



## Prospectus

### for the public offering of

1,475,409 new ordinary bearer shares with no par value from a capital increase against cash contributions as resolved by the extraordinary shareholders' meeting on 9 October 2014,

221,311 new ordinary bearer shares with no par value in connection with a possible volume increase option from a capital increase against cash contributions as resolved by the extraordinary shareholders' meeting on 9 October 2014

and

254,508 existing ordinary bearer shares with no par value from the holdings of certain shareholders under a share loan in connection with a possible over-allotment

and

### for the admission to trading on the regulated market operated by Euronext Amsterdam N.V. of

5,241,693 existing ordinary bearer shares with no par value

and

up to 1,696,720 new ordinary bearer shares with no par value from the aforementioned capital increase as resolved by the extraordinary shareholders' meeting on 9 October 2014

and

up to 254,508 new ordinary bearer shares with no par value from a capital increase from authorized capital to be resolved by the management board with the consent of the supervisory board in case of the exercise of the Greenshoe option for the redelivery of shares to certain shareholders under a share loan in connection with the possible over-allotment

– each with a notional par value of EUR 1.00 per share and vested with full dividend rights as of 1 January 2014 –  
of

### **Probiodrug AG Halle (Saale)**

International Securities Identification Number (ISIN): DE0007921835

Ticker Symbol: PBD

Sole Global Coordinator /Bookrunner

**Kempen & Co**

Co-Bookrunner

**Petercam**

10 October 2014

This document constitutes a prospectus for the purposes of the public offering of 1,951,228 offer shares in the Netherlands and the admission to trading of the entire share capital of Probiodrug AG of 5,241,693 existing shares and up to 1,951,228 offer shares on the regulated market operated by Euronext Amsterdam N.V. (the “**Prospectus**”). This Prospectus has been prepared in the English language in accordance with the Commission Regulation (EC) No 809/2004 of 29 April 2004 and conforms to the requirements of the German Securities Prospectus Act (*Wertpapierprospektgesetz*). This Prospectus has been approved by the German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*) after a review for completeness of the Prospectus, including a review for coherence and comprehensibility of the presented information, according to Section 13 (1) of the German Securities Prospectus Act (*Wertpapierprospektgesetz*), and notified to the Netherlands Authority for the Financial Markets (*Autoriteit Financiële Markten*) in accordance with Section 18 (1) of the German Securities Prospectus Act (*Wertpapierprospektgesetz*) and the European passport mechanism set out in the Prospectus Directive (*Prospektrichtlinie*) (No 2003/71/EC).

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## SUMMARY OF THE PROSPECTUS

Summaries are made up of disclosure requirements known as “Elements”. These Elements are numbered in sections A – E (A.1 to E.7).

This summary contains all the Elements required to be included in a summary for this type of securities and issuer. Because some Elements are not required to be addressed, there may be gaps in the numbering sequence of the Elements.

Even though an Element may be required to be inserted in the summary because of the type of securities and issuer, it is possible that no relevant information can be given regarding the Element. In this case a short description of the Element is included in the summary with the mention of “not applicable”.

### Section A – Introduction and warnings

**A.1** Warnings This summary should be read as an introduction to this prospectus (the “**Prospectus**”). Any decision to invest in the shares of Probiodrug AG (the “**Company**” or “**Probiodrug AG**” and, collectively with its consolidated subsidiary, “**Probiodrug**”) should be based on consideration of the Prospectus as a whole.

Where a claim relating to the information contained in this Prospectus is brought before a court, the plaintiff investor might, under the national legislation of the States of the European Economic Area, have to bear the costs of translating the Prospectus before the legal proceedings are initiated.

The Company, having its registered seat in Halle /Saale, Germany, and Kempen & Co N.V., having its registered seat in Amsterdam, the Netherlands, (“**Kempen & Co**” or the “**Sole Global Coordinator**”), together with Petercam NV/SA, having its registered seat in Brussels, Belgium, (“**Petercam**” or the “**Co-Bookrunner**”; together with Kempen & Co the “**Syndicate Banks**”) assume responsibility for the contents of this summary, including the translation thereof, pursuant to Section 5 (2b) no. 4 of the German Securities Prospectus Act (*Wertpapierprospektgesetz*). Those persons who are responsible for the summary, including the translation thereof, or for its issuing (*Erläss*) can be held liable, however, only in the event that the summary, including the translation thereof, is misleading, false or contradictory when read together with the other parts of this Prospectus, or does not provide all necessary key information when read together with the other parts of this Prospectus.

**A.2** Information regarding the subsequent use of the prospectus and respective consent by the issuer or person responsible for drawing up the prospectus for subsequent resale or final placement of securities by financial intermediaries Not applicable. Neither the Company nor other persons responsible for preparing of the Prospectus granted such consent.

### Section B – Issuer

**B.1** Legal and commercial name The legal name of the Company is Probiodrug AG. Probiodrug is its commercial name.

**B.2** Domicile, legal form, legislation, country of incorporation The Company has its registered seat in Halle /Saale. It is organized in the legal form of a stock corporation under German law (*Aktiengesellschaft*). The Company is incorporated in Germany.

**B.3** Description of, and key Probiodrug AG is a biopharmaceutical company that focuses on the research and development and the potential future commercialization of new therapeutic products for the treatment of

figures relating to, the nature of the issuer's current operations and its principal activities, stating the main categories of products sold and /or services performed and identification of the principal markets in which the issuer competes

Alzheimer's disease ("AD"). The Company is developing a proprietary, focused pipeline of product candidates against AD.

Current approved drugs for AD treat symptoms of the disease only and neither halt the progression nor provide sustainable improvement of the disease. The positive effects of these treatments on cognitive functions and activities of daily living are at best modest and transient and may have side effects.

Scientific insight into the disease has identified a major hallmark of its biology, Abeta peptides. These peptides were identified as being the main constituent of senile plaques which were originally regarded as the toxic component that destroys brain cells, also referred to as neurodegeneration. On this basis, therapeutic concepts were developed aiming at modifying the disease by halting or slowing the progression of the neurodegeneration (disease modification). The first generation of disease-modifying approaches focused on inhibiting the plaque production or reducing existing plaques by targeting Abeta in general. These approaches, however, did not meet the expectations.

The prevailing scientific view today is that not the plaques but certain soluble forms of Abeta aggregates, which are called "Abeta oligomers", cause the early pathological changes in AD (Shankar and Walsh, 2009; Sheng et al., 2012; Shankar et al., 2008; Walsh and Selkoe, 2004; Walsh and Selkoe, 2007). It has been shown that the formation of these toxic soluble Abeta oligomers is triggered by a specific form of Abeta, namely pyroglutamate-Abeta ("pGlu-Abeta") (Nussbaum et al., 2012). Probiodrug's scientists discovered in 2004 that Abeta peptides need a specific enzyme to be transformed into pGlu-Abeta, which is called Glutaminyl Cyclase ("QC") (Schilling et al., 2004). The discovery of this key enzymatic function leading to pGlu-Abeta is Probiodrug's basis to develop small molecule inhibitors as a specific pGlu-Abeta targeting treatment approach.

Probiodrug develops product candidates to specifically target toxic pGlu-Abeta via two modes of action, i.e. by (i) inhibiting the production of pGlu-Abeta; and (ii) clearing existing pGlu-Abeta from the brain, which the Company believes are complementary. The Company's current development pipeline consists of the following product candidates:

- PQ912 is the lead product candidate of the Company, currently entering into a Phase 2a study. PQ912 is a small molecule that was discovered and profiled by Probiodrug and was nominated by the Company for regulatory development in 2010. PQ912 is a specific inhibitor of QC which has shown therapeutic benefit in Alzheimer animal models. PQ912 has shown to be safe and well tolerated and revealed a high level of QC-inhibition in a Phase 1 study with 200 healthy young and elderly volunteers. The preparation of the Phase 2a study started in March 2014. The Clinical Trial Application ("CTA") filing started in August 2014. The first patient is expected to be treated with PQ912 in the first quarter of 2015 with the first data expected to be available in mid 2016.
- PBD-C06 is a monoclonal antibody, currently in preclinical research. PBD-C06 targets pGlu-Abeta, aiming to selectively clear the brain from pGlu-Abeta while leaving non-toxic forms of Abeta untouched. The Company believes that, due to the high specificity of PBD-C06 for pGlu-Abeta, the amount of antibody reaching the brain will be sufficient to neutralize the toxic peptides.
- PQ1565 is a QC-inhibitor, currently in late preclinical research. The product candidate has shown attractive drug-like properties in preclinical studies.

The preclinical and clinical research and development paths are broadly similar in the EU and in the U.S. Initially, preclinical studies are conducted to evaluate the mode of action (pharmacology) and safety (toxicology) either *in vitro* or *in vivo*. Upon successful completion of non-clinical studies, a request for a Clinical Trial Authorization in the EU or an Investigational New Drug application in the U.S. must be approved by the relevant regulating governmental bodies (the "**Competent Authorities**") for studies to be allowed to start. Clinical studies are typically conducted sequentially from Phase 1, Phase 2 and Phase 3 to Phase 4 studies conducted after marketing approval. Under certain circumstances, these phases may be compressed, overlap or even omitted.

Probiodrug has an extensive patent portfolio which it believes sufficiently protects its product candidates and the QC target by composition of matter and medical use claims in AD, but also in inflammatory diseases and other indications, such as the Down syndrome. The continuously expanding patent portfolio currently consists of 42 patent families, which comprise more than

650 national patent applications and issued patents worldwide.

In 2012, the Company commenced the transformation from a research and discovery company to a product development company, thereby focusing on its advanced product candidates using skillsets needed for preclinical and clinical development and reducing internal resources for research. Most of the current research and development activities of the Company are being provided by third parties, such as scientific advisors or contract research organizations (“CROs”), so that the Company focuses on overall management tasks with high levels of outsourcing resulting in flexibility and cost-efficiency. The Company uses its expertise in building and managing networks of advisors and of pharma experts on both the science and the clinical aspects of AD. The Company believes that it has created and maintained strong credibility over the years within the scientific community, with clinicians, and with many pharmaceutical companies that pursue therapies for central nervous system and degenerative diseases such as AD. As of today, regarding its research and development activities in the field of AD, the Company has not entered into any partnering or licensing arrangements in respect of any of its product candidates and is currently mainly financed by equity and to a lesser extent by grants and subsidies. Since 2007 until the date of this Prospectus, the Company raised approximately EUR 78.4 million from investors and the management.

- B.4a** Description of the most significant recent trends affecting the issuer and the industries in which it operates
- At present, approved pharmacotherapies for AD consist only of symptomatic treatments.
- In the past decade, drug discovery has been directed at “disease-modifying drugs” that are able to counteract the progression of AD by intervening in specific steps of its neuropathological process (Selkoe et al., 2004). The Company is convinced that there is a need for treatments that affect the underlying cause of AD. Worldwide, a large number of patients suffer from AD, a number that is expected to increase significantly in the future. Today, over 35 million people worldwide currently live with the condition and this number is expected to double by 2030 and to more than triple by 2050 to 115 million (World Alzheimer Report, 2013).
- The cost of treating AD is a growing problem for Western societies. It is the most expensive disease condition in the United States. The annual cost in the United States alone for treating the disease is estimated to be USD 214 billion in 2014 (Alzheimer’s Association, 2014). Given the expected increase in the population suffering from AD and given the higher reimbursement expected for disease-modifying therapies, this amount is expected to increase in the United States to USD 1.2 trillion by 2050 (Alzheimer’s Association, 2014).
- Therefore, a therapy that successfully impacts on the disease progression and thus responds the yet unmet medical needs in the treatment of AD, presents a significant opportunity for both AD patients and the pharmaceutical industry.
- A recent event in the field of disease-modifying drugs targeting AD is the partnering agreement between AstraZeneca and Eli Lilly, announced on 16 September 2014. AstraZeneca and Eli Lilly agreed to jointly develop and commercialize AZD3293, a beta secretase (“BACE”) inhibitor ready to enter Phase 2 /3 clinical trials. BACE is an enzyme that generates Abeta. Inhibiting BACE targets at the unspecific reduction of Abeta in the brain. According to this announcement, Eli Lilly will pay AstraZeneca up to USD 500 million in regulatory and development milestones, a first USD 50 million payment is anticipated in the first half-year 2015 ([www.astrazeneca.com/Media/Press-releases/Article/astrazeneca-and-lilly-announce-alliance](http://www.astrazeneca.com/Media/Press-releases/Article/astrazeneca-and-lilly-announce-alliance)). In the Company’s view, this deal shows a rising interest of the industry to support novel treatments of AD.
- B.5** Description of the group and the issuer’s position within the group
- The Company has one subsidiary, Probiodrug Inc., Dover, Delaware which is not yet operational. Until July 2014, the Company had a further subsidiary, Ingenium Pharmaceuticals GmbH (“Ingenium”) that was operational and had been acquired in 2007. Ingenium’s business was the creation of novel animal models and the research of CDK 9 inhibitors as anti-inflammatory drugs. CDK 9 is a cyclin-dependent protein kinase and as a component of a multiprotein complex involved in the regulation of several cellular processes. The major assets of Ingenium were sold in 2013 to AstraZeneca and the shares of Ingenium were transferred to a third party in July 2014 without any further obligations of the Company.
- B.6** Shareholders’ structure; control over the issuer; different
- As of the date of the Prospectus, the following persons have a notifiable interest in the Company’s share capital and voting rights:
- Bio Discovery III F.C.P.R., Paris, France (which is managed by an entity belonging to the Rothschild-Group) holds 15.67% in the share capital of the Company.
  - Biotech Growth N.V., Curacao, Netherlands Antilles holds 15.06% in the share

voting rights

capital of the Company.

- TVM V Life Science Ventures GmbH & Co. KG, Germany holds 9.53% in the share capital of the Company.
- HBM Healthcare Investments (Cayman) Ltd., Cayman Islands holds 9.44% in the share capital of the Company.
- Coöperatief LSP IV U.A., 1071 DV Amsterdam, the Netherlands holds 8.45% in the share capital of the Company.
- Biogen Idec MA Inc., Cambridge, Massachusetts, USA holds 4.04% in the share capital of the Company.
- CFH Beteiligungsgesellschaft mbH, Germany holds 3.72% in the share capital of the Company.
- IBG Beteiligungsgesellschaft Sachsen-Anhalt mbH, Germany holds 0.63%, IBG Risikokapitalfonds I GmbH & Co. KG, Germany 9.51%, IBG Innovationsfonds GmbH & Co. KG, Germany 0.26% and IBG Risikokapitalfonds II GmbH & Co. KG, Germany 7.71% in the share capital of the Company. All these entities are managed by IBG Beteiligungsgesellschaft Sachsen-Anhalt mbH and hold an aggregated shareholding of 18.11% of the Company's share capital.
- Hawkes Bay Master Investors LP, Cayman Islands holds 1.70%, Salthill Investors (Bermuda) L.P., Bermuda 0.51%, Salthill Partners, L.P., USA 0.62%, North River Investors (Bermuda) L.P., Bermuda 0.49% and North River Partners, L.P., USA 0.73% in the share capital of the Company. All these entities are advised by Wellington Management Company, LLP, an investment adviser registered under the U.S. Investment Advisers Act of 1940, as amended, and hold an aggregated shareholding of 4.05% of the Company's share capital.

No shareholder has control over the Company.

Each share gives one vote.

**B.7** Selected historical key financial information; significant changes in the financial position and results of operations

The following selected key financial information has been taken from the Company's audited consolidated financial statements as of and for the years ended 31 December 2013, 2012 and 2011 (the "**IFRS Consolidated Financial Statements**") and the unaudited consolidated interim financial statements as of and for the six-month period ended 30 June 2014 (the "**Unaudited IFRS Consolidated Interim Financial Statements**"), each prepared in accordance with International Financial Reporting Standards as adopted by the European Union ("**IFRS**"). The Company also prepared audited unconsolidated financial statements as of and for the year ended 31 December 2013 (the "**German GAAP Financial Statements**") in accordance with the German Commercial Code (*Handelsgesetzbuch*).

**Key financial information from the IFRS Consolidated Financial Statements as of and for the years ended 31 December 2013, 2012 and 2011 as well as from the Unaudited IFRS Consolidated Interim Financial Statements as of and for the six-month period ended 30 June 2014**

***Consolidated statement of comprehensive income***

in TEUR	1 January to 30 June		1 January to 31 December		
	2014	2013	2013	2012	2011
	(unaudited)		(audited)		
<b>I. Profit or Loss</b>					
<i>Continuing operations</i>					
Revenue .....	0	0	0	6	21
Cost of sales .....	0	0	0	0	0
<b>Gross profit</b> .....	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>21</b>
Research and development expenses.....	-2,820	-3,720	-8,004	-9,255	-13,229
General and administrative expenses .....	-961	-1,206	-2,394	-2,341	-3,084
Other operating income.....	43	163	747	1,032	2,023
<b>Operating profit/loss</b> .....	<b>-3,738</b>	<b>-4,763</b>	<b>-9,651</b>	<b>-10,558</b>	<b>-14,269</b>
<b>Financial profit/loss</b> .....	<b>-56</b>	<b>-51</b>	<b>-106</b>	<b>-314</b>	<b>8</b>
<b>Loss before tax</b> .....	<b>-3,794</b>	<b>-4,814</b>	<b>-9,757</b>	<b>-10,872</b>	<b>-14,261</b>
Income tax expense.....	0	0	0	-656	6
<b>Loss from continuing operations</b> .....	<b>-3,794</b>	<b>-4,814</b>	<b>-9,757</b>	<b>-11,528</b>	<b>-14,255</b>
<i>Discontinued operations</i>					
<b>Loss after tax of the discontinued operations</b> .....	<b>-32</b>	<b>-181</b>	<b>-172</b>	<b>-7,192</b>	<b>-2,052</b>
<b>Net loss for the period</b> .....	<b>-3,826</b>	<b>-4,995</b>	<b>-9,929</b>	<b>-18,720</b>	<b>-16,307</b>
<b>II. Other comprehensive income (loss)</b>					
Remeasurement of net defined benefit pension liability	0	18	35	-203	-45
<b>Total other comprehensive income (loss)</b> .....	<b>0</b>	<b>18</b>	<b>35</b>	<b>-203</b>	<b>-45</b>
<b>III. Comprehensive income (loss)</b> .....	<b>-3,826</b>	<b>-4,977</b>	<b>-9,894</b>	<b>-18,923</b>	<b>-16,352</b>

## Consolidated Statement of Financial Position

in TEUR	As of 30 June	As of 31 December		
	2014 (unaudited)	2013	2012 (audited)	2011
<b>ASSETS</b>				
<b>A. Noncurrent assets</b>				
I Goodwill.....	-	0	0	1,996
II Development program.....	-	0	0	4,737
III Other intangible assets.....	86	101	67	61
IV Plant and equipment.....	253	321	926	1,264
V Financial assets.....	3	3	3	3
<b>Total noncurrent assets.....</b>	<b>342</b>	<b>425</b>	<b>996</b>	<b>8,061</b>
<b>B. Current assets.....</b>				
I Inventories.....	-	0	18	18
II Trade receivables.....	-	0	5	1
III Other short-term financial assets.....	12	872	2	9
IV Tax refunds.....	3	10	18	46
V Other assets.....	328	188	483	644
VI Securities.....	-	0	0	1,019
VII Cash and cash equivalents.....	5,919	4,879	7,726	9,295
VIII Noncurrent assets held for sale.....	-	0	757	0
<b>Total current assets.....</b>	<b>6,262</b>	<b>5,949</b>	<b>9,009</b>	<b>11,032</b>
<b>Total assets.....</b>	<b>6,604</b>	<b>6,374</b>	<b>10,005</b>	<b>19,093</b>
<b>LIABILITIES AND EQUITY</b>				
<b>A. Equity</b>				
I Share capital.....	25,529	25,529	25,529	22,694
II Legal reserve.....	228	228	228	228
III Additional paid-in capital.....	51,963	51,963	51,658	45,150
IV Other reserves for remeasurement of the pensions.....	-199	-199	-234	-31
V Retained earnings.....	-85,571	-81,745	-71,816	-53,096
<b>Total equity.....</b>	<b>-8,050</b>	<b>-4,224</b>	<b>5,365</b>	<b>14,945</b>
<b>B. Noncurrent liabilities</b>				
I Investment grants.....	6	11	24	68
II Pensions.....	531	535	545	333
III Provisions.....	811	719	501	610
IV Other noncurrent liabilities.....	-	0	0	1
<b>Total noncurrent liabilities.....</b>	<b>1,348</b>	<b>1,265</b>	<b>1,070</b>	<b>1,012</b>
<b>C. Current liabilities.....</b>				
I Investment grants.....	12	13	43	33
II Tax liabilities.....	2,494	2,445	2,347	1,364
III Provisions.....	41	41	41	41
IV Convertible bonds.....	9,622	5,346	0	0
V Trade payables.....	981	1,327	731	1,215
VI Other current liabilities.....	156	161	408	483
<b>Total current liabilities.....</b>	<b>13,306</b>	<b>9,333</b>	<b>3,570</b>	<b>3,136</b>
<b>Total liabilities.....</b>	<b>14,654</b>	<b>10,598</b>	<b>4,640</b>	<b>4,148</b>
<b>Total equity and liabilities.....</b>	<b>6,604</b>	<b>6,374</b>	<b>10,005</b>	<b>19,093</b>

## Consolidated Cash Flow Statement

in TEUR	1 January to 30 June		1 January to 31 December		
	2014	2013	2013	2012	2011
	(unaudited)		(audited)		
Net loss for the period.....	-3,826	-4,995	-9,929	-18,720	-16,307
Income tax expense / income .....	0	0	0	656	-6
Net interest expense .....	56	51	106	318	32
Non-cash losses from impairment write-downs ..	-	-	25	5,983	0
Depreciation and amortization .....	61	107	314	352	413
Gain on disposal of plant and equipment .....	-3	-9	-21	-267	0
Release of deferred investment grants.....	-6	-14	-43	-34	-54
Other non-cash expense .....	0	10	305	146	414
Interest paid.....	0	0	0	0	-5
Interest received .....	2	6	9	22	44
Income tax paid.....	-1	-2	-2	-7	-11
Income taxes received.....	6	10	11	35	55
<i>Changes of working capital</i>					
Changes in inventories .....	-	-	18	0	24
Changes in trade receivables .....	0	5	320	-4	3
Changes in other assets .....	360	162	-214	153	720
Changes in pension liabilities .....	-13	5	8	-4	-10
Changes in provisions .....	92	218	218	-109	360
Changes in trade payables.....	-346	-64	596	-484	277
Changes in other liabilities.....	-5	-147	-247	-76	-270
<b>Cash flows from operating activities.....</b>	<b>-3,623</b>	<b>-4,657</b>	<b>-8,526</b>	<b>-12,040</b>	<b>-14,321</b>
Proceeds from investment grants .....	-	-	0	15	28
Proceeds from disposal of securities .....	-	-	0	1,019	0
Proceeds from disposal of plant and equipment ..	25	31	36	359	0
Proceeds from disposal of intangible assets .....	362	0	362	0	0
Acquisition of plant and equipment .....	0	-1	-5	-64	-84
Acquisition of intangible assets.....	0	-34	-60	-55	-14
Investments in securities .....	-	-	0	0	-1,016
<b>Cash flows from investing activities.....</b>	<b>387</b>	<b>-4</b>	<b>333</b>	<b>1,274</b>	<b>-1,086</b>
Proceeds from stock issue.....	-	-	0	9,213	18,765
Transaction costs of equity transaction .....	-	-	0	-16	-124
Proceeds from convertible bonds issue .....	4,276	0	5,346	0	0
<b>Cash flows from financing activities.....</b>	<b>4,276</b>	<b>0</b>	<b>5,346</b>	<b>9,197</b>	<b>18,641</b>
<b>Net increase in cash and cash equivalents .....</b>	<b>1,040</b>	<b>-4,661</b>	<b>-2,847</b>	<b>-1,569</b>	<b>3,234</b>
<b>Cash and cash equivalents at the beginning of period .....</b>	<b>4,879</b>	<b>7,726</b>	<b>7,726</b>	<b>9,295</b>	<b>6,061</b>
<b>Cash and cash equivalents at the end of period .....</b>	<b>5,919</b>	<b>3,065</b>	<b>4,879</b>	<b>7,726</b>	<b>9,295</b>

### Significant changes in the financial position and results of operations

Significant changes in the financial position and results of operations in the financial years 2011, 2012, 2013 and in the first half of the financial year 2014 were primarily due to the transformation of the Company from a research company to a development company that began in 2012 and was completed in 2013. By this transformation the Company reduced its research activities and began developing its existing product candidate portfolio by relying on cost efficient outsourcing to third parties. Further changes were due to the sale of the major assets of Ingenium, i.e. the CDK 9 program, in 2013 connected with a close-down of Ingenium's facilities in Munich.

Overall, these factors resulted in lower research expenses and lower general and administrative expenses. These expenses decreased from TEUR 13,229 for research and development and TEUR 3,084 for general and administrative expenses in the financial year 2011 to TEUR 8,004 and TEUR 2,394 respectively in the financial year 2013. The first half of the financial year 2014 shows a further decrease of these expenses to TEUR 2,820 and TEUR 961, respectively, for the first six-month-period in 2014 as compared to TEUR 3,720 and TEUR 1,206, respectively, in the first six-month-period in 2013.

Probiodrug's result after tax of the discontinued operations relates to the decision of the Company to sell the CDK 9 research program of Ingenium and was TEUR -172 in 2013, compared to TEUR -7,192 in 2012 and TEUR -2,052 in 2011. The increase of the losses by TEUR 5,140, or approximately 250%, from TEUR -2,052 in 2011 to TEUR -7,192 in 2012 was due primarily to the extraordinary depreciation of the goodwill and book value of the intangible assets recognized for Ingenium and its research program CDK 9 in the balance sheet of Probiodrug. The decrease of losses by TEUR 7,020 from TEUR -7,192 to TEUR -172 was due primarily to the non-recurring effect of the reclassification of Ingenium and its assets in 2012.

Since 30 June 2014 until the date of this Prospectus, there were no further significant changes in the results of operations. By utilization of the Contingent Capital 2013, 3,289,845 new series B preference shares were issued to holders of the Convertible Bond 2013 and by utilization of the Contingent Capital 2014, 2,631,384 new series B preference shares were issued to holders of the Convertible Bond 2014. The issue of these shares was registered in the commercial register on 28 August 2014.

By resolution of the shareholders' meeting on 25 August 2014 all registered shares of the Company, i.e. all registered no par value common shares and all registered preferred shares of the series B were converted into ordinary bearer shares with no par value with a notional value of EUR 1.00 each.

The shareholders' meeting on 8 September 2014 resolved on a reduction of the share capital and a reverse share split in the ratio of 6:1 in preparation for the Offering. As a consequence, the share capital was decreased from EUR 31,450,158.00 by EUR 26,208,465.00 to EUR 5,241,693.00. The number of ordinary bearer shares was reduced from 31,450,158 by 26,208,465 to 5,241,693.

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|-------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>B.8</b>  | Selected key pro forma financial information                                                               | Not applicable. No pro forma financial information has been prepared by the Company.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>B.9</b>  | Profit forecast and estimate                                                                               | Not applicable. No profit forecast or estimate is being presented by the Company.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>B.10</b> | Description of the nature of any qualification in the audit report on the historical financial information | <p>The audit reports on the historical financial information have been issued without qualifications. However, the auditor's opinion in respect of the IFRS Consolidated Financial Statements contains the following statement: "Without qualifying this opinion we refer to the explanation in the notes. In the section "4. Significant discretionary decisions, estimates and assumptions" it is explained that the ability of the entity to continue as a going concern is endangered if significant payments are required with respect to the lawsuit pending with the fiscal courts with respect to the back payments for taxes."</p> <p>This explanation in section 4 of the notes has the following wording: "As a result of the resolution to issue convertible bonds in July 2013 as well as the increase in these convertible bonds as resolved in May 2014, the Company was able to secure additional funding which provide for the Company's further development at least into the third quarter of 2014. In order to continue the ongoing research and development projects additional funding will, at the latest, be required at this point. Management is currently pursuing an additional financing round for the fall of 2014. If this is not achieved, the Company's further development will be endangered. If extensive adjustments are made to the cost structures, the Company's projections show that, without a successful financing round, the liquidity would be sufficient through the end of 2015. The aforementioned projections are based on the assumption that no cash outflows will be required in 2014 and 2015 with respect to the potential additional tax claims of the fiscal authorities for the year 2004. Probiodrug has filed a lawsuit at the Finanzgericht contesting the potential back taxes. A ruling has not yet been made. A stay of execution for the contested decisions has been granted. This risk was provided for in the</p> |

financial statements by recording an appropriate provision. Should significant payments be required in 2014 or 2015 for the back taxes being contested in the financial courts, the Company's ability to continue as a going concern would be endangered."

Furthermore, the auditor's opinion in respect of the German GAAP Financial Statements contains the following wording: "Without qualifying this opinion we refer to the explanation in the management report. In the section "Risks" it is explained that the ability of the entity to continue as a going concern is endangered if significant payments are required with respect to the lawsuit pending with the fiscal courts with respect to the back payments for taxes."

This explanation in the section "Risks" has the following wording translated into English from the relevant text of the German language management report to which the auditor's opinion on the audited German GAAP Financial Statements makes reference: "The Company's projections indicate that by substantially adjusting the cost structures the liquidity can be provided for without the successful completion of a financing round through the end of 2015. The afore mentioned projections are based on the assumption that no cash outflows will result with respect to the potential back payment claims of the fiscal authorities for taxes for the year 2004. Probiodrug has filed a lawsuit with the fiscal court (*Finanzgericht*) against the potential tax back payments. A ruling has not yet been made. A stay of execution with respect to the disputed assessment notices has been granted. The risk was provided for in the financial statements by recording appropriate provisions. Should significant payments be made with respect to the back taxes in dispute, the ability of the Company to continue as a going concern would be endangered."

- |             |                                                                   |                                                                                                                                                                                                                                                                                                                                                    |
|-------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>B.11</b> | Explanation regarding non-sufficiency of issuer's working capital | Not applicable. The Company believes that the liquid funds of Probiodrug are sufficient to meet its current liquidity requirements. The Company also believes that, to the extent foreseeable as of the date hereof, the available liquid funds of Probiodrug will be sufficient to meet its liabilities when due for at least the next 12 months. |
|-------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Section C – Securities

- |            |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                  |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>C.1</b> | Description of the type and the class of securities being offered and /or admitted to trading, including security identification number | Ordinary bearer shares with no par value and a notional par value of EUR 1.00 each and vested with full dividend rights as of 1 January 2014.<br>International Securities Identification Number (ISIN): DE0007921835<br>German Securities Identification Number (WKN): 792183<br>Capitalization compartment: C<br>Subsector: Biotechnology<br>Ticker Symbol: PBD |
| <b>C.2</b> | Currency of the securities issue                                                                                                        | The currency of the Company's shares is Euro (EUR).                                                                                                                                                                                                                                                                                                              |
| <b>C.3</b> | Number of shares issued, par value per share                                                                                            | As of the date of this Prospectus, the Company's share capital amounts to EUR 5,241,693.00 and is divided into 5,241,693 ordinary bearer shares (the " <b>Existing Shares</b> ") with no par value representing a notional amount of EUR 1.00 per share. The current share capital is fully contributed.                                                         |
| <b>C.4</b> | Description of the rights attached to the securities                                                                                    | Each share of the Company confers one vote at the shareholders' meeting of the Company. There are no voting right restrictions. The Company's shares are vested with full dividend rights as of the financial year beginning 1 January 2014.                                                                                                                     |
| <b>C.5</b> | Description of any restrictions on the free transferability of securities                                                               | Not applicable. All shares of the Company will be freely transferable upon admission of the Company's shares for trading (the " <b>Listing</b> ") in the regulated market operated by Euronext Amsterdam N.V. (" <b>Euronext Amsterdam</b> ").                                                                                                                   |

C.6	Indication as to whether the securities offered are or will be the object of an application for admission to trading on a regulated market and the identity of all the regulated markets where the securities are or are to be traded	<p>The application for admission to listing and trading of the Existing Shares of the Company on the regulated market of Euronext Amsterdam is expected to be filed on 10 October 2014. Admission to and commencement of trading of the Existing Shares on Euronext Amsterdam is expected to take place on a conditional basis “as if and when delivered” on 27 October 2014.</p> <p>The New Shares (as defined in Element E.3 below) and the Additional New Shares (as defined in Element E.3 below), if any, are expected to be admitted to trading on Euronext Amsterdam on or around 31 October 2014 (after delivery).</p> <p>The Greenshoe Shares (as defined in Element E.3 below), if any, are expected to be admitted to trading on Euronext Amsterdam at the end of November /early December 2014 (after delivery).</p>
C.7	Description of dividend policy	The Company does not expect to be able to recognize a balance sheet profit, i.e. distributable profits, that would allow the Company to pay any dividends in the foreseeable future.

## Section D – Risks

The occurrence of one or more of the following risks, individually or together with other circumstances, may have a material adverse effect on the business of Probiodrug and its assets, financial position and results of operations and may negatively affect the market price of the Company’s shares. The risks described below may turn out to be incomplete and therefore may not be the only risks to which Probiodrug is exposed. The order in which the risks are presented does not reflect the likelihood of their occurrence or the extent or significance of the individual risks. Additional risks and uncertainties, of which the Company is currently not aware, could have a material adverse effect on the business of Probiodrug and its assets, financial position or results of operations. The market price of the shares of the Company could fall if these risks were to materialize. In such case, investors could lose all or part of their investment.

D.1	Key information on the key risks that are specific to the issuer or its industry	<p><b>Risks relating to Probiodrug’s business</b></p> <p><i>Development risks on products and technologies</i></p> <ul style="list-style-type: none"> <li>• Drug development is a highly speculative undertaking and involves a substantial degree of uncertainty. Probiodrug is dependent on the success of its current product candidates PQ912, PQ1565 and PBD-C06 and cannot be certain that any of them will be safe and effective, will receive regulatory approval or be successfully commercialized. If Probiodrug is unable to complete clinical studies or to obtain regulatory approval for any of its product candidates, or experiences significant delays in doing so, this would have a material adverse effect on its business.</li> <li>• Failure to successfully exploring benefits of combination therapies between Probiodrug’s product candidates and other products and evaluating the potential of the Anti-pGlu-Abeta approach for other indications could impair Probiodrug’s business.</li> <li>• Competing product candidates could be approved on the market and may be more effective, tolerable or preferred by Competent Authorities over our products.</li> </ul> <p><i>Financial risks</i></p> <ul style="list-style-type: none"> <li>• Probiodrug produces operating losses, has an accumulated deficit and may never become profitable.</li> <li>• The Company will likely need substantial additional funding in the future, which may not be available on commercially acceptable or sensible terms when needed or may not be available at all.</li> <li>• Probiodrug AG may be required to pay retroactively additional taxes plus interest amounting to EUR 2.5 million (including accrued interest) as of 30 June 2014 which may negatively impact its liquidity position and could endanger its going concern.</li> <li>• Restrictions of the utilization of tax loss carry forwards may have an adverse effect on Probiodrug AG’s financial condition and results of operations.</li> <li>• The Company may be required to refund grants and subsidies.</li> </ul> <p><i>Risks relating to the regulatory environment</i></p> <ul style="list-style-type: none"> <li>• Nearly all aspects of Probiodrug’s activities are subject to substantial regulation. No assurance can be given that any of Probiodrug’s product candidates will fulfill regulatory requirements. Failure to comply with such regulatory requirements could result in delays, suspensions, refusals and withdrawals of approvals as well as fines and could make it impossible for the Company to commercialize its products and/or</li> </ul>
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product candidates.

- Probiodrug's research programs and product candidates must undergo rigorous preclinical tests and clinical studies, the start, timing of completion, number and results of which are uncertain and could substantially delay or prevent the product candidates from ever reaching the market.
- If serious adverse side effects are identified for any of its product candidates, Probiodrug may need to abandon or limit its development of that product candidate, which may delay or prevent marketing approval by the Competent Authorities, or, if approval is received for the product candidate, may require it to be taken off the market, to include safety warnings or otherwise limit its sales.
- If Probiodrug obtains regulatory approval for a product candidate, the approved product will remain subject to on-going regulatory obligations.

#### ***Commercialization and market risks***

- New technologies could facilitate or enhance the development of product candidates from competitors or limit or eliminate the market opportunity for Probiodrug's product candidates.
- Even if Probiodrug eventually gains approval for any of its product candidates, it may be unable to commercialize them.
- The future commercial success of Probiodrug's product candidates will depend on the degree of market acceptance among physicians, patients, healthcare payers and the medical community.
- The price setting and availability and level of adequate reimbursement by third parties is uncertain and may impede Probiodrug's ability to generate sufficient operating revenues to offset operating expenses.

#### ***Risks related to Probiodrug's dependence on third parties and key personnel***

- Probiodrug relies and will continue to rely on collaborative partners regarding the development and research of its programs and product candidates.
- Probiodrug relies upon third-party contractors and service providers for the execution of most aspects of its development programs. Failure of these third parties to provide services of a suitable quality and within acceptable timeframes may cause the delay or failure of Probiodrug's development programs.
- Probiodrug relies on third parties to supply and manufacture its product candidates, and it expects to rely on third parties to manufacture its products, if approved. The development of such product candidates and the commercialization of any products, if approved, could be stopped or delayed if any such third party fails to manufacture or provide sufficient quantities of product candidates or products or fails to do so at acceptable quality levels or prices or fails to maintain or achieve satisfactory regulatory compliance.
- Probiodrug depends on the ability to attract and retain key personnel and managers.
- Probiodrug's success significantly depends on its cooperation with certain external key advisors.
- Probiodrug depends on the recruitment of sufficient numbers of suitable volunteers and patients for clinical studies.

#### ***Risks relating to Probiodrug's intellectual property and know how***

- Probiodrug may fail to protect its inventions and know-how not subject to intellectual property rights to a sufficient extent.
- Intellectual property rights of Probiodrug could be infringed by third parties.
- Intellectual property rights do not necessarily address all potential threats to Probiodrug's competitive advantage.
- Changes in either the patent laws or interpretation of the patent laws may diminish the value of Probiodrug's patents or narrow the scope of its patent protection.
- Probiodrug may become involved in legal proceedings in relation to intellectual property rights, which may result in costly litigation and could result in Probiodrug having to pay substantial damages or limit Probiodrug's ability to commercialize its products and /or product candidates.
- Probiodrug may not be able to prevent disclosure of its trade secrets, know-how or other proprietary information, and the value of its technology and product candidates could be significantly diminished.
- Obtaining and maintaining patent protection depends on compliance with various procedures, document submissions, fee payments and other requirements imposed by

governmental patent agencies, and Probiodrug's patent protection could be reduced or eliminated in case of non-compliance with these requirements.

- If Probiodrug fails to comply with its obligations under the agreements pursuant to which it licenses intellectual property rights from third parties, or otherwise experiences disruptions to its business relationships with its licensors, Probiodrug could lose the rights to intellectual property that is important to its business.
- Probiodrug may be subject to claims that its employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

#### ***Operational risks***

- Probiodrug may not be able to manage future additional operational challenges.
- If any product liability lawsuits are successfully brought against Probiodrug or any of its partners, Probiodrug may incur substantial liabilities and may be required to limit the commercialization of its product candidates or possible future products.
- Probiodrug may not have, or be able to obtain, adequate insurance cover in particular in connection with drug or product liability risk.
- Probiodrug's employees, principal investigators, consultants and collaborative partners may engage in misconduct or other improper activities, including non-compliance with regulatory requirements.
- Probiodrug's business may be adversely affected as a result of computer system failures.

### **D.3**

Key information on the key risks that are specific to the securities

#### **Risks related to the shares and the offering**

- The market price and trading volume could fluctuate significantly resulting in substantial losses.
- In particular due to its business model, the Company may experience a significant fluctuation of liquidity and revenues that may have a material adverse effect on the share price of the Company.
- A liquid market for the shares of the Company may fail to develop which may cause the shares to trade at a discount to the Offer Price and make it difficult to sell the shares.
- Future issue of shares could lead to substantial dilution, e.g. due to a capital increase with exclusion of subscription rights, possible exercise of rights on convertible bonds and options or as part of future employee stock option schemes.
- Certain significant shareholders of the Company may have different interests from the Company after the Offering and may be able to influence the Company, including the outcome of shareholder votes.
- Institutional proxy advisors may influence the voting in general shareholders' meetings.
- Future sales of substantial amounts of shares, or the perception that such sales could occur, could adversely affect the market of the shares.
- The fact that no minimum amount is set for the Offering may affect Probiodrug's development plans.
- The Company may be a passive foreign investment company, generally resulting in adverse tax consequences to U.S. investors.
- Investors resident in countries other than Germany may suffer dilution if they are unable to exercise pre-emptive rights in future offerings.
- Investors with a reference currency other than Euros will become subject to foreign exchange rate risks when investing in the shares.
- Any sale, purchase or exchange of shares may become subject to the Financial Transaction Tax.
- Investors may not be able to recover damages in civil proceedings for U.S. securities law violations.
- The Company does not expect to be able to make distributable profits that would allow Probiodrug AG to pay any dividends in the foreseeable future.
- The Company has a broad discretion using the proceeds from the Offering.
- The Offering may not take place.

## Section E – Offering

- E.1** Total net proceeds and an estimate of the total expenses of the issue /offer, including estimated expenses charged to the investor by the issuer or the offeror
- The Company will receive the gross proceeds from the sale of the issue of shares from the capital increase less commissions to be paid by the Company to the Syndicate Banks (without taking into consideration any commissions or fees being subject to the sole discretion of the Company) and less costs associated with the Offering.
- Based on the assumption that the Offer Shares (as defined in Element E.3 below) will be sold at the mid-point of the price range being EUR 17.125, the Company expects to receive net proceeds (the “**Net Proceeds**”) in an amount of approximately
- (i) TEUR 22,777 if only the New Shares (as defined in Element E.3 below) will be sold and the Greenshoe Option (as defined in Element E.3 below) will not be exercised, and
  - (ii) TEUR 30,299 if the New Shares and the Additional New Shares (as defined in Element E.3 below) will be sold and the Greenshoe Option (as defined in Element E.3 below) is fully exercised,
- thus leading to a range of Net Proceeds between approximately TEUR 22,777 and TEUR 30,299.
- Investors should be aware that the Net Proceeds from the Offering (as defined in Element E.3 below) will depend on the final number of Offer Shares (as defined in Element E.3 below) placed and the final Offer Price (as defined in Element E.3 below) both of which will be determined only after the end of the Offer Period (as defined in Element E.3 below) on the basis of a bookbuilding procedure.
- On the assumption that the Offer Shares (as defined in Element E.3 below) will be sold at the mid-point of the price range, fees and commissions payable to the Syndicate Banks by the Company are expected to be approximately
- (i) EUR 1,417,011 if the New Shares (as defined in Element E.3 below) will be sold, and
  - (ii) EUR 2,044,438 if the New Shares (as defined in Element E.3 below) and the Additional New Shares (as defined in Element E.3 below) will be sold and the Greenshoe Option (as defined in Element E.3 below) is fully exercised,
- thus leading to a range of fees and commissions between EUR 1,417,011 and EUR 2,044,438.
- The aggregate of the administrative, legal, audit and other costs and expenses in connection with the Offering and the Listing, including publications as well as the fees for the approval and passporting of the Prospectus to the Netherlands Authority For the Financial Markets (*Autoriteit Financiële Markten*, “**AFM**”) and for the listing of the shares of the Company at Euronext Amsterdam, is expected to amount to approximately TEUR 1,072.
- No expenses will be charged to investors by the Company or the Syndicate Banks.
- E.2a** Reasons for the offer, use of proceeds, estimated net amount of the proceeds
- The Company’s reasons for the Offering (as defined in Element E.3 below) are to finance the preclinical and clinical development of its product candidates PQ912, PBD-C06 and PQ1565 as well as general corporate purposes.
- The Company currently anticipates that it will use the Net Proceeds of this Offering as follows:
- (i) to support the further clinical development of PQ912, primarily a Phase 2a monotherapy study in early Alzheimer patients, the 6 and 9 month toxicology studies and ancillary pharmacology studies, including but not limited to combination studies in animals;
  - (ii) to support the preclinical and then clinical development of PBD-C06, including but not limited to Chemistry, Manufacturing and Control (“**CMC**”), 4 weeks and the 6 and 9 month toxicology studies as well as a Phase 1 and ancillary preclinical pharmacology studies, including but not limited to combination studies in animals;
  - (iii) to support the continued preclinical and then clinical development of PQ1565, including but not limited to CMC, 4 weeks and the 6 and 9 month toxicology studies as well as a Phase 1 and ancillary pharmacology studies, including but not limited to combination studies in animals;
  - (iv) to support further research activities in the field of QC, pGlu-Abeta, AD and other neurodegenerative diseases as well as the exploration of new indications as potential

target indications for QC-inhibitors and anti-pGlu-Abeta antibodies;

- (v) to secure funds for general corporate purposes, such as intellectual property, general and administrative expenses and the additional costs associated with being a listed company;
- (vi) to use potential opportunities to broaden and diversify its research and development portfolio, e.g. through in-licensing or acquiring of programs and companies with synergistic or complementary technologies or products and /or product candidates.

The estimated net amount of the proceeds is expected to be in a range between approximately TEUR 22,777 and TEUR 30,299. Depending on the amount of Net Proceeds and the actual costs related to the intended clinical studies, the funds may not be sufficient to finance all purposes mentioned above.

**E.3** Terms and conditions of the offer The Offering (as defined below) (including any potential over-allotment) in total relates to 1,951,228 ordinary bearer shares of the Company with no par value with a notional value of EUR 1.00 each consisting of

- (i) 1,475,409 new ordinary bearer shares with no par value with a notional value of EUR 1.00 each (the “**New Shares**”), and
- (ii) 221,311 new ordinary bearer shares with no par value with a notional value of EUR 1.00 each in connection with a possible volume increase option (the “**Additional New Shares**”),
  - (i) and (ii) from a capital increase against cash contributions resolved by an extraordinary shareholders’ meeting on 9 October 2014, as well as
- (iii) 254,508 existing ordinary bearer shares with no par value with a notional value of EUR 1.00 each in connection with a possible over-allotment (the “**Over-allotment Shares**”, together with the New Shares and Additional New Shares the “**Offer Shares**”) from the holdings of Bio Discovery III F.C.P.R., Biotech Growth N.V., HBM Healthcare Investments (Cayman) Ltd., Coöperatief LSP IV U.A., PlatzerInvest AG, Sycamore GmbH and Dr. Hendrik Liebers (the “**Lending Shareholders**”).

The Offer Shares will be offered (i) in the Netherlands by way of a public offering and (ii) outside of the Netherlands in a private placement to selected institutional investors, including (A) outside the United States of America in certain member states of the European Union as well as in Switzerland in reliance on Regulation S under the U.S. Securities Act 1933, as amended (“**Securities Act**”), and (B) in the United States of America to qualified institutional buyers (“**QIBs**”) as defined in and pursuant to Rule 144A under the Securities Act (together, the “**Offering**”). Private placements may take place in EEA Member States pursuant to another exemption under the Prospectus Directive as implemented in the relevant EEA Member State. Private placements will not take place in Australia, Canada and Japan.

Certain existing shareholders of the Company have committed to purchase Offer Shares in an aggregate amount of approximately EUR 15 million in the course of the Offering whereby the final number of Offer Shares to be allocated to such existing shareholders will be finally determined by the Company and Kempen & Co at their full discretion. Offer Shares purchased by these shareholders will be delivered only after the registration of the implementation of the Capital Increase. Payment of the Offer Price is due two banking days after commencement of trading of the Existing Shares. On the assumption that the final offer price will be at the mid-point of the Price Range, the existing shareholders may purchase a maximum number of 881,752 Offer Shares on the basis of their commitments subject to full allocation.

The Offer Shares will be offered in a price range between EUR 15.25 and EUR 19.00 (the “**Price Range**”).

The Offering will begin on 13 October 2014 and is expected to end on 23 October 2014, during which period investors will have an opportunity to submit offers to purchase the Offer Shares within the Price Range (the “**Offer Period**”). Offers to purchase shares may be submitted by retail investors through Kempen & Co. Private placements will be arranged by the Syndicate Banks. On the final day of the Offer Period, institutional investors will be able to submit offers to purchase shares until 3:00 p.m. (Central European Summer Time, “**CEST**”) and retail investors until 12:00 noon (CEST).

The Company together with the Sole Global Coordinator reserves the right to decrease the number of Offer Shares, to increase or decrease the upper limit and /or the lower limit of the

Price Range and /or to extend or shorten the Offer Period (the “**Offer Terms**”). If any of the Offer Terms are modified as set out above, the change will be published on the Company’s website, [www.probiodrug.de](http://www.probiodrug.de), and, by a press release issued in the Netherlands and Germany, and, to the extent required under the German Securities Prospectus Act (*Wertpapierprospektgesetz*) or the Financial Markets Supervision Act (*Wet op het financieel toezicht*), as a supplement (*Nachtrag*) to this Prospectus. Investors who have submitted buy offers will not be notified individually in that event.

Any changes to the Offer Terms will have no effect on the validity of buy offers already submitted. Investors who have submitted buy offers prior to the publication of a supplement (*Nachtrag*), if any, will have the right provided under the German Securities Prospectus Act (*Wertpapierprospektgesetz*) to withdraw from these buy offers within the two business days following publication of such supplement (*Nachtrag*). Instead of withdrawing buy offers submitted prior to publication of the supplement (*Nachtrag*), investors may also amend such buy offers or place new limited or unlimited buy offers within the two business days following publication of the supplement (*Nachtrag*).

The price for the Offer Shares (the “**Offer Price**”) will be determined by way of a bookbuilding process.

After the expiration of the Offer Period, the Offer Price will be set by the Company and the Sole Global Coordinator on the basis of the order book prepared during the bookbuilding procedure. The bookbuilding procedure will be based on the Price Range. The Offer Price will be determined on the basis of offers to buy the Offer Shares submitted by investors during the Offer Period and collectively recorded in the above mentioned order book. The buy offers will be evaluated as a function of the price bid and the expected investment horizons of the various investors. The Offer Price and the number of Offer Shares sold will be determined on this basis with a view to maximizing the proceeds. On the other hand, consideration will be given to questions of whether the Offer Price and the number of Offer Shares sold would reasonably support expectations of stable development of the share price in the secondary market in view of demand for the shares of the Company as indicated by the order book. The prices bid by investors and the number of investors interested in purchasing shares at a given price are not the only factors that will be taken into account in this context. Consideration will also be given to the mix of investors in the Company that would result from the allotment at a given price and the anticipated investor behavior.

Investors who have placed buy orders may cancel these orders at any time prior to the end of the Offer Period. Once the Offer Price has been determined, the Offer Shares will be allotted to investors on the basis of the then existing buy offers. It is expected that the Offer Price will be announced on or around 23 October 2014 in the form of an *ad-hoc* announcement through an electronic information system and on the Company’s website [www.probiodrug.de](http://www.probiodrug.de) and a press release issued in the Netherlands and Germany. Investors who have placed buy orders through the Sole Global Coordinator will be able to obtain information from the Sole Global Coordinator concerning the Offer Price and the number of Offer Shares allotted to them beginning at the earliest on the banking day following the determination of the Offer Price. In the event that the placement volume should prove to be insufficient to fill all orders placed at the Offer Price, the Sole Global Coordinator reserves the right to reject orders in part or in its entirety.

In connection with the Offering and placement of the Offer Shares, over-allotments may be made and stabilization measures aimed at supporting the stock exchange or market price of the Company’s shares may be undertaken to the extent legally permitted. Stabilization measures may not be undertaken until the Company’s shares have been introduced to trading (first day of trading) and must end no later than 30 calendar days after such date (the “**Stabilization Period**”).

In view of a potential over-allotment, the Lending Shareholders have agreed to provide Kempen & Co with up to 254,508 Over-allotment Shares by way of a share loan. The Company has agreed to issue the same number of Over-allotment Shares which have been placed and not been purchased in the market by the stabilization manager within 30 calendar days after the first day of trading by utilizing its authorized capital upon notification by Kempen & Co (the “**Greenshoe Option**”). However, Kempen & Co may decide and notify the Company to execute the Greenshoe Option already at any time prior to the expiry of the Stabilization Period. These new shares (the “**Greenshoe Shares**”) shall then be delivered to the Lending Shareholders (together with any shares purchased in the market) and admitted to

trading on Euronext Amsterdam as soon as practicable and feasible.

The underwriting agreement stipulates that Kempen & Co may also on behalf of Petercam under certain circumstances terminate the underwriting agreement, even after allocation of the Offer Shares and the Listing of the Existing Shares and up to delivery of the Offer Shares and settlement. If the underwriting agreement is terminated, the Offering will not take place. Any allotments already made to investors will be cancelled. In such case, investors will have no right to delivery of the Offer Shares. Any claims with regard to buy offer fees paid and costs incurred by investors in connection with the buy offer will be settled solely on the basis of the legal agreement between the respective investor and the institution with which the buy order was placed. Should investors have made so-called short sales of shares, the investors selling the shares will be solely liable for the legal consequences of any failure to make delivery in connection with any such sale.

The Lending Shareholders have granted to Kempen & Co, in its capacity as settlement agent, a further share loan for the purpose of facilitating the settlement of the Offering with Existing Shares in respect of the New Shares and the Additional New Shares, if any (the “**Settlement Share Loan**”). Under the Settlement Share Loan, the Lending Shareholders have agreed to lend to Kempen & Co, in its capacity as settlement agent, such number of their Existing Shares (the “**Settlement Loan Shares**”) as corresponds to the number of New Shares and Additional New Shares placed in the Offering. Kempen & Co will deliver at the settlement such Settlement Loan Shares to investors, other than the existing shareholders of the Company, to whom New Shares and Additional New Shares, if any, have been sold against payment of the Offer Price.

After the settlement, Kempen & Co, on behalf of the Syndicate Banks, will subscribe for the New Shares and Additional New Shares, if any, in order to effect the implementation of the Capital Increase. After the registration of the implementation of the Capital Increase with the Commercial Register, the New Shares and the Additional Shares, if any, will be deposited with Clearstream Banking Aktiengesellschaft, Mergenthalerallee 61, 65760 Eschborn, Germany (“**Clearstream**”) and delivered to the existing shareholders in order to fulfill (i) the redelivery claims of the Lending Shareholders under the Settlement Share Loan and /or (ii) the delivery claims to the extent that Offer Shares were allocated and sold to such shareholders in the course of the Offering and then admitted to trading on Euronext Amsterdam. Existing shareholders to whom Offer Shares were sold in the course of the Offering will be obligated to pay the Offer Price on the day when payment for all of the Offer Shares sold becomes due. It is expected that the implementation of the Capital Increase will be registered with the Commercial Register on or around 30 October 2014 and that the New Shares and Additional New Shares, if any, will be admitted to trading on Euronext Amsterdam on or around 31 October 2014.

The Offer Shares will be delivered in book-entry form through the facilities of Euroclear Nederland. Euroclear Nederland has its offices at Herengracht 459-469, 1017 BS Amsterdam, the Netherlands (“**Euroclear Nederland**”). Application has been made for the Offer Shares to be accepted for clearance through the book-entry facilities of Euroclear Nederland.

The global bearer share certificate or certificates representing the shares of the Company will be deposited with Clearstream. Trades in the shares of the Company will then be settled through Euroclear Nederland and via a direct link between Euroclear Nederland and Clearstream.

The delivery of the Offer Shares against payment of the Offer Price and the standard commission is expected to take place two banking days after the commencement of trading of the Existing Shares. The Offer Price for the Offer Shares sold to existing shareholders of the Company is also due two banking days following the commencement of trading of the Existing Shares, but the Offer Shares will be delivered only after the registration of the implementation of the Capital Increase. The shares of the Company will be made available to shareholders as co-ownership interests in the respective global certificate.

- E.4** Any interest that is material to the issuer /offer including conflicting
- Apart from the interest of the Company to finance its further development, the Syndicate Banks have an interest in receiving the agreed fees and commission in the event that the Offering is executed.
- The current and former members of the management board and the supervisory board as well as certain key employees of the Company participate in certain incentive compensation

interests programs, including stock option programs and phantom stocks. Under the terms of these programs, the commencement of trading of the shares in the Company entitles the respective holders to exercise option rights under the stock option programs and /or to cash payments.

There are no other interests on the part of the parties participating in the Offering that are of material importance for the Offering. There are no conflicts of interests.

**E.5** Entity that offers the sale of shares; lock-up agreements: the parties involved and indication of the period of the lock-up

The Offer Shares will be offered to retail investors in the Netherlands by Kempen & Co. Private placements of the Offer Shares will be arranged by the Syndicate Banks and the Selling Agent.

The Company has agreed with the Syndicate Banks that it will not, for a period ending six months after the first day of trading of the shares of the Company on Euronext Amsterdam, without the prior written consent from Kempen & Co on behalf of the Syndicate Banks, such consent not to be unreasonably withheld, and to the extent legally permissible:

- announce or effect an increase of the share capital of the Company out of authorized capital, other than the Greenshoe Capital Increase; or
- submit a proposal for a capital increase to any meeting of the shareholders for resolution; or
- announce to issue, effect or submit a proposal for the issuance of any securities convertible into shares of the Company, with option rights for shares of the Company; or
- enter into a transaction or perform any action economically similar to those described above.

The Company may, however, offer, sell and issue options, warrants and shares of the Company (i) under current employee share purchase and share option schemes or (ii) in consideration of all or a portion of the acquisition price of any business acquired by the Company or for purposes of entering into a joint venture. In the latter case the Company has agreed to consult with the Syndicate Banks prior to the issuance of the shares or other securities and to use its best efforts to negotiate an undertaking of the recipient that it will accept selling restrictions comparable to those to which the existing shareholders have agreed in connection with the Offering for a period ending six months after the first day of trading of the shares of the Company on Euronext.

For the period ending six months after the first day of trading of the shares of the Company on Euronext Amsterdam, each of the existing shareholders of the Company (i.e. the shareholders as presented in Item B.6 of the summary and the shareholders Sycamore GmbH, DNS-Beteiligungs GmbH, tbg Technologie-Beteiligungs-Gesellschaft mbH, Technologie Beteiligungsfonds Bayern GmbH & Co. KG, PlatzerInvest AG, Sachsen V.C. GmbH & Co.KG as well as Konrad Glund, Dr. Hendrik Liebers, Dr. Inge Lues, Prof. Dr. Georg Frank and Arnd Christ as current, former and future members of the management board and the supervisory board of the Company (together the “**Lock-up Shareholders**”) agreed that they will not:

- offer, pledge, allot, sell, contract to sell, sell any option or contract to purchase, purchase any option to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any of the shares of the Company it holds as of the date of this Prospectus or any other securities of the Company convertible into or exercisable or exchangeable for shares of the Company;
- enter into a transaction or perform any action economically similar to those described above, in particular enter into any swap or other arrangement that transfers to another, in whole or in part, the economic risk of ownership of shares, whether any such transaction is to be settled by delivery of shares or such other securities of the Company, in cash or otherwise.

In addition, each of the Lock-up Shareholders agreed that they will not enter into any such transaction as described above for a further period of six months without the prior written consent of Kempen & Co.

Furthermore, each of the Lock-up Shareholders agreed that, for the period ending 12 months after the first day of trading of the Shares on Euronext Amsterdam, it will not propose, directly or indirectly, any increase in the share capital of the Company to any meeting of the shareholders for resolution, or vote in favor of such a proposed increase or otherwise support any proposal for the issuance of financial instruments or securities convertible into shares of the Company (other than as expressly provided by this Prospectus) without the prior written

consent of Kempen & Co which may not be unreasonably withheld.

The following transactions shall be excluded from the above restrictions:

- any tender of shares or securities of the Company following any public tender offer (or the granting of an irrevocable undertaking to accept any public tender offer) that is made with a view to acquire the entire issued share capital of the Company and that has been recommended by the management board of the Company;
- any disposal of shares made pursuant to an offer by the Company to purchase its own shares, provided that such offer is made on identical terms to all holders of shares of the Company and complies with all applicable laws;
- any purchase of Offer Shares;
- any disposal of securities of the Company to any purchaser in off-market transactions other than through a secondary offering, provided that, prior to any such transfer, such purchaser shall undertake with Kempen & Co to be bound by the restrictions set forth above with respect to the relevant securities of the Company for the remainder of the lock-up period;
- any shares of the Company in relation to a settlement share loan agreement agreed between certain of the existing shareholders and Kempen & Co and any shares of the Company for covering the Over-allotment Option in connection with the Offering;
- any disposal of shares or securities of the Company required by any statutory or regulatory requirement or court decision.

Any shares redelivered to the Lending Shareholders under the Settlement Share Loan or under the share loan for covering any over-allotment will become subject to the above selling restrictions as any other Existing Shares held by the Lending Shareholders.

#### **E.6 Dilution**

The net book value of the Company as reflected in the Company's balance sheet in accordance with IFRS as of 31 August 2014 amounted to TEUR – 890 and is calculated on the basis of total assets minus total liabilities.

This is equivalent to approximately EUR – 0.17 per share (calculated on the basis of 5,241,693 shares outstanding as of the date of this Prospectus).

The following calculation is based on the assumption that the Offer Price amounts to EUR 17.125, which corresponds to the mid-point of the Price Range.

Assuming that only 1,475,409 New Shares are placed and the Greenshoe Option will not be exercised (minimum scenario), the Company would obtain net proceeds from the placement of the New Shares of approximately TEUR 22,777. If the Company had obtained this amount already as of 31 August 2014, the net book value of the Company at that time would have been about TEUR 21,887 or EUR 3.26 per share (based on the increased number of 6,717,102 shares after the placement of only the New Shares). Consequently, under the above mentioned assumptions, the implementation of the Offering would lead to a direct increase in the net book value of Company of around EUR 3.43, but to a direct dilution of EUR 13.87, or 80.98% per share for the purchasers of the Offer Shares who acquire shares at the mid-point of the price range.

Assuming that all the New Shares and the Additional New Shares will be placed and the Greenshoe Option will be fully exercised on that basis (i.e. 15% of the sum of the New Shares and the Additional New Shares) (maximum scenario), the Company would obtain net proceeds from the placement of the New Shares of approximately TEUR 30,299. If the Company had obtained this amount already as of 31 August 2014, the net book value of the Company at that time would have been about TEUR 29,409 or EUR 4.09 per share (based on the increased number of 7,192,921 shares after the placement of the Total New Shares). Consequently, under the above mentioned assumptions, the implementation of the Offering would lead to a direct increase in the net book value of the Company of around EUR 4.26, but to a direct dilution of EUR 13.04, or 76.13% per share for the purchasers of the Offer Shares who acquire shares at the mid-point of the price range.

#### **E.7 Expenses charged to the investor**

Not applicable. No expenses will be charged to the investors.

## RISK FACTORS

Before making a decision regarding the purchase of the shares offered, investors should carefully review the risks described below in addition to other information contained in this prospectus (the “Prospectus”), and take these factors into account in making their investment decision. The occurrence of one or more of these risks, individually or together with other circumstances may have a material adverse effect on the business of Probiodrug AG (the “Company” or “Probiodrug AG”) and its subsidiary (jointly referred to as “Probiodrug”) and its assets, financial position and results of operations. The risks described below may turn out to be incomplete and therefore may not be the only risks to which Probiodrug is exposed. The order in which the risks are presented does not reflect the likelihood of their occurrence or the extent or significance of the individual risks. Additional risks and uncertainties, of which the Company is currently not aware, could have a material adverse effect on the business of Probiodrug and its assets, financial position or results of operations. The market price of the shares of the Company could fall if these risks were to materialize. In such case, investors could lose all or part of their investment.

### Risks relating to Probiodrug’s business

#### *Development risks on products and technologies*

*Drug development is a highly speculative undertaking and involves a substantial degree of uncertainty. Probiodrug is dependent on the success of its current product candidates PQ912, PQ1565 and PBD-C06 and cannot be certain that any of them will be safe and effective, will receive regulatory approval or be successfully commercialized. If Probiodrug is unable to complete clinical studies or to obtain regulatory approval for any of its product candidates, or experiences significant delays in doing so, this would have a material adverse effect on its business*

Probiodrug is a biopharmaceutical company that focuses on the research and development of new therapeutic products for the treatment of Alzheimer’s disease (“AD”). Drug development is a highly speculative undertaking and involves a substantial degree of risk. Probiodrug is pioneering a new treatment mechanism, based on the lowering of pyroglutamylobeta (“pGlu-Abeta”) in Alzheimer patients. Probiodrug has invested a significant portion of its resources in the development of its product candidates. Probiodrug’s prospects for the foreseeable future, including its ability to continue to develop its three product candidates, PQ912, PQ1565 and PBD-C06, and to achieve profitability will depend to a significant extent on Probiodrug’s ability, alone or with partners, to successfully complete the preclinical and clinical development of these product candidates, to obtain the necessary regulatory approvals and eventually to successfully commercialize these product candidates. Probiodrug is currently preparing to advance PQ912 to a Phase 2a clinical study in which it will evaluate safety and efficacy, which is the first phase where PQ912 will be tested in patients with AD. PBD-C06 and PQ1565 are currently in preclinical research and have not yet entered into formal preclinical development. Currently, the Company focuses on these three product candidates.

The future opportunities of Probiodrug depend on the success of its research and development programs. As a product-orientated biotechnology company Probiodrug is subject to the risks generally inherent in the drug development business, i.e. whether the Company will eventually succeed in developing a product that can be successfully and profitably commercialized. Such risks are particularly pronounced in the biotechnology industry especially because of the long development time of the individual product candidates. Development of a drug may take 10 to 15 years or even longer and so far drug companies have failed to develop disease-modifying drugs for the treatment of AD, i.e. drugs that alter, stop or cure the development of the disease, instead of merely alleviating symptoms.

Prior to a potential commercial use, Probiodrug’s product candidates have to pass through preclinical development stages, followed by individual phases of clinical studies in humans when the effectiveness of the drugs and their potential side effects are investigated. Only after it has been demonstrated with substantial evidence through well-controlled clinical studies that the product candidates are safe and effective for use, the Company can seek regulatory approvals for their commercial sale from the relevant regulating governmental bodies (the “Competent Authorities”).

So far, based on its study results, the Company believes that its clinical product candidate PQ912, the only product candidate that has been tested on humans, is safe and will be well tolerated in humans. Success in early preclinical or clinical studies does however not mean that future larger clinical studies will be successful. Product candidates in later-stage clinical studies may fail to demonstrate sufficient safety and efficacy despite having shown promising results in and progressed through early clinical studies. Similarly, the outcome of preclinical testing and early clinical studies may not be predictive of the success of later clinical studies, and interim results of a clinical study do not necessarily predict final results. Progress in studies of one product candidate does not indicate that the Company will make similar progress in additional studies for that product candidate or in studies for other product candidates. A number of companies in the pharmaceutical industry, including those with greater resources and experience than the Company, have suffered significant setbacks in advanced clinical studies, even after obtaining promising results in earlier clinical studies. Also, there can be significant variability in safety and /or efficacy results between different studies of the same product

candidate due to numerous factors, including changes in study protocols, differences in size and type of the patient populations, adherence to the dosing regimen and other study protocols and the rate of dropout among clinical study participants. The Company therefore cannot predict whether any Phase 2, Phase 3 or other clinical studies conducted will demonstrate consistent or adequate efficacy and safety to obtain regulatory approval to market the Company's product candidates. Probiodrug cannot guarantee that its product candidates show sufficient efficacy in patients in future studies or do not display harmful side effects or other relevant adverse events or that other findings do not exclude the further development of its respective product candidates. Any such findings may result in significant delay or even termination of the development of the relevant product candidate which could have a material adverse effect on Probiodrug's business, prospects, liquidity position, financial condition and results of operations.

*Failure to successfully exploring benefits of combination therapies between Probiodrug's product candidates and other products and evaluating the potential of the anti-pGlu-Abeta approach for other indications could impair Probiodrug's business*

Although Probiodrug's efforts will focus on the continued preclinical and clinical testing and potential approval of its current three product candidates, a further element of Probiodrug's strategy is to take advantage of new business opportunities in the future, such as exploring benefits of combination therapies between Probiodrug's product candidates and other products and evaluating the potential of the anti-pGlu-Abeta approach for other indications, such as the Down syndrome or aged-dependent macular degeneration ("AMD"). Probiodrug may fail to discover such additional possibilities of treatment combinations or the anti-pGlu-Abeta approach may turn out to have no potential for other indications. All product candidates are prone to risks of failure typical for pharmaceutical product development, including the possibility that a product candidate may not be suitable for clinical development as a result of its harmful side effects, limited efficacy or other characteristics that indicate that it is unlikely to be a product that will receive approval by the relevant Competent Authorities or achieve market acceptance. If Probiodrug does not successfully develop and take advantage of the possible future opportunities to market these additional products or product candidates, this could have a material adverse effect on its business, prospects, financial condition and results of operations.

*Competing product candidates could be approved on the market and may be more effective, tolerable or preferred by Competent Authorities over the products of Probiodrug*

Probiodrug's competitors also develop new product candidates in the therapeutical areas targeted by Probiodrug. These competitive product candidates may have a better effectiveness, tolerability or side effect profile and might also be preferred by the Competent Authorities in the approval process. As a result, Probiodrug's product candidates could not be approved for the market or may not be sustainably established in the market. In addition, Probiodrug may fail to agree on licensing partnerships for the licensing of its product candidates or the potential cooperation or licensing partner may fail to further develop, file for market approval or market Probiodrug's relevant product candidate. As a consequence, Probiodrug may not be able to receive revenues or potential milestone payments or licenses fees or revenue participation out of licensing agreements with pharmaceutical or biotechnical companies in the future which could have material adverse effects on Probiodrug's business, prospects, financial condition and results of operations.

### **Financial risks**

*Probiodrug produces operating losses, has an accumulated deficit and may never become profitable*

The Company was founded in 1997 and has focused since 2004 on the identification, research and development of drug candidates for the treatment of AD. On the basis of these research and development activities, the Company has not yet generated any revenues. Probiodrug reported a comprehensive income (loss) of TEUR -9,894 for the year 2013 and of TEUR -3,826 for the first six-month period ended 30 June 2014 (according to IFRS); the accumulated loss reported was TEUR -85,571 (retained earnings) as of 30 June 2014 (according to IFRS). The generated losses result from the lack of revenues on the one hand and the costs and expenses for research and development and administrative expenses on the other hand.

Probiodrug will only become profitable if it succeeds to generate substantial revenues from the commercialization of its product candidates, such as advance payments, milestone payments, commissions or fees from licensing agreements or partnerships with pharmaceutical or biotechnology companies, or from research, development or cooperation agreements or product sales. For as long as the Company does not generate sufficient revenues that enable the Company to offset its costs and expenses, and possibly even then, the Company is dependent on additional equity and/or debt financing.

The future profitability of the Company largely depends on the success of the preclinical and clinical studies, the required approvals of Competent Authorities and the market acceptance of its product candidates as well as on its ability to commercialize its products and/or product candidates, which may require the Company to find a suitable partner. It cannot be excluded that some or even all of the development programs of the Company in respect of its product

candidates may need to be terminated in the research and development stage prior to market launch or out-licensing or thereafter, so that no revenues from such product candidates may be generated.

Because numerous factors influence the development of product candidates, it is uncertain whether the Company will ever achieve any substantial revenues. Likewise, the time when the Company may operate profitably, if ever, cannot be predicted. Therefore, because the company will continue to incur expenses for research and development and general administration in the future, the Company expects that it will continue to report losses for the foreseeable future.

If the Company fails to generate sufficient revenues to cover its costs and expenses and /or to obtain sufficient equity and /or debt financing to continue its business activities, the Company will be forced to file for insolvency or to go into liquidation. This could lead to the total loss of the capital invested by the shareholders.

*The Company will likely need substantial additional funding in the future, which may not be available on commercially acceptable or sensible terms when needed or may not be available at all*

The Company currently relies mainly on equity financing for the funding of its operations complemented by public grants, whereby materially all subsidized programs have been completed as of the date of this Prospectus. Probiodrug will likely require additional funding after completion of this Offering to adequately and sufficiently finance its operations, in particular its research and development programs, and /or to take advantage of new business opportunities to broaden and diversify its research and development portfolio in the future, e.g. through in-licensing or acquisitions of programs or companies with synergistic or complementary technologies and products and /or product candidates. The Company's future financing needs will depend on many factors, including the progress, costs and timing of its research and development activities and clinical studies, the costs and timing of obtaining regulatory approvals, the costs of obtaining, maintaining and enforcing its patents and other intellectual property rights, the costs and timing of obtaining manufacturing of its product candidates, the costs and timing of establishing sales and marketing capabilities and the terms and timing of establishing collaborations, license agreements and other partnerships.

The Company currently anticipates that it will use the net proceeds of this Offering primarily to support the progression of its product candidates and it believes that these proceeds will be sufficient to finance at least the performance of the Phase 2a study for its product candidate PQ912. However, the liquidity position of the Company, including the proceeds from this Offering, may prove not to be sufficient to cover the Company's costs and expenses for research and development as assumed in its business plan, including the performance of the Phase 2a study for PQ912. Such deviation from the business plan may in particular occur if the intended preclinical and clinical studies for its product candidates are significantly delayed or altered or if any of the risks described in this Prospectus having an impact on the Company's liquidity position materialize.

Probiodrug's ability to raise additional funds in the future will depend on financial, economic and market conditions and other factors over which it may have no or limited control, and Probiodrug cannot exclude that additional funds may not be available to it when necessary on commercially acceptable or sensible terms, if at all. In case the necessary funds are not available when needed, or not at commercially acceptable or sensible terms, Probiodrug may need to seek funds through collaborations and licensing arrangements earlier than planned or other alternatives, which may require the Company to reduce or relinquish significant rights to its research programs and product candidates, to grant licenses on its technologies to partners or third parties or to enter into cooperation agreements, the terms of which could be less favorable to Probiodrug than originally expected. In addition, the perception that the Company may not be able to continue as a going concern may cause others to choose not to deal with the Company due to concerns about its ability to meet its contractual obligations.

Probiodrug expects to finance its operations also in the foreseeable future primarily with equity. However, intended equity-related transactions such as the issue of new shares may not be successful, whether due to market conditions or otherwise.

Further, Probiodrug may be required to finance its cash needs with debt financing. Any debt financing could involve substantial restrictions on activities and creditors could seek assignments or pledges of some or all of the Company's assets including patents.

If adequate funds are not available on commercially acceptable or sensible terms when needed, Probiodrug may also be forced to delay, reduce or terminate the development or marketing of all or part of its products or product candidates and it may be unable to take advantage of future business opportunities all of which could have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations.

*Probiodrug AG may be required to pay retroactively additional taxes plus interest amounting to EUR 2.5 million (including accrued interest) as of 30 June 2014 which may negatively impact its liquidity position and could endanger its going concern*

In 2004, Probiodrug sold its diabetes program (DP4 inhibitors) including all related IP rights generating a taxable profit in that year. Following a tax audit in 2008, the tax authorities retroactively increased the taxable profits for 2004 by approximately EUR 10 million, resulting in a tax claim for corporate income tax, solidarity surcharge and trade tax of EUR 1.64 million plus interest of 0.5% per month since 1 April 2006. The potential tax liability amounts to a total of EUR 2.5 million as of 30 June 2014 (including accrued interest). The Company believes that the better arguments speak against the tax authorities' view and has contested the claims of the tax authorities. The matter is now pending with the competent tax court. As a matter of precaution, the Company has recognized in its financial statements a tax reserve corresponding to the amount in dispute (including accrued interest). Nevertheless, should the Company be eventually required to make such tax payments, this would have a corresponding material adverse effect on Probiodrug's liquidity and cash flow position and may negatively affect its business, prospects and financial conditions. Such payment obligations could endanger the going concern of Probiodrug if the Company does not succeed to receive additional funding from the Offering or otherwise.

*Restrictions of the utilization of tax loss carry forwards may have an adverse effect on Probiodrug's financial condition and results of operations*

The use of Probiodrug's existing tax loss carry forwards and ongoing losses for German corporate income and trade tax purposes may be forfeited or may have already been forfeited in case of a direct or indirect transfer of shares, including the issue of new shares from a capital increase, subject to certain limited exceptions. Such restriction, applying to both corporate income and trade tax, depends on the percentage of share capital or voting rights transferred within a five-year period to one acquirer or person(s) closely related to the acquirer or a group of acquirers with a common interest. If more than 25% of the share capital or voting rights are transferred to such an acquirer (including potentially as a result of the transfer of existing shares from certain existing shareholders to the Syndicate Banks according to lending agreements or of the subscription of new shares by the syndicate banks in the course of the Offering), tax loss carry forwards and current losses will be forfeited on a pro rata basis while a transfer of more than 50% will result in a total forfeiture.

To the extent the utilization of tax loss carry forwards is restricted, they cannot be set off against future taxable profits which would result in increased tax burdens. This would negatively affect Probiodrug's financial condition and results of operations.

*The Company may be required to refund grants and subsidies*

The Company has received various grants and subsidies to fund its research and development programs from various funding organizations. Materially all such subsidized projects have been completed as of the date of this Prospectus. However, the Company continues to engage in efforts to secure further grants and subsidies for the next development steps of its product candidates. From 2004 until 30 June 2014, the Company has received a total of EUR 10.4 million in grants for its AD projects and related activities. Some of these grants and subsidies provide for certain requirements in respect of the utilization of proceeds generated as a result of the publicly sponsored projects, e.g. proceeds from a sale or the licensing of products or patents developed in connection with these projects. Under these requirements, the Company is obliged to reinvest such proceeds in the Company up to the amounts received under the respective grants or subsidies. These obligations have a term of five years after the termination of the sponsored project. As of the date of this Prospectus, programs with a total amount of approximately EUR 2.86 million are still affected by this obligation.

For most of the projects the proof of use (*Verwendungsnachweis*) was audited by the competent authorities, in each case without major findings. For three projects with subsidies in the aggregate amount of approximately TEUR 670 the audit of the authorities is still outstanding. The Company will continue to seek further funds that are non-dilutive for the shareholders of the Company for the next development steps of the Company. However, the Company expects that most parts of the future funding needs will be financed by equity instruments.

If the Company is in non-compliance with the restrictions and conditions of the grant and subsidy programs, a partly or complete repayment cannot be excluded. This may also apply to grants and subsidies the Company may apply for in the future. If the Company is required to refund grants or subsidies this could have a material adverse effect on Probiodrug's liquidity and cash flow position and may negatively affect its business, prospects and financial conditions.

### ***Risks relating to the regulatory environment***

*Nearly all aspects of Probiodrug's activities are subject to substantial regulation. No assurance can be given that any of Probiodrug's product candidates will fulfill regulatory requirements. Failure to comply with such regulatory*

*requirements could result in delays, suspensions, refusals and withdrawals of approvals as well as fines and could make it impossible for the Company to commercialize its products and/or product candidates*

The international biopharmaceutical and medical technology industry is highly regulated by Competent Authorities that impose substantial requirements covering nearly all aspects of Probiodrug's activities, notably on research and development, manufacturing, preclinical tests, clinical studies, labeling, marketing, sales, storage, record keeping, promotion and pricing of its research programs, product candidates and future products. Such regulation is subject to regular review by the Competent Authorities which may result in changes in the applicable regulation. If Probiodrug does not comply with one or more of these factors in a timely manner, or at all, it could experience significant delays as a result of the European Medicine Agency ("EMA") in the European Union, the Food and Drug Administration ("FDA") in the United States or another Competent Authority recommending non-approval or restrictions on approval for a product candidate, leading to an inability to successfully commercialize any of Probiodrug's products and/or product candidates, which could materially harm its business. Any failure of any of Probiodrug's product candidates in clinical studies or in receiving regulatory approval could have a material adverse effect on Probiodrug's business, results of operations, financial condition and prospects. If any of Probiodrug's product candidates fails to obtain approval on the basis of any applicable condensed regulatory approval process, this will prevent such product candidate from obtaining approval in a shortened time frame, or at all, resulting in increased expenses.

Compliance with the standards laid down by local Competent Authorities is required in each country where Probiodrug, or any of its partners or licensees, conducts its activities. The Competent Authorities include the EMA and the FDA. In order to market Probiodrug's future products in regions such as the European Economic Area, United States of America, Asia Pacific, and other jurisdictions, Probiodrug must obtain separate regulatory approvals. The approval procedures vary among countries and can require additional clinical testing, and the time required to obtain approval may differ from that required to obtain for example an approval from the FDA or EMA. Moreover, clinical studies conducted in one country may not be accepted by regulatory authorities in other countries. Approval by the FDA or EMA does not ensure approval by Competent Authorities in other countries, and approval by one or more foreign regulatory authorities does not ensure approval by regulatory authorities in other countries or by the FDA or EMA.

There can be no assurance that Probiodrug's product candidates will fulfill the criteria required to obtain necessary regulatory clearance to access the market. Also Probiodrug cannot predict the exact nature, precise timing and detailed costs and expenses in respect of the efforts that will be necessary to complete the development of its research programs and product candidates. Each Competent Authority may impose its own requirements, revoke an approval, refuse to grant approval, or require additional data before granting approval, notwithstanding that approval may have been granted by one or more other Competent Authorities. Competent Authorities may also approve a product candidate for fewer or more limited indications or patient sub-segments than requested or may grant approval subject to the performance of post-marketing studies. Approvals may be delayed, limited or denied for a number of reasons, many of which are beyond Probiodrug's control. Such reasons could include, among others, the production process or site not meeting the applicable requirements for the manufacturing of regulated products, or the product candidates not meeting applicable requirements for safety or efficacy during the clinical development stage or after marketing of the product candidates commences. No assurance can be given that clinical studies will be approved by Competent Authorities or that product candidates will be approved for marketing by Competent Authorities in any pre-determined indication or intended use. Competent Authorities may also disagree with Probiodrug's interpretation of data submitted for their review.

Probiodrug's product candidates may become subject to changes in the regulatory framework or market conditions. Regulatory guidelines may change during the course of drug development and review processes, which may render the chosen development strategy suboptimal. Market conditions may change resulting from the emergence of new competitors or new treatment guidelines or otherwise which may require alterations to the research and development strategy. Changes in the regulatory framework or the market conditions may result in significant delays, increased costs, and significant changes in the commercial assumptions and may prevent the product candidates of the Company from obtaining approval necessary for the marketing of its product candidates.

Any of the above risks could have a material adverse effect on Probiodrug's liquidity position, business, prospects, financial condition and results of operations.

*Probiodrug's research programs and product candidates must undergo rigorous preclinical tests and clinical studies, the start, timing of completion, number and results of which are uncertain and could substantially delay or prevent the product candidates from ever reaching the market*

Preclinical tests and clinical studies are expensive and time-consuming and their results are uncertain. Probiodrug, its collaborative partners or other third parties may not successfully complete the preclinical tests and clinical studies of the research programs and product candidates, which could delay or prevent the commercialization of Probiodrug's product candidates. Probiodrug cannot guarantee that its research programs and product candidates will demonstrate sufficient safety or efficacy or performance in its preclinical tests and clinical studies to obtain marketing approval in any given

country or at all, and the results from earlier preclinical tests and clinical studies may not indicate the results of later-stage preclinical tests and clinical studies. At any stage of development, based on a review of available preclinical and clinical data, the estimated costs for the continued development of its product candidates, market assessments and other factors could change, and the development of any of Probiodrug's research programs and product candidates may be suspended or discontinued.

Clinical studies can be delayed for a variety of reasons, including delays in obtaining regulatory approval to commence a study, in reaching agreement on acceptable terms with prospective contract research organizations ("CROs"), contract manufacturing organizations ("CMOs") and clinical study sites, in obtaining ethics committee approval, in recruiting suitable patients to participate in a study, in having patients complete a study or return for follow-up, in adding new sites or in obtaining sufficient supplies of clinical study materials or clinical sites dropping out of a study and in the availability to Probiodrug of appropriate clinical study insurances. Furthermore, Probiodrug, its collaborative partners or regulators may require additional preclinical tests and clinical studies. Such delays or additional testing could result in increased costs and delay or jeopardize Probiodrug's ability to obtain regulatory approval and thus the commencement of the marketing of its product candidates as expected.

Successful and timely completion of clinical studies will require the enrolment of a sufficient number of patient candidates. Studies may be subject to delays as a result of patient enrolment taking longer than anticipated or patient withdrawal. Many factors affect patient enrolment, including the size and nature of the patient population, the severity of the disease under investigation, the patient eligibility criteria for the study in question, the ability to monitor patients adequately during and after the treatment, Probiodrug's payments for conducting clinical studies, the proximity of patients to clinical sites, the design of the clinical study, clinicians' and patients' perceptions as to the potential advantages of the product candidates being studied in relation to other available therapies, including any new products that may be approved for the indications Probiodrug is developing and whether the clinical study design involves comparison to placebo or standard of care. In addition, some of Probiodrug's competitors have on-going clinical studies for product candidates that treat the same indications as Probiodrug's product candidates, and patients who would otherwise be eligible for Probiodrug's clinical studies may instead enroll in clinical studies of product candidates of Probiodrug's competitors. If Probiodrug experiences lower than expected enrolment in the studies, the studies may not be completed as envisaged or may become more expensive to complete.

The realization of any of the above risks may have a material adverse effect on Probiodrug's liquidity position, business, prospects, financial condition and results of operation.

*If serious adverse side effects are identified for any of its product candidates, Probiodrug may need to abandon or limit its development of that product candidate, which may delay or prevent marketing approval by the Competent Authorities, or, if approval is received for the product candidate, may require it to be taken off the market, to include safety warnings or otherwise limit its sales*

Not all adverse effects of drugs can be predicted or anticipated. Serious unforeseen side effects from any of Probiodrug's product candidates could arise either during clinical development or, if approved by Competent Authorities, after the approved product has been marketed. All of Probiodrug's product candidates are still in clinical or preclinical development. While Probiodrug's preclinical and clinical studies for its product candidate PQ912 to date have demonstrated an acceptable safety profile, the results from future studies may not support this conclusion. Probiodrug's product candidates PBD-CO6 and PQ1565 have not entered formal preclinical studies yet and are still in the preclinical research stage. The results of future preclinical and clinical studies may show that Probiodrug's product candidates cause undesirable or unacceptable side effects or even death, which could interrupt, delay or halt clinical studies, and result in the delay of, or failure to obtain, marketing approval from the FDA, the EMA and other Competent Authorities, or result in marketing approval from the FDA, the EMA and other Competent Authorities with restrictive label warnings impacting sales and increasing the risk of potential product liability claims. The number of patients that are treated with Probiodrug's product candidates increases in advanced clinical studies and even more so if Probiodrug's product candidates receive marketing approval and are successfully marketed, such that the risk that uncommon or low frequency but significant side effects are identified may likewise increase. If any of Probiodrug's product candidates receives marketing approval and Probiodrug or others later identify undesirable or unacceptable side effects caused by such products at that time:

- Competent Authorities may require Probiodrug to take its approved product off the market;
- Competent Authorities may require the addition of labeling statements, specific warnings, a contraindication or field alerts to physicians and pharmacies;
- Probiodrug may be required to change the way the product is administered, conduct additional clinical studies or change the labeling of the product;

- Probiodrug may be subject to limitations on how it may promote the product;
- future sales of the product may decrease significantly;
- Probiodrug may be subject to litigation or product liability claims; and
- Probiodrug's reputation may suffer and, thus, jeopardize the success of its other product candidates.

Any of these events could prevent Probiodrug or any potential future commercializing partners from achieving or maintaining market acceptance of the affected product or could substantially increase commercialization costs and expenses which could delay or prevent Probiodrug from generating significant revenue from the sale of its products and therefore could have a material adverse effect on Probiodrug's liquidity position, business, prospects, financial condition and results of operations.

*If Probiodrug obtains regulatory approval for a product candidate, the approved product will remain subject to on-going regulatory obligations*

If Probiodrug obtains regulatory approval in a jurisdiction, Competent Authorities may still impose significant restrictions on the indicated uses or marketing of the product and impose on-going requirements for potentially costly post-approval studies or post-market surveillance. There can be no guarantee that such additional data or studies, if required, will corroborate earlier data. Post-approval manufacturing and marketing of Probiodrug's products may show different safety and efficacy profiles to those demonstrated in the data on which the approval to test or market such products was based. As Probiodrug intends to conduct clinical tests of its products with other therapeutic products (combination therapy), Probiodrug's products would be exposed to any risk identified in relation to such other therapeutic products. Such risks could lead to the withdrawal, restriction on use or suspension of approval, which could have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations. Advertising and promotional materials must comply with applicable rules and regulations and are subject to review by the Competent Authorities. In addition, Competent Authorities may not approve the labeling claims or advertisements that are necessary or desirable for the successful commercialization of Probiodrug's possible future products.

For example, if the Company seeks FDA approval in the United States, Probiodrug's product candidate PBD-C06 would be classified as biologics and, therefore, can only be sold if Probiodrug obtains a Biologics License Application (BLA) from the FDA. The holder of a BLA is obligated to monitor and report adverse events and any failure of a product to meet the specifications in the BLA. The holder of a BLA must also submit new or supplemental applications and obtain FDA approval for certain changes to the approved product, product labeling or manufacturing process. Failure to comply with a BLA or any other on-going regulatory obligation may result in the suspension of the approval to manufacture or distribute the relevant product as well as fines or imprisonment.

Competent Authorities have broad enforcement powers and a failure by Probiodrug or its present or future collaboration partners to comply with applicable regulatory requirements can, among other things, result in recalls or seizures of products, operating and production restrictions, withdrawals of previously granted marketing approvals, total or partial suspension of regulatory approvals for ongoing clinical studies, refusals to approve pending applications, warning letters, injunctions, penalties, fines, civil proceedings, criminal prosecutions and imprisonment. Competent authorities may also refuse to allow Probiodrug to enter into supply contracts, including government contracts. Further, any government investigation of alleged violations of law could require Probiodrug to expend significant time and resources in response and could generate negative publicity.

The occurrence of any event or penalty described above may delay the commercialization of Probiodrug's possible future products, increase costs and expenses and materially adversely affect Probiodrug's business, prospects, financial condition and results of operation.

### ***Commercialization and market risks***

*New technologies could facilitate or enhance the development of product candidates from competitors or limit or eliminate the market opportunity for Probiodrug's product candidates*

The market for pharmaceutical products, in particular regarding the treatment of AD, is likely to become highly competitive. The fields in which Probiodrug operates are characterized by rapid technological change and innovation. Probiodrug's competitors include many established pharmaceutical and biotechnology enterprises, universities and other research or commercial institutions many of which have substantially greater financial, research and development resources than Probiodrug. Although Probiodrug believes that it is pursuing a unique approach with its product candidates PQ912 and PQ1565 for the treatment of AD, there are competitors with different medical approaches whose product candidates are more advanced than those of Probiodrug. In particular, the pharmaceutical company Eli Lilly &

Company has reported development progress with an antibody that, like Probiodrug's antibody PBD-C06, also focuses on a pGlu-Abeta related mechanism.

Although Probiodrug believes that a combination of its product candidates with other therapies of competitors being on the market or in development may possibly have additive or synergetic effects due to the different mechanisms of action, there can be no assurance that competitors of Probiodrug are not currently developing, or will not in the future develop, technologies and product candidates that are equally or more effective or are economically more favorable as any current or future product or product candidate of Probiodrug taken alone or in combination with other therapies. Competing products may gain faster or greater market acceptance than Probiodrug's possible future products, without necessarily being more effective or safer, and medical advances or rapid technological development by competitors may result in Probiodrug's product candidates becoming non-competitive or obsolete before Probiodrug is able to recover its investments made in research and development and marketing. If Probiodrug fails to effectively compete with its products in the market this would have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations.

*Even if Probiodrug eventually gains approval for any of its product candidates, it may be unable to commercialize them*

Probiodrug has neither a sales or marketing infrastructure nor experience in the sale or marketing of pharmaceutical products. To achieve commercial success for any approved product, Probiodrug would have to develop or acquire a sales and marketing organization, outsource these functions to third parties or enter into partnerships with parties that are able and willing to commercialize Probiodrug's future products, but such partnerships or marketing arrangements could be difficult to find.

Probiodrug may decide to establish its own sales and marketing capabilities and promote its possible future products if it has obtained the necessary regulatory approvals for the marketing of its products. Even if Probiodrug establishes its own sales and marketing capabilities, it may fail to launch or market its products effectively given it has no experience in the sales and marketing of pharmaceutical products. In addition, recruiting and training a suitable sales force is subject to a wide variety of operational risks, likely will be expensive and time consuming and could delay any product launch and marketing activities. In the event that a product launch or marketing activities are delayed or do not occur for any reason, Probiodrug would have commercialization expenses and Probiodrug's investment could be lost if it cannot retain or reposition its sales and marketing force when market conditions require or new products are developed. Factors that may adversely affect Probiodrug's efforts to commercialize its future products on its own include:

- Probiodrug's inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to or persuade adequate numbers of physicians to prescribe its products;
- the lack of complementary products to be offered by sales personnel, which may put Probiodrug at a competitive disadvantage relative to companies with more extensive product lines;
- unforeseen costs and expenses associated with creating an independent sales and marketing organization; and
- costs of marketing and promotion above those anticipated by Probiodrug.

If Probiodrug entered into arrangements with third parties to perform sales and marketing services, the expenses associated therewith could be higher than if Probiodrug were to market and sell its possible future products itself and thus have a negative effect on its profitability. In addition, Probiodrug may not be successful in entering into arrangements with third parties to sell and market its future products or may only be able to do so on terms that are not favorable for Probiodrug. Arrangements with partners may also place the commercialization of Probiodrug's future products outside of Probiodrug's control and could make Probiodrug subject to a number of risks including that Probiodrug may not be able to control the amount or timing of resources that its partner devotes to the marketing and sale of Probiodrug's products or that such partner may not be willing or able to fulfill its obligations under the arrangements or the partner's performance may be adversely affected by business combinations or significant changes in its business strategy.

If Probiodrug does not establish successfully sufficient and efficient sales and marketing capabilities, either on its own or with third parties, it may not be able to successfully commercialize its future products which would have a material adverse effect on its business, prospects, financial condition and results of operations.

*The future commercial success of Probiodrug's product candidates will depend on the degree of market acceptance among physicians, patients, healthcare payers and the medical community*

Probiodrug's product candidates are at varying stages of development and Probiodrug may never develop a drug that is commercially successful. To date, Probiodrug has no drug developed that is approved for marketing and Probiodrug does not expect to be able to market any of its product candidates in the foreseeable future. However, even if Probiodrug eventually succeeds in developing a marketable product, it cannot be ensured that such product will gain the market acceptance necessary for Probiodrug to achieve profitability. Market acceptance of Probiodrug's possible future products by physicians, patients and healthcare payers will depend on a number of factors, many of which are beyond Probiodrug's control, including for example:

- the wording of the drug label;
- acceptance by physicians, patients and third party healthcare payers of each drug as safe, effective and cost-effective;
- ease of use, ease of administration and other perceived advantages over alternative drugs;
- prevalence and severity of side effects or other adverse events (e.g. publicity);
- limitations, precautions or warnings listed in the summary of drug characteristics, patient information leaflet, package labeling or instructions for use;
- the cost of treatment with Probiodrug's possible future products in relation to alternative treatments;
- the extent to which drugs are approved for inclusion and reimbursed on formularies of hospitals and managed care organizations;
- whether drugs are designated in the label and /or under physician treatment guidelines or under reimbursement guidelines as a first-line therapy or as a second-line or third-line or last-line therapy;
- changes in the standard of care for the targeted indications for any possible future products; and
- sales, marketing and distribution support.

The level of acceptance achieved by Probiodrug's product candidates, once they have entered the marketing stage, will have a direct effect on Probiodrug's business, prospects, financial condition and results of operations.

*The price setting and availability and level of adequate reimbursement by third parties is uncertain and may impede Probiodrug's ability to generate sufficient operating revenues to offset operating expenses*

The biotech industry is subject to midterm and long-term developments of national and international healthcare systems and healthcare policies, e.g. health insurance companies and governmental health care institutions may increase the pressure to reduce the overall healthcare costs.

Probiodrug's commercial success will depend on the conditions for setting the sales price of its drugs by the relevant public authorities, commissions and bodies and the conditions of their reimbursement by the health care agencies or insurance companies in the individual countries where Probiodrug intends to market its product candidates. The current context of healthcare cost control and economic and financial crisis that many countries are currently facing or have faced, coupled with the increase in health care budgets caused, *inter alia*, by the aging population creates additional pressure on health care spending in most if not all countries. Consequently, the pressure on sales prices and reimbursement levels is expected to further intensify in particular due to:

- price controls imposed by many countries, if not all;
- the increasing reimbursement limitations of some drugs under budgetary policies;
- the increased difficulty in obtaining and maintaining a satisfactory reimbursement rate for drugs.

Obtaining adequate pricing decisions and the return that can be generated on the investment incurred for the development of product candidates developed by Probiodrug is therefore uncertain. Probiodrug's ability to manage its expenses and cost structure to adapt to increased pricing pressure is also uncertain.

All of these factors will have a direct impact on Probiodrug's ability to generate profits on the drugs developed by Probiodrug and could have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations.

***Risks related to Probiodrug's dependence on third parties and key personnel***

*Probiodrug relies and will continue to rely on collaborative partners regarding the research and development of its programs and product candidates*

Probiodrug is, and expects to continue to be, dependent on collaborations with partners relating to the development and commercialization of its existing and future research programs and product candidates. Probiodrug currently has collaborative research relationships with various academic and research institutions worldwide for the development of its product candidates. Further, Probiodrug has and will continue to have discussions on potential partnering opportunities with various pharmaceutical companies. If Probiodrug fails to enter into or maintain collaborative agreements on reasonable terms or at all, Probiodrug's ability to develop its existing or future research programs and product candidates could be delayed, the commercial potential of its product candidates could change and its costs of development and commercialization could increase. Probiodrug's dependence on collaborative partners is subject to a number of risks, including, but not limited to, the following:

- Probiodrug relies on information and data received from third parties regarding its research programs and product candidates and will not have control of the process conducted by the third party in gathering and composing such data and information. Probiodrug may not have formal or appropriate guarantees from its contract parties with respect to the quality and the completeness of such data;
- a collaborative partner may develop a competing product either by itself or in collaboration with others, including one or more of Probiodrug's competitors;
- Probiodrug's collaborative partners' willingness or ability to fulfill their obligations under Probiodrug's collaboration arrangements may be adversely affected by business combinations or significant changes in a collaborative partner's business strategy;
- Probiodrug may not be able to control the amount or timing of resources that collaborative partners devote to Probiodrug's research programs and product candidates;
- Probiodrug may be required to relinquish significant rights, including intellectual property, marketing and distribution rights;
- Probiodrug's anticipated payments under any collaboration agreement (e.g., royalty payments for licensed products) may not materialize;
- Probiodrug may experience delays in, or increases in the costs of, the development of Probiodrug's research programs and product candidates due to the termination or expiration of collaborative research and development arrangements;
- Probiodrug may have disagreements with collaborative partners, including disagreements over proprietary rights, contract interpretation or the preferred course of development, which might cause delays or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for Probiodrug with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaborative partners may not properly maintain or defend Probiodrug's intellectual property rights or may use proprietary information in such a way as to invite litigation that could jeopardize or invalidate Probiodrug's intellectual property or proprietary information or expose Probiodrug to potential litigation; and/or
- collaborative partners may infringe the intellectual property rights of third parties which may expose Probiodrug to litigation and potential liability.

Probiodrug faces significant competition in seeking appropriate collaborative partners. Probiodrug's ability to reach a definitive agreement for collaboration will depend upon, among other things, an assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. These factors may include the design or results of clinical studies, the likelihood of

regulatory approval, the potential market for the relevant product candidate, the costs and complexities of manufacturing and delivering such product to patients, the potential of competing products, the existence of uncertainty with respect to Probiodrug's ownership of technology, which can exist if there is a challenge to such ownership regardless of the merits of the challenge, and industry and market conditions generally. The collaborating partner may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such collaboration could be more attractive than the one with Probiodrug. Any of the above factors could have a material adverse effect on Probiodrug's ability to enter into successful collaborative arrangements and, consequently, its business, prospects, financial condition and results of operations.

*Probiodrug relies upon third-party contractors and service providers for the execution of most aspects of its development programs. Failure of these third parties to provide services of a suitable quality and within acceptable timeframes may cause the delay or failure of Probiodrug's development programs*

Probiodrug outsources and expects to outsource the majority of functions, tests and services to contract research organizations ("CROs"), medical institutions and other specialist providers in relation to, among others, assays, animal models, toxicology studies, and pharmacokinetic /pharmacodynamic studies. Probiodrug furthermore relies on these third parties for quality assurance, clinical monitoring, clinical data management and regulatory expertise. Probiodrug has engaged, and may in the future engage, CROs to run all aspects of a clinical study on its behalf. There is no assurance that such individuals or organizations will be able to provide the functions, tests or services as agreed upon or with the necessary quality which could result in significant delays in the development of its product candidates. Currently, Probiodrug relies on one single CRO.

There is also no assurance that these third parties will not make errors in the design, management or retention of Probiodrug's data or data systems. The failure of such third parties could lead to loss of data, which in turn could lead to delays in commercialization. These third parties may not pass FDA, EMA or other regulatory audits, which could delay or prohibit regulatory approvals. In addition, the cost of such services could significantly increase over time. If these third parties do not successfully carry out their contractual duties or meet expected timelines, obtaining regulatory approval for manufacturing and commercialization of its product candidates may be delayed or prevented, which would have a material adverse effect on Probiodrug's business prospects, results of operations and/or financial condition.

*Probiodrug relies on third parties to supply and manufacture its product candidates, and it expects to rely on third parties to manufacture its products, if approved. The development of such product candidates and the commercialization of any products, if approved, could be stopped or delayed if any such third party fails to manufacture or provide sufficient quantities of product candidates or products or fails to do so at acceptable quality levels or prices or fails to maintain or achieve satisfactory regulatory compliance*

Probiodrug does not currently have, nor does it plan to acquire, the infrastructure or capability internally to manufacture its product candidates for use in the conduct of its clinical or preclinical studies or for commercial supply, once its product candidates are approved for marketing. Instead, Probiodrug relies on, and expects to continue to rely on, Contract Manufacturing Organizations ("CMOs"). Probiodrug currently relies mainly on Carbogen Amcis, Bubendorf, Switzerland for manufacturing PQ912 but is not exclusively committed to them. Probiodrug does not control the manufacturing processes of the CMOs and is dependent on those third parties for the production of its product candidates and future products in accordance with relevant regulations which includes, among other things, quality control, quality assurance and the maintenance of records and documentation.

If Probiodrug were to experience an unexpected loss of supply of, or if any supplier were unable to meet Probiodrug's demand for, any of its product candidates, it could experience delays in its research and development activities or planned clinical studies or commercialization of approved products. Probiodrug could be unable to find alternative suppliers of acceptable quality who can deliver appropriate volumes at acceptable cost. Moreover, Probiodrug's suppliers are often subject to strict manufacturing requirements and rigorous testing requirements, which could limit or delay the production. The long transition periods involved in the change of manufacturers and suppliers, if necessary, would significantly delay Probiodrug's clinical studies of its product candidates and the commercialization of its product candidates or products, if approved, which would materially adversely affect Probiodrug's business, prospects, financial condition and results of operation.

In complying with the manufacturing regulations of Competent Authorities, Probiodrug and its third-party suppliers must spend significant time, money and effort in the areas of design and development, testing, production, record-keeping and quality control to assure that the products meet applicable specifications and other regulatory requirements. The failure to comply with these requirements could result in an enforcement action against Probiodrug, including the seizure of products and shutting down of production. Any of these third-party suppliers and Probiodrug also may be subject to audits by the Competent Authorities. If any of Probiodrug's third-party suppliers fails to comply with applicable good manufacturing practices ("GMP") or other applicable manufacturing regulations, Probiodrug's ability to develop and

commercialize its products and/or product candidates could suffer significant interruptions. Probiodrug faces risks inherent in relying on a single CMO, as any disruption, such as a fire, natural hazards or vandalism at the CMO could significantly interrupt Probiodrug's manufacturing capability. Probiodrug currently does not have alternative production plans in place or disaster-recovery facilities available. In case of a disruption, Probiodrug will have to establish alternative manufacturing sources. Additionally, Probiodrug would likely experience months or years of manufacturing delays if it builds or locates manufacturing facilities and seeks to obtain the necessary regulatory approvals. If this occurs, Probiodrug will be unable to satisfy manufacturing needs on a timely basis, if at all. Further, business interruption insurance may not adequately compensate Probiodrug for any losses that may occur and Probiodrug would have to bear the additional cost of any disruption. For these reasons, a significant disruptive event at the CMO could have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations.

*Probiodrug depends on the ability to attract and retain key personnel and managers*

Probiodrug has only a small number of management executives responsible for managing its core business. Probiodrug's success significantly depends on the performance of its management executives and highly qualified employees in key positions, in particular management board members and other management executives with substantial sector experience. The services of Probiodrug's management executives are essential for the success of Probiodrug's business, research, development and regulatory strategies. Management executives may terminate their contracts any time.

Additionally, it is important for Probiodrug's success to attract, retain and motivate highly qualified clinical and scientific personnel. Many of the other biotechnology and pharmaceutical companies and academic institutions that it competes against for qualified personnel have greater financial and other resources, different risk profiles and a longer history in the industry than Probiodrug. Therefore, Probiodrug might not be able to attract or retain such key persons on conditions that are economically acceptable or enforce non-competition undertakings, where necessary. In the event of a loss of certain clinical and scientific personnel or management executives, Probiodrug's research and development efforts may be materially adversely affected. Probiodrug's anticipated growth and expansion into areas and activities requiring additional expertise such as clinical studies, registration, manufacturing and marketing, are expected to place increased demands on Probiodrug's resources. These demands are expected to require the addition of new personnel or managers and/or the development of additional expertise by current executives.

The failure to attract the needed personnel, the loss of certain clinical and scientific personnel or management executives or the failure to develop or obtain the necessary expertise could have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations.

*Probiodrug's success significantly depends on its cooperation with certain external key advisors*

Certain management functions of Probiodrug are in the responsibility of external long-term advisors. In particular, Dr. Inge Lues and Dr. Frank Weber act as research and development advisers in the field of the preclinical and clinical development of Glutaminy cyclase ("QC") (an enzyme forming pGlu-Abeta), one of the core research activities of Probiodrug.

Dr. Lues was appointed by the supervisory board as an additional member of the management board in the function Chief Development Officer (CDO) effective as of 1 November 2014. However, it cannot be excluded that she will, for whatever reason, not join the management board and that she might terminate her current advisory agreement at will on relatively short notice. The advisory agreement of Dr. Weber may also be terminated for any reasons at will on relatively short notice.

Other biotechnology and pharmaceutical companies and academic institutions that Probiodrug competes with for qualified personnel have greater financial and other resources, different risk profiles and a longer history in the industry than Probiodrug does and therefore may offer better conditions than those Probiodrug is able to offer. The advisory agreements may be terminated or may expire without Probiodrug having an adequate substitute advisor for the relevant field. Due to the specific and detailed knowledge and experience of these advisors with Probiodrug and its business and competitive environment, the loss of these advisors without having an adequate substitution in place, may have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations.

Probiodrug's portfolio of patents, patent applications and other intellectual property related matters is managed by the lawfirm Maikowski & Ninnemann, Berlin and Leipzig, Germany ("Maikowski & Ninnemann"). It cannot be excluded that Maikowski & Ninnemann may terminate the mandate or cease advising Probiodrug in necessary patent activities for other reasons. Due to the specific and detailed knowledge and experience of Maikowski & Ninnemann regarding patent activities of Probiodrug, the loss of these advisors may have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations.

### *Probiodrug depends on the recruitment of sufficient numbers of suitable volunteers and patients for clinical studies*

A clinical study requires a sufficient number of suitable volunteers and patients who meet the specific requirements of such clinical study, e.g. in the case of the Phase 2a study of PQ912, early-stage AD patients. Due to the complex conditions of the environment of the study, e.g. attractiveness of study, design of study, competitive situation, patient population, locations etc., studies may be rather slow or delayed. In addition, the study center – for example, due to other ongoing clinical studies – may not be able to include a sufficient number of patients on time in the clinical study. This could jeopardize the timely planning and execution of the clinical study or cause delays. As a result and to progress the study, Probiodrug may be forced to include additional study centers in the current study, which may substantially increase the costs and, therefore, could have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations.

### ***Risks relating to Probiodrug's intellectual property and know how***

*Probiodrug may fail to protect its inventions and know-how not subject to intellectual property rights to a sufficient extent*

Some technologies and processes of Probiodrug do not fulfill the requirements for patent or trademark protection or are not protected by patent or trademark rights for other reasons, e.g. secrecy. To protect these business secrets, know-how, technologies and processes, Probiodrug enters into non-disclosure, confidentiality and other contractual agreements with its employees, agents, advisors and cooperation partners. In accordance with these agreements employees, agents, advisors and cooperation partners are required to transfer developments, discoveries and inventions to Probiodrug and support Probiodrug with regard to the intellectual property rights proceedings.

However, there is no guarantee that such agreements will not be breached, that they will provide sufficient protection for Probiodrug's business secrets and proprietary information or that adequate remedies will be available in the event of an unauthorized use or disclosure of such information. It cannot be excluded that Probiodrug does not have, or cannot enforce, legal remedies that are effective at economically acceptable costs. Further, the violation of a non-disclosure agreement might be difficult to prove because business secrets and know-how may be developed independently by, or become otherwise known to, third parties. In addition, it may be difficult to quantify the damages which have occurred and to obtain legal remediation, or to undo the damages caused, by legal remedies. The failure of Probiodrug to effectively protect its business secrets and know-how could have material adverse effects on Probiodrug's business, prospects, financial condition and results of operations.

*Intellectual property rights of Probiodrug could be infringed by third parties*

It cannot be excluded that Probiodrug's intellectual property rights are or will be infringed by third parties. In particular, competitors may develop their own products without consequences until and through clinical Phase 3 because of the so-called research exemption or safe harbor exemption, which provides for an exemption from patent infringement regarding research and tests carried out in order to obtain regulatory approval for human medicinal products. The extent of this exemption varies from country to country. In certain jurisdictions, Probiodrug may challenge these competitors based on its intellectual property rights only after market approval and market entry of the competitor drugs. The enforcement of the intellectual property rights of Probiodrug against any infringer, before courts or otherwise, may divert the time and efforts of the management from Probiodrug's core business and cause additional costs and expenses. In addition, the enforcement may be unsuccessful, e.g. if the judicial system is not regulated in a sufficient manner or the relevant jurisdictions do not recognize in a sufficient manner the enforcement of intellectual property rights. The failure of Probiodrug to enforce its intellectual property rights against the infringement by third parties could have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations.

*Intellectual property rights do not necessarily address all potential threats to Probiodrug's competitive advantage*

The degree of future protection afforded by Probiodrug's intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect Probiodrug's business or permit Probiodrug to maintain its competitive advantage. The following examples are illustrative:

- competitors may be able to develop products that are similar to Probiodrug's product candidates but are not covered by the claims of the patents that Probiodrug has, obtains and/or licenses;
- the patents of competitors may have an adverse effect on Probiodrug's business. For instance, if one of Probiodrug's product candidates would prove to be effective against a specific indication not covered by Probiodrug's patents or patent applications and/or Probiodrug not having priority in this indication, Probiodrug may be confronted with existing patents covering such indication;

- Probiodrug and /or Probiodrug’s licensors or collaborators might not have been the first to make the inventions covered by an issued patent or pending patent application;
- Probiodrug and /or Probiodrug’s licensors or collaborators might not have been the first to file patent applications covering an invention;
- others may independently develop similar or alternative technologies, design around the Company’s patents or duplicate any of Probiodrug’s technologies without infringing Probiodrug’s intellectual property rights;
- pending patent applications may not lead to issued patents or not with the initially desired scope of protection;
- issued patents may not provide Probiodrug with competitive advantages, or may be held invalid or unenforceable, as a result of legal challenges by Probiodrug’s competitors;
- Probiodrug’s competitors might conduct research and development activities in countries where Probiodrug does not have patent rights and then use the information learned from such activities to develop competitive products for sale in these and other markets targeted by Probiodrug; and
- Probiodrug may not develop or in-license additional proprietary technologies that are patentable.

Any of these events could have a material adverse effect on Probiodrug’s business, prospects, financial condition and results of operation.

*Changes in either the patent laws or interpretation of the patent laws may diminish the value of Probiodrug’s patents or narrow the scope of its patent protection*

Changes in either the patent laws or interpretation of the patent laws may diminish the value of Probiodrug’s patents or narrow the scope of its patent protection and could increase the uncertainties and costs surrounding the prosecution of the patent applications of Probiodrug and the enforcement or defense of its issued patents. For instance, on 16 September 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to United States patent law. The Leahy-Smith Act includes provisions that affect the way patent applications are prosecuted and affect patent litigation. The United States Patent and Trademark Office (“PTO”) recently developed new regulations and procedures to govern administration of the Leahy-Smith Act. However, many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first to file provisions, only became effective on 16 March 2013. Accordingly, it is not entirely clear what, if any, impact the Leahy-Smith Act will have on the operation of the business of Probiodrug. However, the Leahy-Smith Act and its implementation, as any other possible future changes in the patent laws or their interpretation, could increase the uncertainties and costs surrounding the prosecution of Probiodrug’s patent applications and the enforcement or defense of issued patents, all of which could have a material adverse effect on Probiodrug’s business, prospects, financial condition and results of operation.

*Probiodrug may become involved in legal proceedings in relation to intellectual property rights, which may result in costly litigation and could result in Probiodrug having to pay substantial damages or limit Probiodrug’s ability to commercialize its products and/or product candidates*

Probiodrug’s commercial success depends upon its ability, and the ability of any third party with which it may partner, to develop, manufacture, market and sell its product candidates and /or products, if approved, and use its patent-protected technologies without infringing the patents of third parties. There is considerable patent litigation in the biotechnology and pharmaceutical industries. As the biopharmaceutical industry expands and more patents are issued, Probiodrug faces increased risks that there may be patents issued to third parties that relate to its product candidates and technology of which Probiodrug is not aware or that it must challenge to continue its operations as currently contemplated. In the field of medicinal chemistry, a broad protection for products is typically sought by patenting so-called Markush-Groups. The same applies to medical use or medical treatment patents, regarding which also a broad protection is sought. Whether such broad medical use patents or currently developed product candidates collide with a patent involves complex legal and factual issues, and the determination thereof is often uncertain.

Probiodrug may become involved in proceedings, including oppositions, post grant reviews, interferences, derivation proceedings, inter partes reviews, patent nullification proceedings, or re-examinations challenging Probiodrug’s patent rights or the patent rights of others, and the outcome of any such proceedings are uncertain. An adverse determination in any such proceeding could reduce the scope of, or invalidate, important patent rights, allow third parties to commercial-

ize Probiodrug's technology, products and/or product candidates and compete directly with Probiodrug without being obligated to make any payments to Probiodrug, or result in Probiodrug's inability to manufacture or commercialize products and/or product candidates without infringing third-party patent rights. Litigation or other proceedings may fail and, even if successful, may result in substantial costs and distract Probiodrug's management and other employees.

Probiodrug's product candidates may infringe or may be alleged to infringe existing patents or patents that may be granted in the future. Because patent applications in Europe, the United States and many foreign jurisdictions are typically not published until 18 months after filing, and publications in the scientific literature often lag behind actual discoveries, Probiodrug cannot be certain that others have not filed patents that may cover its technologies, its product candidates or the use of its product candidates. Additionally, pending patent applications which have been published can, subject to certain limitations, be later amended in a manner that could cover Probiodrug's technologies, its product candidates or the use of its product candidates. As a result, Probiodrug may become party to, or threatened with, future adversarial proceedings or litigation regarding patents with respect to its product candidates and technology.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and Probiodrug's patents may be challenged in courts or patent offices. Such challenges may result in the loss of exclusivity or freedom to operate, or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit Probiodrug's ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of its technology and products. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might also expire before or shortly after such candidates are commercialized. As a result, Probiodrug's patent portfolio may not provide it with sufficient rights to exclude others from commercializing products similar or identical to those of Probiodrug or not for a time long enough to fully exploit the expected potential of its product candidates.

If Probiodrug is sued for patent infringement, Probiodrug would need to demonstrate that its product candidates or technology either do not infringe the patent claims of the relevant patent or that the patent claims are invalid, and Probiodrug may not be able to do this. If Probiodrug is found to infringe a third party's patent, Probiodrug could be required to obtain a license from such third party to continue developing and marketing its product candidates and technology or Probiodrug may elect to enter into such a license in order to settle litigation or in order to resolve disputes prior to litigation. However, Probiodrug may not be able to obtain any required license on commercially reasonable terms or at all. Even if Probiodrug is able to obtain a license, it could be non-exclusive, thereby giving its competitors access to the same technologies licensed to Probiodrug, and could require Probiodrug to make substantial royalty payments. Probiodrug could also be forced, including by court order, to cease commercializing the infringing technology or product candidate. A finding of infringement could prevent Probiodrug from commercializing its product candidates or force Probiodrug to cease some of its business operations, which could materially harm its business. Claims that Probiodrug has misappropriated confidential information or trade secrets of third parties could have a similar negative impact on its business. Any such claims or infringement or misappropriation are likely to be expensive to defend, and some of its competitors may be able to sustain the costs of complex patent litigation more effectively than Probiodrug if they have substantially greater resources. Moreover, even if Probiodrug is successful in defending any infringement proceedings it may incur substantial costs and divert management's time and attention. In addition, if the breadth or strength of protection provided by the patents and patent applications of Probiodrug is threatened, it could dissuade companies from collaborating with it to license, develop or commercialize current or future product candidates. Even if Probiodrug's patent applications issue as patents, they may not issue in a form that will provide it with any meaningful protection, prevent competitors from competing with it, or otherwise provide it with any competitive advantage. Competitors of Probiodrug may be able to circumvent its patents by developing similar or alternative technologies or products in a non-infringing manner.

Any of the above events could materially adversely affect Probiodrug's business, prospects, financial condition and results of operation.

*Probiodrug may not be able to prevent disclosure of its trade secrets, know-how or other proprietary information, and the value of its technology and product candidates could be significantly diminished*

Probiodrug relies on trade secret protection to protect its interests in its trade secrets, know-how or other proprietary information and processes for which patents are difficult to obtain or enforce, all of which constitute confidential information. Probiodrug may not be able to protect its confidential information adequately. Probiodrug has a policy of requiring its consultants, contract personnel, advisers and third-party partners to enter into confidentiality agreements and its employees to enter into invention, non-disclosure and non-compete agreements. However, no assurance can be given that Probiodrug has entered into appropriate agreements with all of its consultants, contract personnel, advisers, third-party partners or other parties that have had access to its confidential information. There is also no assurance that such agreements will provide for a meaningful protection of confidential information in the event of any unauthorized use or disclosure of information. Furthermore, Probiodrug cannot provide assurance that any of its employees, consultants, contract personnel or third-party partners, either accidentally or through willful or intentional misconduct, will not cause

serious damage to its programs and/or its strategy, by, for example, disclosing confidential information to its competitors. It is also possible that confidential information could be obtained by third parties as a result of breaches of physical or electronic security systems of Probiodrug, its consultants, advisers, third-party partners or other parties that have had access to its confidential information. Any disclosure of confidential information into the public domain or to third parties could allow Probiodrug's competitors to learn such confidential information and use it in competition against Probiodrug. In addition, others may independently discover Probiodrug's confidential information. Any action to enforce Probiodrug's rights against any misappropriation or unauthorized access, use and/or disclosure of confidential information is likely to be time-consuming and expensive, and may ultimately be unsuccessful, or may result in a remedy that is not commercially valuable. Any of the above events could materially adversely affect Probiodrug's business, prospects, financial condition and results of operation.

*Obtaining and maintaining patent protection depends on compliance with various procedures, document submissions, fee payments and other requirements imposed by governmental patent agencies, and Probiodrug's patent protection could be reduced or eliminated in case of non-compliance with these requirements*

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and/or applications will be due to be paid by Probiodrug and /or its licensors to the relevant patent agencies in several stages over the lifetime of the patents and /or applications. The relevant patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent application process. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which the failure to comply with the relevant requirements can result in the abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, Probiodrug's competitors might be able to use Probiodrug's technologies and know-how which could have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operation.

*If Probiodrug fails to comply with its obligations under the agreements pursuant to which it licenses intellectual property rights from third parties, or otherwise experiences disruptions to its business relationships with its licensors, Probiodrug could lose the rights to intellectual property that is important to its business*

Probiodrug expects that it may need to enter into license agreements in the future under which it is granted rights to intellectual property that are important to its business. Probiodrug expects that future license agreements may impose on it various development obligations, payment of royalties and fees based on achieving certain milestones as well as other obligations. If Probiodrug fails to comply with its obligations under these agreements, the licensor may have the right to terminate the license. In addition, if the licensor fails to enforce its intellectual property, the licensed rights may not be adequately maintained. The termination of any license agreements or failure to adequately protect such license agreements could prevent Probiodrug from commercializing its product candidates or possible future products covered by the licensed intellectual property. Several of such future license agreements of Probiodrug may be sublicenses from third parties which are not the original licensor of the relevant intellectual property. Under these agreements, Probiodrug must rely on its licensor to comply with its obligations under the primary license agreements under which such third party obtained rights in the applicable intellectual property, where Probiodrug may have no relationship with the original licensor of such rights. If the licensors fail to comply with their obligations under these upstream license agreements, the original third-party licensor may have the right to terminate the original license, which may lead also to the termination of the sublicense. In such a case, Probiodrug would no longer have rights to the relevant intellectual property and, in the case of a sublicense, if Probiodrug was not able to secure its own direct license with the owner of the relevant rights, which it may not be able to do at reasonable costs or on reasonable terms, it may adversely affect Probiodrug's ability to continue to develop and commercialize its product candidates or possible future products incorporating the relevant intellectual property. Any of these events could materially adversely affect Probiodrug's business, prospects, financial condition and results of operation.

*Probiodrug may be subject to claims that its employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties*

Probiodrug employs individuals who were previously employed at other biotechnology or pharmaceutical companies. Probiodrug may be subject to claims that it or its employees, consultants or independent contractors will inadvertently or otherwise use or disclose confidential information of its employees' former employers or other third parties. Litigation may be necessary to defend any such claims. There is no guarantee of success in defending any such claims, and if Probiodrug does not prevail, Probiodrug could be required to pay substantial damages and could lose rights to important intellectual property. Even if Probiodrug is successful, litigation could result in substantial costs and be a distraction to its management and other employees. Any of the above events could materially adversely affect Probiodrug's business, prospects, financial condition and results of operation.

## ***Operational risks***

### *Probiodrug may not be able to manage future additional operational challenges*

As the pipeline of the Company's product candidates matures, Probiodrug will face new and additional challenges, such as increased administrative internal tasks which will place a significant strain on the Company's management and its operational and financial resources. Likewise, the duties following the listing of the shares of the Company will require the establishment of appropriate functions, staff and processes in order to comply with the requirements to which public companies are subject, in particular compliance, controlling and financial reporting. To manage these challenges, the Company will have to augment its operational, financial and management systems and hire and train additional qualified personnel. The Company currently has a risk management system that, in the view of the management of the Company, is appropriate for the business the Company currently conducts. The Company intends to evaluate whether an improved risk management system may need to be implemented in the future in light of the additional future operational challenges. The Company's failure to manage the additional operational challenges effectively, or to fail to implement improved risk management systems, if needed, could have a material adverse effect on its business, financial condition and results of operations.

*If any product liability lawsuits are successfully brought against Probiodrug or any of its partners, Probiodrug may incur substantial liabilities and may be required to limit the commercialization of its product candidates or possible future products*

Probiodrug is exposed, and will be exposed in the future, to the risk of liability claims, especially drug or product liability, inherent in businesses relating to researching, developing, manufacturing, testing, marketing and selling of pharmaceutical products. Probiodrug could face the risk of substantial liability for damages if its product candidates were to cause adverse side effects in clinical studies or on the market. Probiodrug may not be able to accurately predict the possible side effects that may result from the use of its products and /or product candidates. Product liability claims may be brought against Probiodrug or its partners by participants enrolled in clinical studies, practitioners, researchers and other health/research professionals or others using, administering or selling any of Probiodrug's future approved products. If Probiodrug cannot successfully defend itself against any such claims, it may incur substantial liabilities. Regardless of their merit or eventual outcome, liability claims may result in:

- withdrawal of clinical study participants;
- termination of clinical study sites or entire study programs;
- increased regulatory scrutiny;
- decreased demand for Probiodrug's future products;
- damage to Probiodrug's reputation;
- significant litigation costs;
- substantial monetary awards to or costly settlement with patients or other claimants;
- product recalls or a change in indications for which they may be used;
- loss of revenue;
- diversion of management and scientific resources from Probiodrug's business operations; and
- the inability to commercialize products and /or product candidates.

To date, no such claims or legal actions have been filed against Probiodrug. However, it cannot be excluded that legal actions based on product liability may be initiated, in particular as Probiodrug's product candidates have not yet been approved for commercial sale. Any such future claims could have material adverse effects on Probiodrug's business, prospects, financial condition and results of operations.

*Probiodrug may not have, or be able to obtain, adequate insurance cover, in particular in connection with drug or product liability risk*

Probiodrug may not have, or be able to obtain, adequate insurance cover in particular in connection with potential drug or product liability risks. Probiodrug faces the risk of substantial liability for damages if its product candidates were to cause adverse side effects in clinical studies or on the market and Probiodrug cannot predict any possible side effects that may result from the use of its future products or the potential costs or damages for which it may become liable in relation to any side effects.

The Company maintains product liability insurance for its clinical studies. In the future, the Company intends to seek additional drug and product liability insurance, i.e. for commercially marketed products, when approved, if (i) it is required by law or (ii) it is economically feasible to do so, given the level of premiums and the risk and magnitude of potential liability. If drug and product liability insurance is necessary in respect of one or more of its product candidates or future products, Probiodrug may not be able to obtain full liability coverage as insurance coverage in the pharmaceutical and biotechnical industry is becoming increasingly expensive. Hence, Probiodrug may face liability for claims that may not be covered by its insurance or its liabilities could exceed the limits of its insurance coverage, which may have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations. Moreover, product or drug liability claims (particularly class actions) may require significant financial and managerial resources, may materially harm Probiodrug's reputation if the market perceives its product candidates to have unforeseen side effects or to be ineffective, and may limit or prevent the further development or marketing of Probiodrug's product candidates.

*Probiodrug's employees, principal investigators, consultants and collaborative partners may engage in misconduct or other improper activities, including non-compliance with regulatory requirements*

Probiodrug is exposed to the risk of employees, independent contractors, principal investigators, consultants, collaborative partners or vendors engaging in fraud or other misconduct. Such misconduct could, *inter alia*, include intentional failures to comply with regulations stipulated by the EMA, the FDA or other Competent Authorities, to provide accurate information to the FDA, EMA or other Competent Authorities or to comply with manufacturing standards Probiodrug has established.

Misconduct could also involve scientific data fraud or the improper use of information obtained in the course of clinical studies, which could result in regulatory sanctions and serious harm to Probiodrug's reputation. It is not always possible to identify and deter misconduct, and the precautions Probiodrug takes to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting Probiodrug from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against Probiodrug, and Probiodrug is not successful in defending itself or asserting its rights, such actions could have material adverse effects on its business, including the imposition of significant fines or other sanctions, and its reputation.

If any of the above risks realizes this could have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations.

*Probiodrug's business may be adversely affected as a result of computer system failures*

The operation of Probiodrug's business depends also on information technology systems. Any of the internal computer systems belonging to Probiodrug or its third-party service providers are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failure. The regulatory and legal environment of Probiodrug's industry requires maintaining records for long periods of time, sometimes forever. In most cases, those records are kept only in electronic form and without paper copies. Any system failure, accident or security breach that causes interruptions in its own or in third-party service provider operations could result in a material disruption of its product development programs. For example, the loss of clinical study data from completed or future clinical studies could result in delays in Probiodrug's or its partners' regulatory approval efforts and significantly increase the costs in order to recover or reproduce the lost data. To the extent that any disruption or security breach results in a loss or damage to its data or applications, or inappropriate disclosure of confidential or proprietary information, Probiodrug may incur liability, its product development programs and competitive position may be adversely affected and the further development of its product candidates may be delayed. Furthermore, Probiodrug may incur additional costs to remedy the damage caused by these disruptions or security breaches. If any of these risks are realized this could have a material adverse effect on Probiodrug's business, prospects, financial condition and results of operations.

## **Risks related to the shares and the offering**

*The market price and trading volume could fluctuate significantly resulting in substantial losses*

There was no public trading in the Company's shares prior to this Offering. The offer price for the shares offered will be determined by way of a bookbuilding procedure. However, the Company cannot ensure that this offer price will correspond to the price at which the shares will be traded following this Offering.

Following the Offering, the Company's share price could fluctuate considerably, in particular as a result of fluctuations in the actual or projected results of operations, changes in projected earnings, a failure to meet the expectations of market participants, changes in earnings estimates by analysts, changes in the general conditions in the pharmaceutical industry and general economic, financial market and business conditions in the countries in which the Company operates or investors are located. Other factors which could cause the price of the shares to fluctuate or could influence the reputation of the Company include, amongst other things:

- announcements of technological innovations or new commercial products or collaborations by the Company's competitors or the Company itself;
- developments concerning intellectual property rights, including patents in general;
- public information regarding actual or potential results relating to products and product candidates under development by the Company's competitors or the Company itself;
- regulatory and medicine pricing and reimbursement developments in Europe, the U.S. and other jurisdictions;
- any publicity derived from any business affairs, contingencies, litigation or other proceedings in relation to the Company's assets (including the imposition of any lien), its management, or its significant shareholders or collaborative partners; or
- changes in the tax regime relating to the Company's business or to its shareholders.

In addition, general developments in the stock market and fluctuations therein could also influence the Company's share price irrespective of factors directly connected with the Company's business. This could result in a market price for the Company's shares, possibly significantly, below the offer price.

*In particular due to its business model, the Company may experience a significant fluctuation of liquidity and revenues that may have a material adverse effect on the share price of the Company*

The liquidity and cash position of the Company fluctuated significantly in the past and the Company expects significant fluctuations to continue for the foreseeable future. Currently, the Company has not entered into any licensing or partnering agreements and is not eligible to receive any milestone payments or royalties from any such agreements. In the future the revenues of the Company are expected to primarily consist of advance payments, milestone payments and royalties from the licensing and /or partnering of product candidates and other proceeds from research collaborations. The timing and amount of any future payments will greatly depend on the timely and successful preclinical and clinical development of Probiodrug's product candidates, the conditions of future cooperation agreements, and possible changes of applicable accounting rules.

Income or cost fluctuation may result in the Company not complying with the expectations of analysts and investors and thus may have a material adverse effect on the share price of Probiodrug AG.

*A liquid market for the shares of the Company may fail to develop which may cause the shares to trade at a discount to the Offer Price and make it difficult to sell the shares*

The Company cannot predict the extent to which investors' interest in the Company will lead to the development of an active liquid market. Prior to admission of the shares to trading on Euronext, there has been no public market for the shares of the Company and there is no guarantee that an active trading market will develop or be sustained after admission to trading. If an active trading market is not developed or maintained, the liquidity and trading price of the shares of the Company may be adversely affected. Even if an active trading market develops, the market price of the shares may not properly reflect the Company's underlying value or financial performance.

*Future issue of shares could lead to substantial dilution, e.g. due to a capital increase with exclusion of subscription rights, possible exercise of rights on convertible bonds and options or as part of future employee stock option schemes*

Probiodrug expects to require significant further capital in the future in order to finance its business and the further development of its product candidates. Probiodrug expects to finance its future operations also in the foreseeable future primarily with equity. Both the issuance of new shares in order to raise new equity capital and the possible exercise of conversion and option rights by the holders of convertible or warrant-linked bonds that may possibly be issued in the future would lead to a dilution of shareholders' equity. In addition, the acquisition of other companies or interests in companies or other assets in return for newly issued shares in the Company as well as the exercise of stock options under stock option plans by employees of the Company within the scope of existing and /or future management or employee participation would lead to a dilution of the shareholders.

*Certain significant shareholders of the Company may have different interests from the Company after the Offering and may be able to influence the Company, including the outcome of shareholder votes*

Following the completion of the Offering, the settlement and the admission to Euronext Amsterdam, the Company will have a small number of significant shareholders. The existing shareholders will hold, even if all offered shares will be placed and the Greenshoe option will be fully exercised, after the completion of the Offering at least 73% of the share capital of the Company and 85% of the share capital of the Company if all offer shares which the shareholders have committed to purchase will be sold to such existing shareholders. Currently, the Company is not aware that any of its current shareholders has entered or intends to enter into a shareholders' agreement with respect to the exercise of their voting rights in the Company after completion of the Offering. Nevertheless, they could, alone or together, have the ability to elect or dismiss members of the supervisory board, and, depending on how broadly the Company's shares are held, take certain other shareholders' decisions that require 50 % or more of the votes of the shareholders that are present or represented at shareholders' meetings where such items are submitted to shareholders for approval. Alternatively, to the extent that these shareholders have insufficient votes to impose certain shareholders' resolutions, they could have the ability to block proposed shareholders' resolutions that require 50 % or more of the votes of the shareholders that are present or represented at shareholders' meetings where such items are submitted to shareholders for approval, such as change in control transactions. Any such voting by these shareholders may not be in accordance with the interests of the Company or the other shareholders of the Company.

*Institutional proxy advisors may influence the voting in general shareholders' meetings*

Institutional proxy advisors are increasingly used by institutional investors. Institutional proxy advisors evaluate the agenda items of general shareholders' meetings and recommend to their clients as to how they should vote on such agenda items. Usually, the institutional investors follow the recommendations of the institutional proxy advisors, although no statistical evidence exists. Depending on the shareholder structure and the shareholdings of those who follow the recommendations of the institutional proxy advisors, the latter can have a significant influence on the voting results in general shareholders' meetings. In particular, if the boards of the Company propose a certain item on the agenda of the shareholders' meeting and the institutional proxy advisors recommend not to vote in favor of such proposal it cannot be excluded that such proposal may fail to be passed for the lack of sufficient votes, which may not be in the best interest of the Company and its shareholders.

*Future sales of substantial amounts of shares, or the perception that such sales could occur, could adversely affect the market of the shares*

Sales by the shareholders of a substantial number of shares of the Company in the public markets following the Offering, or the perception that such sales might occur, could cause the market price of the shares to decline. Furthermore, there is no commitment on the part of any of the existing shareholders to remain a shareholder or to retain a minimum interest in the Company after the expiry of the respective lock-up periods provided for in the Lock-up agreements for the securities held by the existing shareholders pursuant to which they have agreed not to sell their respective existing shares within 6 months following the first day of trading of the shares on Euronext Amsterdam, and thereafter for another 6 months period only with the prior approval of Kempen & Co. As a result, no investment decision should be made on the basis that any of the existing shareholders will retain any interest in the Company following the expiration of the lock-up period.

*The fact that no minimum amount is set for the Offering may affect Probiodrug's development plans*

There is no minimum amount set for the proceeds from the Offering. The actual number of shares sold will be confirmed on the Company's website and by press release together with the offer price. Therefore, (i) the maximum number of offered shares may not be available for trading on the market which could limit the liquidity of the Shares, and (ii) the Company's financial means in view of the intended use of the proceeds might be reduced. The Company may therefore not be able to progress the development of the product candidates as intended.

*The Company may be a passive foreign investment company, possibly resulting in materially adverse tax consequences to U.S. owners of the Offer Shares*

The Company believes that it likely will constitute a passive foreign investment company (a PFIC) for its current fiscal year. Further, the Company believes that it likely will continue to be a PFIC until it generates sufficient revenues from its pharmaceutical operations, and depending upon the nature of its assets and operations, may remain a PFIC thereafter. If the Company is a PFIC, any gain recognized by a U.S. holder on the sale of the Offer Shares may be taxed at ordinary income rates (rather than capital), and any resulting United States federal income tax may be increased by an interest charge. Rules similar to those applicable to dispositions generally will apply to certain excess distributions in respect of the Offer Shares. Under certain circumstances, a United States person generally may make an election to avoid certain of these unfavorable United States federal income tax consequences, but it is uncertain whether such election will be available. Treatment of the Company as a PFIC generally will possibly result in materially adverse U.S. tax consequences to U.S. investors.

*Investors resident in countries other than Germany may suffer dilution if they are unable to exercise pre-emptive rights in future offerings*

In the event of an increase of the Company's share capital, shareholders are generally entitled to full pre-emptive rights unless these rights are excluded. However, certain shareholders outside Germany may not be able to exercise their pre-emptive rights, even if not excluded, unless local securities laws have been complied with. In particular, there can be no assurance that the Company will be able to establish an exemption from registration requirements under the Securities Act of 1933, as amended, and it is under no obligation to file a registration statement with respect to any such pre-emptive rights or underlying securities or to endeavor to have a registration statement declared effective under the Securities Act of 1933, as amended. Shareholders in jurisdictions outside Germany who are not able or not permitted to exercise their pre-emptive rights in the event of a future pre-emptive rights offering may suffer dilution of their shareholdings.

*Investors with a reference currency other than Euros will become subject to foreign exchange rate risks when investing in the shares*

The shares are, and any dividends to be announced in respect of the shares will be, denominated in Euro. An investment in the shares by an investor whose principal currency is not the Euro exposes such investor to currency exchange rate risk that may impact the value of the investment in the shares or any dividends.

*Any sale, purchase or exchange of shares may become subject to the Financial Transaction Tax*

On 14 February 2013, the EU Commission adopted a proposal for a Council Directive (the Draft Directive) on a common financial transaction tax (the Financial Transaction Tax). The intention is for the Financial Transaction Tax to be implemented via an enhanced cooperation procedure in 11 EU Member States (Austria, Belgium, Estonia, France, Germany, Greece, Italy, Portugal, Spain, Slovakia and Slovenia, together the Participating Member States).

Pursuant to the Draft Directive, the Financial Transaction Tax will be payable on financial transactions provided at least one party to the financial transaction is established or deemed established in a Participating Member State and there is a financial institution established or deemed established in a Participating Member State which is a party to the financial transaction, or is acting in the name of a party to the transaction. The Financial Transaction Tax shall, however, not apply to (*inter alia*) primary market transactions referred to in Article 51 of Regulation (EC) No 1287/2006, including the activity of underwriting and subsequent allocation of financial instruments in the framework of their issue.

The rates of the Financial Transaction Tax shall be fixed by each Participating Member State but for transactions involving financial instruments other than derivatives shall amount to at least 0.1% of the taxable amount. The taxable amount for such transactions shall in general be determined by reference to the consideration paid or owed in return for the transfer. The Financial Transaction Tax shall be payable by each financial institution established or deemed established in a Participating Member State which is either a party to the financial transaction, or acting in the name of a party to the transaction or where the transaction has been carried out on its account. Where the Financial Transaction Tax due has not been paid within the applicable time limits, each party to a financial transaction, including persons other than financial institutions, shall become jointly and severally liable for the payment of the Financial Transaction Tax due.

Investors should therefore note, in particular, that any sale, purchase or exchange of shares will be subject to the Financial Transaction Tax at a minimum rate of 0.1% provided the abovementioned prerequisites are met. The investor may be liable to pay this charge or reimburse a financial institution for the charge, and /or the charge may affect the value of the shares. The issuance of new shares should not be subject to the Financial Transaction Tax.

The Draft Directive is still subject to negotiation among the Participating Member States and therefore may be changed at any time. A committee of the EU Parliament published a draft report on March 19, 2013, suggesting amendments to the Draft Directive. If the amendments were included in the eventual Directive, the Financial Transaction Tax would have an even broader reach. Moreover, once the Draft Directive has been adopted (the Directive), it will need to be implemented into the respective domestic laws of the Participating Member States and the domestic provisions implementing the Directive might deviate from the Directive itself.

Investors should consult their own tax advisors in relation to the consequences of the Financial Transaction Tax associated with subscribing for, purchasing, holding and disposal of the shares.

*Investors may not be able to recover damages in civil proceedings for U.S. securities law violations*

The members of the management and supervisory board of the Company are not resident in the United States. All or a substantial proportion of the assets of these individuals are located outside the United States. The Company's assets are also predominantly located outside of the United States. As a result, it may be impossible or difficult for investors to affect service of process upon such persons or the Company or to enforce against them judgments obtained in U.S. courts, including judgments predicated upon the civil liabilities provisions of the federal securities laws of the United States. The United States and Germany currently do not have a treaty providing for the reciprocal recognition and enforcement of judgments, other than arbitration awards, in civil and commercial matters. Consequently, a final judgment for payment given by a court in the United States, whether or not predicated solely upon U.S. securities laws, would not automatically be recognized or enforceable in Germany. German courts may deny the recognition and enforcement of a judgment rendered by a U.S. court if they consider the U.S. court not to be competent or the decision not in line with German public policy principles. For example, recognition of court decisions based on class actions brought in the United States typically raises public policy concerns and judgments awarding punitive damages are generally not enforceable in Germany.

In addition, actions brought in a German court against the Company or the members of its management or its supervisory board to enforce liabilities based on U.S. federal securities laws may be subject to certain restrictions. In particular, German courts generally do not award punitive damages. Litigation in Germany is also subject to rules of procedure that differ from the U.S. rules, including with respect to the taking and admissibility of evidence, the conduct of the proceedings and the allocation of costs. Proceedings in Germany would have to be conducted in the German language and all documents submitted to the court would, in principle, have to be translated into German. For these reasons, it may be difficult for a U.S. investor to bring an original action predicated upon the civil liability provisions of the U.S. federal securities laws in a German court against the Company or the members of its management or its supervisory board.

Based on the lack of a treaty, as described above, U.S. investors may not be able to enforce against the Company or the members of its management or its supervisory board who are residents of Germany or other countries other than the United States any judgments obtained in a U.S. court in civil and commercial matters, including judgments under the U.S. federal securities laws.

*The Company does not expect to be able to make distributable profits that would allow Probiodrug AG to pay any dividends in the foreseeable future*

On the basis of the development activities in the field of AD, the Company has not yet generated any revenues over the three preceding years. Because of numerous factors of influence on the development of product candidates, the time when the Company may operate profitably cannot be predicted. Likewise, it is uncertain whether the Company will ever achieve any substantial revenues in the future.

The Company intends to retain all available funds and future earnings for use in the development and commercialization of its product candidates and technologies and the expansion of its business. In any event, the Company will not be able to pay dividends until such time as it has profits available for that purpose, as determined in accordance with German Company Law and as shown in the German GAAP financial statements of Probiodrug AG. Payment of future dividends to shareholders will be subject to a decision of the annual shareholders' meeting of the Company and subject to legal restrictions as provided under applicable laws. Furthermore, financial restrictions and other limitations may be contained in future credit agreements that may impair the ability of the Company to distribute dividends.

Therefore, and under consideration of indispensable future research and development expenses, the Company expects that it will continue to report losses in the foreseeable future and it cannot predict if and when the Company will be able to pay dividends to its shareholders.

Accordingly, investors may have to sell their shares in order to generate cash flows from their investment and capital appreciation, if any, will be the sole source of gains from the investment. Investors may however never receive a gain on

their investment when they sell shares and may lose the entire amount of their investment. Furthermore, investors seeking cash dividends should not invest in the Company's shares.

*The Company has a broad discretion using the proceeds from the Offering*

The Company intends to use the net proceeds from the Offering to finance the preclinical and clinical development of its product candidates as well as for general corporate purposes. However, the Company may decide to use the net proceeds for other purposes. Investors may not have the opportunity to evaluate the economic, financial or other information on which the Company bases its decisions on how to use the net proceeds it receives from the Offering. The Company cannot assure that it will use the capital raised in the Offering in a way that will generate maximum, or even positive, returns.

*The Offering may not take place*

Pursuant to the underwriting agreement between the Company and Kempen & Co and Petercam (the "**Underwriting Agreement**") Kempen & Co acting for the Syndicate Banks has the right to terminate the Underwriting Agreement under certain circumstances until the settlement, i.e. also following the end of the offer period and also after the allotment of the offered shares to investors, in particular if certain conditions are not fulfilled. In the case of an early termination of the Underwriting Agreement, the Offering, and, even after the allotment of the shares offered to investors, the delivery of the shares offered, will not take place. If the Offering does not take place, allotments to investors which have already been made become invalid. A claim on the part of the investors for delivery of the shares in the Company will not exist in this case. Any disposition made by investors of shares allocated to them prior to delivery is at the sole risk of the investors.

## GENERAL INFORMATION

### Responsibility for the content of the Prospectus

Probiodrug AG, having its registered seat in Halle /Saale, Germany, registered with the commercial register of the local court (*Amtsgericht*) of Stendal under HRB 213719 (the “**Company**” or “**Probiodrug AG**” and, collectively with its consolidated subsidiary, “**Probiodrug**”) and Kempen & Co N.V., having its registered seat in Amsterdam, The Netherlands (“**Kempen & Co**” or the “**Sole Global Coordinator**”), as well as Petercam NV/SA, having its registered seat in Brussels, Belgium (“**Petercam**” or the “**Co-Bookrunner**”), (together with Kempen & Co the “**Syndicate Banks**”) assume responsibility for the content of this prospectus (the “**Prospectus**”) pursuant to Section 5 (4) of the German Securities Prospectus Act (*Wertpapierprospektgesetz*) and hereby declare that the information contained in this Prospectus is, to the best of their knowledge, correct and that no material information has been omitted.

If any claims shall be asserted before a court of law based on the information contained in this Prospectus, the investor appearing as plaintiff may have to bear the costs of translating the Prospectus prior to the commencement of the court proceedings pursuant to the national legislation of the member states of the European Economic Area.

The information provided in this Prospectus will not be updated subsequent to the date hereof except for any significant new event or significant error or inaccuracy relating to the information contained in this Prospectus that may affect an assessment of the securities and occurs or comes to light following the approval of this Prospectus, but before the completion of the Offering (as defined below) or admission of the securities to trading, whichever occurs later. These updates must be disclosed in a prospectus supplement in accordance with Section 16 (1) sentence 1 of the German Securities Prospectus Act (*Wertpapierprospektgesetz*).

### Subject matter of this Prospectus

The subject matter of this Prospectus for purposes of the public offering are 1,951,228 ordinary bearer shares of the Company with no par value with a notional value of EUR 1.00 each and with full dividend rights from 1 January 2014 consisting of

- (i) 1,475,409 new ordinary bearer shares with no par value with a notional value of EUR 1.00 each (the “**New Shares**”), and
- (ii) 221,311 new ordinary bearer shares with no par value with a notional value of EUR 1.00 each in connection with a possible volume increase option (the “**Additional New Shares**”),  
  
(i) and (ii) from a capital increase against cash contributions resolved by an extraordinary shareholders’ meeting on 9 October 2014, and
- (iii) 254,508 existing ordinary bearer shares with no par value with a notional value of EUR 1.00 each in connection with a possible over-allotment (the “**Over-allotment Shares**”; the New Shares, the Additional New Shares and the Over-allotment Shares together the “**Offer Shares**”) from the holdings of Bio Discovery III F.C.P.R., Biotech Growth N.V., HBM Healthcare Investments (Cayman) Ltd., Coöperatief LSP IV U.A., PlatzerInvest AG, Sycamore GmbH and Dr. Hendrik Liebers (the “**Lending Shareholders**”).

The subject matter of this Prospectus for purposes of the admission to trading in the regulated market operated by Euronext Amsterdam N.V. (“**Euronext Amsterdam**”) (the “**Listing**”) are up to 7,192,921 ordinary bearer shares with no par value with a notional value of EUR 1.00 each and with full dividend rights as of 1 January 2014 (being the entire share capital of the Company following the registration of the respective capital increase) consisting of

- (i) 5,241,693 existing ordinary bearer shares with no par value with a notional value of EUR 1.00 each (the “**Existing Shares**”),
- (ii) up to 1,475,409 New Shares,
- (iii) up to 221,311 Additional New Shares, and
- (iv) up to 254,508 new ordinary bearer shares with no par value with a notional value of EUR 1.00 each from a further capital increase against cash contribution out of authorized capital if and to the extent Kempen & Co exercises the Greenshoe-Option (as defined below) and has subscribed for new shares out of authorized capital in connection with the over-allotment (the “**Greenshoe Shares**”; the New Shares, the Additional New Shares and the Greenshoe Shares together the “**Total New Shares**”).

## **Forward-looking statements**

This Prospectus contains certain forward-looking statements. A forward-looking statement is any statement that is not based upon historical facts or events or relates to facts or events that may occur after publication of this Prospectus.

This applies, in particular, to statements containing information on the future financial results, plans, or expectations regarding the business and management of the Company, its future growth profitability and general economic conditions and regulatory requirements as well as other matters affecting the Company.

Forward-looking statements are based on current estimates and assumptions made by the Company to the best of its present knowledge. Such forward-looking statements are subject to risks, uncertainties and other factors that could cause the actual financial condition and results of Probiodrug to differ materially from and fail to meet expressed expectations implied by such forward-looking statements. The business of Probiodrug is subject to a number of risks and uncertainties that could also cause a forward-looking statement, estimate or prediction to become inaccurate. Accordingly, prospective investors are strongly advised to read in particular the following sections of this Prospectus: “*SUMMARY OF THE PROSPECTUS*”, “*RISK FACTORS*”, “*MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITIONS AND RESULTS OF OPERATIONS*”, “*BUSINESS*”, “*RECENT DEVELOPMENTS AND OUTLOOK*”. These sections include more detailed descriptions of factors that might have an impact on the business of Probiodrug and the industry in which Probiodrug operates.

In light of these risks, uncertainties and assumptions, it is possible that the future events mentioned in this Prospectus may not occur, and that forward-looking estimates and forecasts derived from third-party sources (see “—*INFORMATION ON SOURCES OF INDUSTRY AND MARKET DATA AND INFORMATION DERIVED FROM THIRD PARTIES; AND SCIENTIFIC AND TECHNICAL EXPLANATIONS*”) reproduced in this Prospectus may prove to be inaccurate. Moreover, neither the Company nor the Syndicate Banks assume any obligation, except as required by law, to update any forward-looking statements or to conform such forward-looking statements to future events or developments.

## **Information on sources of industry and market data, information derived from third parties, and scientific and technical explanations**

Information contained in this Prospectus regarding the industry and market environment in which Probiodrug operates are primarily based on the beliefs and opinions of Probiodrug. These beliefs and opinions are based on the many years of experience of the Company’s decision-makers in the biotechnological and pharmaceutical industries, and the evaluation of internal studies, publicly available professional publications, third party industry and market research reports and other commercial publications. This information might differ completely from the beliefs and opinions of third parties, including the competitors of Probiodrug, or the evaluations of market research companies or others. Where indicated in the text, statements are based on published data and figures. Information from the Company’s internal estimates and studies has not been verified by any independent sources.

The scientific and technical explanations contained in this Prospectus have been summarized primarily on the basis of and derived primarily from various internal studies of Probiodrug AG. Specific internal and third-party studies have only been cited if the relevant information was directly gathered from that individual study. Some external studies have been prepared by, or with support of scientists that work, or previously worked for, the Company. Where no specific source is cited, the information is based on the beliefs and opinions of Probiodrug AG and is derived from the evaluation and synthesis by the Company’s decision-makers of internal studies as well as publicly available professional publications prepared by third parties. While the Company believes its internal research is reliable and the definition of its market and industry are appropriate, neither such research nor these definitions have been verified by any independent source.

The publicly available sources, third party industry and market research reports and other commercial publications used in connection with the preparation of this Prospectus generally state that the information that they contain has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. Neither Probiodrug nor the Syndicate Banks have independently verified the figures, market data or other information on which third parties have based their studies. Accordingly, Probiodrug and the Syndicate Banks make no representation or warranty as to the accuracy of any such information from third party sources included in this Prospectus.

The Company has accurately reproduced information obtained from publicly available sources, third party industry and market research reports and other commercial publications, and, so far as the Company is aware and has been able to ascertain from information published by those sources, no facts have been omitted which would render the reproduced information inaccurate or misleading. A list of quoted sources can be found at the end of this Prospectus (see “*SOURCES*”).

A glossary of technical terms and specialized abbreviations can also be found at the end of the Prospectus (see

“GLOSSARY OF TECHNICAL TERMS”).

### Documents available for inspection

For the duration of the validity of this Prospectus, copies of the following documents referred to in this Prospectus will be available for inspection during regular business hours at the offices of the Company, Weinbergweg 22, 06120 Halle /Saale, Germany and /or at the Company’s website, www.probiodrug.de:

- (i) the Company’s articles of association (*Satzung*) (the “**Articles of Association**”);
- (ii) the audited consolidated financial statements prepared in accordance with the International Financial Reporting Standards, as adopted by the European Union (“**IFRS**”), of the Company for the financial years ended 31 December 2011, 31 December 2012 and 31 December 2013 (the “**IFRS Consolidated Financial Statements**”);
- (iii) the unaudited consolidated interim financial statements prepared in accordance with IFRS of the Company for the six-month period ended 30 June 2014 (the “**Unaudited IFRS Consolidated Interim Financial Statements**”);
- (iv) the audited unconsolidated financial statements prepared in accordance with the German Commercial Code (*Handelsgesetzbuch*) and the German generally accepted principles of proper accounting (“**German GAAP**”) of the Company for the year ended 31 December 2013 (the “**German GAAP Financial Statements**”).

Future annual financial statements and interim reports of the Company will be available at its offices as well as on the Company’s website, www.probiodrug.de.

### Currency and financial data

The financial data contained in this Prospectus is derived from the IFRS Consolidated Financial Statements and the Unaudited IFRS Consolidated Interim Financial Statements as well as from the German GAAP Financial Statements. For detailed information about the financial information, see “*SELECTED FINANCIAL INFORMATION AND RESULTS OF BUSINESS OPERATIONS*”.

All information with respect to currencies in this Prospectus refers to Euros.

### Figures

Some figures (including percentages) in this Prospectus have been rounded to the nearest whole number. As a result, figures shown as totals in tables or text may in some cases not add up to the exact totals shown in the tables or in the text. Percentages cited in the text were calculated on the basis of rounded values rather than actual values.

### Auditors

KPMG AG Wirtschaftsprüfungsgesellschaft, Münzgasse 2, 04107 Leipzig, Germany, has been appointed as the Company’s auditor for the financial years 2011, 2012 and 2013. KPMG AG Wirtschaftsprüfungsgesellschaft is a member of the German Chamber of Public Auditors (*Wirtschaftsprüferkammer*), Rauchstraße 26, 10787 Berlin.

The IFRS Consolidated Financial Statements have been audited by KPMG AG Wirtschaftsprüfungsgesellschaft in compliance with the International Standards of Auditing (*ISA*) and the German GAAP Financial Statements have been audited by KPMG AG Wirtschaftsprüfungsgesellschaft in compliance with German Generally Accepted Principles for the Audit of Financial Statements issued by the *Institut der Wirtschaftsprüfer (German GAAS)* and in each case provided with the unqualified auditor’s report (*uneingeschränkte Bestätigungsvermerke*) reproduced in this Prospectus, however with an emphasis of matter paragraph regarding material uncertainty regarding the appropriateness of the use of the going concern assumption. The Unaudited IFRS Consolidated Interim Financial Statements for the half-year period ended 30 June 2014 are neither audited nor reviewed.

### Available information

Rule 12g3-2(b) of the U.S. Securities Exchange Act of 1934, as amended (the “**Exchange Act**”) exempts a “foreign private issuer” from the requirement to register its securities in the United States. The Company relies on this exemption, which is available for as long as the Company’s shares are listed on a market outside the United States which constitutes the primary trading market; it has not listed or publicly offered securities in the United States and publishes certain information electronically in English. As a consequence the Company is not subject to any reporting requirements under any U.S. laws and regulations.

If at any time the Company is neither subject to Section 13 or 15(d) of the U.S. Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), which would be the case if the Company was to list its securities in the United States or to offer securities to the public in the United States, nor exempt from reporting pursuant to Rule 12g3-2(b) thereunder, the Company would be required to furnish, upon written request, to holders of the Company's shares, owners of beneficial interests in the Company's shares or prospective purchasers designated by such holders or beneficial owners, the information required to be delivered pursuant to Rule 144A(d)(4) under the Securities Act. Such information would include: a brief statement of the nature of the business of the Company and the products and services it offers; the Company's most recent balance sheet and profit and loss and retained earnings statements, and similar financial statements for such part of the two preceding fiscal years as the Company has been in operation (the financial statements should be audited to the extent reasonably available).

#### **Enforcement of civil liabilities**

The members of the supervisory board and management board of the Company and certain executive officers and certain experts named in this Prospectus are residents of the Federal Republic of Germany or countries other than the United States of America and all or a substantial portion of the assets of such persons and of the Company are located outside the United States of America. As a result, it may not be possible for investors to effect service of process within the United States of America upon the Company or such persons or to enforce against them in United States courts judgments obtained in such courts based on the civil liability provisions of the United States securities laws. In general, the enforceability in German courts of a final judgment of a United States court would require a retrial of the case in the Federal Republic of Germany.

## THE OFFERING OF THE OFFER SHARES

### Subject matter of the offering

The offering (including any potential over-allotment) (the “**Offering**”) in total relates to 1,951,228 ordinary bearer shares with no par value with a notional value of EUR 1.00 each (the “**Offer Shares**”) consisting of

- (i) 1,475,409 new ordinary bearer shares with no par value with a notional value of EUR 1.00 each (the “**New Shares**”), and
- (ii) 221,311 new ordinary bearer shares with no par value with a notional value of EUR 1.00 each in connection with a possible volume increase option (the “**Additional New Shares**”),
  - (i) and (ii) from a capital increase against cash contributions resolved by an extraordinary shareholders’ meeting of the Company on 9 October 2014, as well as
- (iii) 254,508 existing ordinary bearer shares with no par value with a notional value of EUR 1.00 each in connection with a possible over-allotment (the “**Over-allotment Shares**”, together with the New Shares and Additional New Shares the “**Offer Shares**”) from the holdings of Bio Discovery III F.C.P.R., Biotech Growth N.V., HBM Healthcare Investments (Cayman) Ltd., Coöperatief LSP IV U.A., PlatzerInvest AG, Sycamore GmbH and Dr. Hendrik Liebers (the “**Lending Shareholders**”).

The Offer Shares will be offered (i) in the Netherlands by way of a public offering and (ii) outside of the Netherlands in a private placement to selected institutional investors, including (A) outside the United States of America in certain member states of the European Union as well as in Switzerland in reliance on Regulation S under the U.S. Securities Act 1933, as amended (“**Securities Act**”), and (B) in the United States of America to qualified institutional buyers (“**QIBs**”) as defined in and pursuant to Rule 144A under the Securities Act (together, the “**Offering**”). Private placements may take place in EEA Member States pursuant to another exemption under the Prospectus Directive as implemented in the relevant EEA Member State. Private placements will not take place in Australia, Canada and Japan.

The capital increase to create the New Shares and the Additional New Shares, if any, (the “**Capital Increase**”) has been resolved by an extraordinary shareholders’ meeting of the Company on 9 October 2014. The authorized capital authorizing the management board of the Company to create Greenshoe Shares, if any, has also been resolved by an extraordinary shareholders’ meeting of the Company on 9 October 2014. The implementation of the Capital Increase is expected to be registered with the commercial register shortly after the settlement day on or around 30 October 2014. Once the final number of Offer Shares sold to investors has been determined, which is expected to take place on or around 23 October 2014, it is expected that the authorized capital will be increased by the resolution of an extraordinary shareholders’ meeting to an amount corresponding to 50% of the then existing share capital of the Company following the registration of the implementation of the Capital Increase. The utilization of the authorized capital to create the Greenshoe Shares (as defined below), to the extent Kempen & Co has subscribed for such Greenshoe Shares (the “**Greenshoe Capital Increase**”), if any, is expected to be implemented shortly after execution of the Greenshoe Option (as defined below). Upon implementation and registration of the Capital Increase for the issuance of the New Shares, assuming placement of all New Shares, the share capital will amount to EUR 6,717,102. Upon implementation and registration of the Capital Increase for the issuance of the New Shares and the Additional New Shares, assuming placement of all New Shares and all Additional New Shares, the share capital of the Company will amount to EUR 6,938,413. Assuming the Capital Increase and the Greenshoe Capital Increase are fully effected and all Total New Shares are issued, the share capital of the Company would amount to EUR 7,192,921; the nominal value of the Offer Shares that are subject of the Offering including a potential over-allotment, represents a total of EUR 1,951,228, or 27 % of the Company’s share capital at that time.

In connection with the Offering, the Company will receive the net proceeds from the sale of the Total New Shares (after deduction of fees and commissions). The Company will receive the proceeds from the sale of the Over-allotment Shares to the extent that the Greenshoe Option is exercised and the Greenshoe Capital Increase is implemented (see “*– STABILIZATION /OVER-ALLOTMENT /GREENSHOE*”).

Certain existing shareholders of the Company have committed to purchase Offer Shares in an aggregate amount of approximately EUR 15 million in the course of the Offering whereby the final number of Offer Shares to be allocated to such existing shareholders will be finally determined by the Company and Kempen & Co at their full discretion. On the assumption that the final offer price will be at the mid-point of the Price Range, the existing shareholders may purchase a maximum number of 881,752 Offer Shares on the basis of their commitments subject to full allocation. In such case the Offer Shares could be allocated to existing shareholders according to their commitment as follows:

<b>Shareholder</b>	<b>Committed Amount (in TEUR)</b>	<b>Number of Offer Shares <sup>(1)</sup></b>
IBG Risikokapitalfonds II GmbH & Co. KG, Germany	800	46,715
Bio Discovery III F.C.P.R., Paris, France (managed by an entity belonging to the Rothschild-Group)	2,000	116,788
Biotech Growth N.V., Curacao, Netherlands Antilles (investment vehicle of BB Biotech)	4,000	233,577
TVM V Life Science Ventures GmbH & Co. KG, Germany	900	52,555
HBM Healthcare Investments (Cayman) Ltd., Cayman Islands	4,000	233,577
Coöperatief LSP IV U.A., 1071 DV Amsterdam, The Netherlands	2,000	116,788
Biogen Idec MA Inc., Cambridge, Massachusetts, USA <sup>(1)(2)</sup>	1,200	70,072
Sycamore GmbH, Germany	75	4,380
Dr. Liebers, Germany	25	1,460
Dr. Glund, Germany	25	1,460
Dr. Lues, Germany	25	1,460
Prof. Frank, Germany	25	1,460
PlatzerInvest AG, Switzerland	25	1,460
<b>Total</b>	<b>15,100</b>	<b>881,752</b>

<sup>(1)</sup> On the assumption that the final offer price will be at the mid-point of the Price Range (as defined below).

<sup>(2)</sup> Biogen Idec MA Inc. has agreed to purchase such number of Offer Shares reflecting 4% of the aggregate amount of the New Shares and the Additional New Shares (without consideration of any Greenshoe Shares); therefore, there is no fixed amount committed and the figure above has been calculated on the assumption that both the New Shares and the Additional New Shares will be placed and rounded.

Kempen & Co will be acting as Sole Global Coordinator and Bookrunner and Petercam will be acting as Co-Bookrunner (Kempen & Co and Petercam together the “**Syndicate Banks**”). Close Brothers Seydler Bank AG is appointed by Kempen & Co on behalf of the Company to act as Selling Agent (the “**Selling Agent**”).

#### **Price range, offer period, offer price and allotment**

The Offer Shares will be offered in a price range between EUR 15.25 and EUR 19.00 (the “**Price Range**”).

The Offering will begin on 13 October 2014 and is expected to end on 23 October 2014, during which period investors will have an opportunity to submit offers to purchase the Offer Shares within the Price Range (the “**Offer Period**”). Offers to purchase shares may be submitted by retail investors through Kempen & Co. Private placements will be arranged by the Syndicate Banks and the Selling Agent. On the final day of the Offer Period, institutional investors will be able to submit offers to purchase shares until 3:00 p.m. (Central European Summer Time, “**CEST**”) and retail investors until 12:00 noon (CEST).

The Company together with the Sole Global Coordinator reserves the right to decrease the number of Offer Shares, to increase or decrease the upper limit and /or the lower limit of the Price Range and/or to extend or shorten the Offer Period (the “**Offer Terms**”). If any of the Offer Terms are modified as set out above, the change will be published on the Company’s website, [www.probiodrug.de](http://www.probiodrug.de), and by a press release issued in the Netherlands and Germany, and, to the extent required under the German Securities Prospectus Act (*Wertpapierprospektgesetz*) or the Financial Markets Supervision Act (*Wet op het financieel toezicht*), as a supplement (*Nachtrag*) to this Prospectus. Investors who have submitted buy offers will not be notified individually in that event.

Any changes to the Offer Terms will have no effect on the validity of buy offers already submitted. Investors who have submitted buy offers prior to publication of a supplement (*Nachtrag*), if any, will have the right provided under the German Securities Prospectus Act (*Wertpapierprospektgesetz*) to withdraw from these buy offers within the two business

days following publication of such supplement (*Nachtrag*). Instead of withdrawing buy offers submitted prior to publication of the supplement (*Nachtrag*), investors may also amend such buy offers or place new limited or unlimited buy offers within the two business days following publication of the supplement (*Nachtrag*).

The price for the Offer Shares (the “**Offer Price**”) will be determined by way of a bookbuilding process.

After the expiration of the Offer Period, the Offer Price will be set by the Company and the Sole Global Coordinator on the basis of the order book prepared during the bookbuilding procedure. The bookbuilding procedure will be based on the Price Range. The Offer Price will be determined on the basis of offers to buy the Offer Shares submitted by investors during the Offer Period and collectively recorded in the above mentioned order book. The buy orders will be evaluated as a function of the price bid and the expected investment horizons of the various investors. The Offer Price and the number of Offer Shares placed will be determined on this basis with a view to maximizing the proceeds. On the other hand, consideration will be given to questions of whether the Offer Price and the number of Offer Shares sold would reasonably support expectations of stable development of the share price in the secondary market in view of demand for the shares of the Company as indicated by the order book. The prices bid by investors and the number of investors interested in purchasing shares at a given price are not the only factors that will be taken into account in this context. Consideration will also be given to the mix of investors in the Company that would result from allotment at a given price and the anticipated investor behavior.

Investors who have placed buy orders may cancel these orders at any time prior to the end of the Offer Period. Once the Offer Price has been determined, the Offer Shares will be allotted to investors on the basis of the then existing buy offers. It is expected that the Offer Price will be announced on or around 23 October 2014 in the form of an *ad-hoc* announcement through an electronic information system and on the Company’s website, [www.probiodrug.de](http://www.probiodrug.de), and a press release issued in the Netherlands and Germany. Investors who have placed buy orders through the Sole Global Coordinator will be able to obtain information from the Sole Global Coordinator concerning the Offer Price and the number of Offer Shares allotted to them beginning at the earliest on the banking day following the determination of the Offer Price. In the event that the placement volume should prove to be insufficient to fill all orders placed at the Offer Price, the Sole Global Coordinator reserves the right to reject orders in part or in their entirety.

#### **Stabilization /Over-allotment /Greenshoe**

In connection with the Offering and placement of the Offer Shares, over-allotments may be made and stabilization measures aimed at supporting the market price of the Company’s shares may be undertaken to the extent legally permitted. Stabilization measures may not be undertaken until the Existing Shares have been introduced to trading (first day of trading) and must end no later than 30 calendar days after such date (the “**Stabilization Period**”). Kempen & Co, acting also for the account of Petercam, will act as the stabilization manager and may, in accordance with legal requirements, take stabilization measures to support the market price of the Company’s shares and thereby counteract any selling pressure. There is no obligation, however, to undertake any stabilization measures. No assurance can be given that any such measures will be taken. These measures may result in the market price of the Company’s shares being higher than would have otherwise been the case and the market price may temporarily be at an unsustainable level.

In connection with the possible stabilization measures, investors may, in addition to the New Shares and the Additional New Shares being offered, be allocated up to 221,311 Over-allotment Shares if the New Shares are sold and up to 254,508 Over-allotment Shares if both, the New Shares and Additional New Shares are sold (and in no event will the Over-allotment Shares represent more than 15% of the New Shares and Additional New Shares, if any, sold in the Offering) as part of the allocation of the Offer Shares (the “**Over-allotment**”).

In view of the potential Over-allotment, the Lending Shareholders have agreed to provide Kempen & Co a share loan. If and to the extent the Over-allotment has been made, Kempen & Co will redeliver the loan shares by using (i) shares Kempen & Co has acquired in connection with stabilization measures within the Stabilization Period, and /or (ii) the Greenshoe Shares (as defined below) from the Greenshoe Capital Increase. In the latter case, the Lending Shareholders and Kempen & Co have agreed that the share loan will be extended until the Greenshoe Capital Increase from authorized capital is implemented and registered and the Greenshoe Shares have come into existence.

The Company has agreed to issue the number of new shares that equals the number of shares Kempen & Co has placed with investors in connection with the Over-allotment minus the number of shares Kempen & Co has acquired in the context of stabilization measures by utilizing its authorized capital (such new shares the “**Greenshoe Shares**”). Kempen & Co has undertaken to subscribe for the Greenshoe Shares at the Offer Price per share less agreed fees and commissions. Kempen & Co will notify the Company within two business days following expiry of the Stabilization Period, if and to what extent stabilization measures were taken and how many shares Kempen & Co has acquired in this connection and thereby request the Company to effect the Greenshoe Capital Increase (the “**Greenshoe Option**”). However, Kempen & Co may decide and notify the Company to execute the Greenshoe Option in whole or in part already at any time prior to the expiry of the Stabilization Period. The Company’s management and supervisory board

will resolve upon the utilization of the authorized capital for the Greenshoe Capital Increase within two business days following such notification. Once issued, the Greenshoe Shares shall be delivered to the Lending Shareholders (together with any shares purchased in the market) and then admitted to trading on Euronext Amsterdam as soon as practicable and feasible.

Once the Stabilization Period has ended, an announcement will be made within one week in various media outlets distributed across the entire European Economic Area as to whether stabilization measures were taken, when stabilization started and finished, and the price range within which stabilization was taken; the latter will be disclosed for each occasion on which price stabilization measures were taken. The issuance of the Greenshoe Shares, its timing and the number and type of shares concerned as well as the issue price will also be announced promptly in the same manner.

### Early Termination of the Offer

The underwriting agreement stipulates that Kempen & Co may, on behalf of itself and Petercam, under certain circumstances terminate the underwriting agreement, even after allocation and Listing and up to delivery and settlement. If the underwriting agreement is terminated, the Offering will not take place. Any allotments already made to investors will be cancelled. In such case, investors will have no right to delivery of the Offer Shares. Any claims with regard to subscription fees paid and costs incurred by investors in connection with the subscription will be settled solely on the basis of the legal agreement between the respective investor and the institution with which the buy order was placed. Should investors have made so-called short sales of shares, the investors selling the shares will be solely liable for the legal consequences of any failure to make delivery in connection with any such sale.

### Timetable

The following timetable shows the anticipated schedule for the Offering and the admission to trading of the Shares on Euronext Amsterdam:

10 October 2014	Approval of this Prospectus by the German Financial Supervisory Authority ( <i>Bundesanstalt für Finanzdienstleistungsaufsicht</i> , “ <b>BaFin</b> ”) and publication of the approved Prospectus on the Company’s website
10 October 2014	Notification of the approved Prospectus to the Netherlands Authority For the Financial Markets ( <i>Autoriteit Financiële Markten</i> , “ <b>AFM</b> ”)
10 October 2014	Application for admission to listing and trading of the Existing Shares of the Company on the regulated market of Euronext Amsterdam
13 October 2014	Commencement of the Offer Period
23 October 2014	End of the Offer Period for institutional investors at 3:00 p.m. (CEST) and for retail investors in the Netherlands at 12:00 noon (CEST)
On or around 23 October 2014	Determination of the Offer Price and the number of the Offer Shares placed and allotment; publication of the Offer Price and the number of the Offer Shares placed in the form of an ad-hoc announcement on an electronic information system and on the Company’s website
27 October 2014	Admission to and commencement of trading of the Existing Shares on Euronext Amsterdam on a conditional basis “as if and when delivered”
29 October 2014	Book-entry delivery of the Offer Shares in form of the Settlement Loan Shares (as defined below) against payment of the Offer Price (settlement)
On or around 30 October 2014	Registration of the implementation of the Capital Increase and the increase of the authorized capital
On or around 30 October 2014	Delivery of the New Shares and the Additional New Shares, if any, to the Lending Shareholders
On or around 31 October	Commencement of trading of the New Shares and the Additional New Shares, if any, on the regulated market of Euronext Amsterdam
27 November 2014	End of stabilization period

end of November  
/early December  
2014

Greenshoe Capital Increase, if any, and commencement of trading of the Greenshoe Shares, if any, on Euronext Amsterdam

On the date of its approval, the Prospectus will be published on the Company's website, [www.probiodrug.de](http://www.probiodrug.de).

## **General and specific information on the shares of the Company**

### ***Type of shares, voting rights***

The shares of the Company are ordinary bearer shares with no par value. Each share has a notional par value of EUR 1.00. Each share carries one vote at the Company's shareholders' meeting. There are no restrictions on voting rights.

### ***Legal basis for the creation of shares***

The legal basis for the creation of the shares are provisions of the German Stock Corporation Act (*Aktiengesetz*), Section 182 and Section 186 of the German Stock Corporation Act (*Aktiengesetz*) for the creation of shares by a resolution of the shareholders' meeting, and additional Sections 202 et seq. of the German Stock Corporation Act (*Aktiengesetz*) for the creation of shares from authorized capital.

### ***Dividend rights***

The Offer Shares will have full dividend rights as of 1 January 2014 and for subsequent years.

### ***Form and representation of shares***

In compliance with the Company's articles of association (the "**Articles of Association**") (*Satzung*), all shares of the Company have been and will be issued as ordinary bearer shares with no par value (non-par value shares). The present share capital in the amount of EUR 5,241,693.00 will be represented by one global bearer share certificate without dividend coupons that will be deposited with Clearstream Banking Aktiengesellschaft, Mergenthalerallee 61, 65760 Eschborn, Germany ("**Clearstream**"). Trades in the shares of the Company will then be settled through Euroclear Nederland having its offices at Herengracht 459-469, 1017 BS Amsterdam, the Netherlands ("**Euroclear Nederland**") and via a direct link between Euroclear Nederland and Clearstream Banking Aktiengesellschaft.

The shares from the Capital Increase against cash contributions will be represented by additional global share certificate(s) that will also be deposited with Clearstream. The global share certificate(s) representing the New Shares (and the Additional New Shares, if any), and the global share certificate representing the Greenshoe Shares, if any, are expected to be deposited with Clearstream not later than one banking day after the registration of the implementation of the Capital Increase and Greenshoe Capital Increase, if any, respectively with the competent Commercial Register.

Article 5 (3) of the Company's Articles of Association precludes the rights of shareholders to receive individual share certificates for their shares. The Company may issue share certificates that represent one share (individual certificates) or several shares (global certificates). The management of the Company determines the form of share certificates, dividend and renewal coupons, bonds, and interest and renewal coupons. The shares of the Company that are the subject of the Offering provide holders thereof with the same rights as all other shares of the Company and do not entitle holders to any rights or benefits in excess thereof.

### ***Delivery and payment***

The Offer Shares will be delivered in book-entry form through Euroclear Nederland via a link with Clearstream. Application has been made for the Offer Shares to be accepted for clearance through the book-entry facilities of Euroclear Nederland.

The delivery of the Offer Shares against payment of the Offer Price and the standard commission is expected to take place two banking days after the commencement of trading of the Existing Shares on the regulated market of Euronext Amsterdam. The Offer Price for the Offer Shares allocated and sold to existing shareholders of the Company is also due two banking days following the commencement of trading of the Existing Shares, but will be delivered only after the registration of the implementation of the Capital Increase. The shares of the Company will be made available to shareholders as co-ownership rights in the respective global share certificate.

### ***Settlement Share Loan***

The Lending Shareholders have granted to Kempen & Co, in its capacity as settlement agent, a further share loan for the purpose of facilitating the settlement of the Offering with Existing Shares in respect of the New Shares and the Additional New Shares, if any (the “**Settlement Share Loan**”).

Under the Settlement Share Loan, the Lending Shareholders have agreed to lend to Kempen & Co, in its capacity as settlement agent, such number of their Existing Shares (the “**Settlement Loan Shares**”) as corresponds to the number of New Shares and Additional New Shares sold in the course of the Offering. Kempen & Co will deliver at the settlement such Settlement Loan Shares to investors, other than the Lending Shareholders, to whom New Shares and Additional New Shares, if any, have been sold against payment of the Offer Price.

To the extent that Offer Shares are allocated to Lending Shareholders in the course of the Offering, such Lending Shareholders have agreed that they will pay the Offer Price for the Offer Shares allocated and sold to them in the course of the Offering at the settlement, whereas the Offer Shares allocated to them will only be delivered following the registration of the implementation of the Capital Increase.

After the settlement, Kempen & Co, on behalf of the Syndicate Banks, will subscribe for the New Shares and Additional New Shares, if any, in order to effect the implementation of the Capital Increase. After the registration of the implementation of the Capital Increase with the Commercial Register, the New Shares and the Additional Shares, if any, will be deposited with Clearstream and delivered to the existing shareholders in order to fulfill (i) the redelivery claims of the Lending Shareholders under the Settlement Share Loan and/or (ii) the delivery claims to the extent that Offer Shares were allocated and sold to such shareholders in the course of the Offering and then admitted to trading on Euronext Amsterdam.

It is expected that the implementation of the Capital Increase will be registered with the Commercial Register on or around 30 October 2014 and that the New Shares and Additional New Shares, if any, will be admitted to trading on Euronext Amsterdam on or around 31 October 2014.

### ***ISIN /Capitalization compartment /ticker symbol***

International Securities Identification Number (ISIN)	DE0007921835
German Securities Identification Number (WKN)	792183
Capitalization compartment:	C
Subsector:	Biotechnology
Ticker Symbol:	PBD

### ***Transferability***

All shares of the Company will be freely transferable upon their listing on the Euronext Amsterdam.

### ***Allotment criteria***

No agreements concerning the allotment method exist between or among the Company, its existing shareholders and the Sole Global Coordinator and Petercam prior to the commencement of the Offer Period. There will be, in particular, no preferred allocation to existing shareholders in the course of the Offering. However, certain existing shareholders have committed to invest in the course of the Offering an aggregate amount of approximately EUR 15 million (see “*SUBJECT MATTER OF THE OFFERING*”).

### ***Market protection agreement /selling restrictions (lock-up)***

The Company has agreed with the Syndicate Banks that it will not, for a period ending six months after the first day of trading of the shares of the Company on Euronext, without the prior written consent from Kempen & Co acting on behalf of the Syndicate Banks, such consent not to be unreasonable withheld, and to the extent legally permissible:

- announce or effect an increase of the share capital of the Company out of authorized capital, other than the Greenshoe Capital Increase; or

- submit a proposal for a capital increase to any meeting of the shareholders for resolution; or
- announce to issue, effect or submit a proposal for the issuance of any securities convertible into shares of the Company, with option rights for shares of the Company; or
- enter into a transaction or perform any action economically similar to those described above.

The Company may, however, offer, sell and issue options, warrants and shares of the Company (i) under current employee share purchase and share option schemes or (ii) in consideration of all or a portion of the acquisition price of any business acquired by the Company or for purposes of entering into a joint venture. In the latter case the Company has agreed to consult with Kempen & Co acting for the Syndicate Banks prior to the issuance of the shares or other securities and to use its best efforts to negotiate an undertaking of the recipient that it will accept selling restrictions comparable to those to which the existing shareholders have agreed in connection with the Offering for a period ending six months after the first day of trading of the shares of the Company on Euronext Amsterdam.

For the period ending six months after the first day of trading of the shares of the Company on Euronext Amsterdam, each of the existing shareholders of the Company (i.e. the shareholders as presented in the section “*SHAREHOLDER STRUCTURE*” and the shareholders Sycamore GmbH, DNS-Beteiligungs GmbH, tbg Technologie-Beteiligungs-Gesellschaft mbH, Technologie Beteiligungsfonds Bayern GmbH & Co. KG, PlatzerInvest AG, Sachsen V.C. GmbH & Co.KG as well as Dr. Konrad Glund, Dr. Hendrik Liebers, Dr. Inge Lues, Prof. Dr. Georg Frank and Arnd Christ as current, former and future members of the management board and the supervisory board of the Company (together the “**Lock-up Shareholders**”) agreed that it will not:

- offer, pledge, allot, sell, contract to sell, sell any option or contract to purchase, purchase any option to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any of the shares of the Company it holds as of the date of this Prospectus or any other securities of the Company convertible into or exercisable or exchangeable for shares of the Company;
- enter into a transaction or perform any action economically similar to those described above, in particular enter into any swap or other arrangement that transfers to another, in whole or in part, the economic risk of ownership of shares, whether any such transaction is to be settled by delivery of shares or such other securities of the Company, in cash or otherwise.

In addition, each of the Lock-up Shareholders has agreed that it will not enter into any such transaction as described above for a further period of six months without the prior written consent of Kempen & Co.

Furthermore, each of the Lock-up Shareholders has agreed that, for the period ending 12 months after the first day of trading of the Shares on Euronext Amsterdam, it will not propose, directly or indirectly, any increase in the share capital of the Company to any meeting of the shareholders for resolution, or vote in favor of such a proposed increase or otherwise support any proposal for the issuance of financial instruments or securities convertible into shares of the Company (other than as expressly provided by this Prospectus) without the prior written consent of Kempen & Co which may not be unreasonably withheld.

The following transactions shall be excluded from the above restrictions:

- any tender of shares or securities of the Company following any public tender offer (or the granting of an irrevocable undertaking to accept any public tender offer) that is made with a view to acquire the entire issued share capital of the Company and that has been recommended by the management board of the Company;
- any disposal of shares made pursuant to an offer by the Company to purchase its own shares, provided that such offer is made on identical terms to all holders of shares of the Company and complies with all applicable laws;
- any purchase of Offer Shares;
- any disposal of securities of the Company to any purchaser in off-market transactions other than through a secondary offering, provided that, prior to any such transfer, such purchaser shall undertake with Kempen & Co to be bound by the restrictions set forth above with respect to the relevant securities of the Company for the remainder of the lock-up period;
- any shares of the Company in relation to a share loan agreement agreed between any of the existing shareholders and Kempen & Co for covering any over-allotments and /or for facilitating the settlement (delivery of Overallotment and /or Offer Shares) in connection with the Offering;

- any disposal of shares or securities of the Company required by any statutory or regulatory requirement or court decision.

### ***Share Loans and Market Protection Agreements***

The Lock-up Shareholders have entered into a market protection agreement with Kempen & Co (see “*THE OFFERING OF THE OFFER SHARES – GENERAL AND SPECIFIC INFORMATION ON THE SHARES OF THE COMPANY – MARKET PROTECTION AGREEMENT/SELLING RESTRICTIONS (LOCK-UP)*”).

The Lending Shareholders have granted to Kempen & Co, in its capacity as settlement agent, the Settlement Share Loan for the purpose of facilitating the settlement of the Offering with Existing Shares in respect of the New Shares and the Additional New Shares, if any (see also “*THE OFFERING OF THE OFFER SHARES – THE SETTLEMENT SHARE LOAN*”). The Lending Shareholders have been exempted from their obligations under the market protection agreement in respect of the Settlement Loan Shares in order to facilitate the settlement of the Offer Shares with Settlement Loan Shares. The New Shares and the Additional New Shares, if any, once delivered to the Lending Shareholders in order to fulfill their respective redelivery claims under the Settlement Share Loan, will however then become subject to the market protection agreement as the Settlement Loan Shares would otherwise have been.

The Lending Shareholders have agreed to provide Kempen & Co in its capacity as stabilization manager with a share loan in connection with a possible over-allotment (see also “*THE OFFERING OF THE OFFER SHARES – STABILISATION/OVER-ALLOTMENT/GREENSHOE*”). To the extent the Greenshoe Option is exercised and Greenshoe Shares are delivered to the Lending Shareholders, such Greenshoe Shares will then become subject to the market protection agreement as the Existing Shares lent to Kempen & Co by the Lending Shareholders in connection with the over-Allotment would otherwise have been.

Any Offer Shares allocated and sold to existing shareholders in the course of the Offering, including the Lending Shareholders, are not be subject to the market protection agreement and are therefore not subject to any selling restrictions.

### ***Shareholder Notification Obligations due to the Share Loans***

With the admission of the Existing Shares to trading on Euronext Amsterdam, shareholders of the Company become subject to certain notification obligations if their voting rights exceed certain thresholds. In addition, if thereafter shareholders reach, exceed or fall below certain thresholds in respect of their voting rights they are also subject to such notification obligations. See “*DESCRIPTION OF THE SHARE CAPITAL OF THE COMPANY AND APPLICABLE REGULATIONS – SHAREHOLDER DISCLOSURE AND REPORTING DUTIES*”).

If due to the lending of any of the Existing Shares to Kempen & Co, in its capacity as settlement agent or in its capacity as stabilization manager, any of the Lending Shareholders falls below any voting rights thresholds that would trigger the duty to make a notification, such Lending Shareholder would be required to make such a notification in respect of the change of his voting rights. Likewise, if due to the redelivery of any Settlement Loan Shares or any Greenshoe Shares any of the Lending Shareholders of the Company reaches or exceeds any of the relevant voting rights thresholds, such Lending Shareholder would be required to make such a notification in respect of the change of his voting rights.

Investors should be aware that any such notifications of Lending Shareholders in respect of changes in their voting rights due to the settlement mechanics should not be mistaken as a breach of the market protection agreement of any such Lending Shareholder if he falls below or reaches or exceeds any such voting rights thresholds due to the delivery or redelivery of any shares under any of the share loans.

### ***Shareholder Notification Obligations due to the Implementation of the Capital Increase and the Greenshoe Capital Increase***

The Capital Increase will be implemented after the Existing Shares have been admitted to trading on Euronext Amsterdam and the Greenshoe Capital Increase, if any, will be implemented after the Existing Shares and the New Shares and Additional Shares, if any, have been admitted to trading on Euronext Amsterdam.

Once the Capital Increase and the Greenshoe Capital Increase, if any, have been implemented by registration with the Commercial Register, the total share capital of the Company, and thereby also the total number of issued and outstanding shares of the Company, will, in each case, be increased accordingly, see also “*THE OFFERING OF THE OFFER SHARES – SUBJECT MATTER OF THE OFFERING*”. As a consequence, the relative percentage of the voting rights of shareholders of the Company will change due to such implementation of the Capital Increase and the Greenshoe Capital Increase, if any, see also “*DILUTION*”.

Therefore, shareholders may be required to make a voting rights notification, if they fall below any relevant voting rights thresholds due to the implementation of the Capital Increase or the Greenshoe Capital Increase, if any, as the case may be. As soon as the implementation of the Capital Increase and the Greenshoe Capital Increase, if any, has been registered with the Commercial Register, the Company will issue an ad hoc announcement stating the amount of the implemented Capital Increase, or Greenshoe Capital Increase, if any, and the date when the implementation became effective.

#### ***Admission to Euronext Amsterdam and commencement of trading***

The Existing Shares as well as all Total New Shares, to the extent issued, shall be admitted to trading on Euronext Amsterdam. The application for admission to listing and trading of the Existing Shares of the Company on the regulated market of Euronext Amsterdam is expected to be filed on 10 October 2014. The admission to listing and trading is expected to become effective on 27 October 2014. Commencement of trading of the Existing Shares on Euronext Amsterdam is expected to take place on a conditional basis “as if and when delivered” also on 27 October 2014.

The New Shares and the Additional New Shares, if any, are expected to be admitted to trading on Euronext Amsterdam on or around 31 October 2014 (after delivery).

The Greenshoe Shares (as defined below), if any, are expected to be admitted to trading on Euronext Amsterdam end November /early December 2014 (after delivery).

#### **Interests of parties participating in the Offer**

The Company’s interest to finance the clinical and preclinical development of its product candidates is of key importance for the execution of the Offering (see “*REASONS FOR THE OFFERING; USE OF PROCEEDS AND COST OF THE ISSUE*”).

Apart from this, the Syndicate Banks have an interest in receiving the agreed fees and commission in the event that the Offering is executed.

The current and former members of the management board and the supervisory board as well as certain key employees of the Company participate in certain incentive compensation programs, including stock option programs and phantom stocks. Under the terms of these programs, the commencement of trading of the shares in the Company entitles the respective holders to exercise option rights under the stock option programs or to cash payments. (see “*DESCRIPTION OF THE SHARE CAPITAL OF THE COMPANY AND APPLICABLE REGULATIONS – CONVERSION AND STOCK OPTION RIGHTS – STOCK OPTION RIGHTS*” and “*GOVERNING BODIES – MANAGEMENT BOARD – COMPENSATION OF THE MANAGEMENT BOARD MEMBERS*” and “*GOVERNING BODIES – SUPERVISORY BOARD – COMPENSATION OF THE SUPERVISORY BOARD MEMBERS*”). The current members of the management board will receive a bonus of EUR 50,000 each if the Company is listed on the Euronext Amsterdam or a similar stock exchange by not later than 31 December 2014, which would be earned upon the Listing contemplated herein (see “*GOVERNING BODIES – MANAGEMENT BOARD – COMPENSATION OF THE MANAGEMENT BOARD MEMBERS*”).

There are no other interests on the part of the parties participating in the Offer that are of material importance for the Offering. There are no conflicts of interests.

## REASONS FOR THE OFFERING, USE OF PROCEEDS AND COSTS OF THE ISSUE

### Reasons for the Offering

The principal purpose of the Offering is to obtain capital to support the execution of the Company's business and development strategy (as described in "*BUSINESS – STRATEGY*") and in particular to finance the clinical and preclinical development of its product candidates PQ912, PBD-C06 and PQ1565 as well as for general corporate purposes.

The Offering together with the admission of the Company's Shares to trading on Euronext Amsterdam will create a public market for the shares of the Company providing access of the Company to the public capital markets for potential future equity funding. Also, a sound cash position provides the Company the necessary flexibility to address possible new developments in the business area in which the Company is active. It shall also enable the Company to strengthen its position in the biopharmaceutical drug market towards future partners and competitors.

### Costs and Expenses of the Offering

On the assumption that the Offer Shares will be sold at the mid-point of the price range, being EUR 17.125, fees and commissions payable to the Syndicate Banks by the Company are expected to be approximately

- (i) EUR 1,417,011, if only the New Shares are sold, and
- (ii) EUR 2,044,438, if the New Shares and the Additional New Shares are sold and the Greenshoe Option is fully exercised,

thus leading to a range of fees and commissions between EUR 1,417,011 and EUR 2,044,438.

The aggregate of the administrative, legal, audit and other costs and expenses in connection with the Offering and the admission of the Company's Shares to trading on Euronext Amsterdam, including publications as well as the fees for the approval of this Prospectus by BaFin and passporting of the Prospectus to the AFM, is expected to amount to approximately TEUR 1,072.

Based on the aforementioned assumptions, in particular on the assumption that the Offer Shares will be sold at the mid-point of the price range, and taking into account the costs and expenses of the Offering as stated above the Company expects to receive net proceeds (the "**Net Proceeds**") in an amount of approximately

- (i) TEUR 22,777, if only the New Shares are sold and the Greenshoe Option is not exercised, and
- (ii) TEUR 30,299, if the New Shares and the Additional New Shares are sold and the Greenshoe Option is fully exercised,

thus leading to a range of Net Proceeds between approximately TEUR 22,777 and TEUR 30,299.

Investors should be aware that the Net Proceeds from the Offering will depend on the final number of Offer Shares placed and the final Offer Price, both of which will be determined only after the end of the Offer Period on the basis of a bookbuilding procedure.

### Use of proceeds

The Company currently anticipates that it will use the Net Proceeds of this Offering as outlined below:

- (i) to support the further clinical development of PQ912, primarily a Phase 2a monotherapy study in early Alzheimer patients, the 6 and 9 month toxicology studies and ancillary pharmacology studies, including but not limited to combination studies in animals;
- (ii) to support the preclinical and then clinical development of PBD-C06, including but not limited to Chemistry, Manufacturing and Control ("**CMC**"), 4 weeks and the 6 and 9 month toxicology studies as well as Phase 1 and ancillary preclinical pharmacology studies, including but not limited to combination studies in animals;
- (iii) to support the continued preclinical and then clinical development of PQ1565, including but not limited to CMC, 4 weeks and the 6 and 9 month toxicology studies as well as Phase 1 and ancillary pharmacology studies, including but not limited to combination studies in animals;

- (iv) to support further research activities in the field of QC, pGlu-Abeta, AD and other neurodegenerative diseases as well as the exploration of new indications as potential target indications for QC-inhibitors and anti-pGlu-Abeta antibodies;
- (v) to secure funds for general corporate purposes, such as intellectual property, general and administrative expenses and the additional costs associated with being a listed company;
- (vi) to use potential opportunities to broaden and diversify its research and development portfolio, e.g. through in-licensing or the acquisition of programs and companies with synergistic or complementary technologies, products and /or product candidates.

As of the date of this Prospectus, the Company cannot predict all of the specific uses for the Net Proceeds, or the amounts that will be actually spent on the uses described above. The exact amounts and the timing of the actual use of the Net Proceeds will depend on numerous factors, amongst others the progress, costs and respective results of the Company's preclinical and clinical development programs, other developments in the field of AD and related or other relevant diseases, and whether the Company can secure the intellectual property rights necessary for the further development of its drug product candidates. As a result, the Company has broad discretion as to how to apply the Net Proceeds.

However, depending on the amount of Net Proceeds and the actual costs related to the intended clinical studies, the funds may not be sufficient to finance all purposes mentioned above.

For as long as the Net Proceeds are not needed to be invested in the development of its business, the Company intends to hold the Net Proceeds in interest bearing bank accounts or to invest the Net Proceeds in cash equivalent instruments or short term certificates of deposit.

## EARNINGS PER SHARE AND DIVIDEND POLICY

### Distributable earnings

The share of each individual shareholder in the profit of the Company is determined by the shareholding such shareholder holds in the registered share capital of the Company. There are neither dividend restrictions nor different procedures for shareholders residing outside Germany as compared to shareholders residing within Germany. The resolutions relating to profit allocation and thus the distribution of dividends for a given financial year are adopted at the ordinary shareholders' meeting held in the subsequent financial year which resolves on the utilization of the Company's distributable profits on the basis of a non-binding proposal of the management board and the supervisory board of the Company.

German law provides that a resolution concerning dividends and the distribution thereof may be adopted only on the basis of a balance sheet profit shown in the Company's unconsolidated financial statements prepared in accordance with the German Commercial Code (*Handelsgesetzbuch*). In determining the balance sheet profit available for distribution, the annual net income or loss of the respective year must be adjusted for profits and losses carried forward from the previous year and for deposits into or withdrawals from reserves. German law requires that certain reserves are created and therefore deducted, where applicable, when calculating the balance sheet profits available for distribution. In a resolution regarding the utilization of balance sheet profits, the shareholders' meeting can include further amounts in retained earnings or carry them forward as profit.

Dividends will be paid out in accordance with the rules of the clearing system of Clearstream. Details concerning any dividends approved by the ordinary shareholders' meeting and the respective paying agents designated by the Company will be published in the German Federal Gazette (*Bundesanzeiger*).

Under German law, the claim to dividend payments generally becomes statutory time-barred after a period of three years starting at the end of the year in which the dividend payment has been resolved upon. If such claim is represented by a dividend coupon, such claim will lapse if the dividend coupon is not presented within the four-year period of presentation. However, if the coupon is presented within the four-year period of presentation, the claim will lapse after two years following the expiration of the period of presentation. In case the dividend rights are statutory time-barred, the Company may retain the dividend as extraordinary gains.

### Earnings per share

The Company had no distributable profits in the previous three financial years. The balance sheet loss as shown in the unconsolidated financial statements prepared in accordance with German GAAP amounted to EUR 50.9 million in 2011, EUR 71.2 million in 2012 and EUR 81.3 million in 2013, which corresponds to earnings per share, on the assumption that the Company's share capital had been the same in the relevant periods as it is as of the date of this Prospectus, of EUR -9.71 in 2011, EUR -13.58 in 2012 and EUR -14.73 in 2013.

The following overview presents the consolidated result and the earnings per share of Probiodrug for the financial years ended 31 December 2013, 2012 and 2011 (in each case in accordance with IFRS).

	For the years ended 31 December		
IFRS	2013	2012	2011
Number of shares on 1 January	25,528,929	22,694,162	15,718,325
Weighted average number of shares outstanding on 31 December	25,528,929	24,310,478	20,866,817
Results for the period in TEUR	-9,929	-18,720	-16,307
Earnings per share (in EUR) <sup>(1)</sup>	-0.39	-0.77	-0.78

<sup>(1)</sup> There are no dilution effects on the earnings per share. The undiluted earnings per share from continuing operations are EUR -0.38 in the financial year ended 31 December 2013 (EUR -0.47 in the financial year ending 31 December 2012; EUR -0.67 in the financial year ended 31 December 2011). The diluted earnings per share from continuing operations are equivalent to the undiluted earnings per share from continuing operations.

**Dividend policy**

The Company does not expect to be able to recognize a balance sheet profit, i.e. distributable profits, that would allow Probiodrug AG to pay any dividends for the foreseeable future.

## CAPITALIZATION AND INDEBTEDNESS, WORKING CAPITAL

### Capitalization

The data presented in the following table shows the capitalization of the Company as of 31 August 2014 and is derived from the Company's internal unaudited accounting records prepared in accordance with IFRS.

In TEUR	Unadjusted	Adjusted due to capital measures after 31 August 2014	Adjusted assuming the completion of the Offering with Net Proceeds in an amount of TEUR 22,777 <sup>(1)</sup>	Adjusted assuming the completion of the Offering with Net Proceeds in an amount of TEUR 30,299 <sup>(1)</sup>
<b>Total current liabilities<sup>(2)</sup></b>	4,206	4,206	4,206	4,206
of which secured	0	0	0	0
of which guaranteed	0	0	0	0
of which unsecured /unguaranteed	4,206	4,206	4,206	4,206
<b>Total non-current liabilities<sup>(3)</sup></b>	1,374	1,374	1,374	1,374
of which secured <sup>(4)</sup>	0	0	0	0
of which guaranteed <sup>(4)</sup>	0	0	0	0
of which unsecured /unguaranteed	1,374	1,374	1,374	1,374
<b>Total shareholders' equity</b>	-890	-890	21,887	29,409
Share capital	31,450	5,242	6,717	7,193
Legal reserve	228	228	228	228
Capital reserve <sup>(5)</sup>	55,665	793	23,070	30,093
Other reserves	-199	-199	-199	-199
Retained earnings	-88,034	-6,954	-7,929	-7,906
<b>Total capitalization</b>	4,690	4,690	27,467	34,989

<sup>(1)</sup> The amount of the Net Proceeds from the Offering will depend on the final Offer Price and the final number of Offer Shares sold. On the assumption that the final Offer Price will be at the mid-point of the Price Range, the Company expects to generate Net Proceeds of

- (i) approximately TEUR 22,777 if only the New Shares are placed and the Greenshoe Option is not exercised ("minimum scenario");
- (ii) approximately TEUR 30,299 if the New Shares and the Additional New Shares are placed and the Greenshoe Option on that basis (15% of the New Shares and the Additional New Shares) is fully exercised ("maximum scenario").

- (2) Current liabilities consist primarily of tax liabilities (TEUR 2,511) and trade payables (TEUR 1,566). The tax liabilities relate to the disputed alleged tax claims including accrued interest (see “*BUSINESS – LITIGATION*” and “*RISK FACTORS – FINANCIAL RISKS*”).
- (3) Non-current liabilities consist of pensions (TEUR 530) and provisions (TEUR 844). The provisions relate primarily to the phantom stocks issued by the Company.
- (4) The Company has entered into an insurance arrangement that covers its pension liabilities. The claims of such insurance arrangement have been assigned to the beneficiaries of the pension commitments and could thereby also be considered “secured” / “guaranteed” by a third party.
- (5) The position “Capital reserve” corresponds to the item Additional paid-in capital in the IFRS Financial Statements of Probiodrug.

## Indebtedness

The following table shows the Company's indebtedness as of 31 August 2014 and is derived from the Company's unaudited internal accounting records prepared in accordance with IFRS

In TEUR	Unadjusted	Adjusted assuming the completion of the Offering with Net Proceeds in an amount of TEUR 22,777 <sup>(1)</sup>	Adjusted assuming the completion of the Offering with Net Proceeds in an amount of TEUR 30,299 <sup>(1)</sup>
<b>As of 31 August 2014</b>			
Cash	3,958	26,735	34,257
Cash equivalent	0	0	0
Trading securities	0	0	0
<b>Liquidity</b>	<b>3,958</b>	<b>26,735</b>	<b>34,257</b>
<b>Current financial receivables<sup>(2)</sup></b>	<b>525</b>	<b>525</b>	<b>525</b>
<b>Total current assets</b>	<b>4,483</b>	<b>27,260</b>	<b>34,782</b>
			0
Current bank debt	0	0	0
Current position of non current debt	0	0	
Other current financial debt	-1,640	-1,640	-1,640
<b>Current financial debt<sup>(3)</sup></b>	<b>-1,640</b>	<b>-1,640</b>	<b>-1,640</b>
<b>Net current financial indebtedness</b>	<b>-2,843</b>	<b>-25.620</b>	<b>-33,142</b>
Non current bank loans	0	0	0
Bonds issued	0	0	0
Other non current loans	0	0	0
<b>Non current financial indebtedness</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Net financial indebtedness</b>	<b>-2,843</b>	<b>-25.620</b>	<b>-33,142</b>

<sup>(1)</sup> The amount of the Net Proceeds from the Offering will depend on the final Offer Price and the final number of Offer Shares sold. On the assumption that the final Offer Price will be at the mid-point of the Price Range, the Company expects to generate Net Proceeds of

- (i) approximately TEUR 22,777 if only the New Shares are placed and the Greenshoe Option is not exercised (“**minimum scenario**”);
- (ii) approximately TEUR 30,299 if the New Shares and the Additional New Shares are placed and the Greenshoe Option on that basis (15% of the New Shares and the Additional New Shares) is fully exercised (“**maximum scenario**”).

<sup>(2)</sup> Current financial receivables consist of other financial assets, tax refunds and other assets.

<sup>(3)</sup> Current financial debt consists of trade payables and other financial liabilities.

As of 31 August 2014 no off-balance sheet arrangement and no contingent liabilities were present. However, the Company has pension liabilities for which, as of 31 August 2014, a reserve in the amount of TEUR 530 was recorded. In addition, in respect of the potential tax liabilities resulting from a disputed tax claim the Company recorded tax reserves as of 31 August 2014 in the amount of TEUR 2,511 (corresponding to the entire amount claimed including accrued interest). In addition, the Company provided for other “provisions” which were, as of 31 August 2014, TEUR 844 non-current and TEUR 41 current which relate primarily to the phantom stocks issued by the Company.

#### **Working capital statement**

The Company believes that the liquid funds of Probiodrug are sufficient to meet its current liquidity requirements. The Company also believes that, to the extent foreseeable as of the date hereof, the available liquid funds of Probiodrug will be sufficient to meet its liabilities when due for at least the next 12 months.

## DILUTION

The net book value of the Company as reflected in the Company's balance sheet in accordance with IFRS as of 31 August 2014 amounted to TEUR -890 and is calculated on the basis of total assets minus total liabilities (see "*CAPITALIZATION AND INDEBTEDNESS, WORKING CAPITAL – CAPITALIZATION*").

This is equivalent to approximately EUR -0.17 per share (calculated on the basis of 5,241,693 shares outstanding as of the date of this Prospectus).

The following calculation is based on the assumption that the Offer Price amounts to EUR 17.125, which corresponds to the mid-point of the Price Range.

Assuming that only 1,475,409 New Shares are placed and the Greenshoe Option will not be exercised (minimum scenario), the Company would obtain net proceeds from the placement of the New Shares of approximately TEUR 22,777. If the Company had obtained this amount already as of 31 August 2014, the net book value of the Company at that time would have been about TEUR 21,887 or EUR 3.26 per share (based on the increased number of 6,717,102 shares after the placement of only the New Shares). Consequently, under the above mentioned assumptions, the implementation of the Offering would lead to a direct increase in the net book value of Company of around EUR 3.43, but to a direct dilution of EUR 13.87, or 80.98% per share for the purchasers of the Offer Shares who acquire shares at the mid-point of the price range.

Assuming that all the New Shares and the Additional New Shares will be placed and the Greenshoe Option will be fully exercised on that basis (i.e. 15% of the sum of the New Shares and the Additional New Shares) (maximum scenario), the Company would obtain net proceeds from the placement of the New Shares of approximately TEUR 30,299. If the Company had obtained this amount already as of 31 August 2014, the net book value of the Company at that time would have been about TEUR 29,409 or EUR 4.09 per share (based on the increased number of 7,192,921 shares after the placement of the Total New Shares). Consequently, under the above mentioned assumptions, the implementation of the Offering would lead to a direct increase in the net book value of the Company of around EUR 4.26, but to a direct dilution of EUR 13.04, or 76.13% per share for the purchasers of the Offer Shares who acquire shares at the mid-point of the price range.

## SELECTED FINANCIAL INFORMATION AND RESULTS OF BUSINESS OPERATIONS

Unless explicitly stated otherwise, the following summary of financial information of Probiodrug presented in this section of the Prospectus is taken from the audited consolidated financial statements of the Company as of and for the years ended 31 December 2013, 31 December 2012 and 31 December 2011 (the “**IFRS Consolidated Financial Statements**”) and the unaudited consolidated interim financial statements as of and for the six-month period ended 30 June 2014 (the “**Unaudited IFRS Consolidated Interim Financial Statements**”). The IFRS Consolidated Financial Statements and the Unaudited IFRS Consolidated Interim Financial Statements (together the “**IFRS Financial Statements**”) have been prepared in accordance with International Financial Reporting Standards, as adopted by the European Union (“**IFRS**”).

The Company has also prepared unconsolidated financial statements as of and for the year ended 31 December 2013 (the “**German GAAP Financial Statements**”) in accordance with the German Commercial Code (*Handelsgesetzbuch*).

### **Audit of the IFRS Financial Statements by the auditor**

The IFRS Consolidated Financial Statements have been audited by the statutory auditor of the Company, KPMG AG Wirtschaftsprüfungsgesellschaft, Leipzig, Germany, in compliance with the International Standards on Auditing (*ISA*) and provided with an unqualified auditor’s report with an emphasis of matter paragraph regarding material uncertainty regarding the appropriateness of the use of the going concern assumption. The Unaudited IFRS Consolidated Interim Financial Statements for the half-year period ended 30 June 2014 are neither audited nor reviewed. In this Prospectus financial data referred to as “audited” is taken from the aforementioned audited consolidated financial statements of the Company. Financial data referred to as “unaudited” is neither audited nor revised (*einer prüferischen Durchsicht unterzogen*).

The audit reports on the historical financial information have been issued without qualifications. However, the auditor’s opinion in respect of the IFRS Consolidated Financial Statements contains the following statement: “Without qualifying this opinion we refer to the explanation in the notes. In the section “4. Significant discretionary decisions, estimates and assumptions” it is explained that the ability of the entity to continue as a going concern is endangered if significant payments are required with respect to the lawsuit pending with the fiscal courts with respect to the back payments for taxes.”

This explanation in section 4. of the notes has the following wording: “As a result of the resolution to issue convertible bonds in July 2013 as well as the increase in these convertible bonds as resolved in May 2014, the Company was able to secure additional funding which provide for the Company’s further development at least into the third quarter of 2014. In order to continue the ongoing research and development projects additional funding will, at the latest, be required at this point. Management is currently pursuing an additional financing round for the fall of 2014. If this is not achieved, the Company’s further development will be endangered. If extensive adjustments are made to the cost structures, the Company’s projections show that, without a successful financing round, the liquidity would be sufficient through the end of 2015. The aforementioned projections are based on the assumption that no cash outflows will be required in 2014 and 2015 with respect to the potential additional tax claims of the fiscal authorities for the year 2004. Probiodrug has filed a lawsuit at the Finanzgericht contesting the potential back taxes. A ruling has not yet been made. A stay of execution for the contested decisions has been granted. This risk was provided for in the financial statements by recording an appropriate provision. Should significant payments be required in 2014 or 2015 for the back taxes being contested in the financial courts, the Company’s ability to continue as a going concern would be endangered.”

Furthermore, the auditor’s opinion in respect of the German GAAP Financial Statements contains the following wording: “Without qualifying this opinion we refer to the explanation in the management report. In the section “Risks” it is explained that the ability of the entity to continue as a going concern is endangered if significant payments are required with respect to the lawsuit pending with the fiscal courts with respect to the back payments for taxes.”

This explanation in the section “Risks” has the following wording translated into English from the relevant text of the German language management report to which the auditor’s opinion on the audited German GAAP Financial Statements makes reference: “The Company’s projections indicate that by substantially adjusting the cost structures the liquidity can be provided for without the successful completion of a financing round through the end of 2015. The afore mentioned projections are based on the assumption that no cash outflows will result with respect to the potential back payment claims of the fiscal authorities for taxes for the year 2004. Probiodrug has filed a lawsuit with the fiscal court (*Finanzgericht*) against the potential tax back payments. A ruling has not yet been made. A stay of execution with respect to the disputed assessment notices has been granted. The risk was provided for in the financial statements by recording appropriate provisions. Should significant payments be made with respect to the back taxes in dispute, the ability of the Company to continue as a going concern would be endangered.”

## **Overview of consolidated financial data in accordance with IFRS**

The consolidated financial data summarized below is intended to be read together with the section entitled “*MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS*”.

## Consolidated Statement of Comprehensive Income

in TEUR	1 January to 30 June		1 January to 31 December		
	2014	2013	2013	2012	2011
	(unaudited)		(audited)		
<b>I. Profit or Loss</b>					
<i>Continuing operations</i>					
Revenue .....	0	0	0	6	21
Cost of sales .....	0	0	0	0	0
<b>Gross profit .....</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>21</b>
Research and development expenses .....	-2,820	-3,720	-8,004	-9,255	-13,229
General and administrative expenses .....	-961	-1,206	-2,394	-2,341	-3,084
Other operating income .....	43	163	747	1,032	2,023
<b>Operating profit/loss .....</b>	<b>-3,738</b>	<b>-4,763</b>	<b>-9,651</b>	<b>-10,558</b>	<b>-14,269</b>
Interest income .....	2	6	9	22	42
Interest expense .....	-58	-57	-115	-340	-71
Other financial income .....	-	-	0	4	37
<b>Financial profit/loss .....</b>	<b>-56</b>	<b>-51</b>	<b>-106</b>	<b>-314</b>	<b>8</b>
<b>Loss before tax .....</b>	<b>-3,794</b>	<b>-4,814</b>	<b>-9,757</b>	<b>-10,872</b>	<b>-14,261</b>
Income tax expense .....	0	0	0	-656	6
<b>Loss from continuing operations .....</b>	<b>-3,794</b>	<b>-4,814</b>	<b>-9,757</b>	<b>-11,528</b>	<b>-14,255</b>
<i>Discontinued operations</i>					
<b>Loss after tax of the discontinued operations .....</b>	<b>-32</b>	<b>-181</b>	<b>-172</b>	<b>-7,192</b>	<b>-2,052</b>
<b>Net loss for the period .....</b>	<b>-3,826</b>	<b>-4,995</b>	<b>-9,929</b>	<b>-18,720</b>	<b>-16,307</b>
<b>II. Other comprehensive income (loss)</b>					
Items not to be reclassified subsequently to profit or loss					
Remeasurement of the net defined benefit pension liability .....	0	18	35	-203	-45
<b>Total other comprehensive income (loss) .....</b>	<b>0</b>	<b>18</b>	<b>35</b>	<b>-203</b>	<b>-45</b>
<b>III. Comprehensive income (loss) .....</b>	<b>-3,826</b>	<b>-4,977</b>	<b>-9,894</b>	<b>-18,923</b>	<b>-16,352</b>

## Consolidated Statement of Financial Position

in TEUR	As of 30 June		As of 31 December	
	2014 (unaudited)	2013	2012 (audited)	2011
<b>ASSETS</b>				
<b>A. Noncurrent assets</b>				
I Goodwill.....	-	0	0	1,996
II Development program.....	-	0	0	4,737
III Other intangible assets .....	86	101	67	61
IV Plant and equipment.....	253	321	926	1,264
V Financial assets.....	3	3	3	3
<b>Total noncurrent assets.....</b>	<b>342</b>	<b>425</b>	<b>996</b>	<b>8,061</b>
<b>B. Current assets</b>				
I Inventories.....	-	0	18	18
II Trade receivables .....	-	0	5	1
III Other short-term financial assets .....	12	872	2	9
IV Tax refunds.....	3	10	18	46
V Other assets .....	328	188	483	644
VI Securities.....	-	0	0	1,019
VII Cash and cash equivalents...	5,919	4,879	7,726	9,295
VIII Noncurrent assets held for sale .....	-	0	757	0
<b>Total current assets .....</b>	<b>6,262</b>	<b>5,949</b>	<b>9,009</b>	<b>11,032</b>
<b>Total assets .....</b>	<b>6,604</b>	<b>6,374</b>	<b>10,005</b>	<b>19,093</b>
<b>LIABILITIES AND EQUITY</b>				
<b>A. Equity</b>				
I Share capital.....	25,529	25,529	25,529	22,694
II Legal reserve .....	228	228	228	228
III Additional paid-in capital....	51,963	51,963	51,658	45,150
IV Other reserves for the remeasurement of the pensions.....	-199	-199	-234	-31
V Retained earnings.....	-85,571	-81,745	-71,816	-53,096
<b>Total equity .....</b>	<b>-8,050</b>	<b>-4,224</b>	<b>5,365</b>	<b>14,945</b>
<b>B. Noncurrent liabilities</b>				
I Investment grants .....	6	11	24	68
II Pensions .....	531	535	545	333
III Provisions.....	811	719	501	610
IV Other noncurrent liabilities.....	-	0	0	1
<b>Total noncurrent liabilities .....</b>	<b>1,348</b>	<b>1,265</b>	<b>1,070</b>	<b>1,012</b>
<b>C. Current liabilities</b>				
I Investment grants .....	12	13	43	33
II Tax liabilities .....	2,494	2,445	2,347	1,364
III Provisions.....	41	41	41	41
IV Convertible bonds .....	9,622	5,346	0	0
V Trade payables .....	981	1,327	731	1,215
VI Other current liabilities.....	156	161	408	483
<b>Total current liabilities.....</b>	<b>13,306</b>	<b>9,333</b>	<b>3,570</b>	<b>3,136</b>
<b>Total liabilities .....</b>	<b>14,654</b>	<b>10,598</b>	<b>4,640</b>	<b>4,148</b>
<b>Total equity and liabilities .....</b>	<b>6,604</b>	<b>6,374</b>	<b>10,005</b>	<b>19,093</b>

## Consolidated Cash Flow Statement

in TEUR	1 January to 30 June		1 January to 31 December		
	2014	2013	2013	2012	2011
	(unaudited)		(audited)		
Net loss for the period .....	-3,826	-4,995	-9,929	-18,720	-16,307
Income tax expense / income.....	0	0	0	656	-6
Net interest expense.....	56	51	106	318	32
Non-cash losses from impairment write-downs .....	-	-	25	5,983	0
Depreciation and amortization.....	61	107	314	352	413
Gain on disposal of plant and equipment ...	-3	-9	-21	-267	0
Release of deferred investment grants .....	-6	-14	-43	-34	-54
Other non-cash expense.....	0	10	305	146	414
Interest paid .....	0	0	0	0	-5
Interest received.....	2	6	9	22	44
Income taxes paid.....	-1	-2	-2	-7	-11
Income taxes received .....	6	10	11	35	55
<i>Changes in working capital</i>					
Changes in inventories .....	-	-	18	0	24
Changes in trade receivables .....	0	5	320	-4	3
Changes in other assets.....	360	162	-214	153	720
Changes in pension liabilities.....	-13	5	8	-4	-10
Changes in provisions.....	92	218	218	-109	360
Changes in trade payables .....	-346	-64	596	-484	277
Changes in other liabilities .....	-5	-147	-247	-76	-270
<b>Cash flows from operating activities.....</b>	<b>-3,623</b>	<b>-4,657</b>	<b>-8,526</b>	<b>-12,040</b>	<b>-14,321</b>
Proceeds from investment grants.....	-	-	0	15	28
Proceeds from disposal of securities.....	-	-	0	1,019	0
Proceeds from disposal of plant and equipment .....	25	31	36	359	0
Proceeds from disposal of intangible assets.....	362	0	362	0	0
Acquisition of plant and equipment.....	0	-1	-5	-64	-84
Acquisition of intangible assets .....	0	-34	-60	-55	-14
Investments in securities.....	-	-	0	0	-1,016
<b>Cash flows from investing activities.....</b>	<b>387</b>	<b>-4</b>	<b>333</b>	<b>1,274</b>	<b>-1,086</b>
Proceeds from stock issue.....	-	-	0	9,213	18,765
Transaction costs of equity transaction.....	-	-	0	-16	-124
Proceeds from convertible bonds issue.....	4,276	0	5,346	0	0
<b>Cash flows from financing activities.....</b>	<b>4,276</b>	<b>0</b>	<b>5,346</b>	<b>9,197</b>	<b>18,641</b>
<b>Net increase in cash and cash equivalents.....</b>	<b>1,040</b>	<b>-4,661</b>	<b>-2,847</b>	<b>-1,569</b>	<b>3,234</b>
<b>Cash and cash equivalents at the beginning of period.....</b>	<b>4,879</b>	<b>7,726</b>	<b>7,726</b>	<b>9,295</b>	<b>6,061</b>
<b>Cash and cash equivalents at the end of period.....</b>	<b>5,919</b>	<b>3,065</b>	<b>4,879</b>	<b>7,726</b>	<b>9,295</b>

## MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*Investors should read the following discussion of the financial condition and results of operations of Probiodrug in conjunction with the sections "BUSINESS" and "RISK FACTORS" as well as the other financial information contained in this Prospectus, including the financial statements and the notes thereto. The financial information contained in the tables and discussed in this section of this Prospectus has been derived – unless otherwise indicated – from the audited consolidated financial statements of the Company as of and for the years ended 31 December 2013, 31 December 2012 and 31 December 2011 (the "IFRS Consolidated Financial Statements") and the unaudited consolidated interim financial statements as of and for the six-month period ended 30 June 2014 (the "Unaudited IFRS Consolidated Interim Financial Statement") (together the "IFRS Financial Statements"). The IFRS Financial Statements were prepared in accordance with IFRS as adopted by the European Union.*

*The Company has also prepared annual financial statements for the financial year ended 31 December 2013 in accordance with German principles of proper accounting and German Generally Accepted Accounting Principles ("German GAAP") (the "German GAAP Financial Statements") which are also included in this Prospectus. Certain line items of these German GAAP Financial Statements are also discussed in this section. German GAAP deviates in certain material aspects from IFRS.*

*For an overview of selected key financial information, see also "SELECTED FINANCIAL INFORMATION AND RESULTS OF BUSINESS OPERATIONS".*

*The following section contains forward-looking statements which are based on the Company's management's assumptions regarding the Company's future business performance, see also "GENERAL INFORMATION – FORWARD-LOOKING STATEMENTS" and "RISK FACTORS". A number of factors, including the risks described in the section titled "RISK FACTORS", may cause the Company's actual results to differ materially from the results expected on the basis of these forward-looking statements. Due to the presentation of figures in thousands of EUR (TEUR) and the application of standard commercial rounding principles resulting in whole numbers, the figures presented may not add up to the totals shown in all cases.*

### Overview

Probiodrug AG is a biopharmaceutical company that focuses on the research and development and the potential future commercialization of new therapeutic products for the treatment of Alzheimer's disease ("AD"). The Company is developing a proprietary, focused pipeline of product candidates against AD.

Current approved drugs for AD treat symptoms of the disease only and neither halt the progression nor provide sustainable improvement of the disease. The positive effects of these treatments on cognitive functions and activities of daily living are at best modest and transient and may have side effects.

Scientific insight into the disease has identified a major hallmark of its biology, Abeta peptides. These peptides were identified as being the main constituent of senile plaques which were originally regarded as the toxic component that destroys brain cells, also referred to as neurodegeneration. On this basis, therapeutic concepts were developed aiming at modifying the disease by halting or slowing the progression of the neurodegeneration (disease modification). The first generation of disease-modifying approaches focused on inhibiting the plaque production or reducing existing plaques by targeting Abeta in general. These approaches, however, did not meet the expectations.

The prevailing scientific view today is that not the plaques but certain soluble forms of Abeta aggregates, which are called "Abeta oligomers", cause the early pathological changes in AD (Shankar and Walsh, 2009; Sheng et al., 2012; Shankar et al., 2008; Walsh and Selkoe, 2004; Walsh and Selkoe, 2007). It has been shown that the formation of these toxic soluble Abeta oligomers is triggered by a specific form of Abeta, namely pyroglutamate-Abeta ("pGlu-Abeta") (Nussbaum et al., 2012). Probiodrug's scientists discovered in 2004 that Abeta peptides need a specific enzyme to be transformed into pGlu-Abeta, which is called Glutaminyl Cyclase ("QC") (Schilling et al., 2004). The discovery of this key enzymatic function leading to pGlu-Abeta is Probiodrug's basis for developing small molecule inhibitors as a specific pGlu-Abeta targeting treatment approach.

Probiodrug is developing product candidates to specifically target toxic pGlu-Abeta via two modes of action, i.e. by (i) inhibiting the production of pGlu-Abeta; and (ii) clearing existing pGlu-Abeta from the brain, which the Company believes are complementary. The Company's current development pipeline consists of the following product candidates:

- PQ912 is the lead product candidate of the Company, currently entering into a Phase 2a study. PQ912 is a small molecule that was discovered and profiled by Probiodrug and was nominated for regulatory development in 2010. PQ912 is a specific inhibitor of QC which has shown therapeutic benefit in Alzheimer animal models.

PQ912 was shown to be safe and well tolerated and revealed a high level of QC-inhibition in a Phase 1 study with 200 healthy young and elderly volunteers. The preparation of the Phase 2a study started in March 2014. The Clinical Trial Application (“CTA”) filing started in August 2014. The first AD patient is expected to be treated with PQ912 in the first quarter of 2015 with the first data expected to be available in mid 2016.

- PBD-C06 is a monoclonal antibody, currently in preclinical research. PBD-C06 targets pGlu-Abeta, aiming to selectively clear the brain from pGlu-Abeta while leaving non-toxic forms of Abeta untouched. The Company believes that, due to the high specificity of PBD-C06 for pGlu-Abeta, the amount of antibody reaching the brain will be sufficient to neutralize the toxic peptides.
- PQ1565 is a QC-inhibitor, currently in late preclinical research. The product candidate has shown attractive drug-like properties in preclinical studies.

In 2012, the Company commenced the transformation from a research and discovery company to a product development company, thereby focusing on its advanced product candidates using skillsets needed for preclinical and clinical development and reducing internal resources for research. Most of the current research and development activities of the Company are being provided by third parties, such as scientific advisors or contract research organizations (“CROs”), so that the Company can focus on overall management tasks with a high level of outsourcing resulting in flexibility and cost-efficiency. The Company uses its expertise in building and managing networks of advisors and of pharma experts on both the science and the clinical aspects of AD. The Company believes that it has created and maintained strong credibility over the years within the scientific community, with clinicians, and with many pharmaceutical companies that pursue therapies for central nervous system and degenerative diseases such as AD.

As of today, regarding its research and development activities in the field of AD, the Company has not entered into any partnering or licensing arrangements in respect of any of its product candidates and is currently mainly financed by equity and to a lesser extent by grants and subsidies. Since 2007, the Company has raised approximately EUR 78.4 million from investors and the management.

The Company has a subsidiary in the U.S. that is currently not operational. In the financial years 2011, 2012 and 2013 and also in the first half-year of 2014, the Company had a subsidiary, Ingenium Pharmaceuticals GmbH (“Ingenium”), that was operational and was acquired in 2007. The business of Ingenium consisted of the creation and commercialization of novel animal models and research of CDK 9 inhibitors for the treatment of inflammatory diseases. The major assets of Ingenium were the CDK 9 research program which was sold in 2013 to AstraZeneca. The shares of Ingenium were transferred to a third party in July 2014 without consideration and without any obligations remaining with the Company. The Company and its subsidiaries are together referred to herein as “Probiodrug”.

The business of Probiodrug is described in more detail in the section “BUSINESS” of this Prospectus.

### **Future Funding Needs**

Except for the financial year 2004 in which the Company sold its Diabetes program, Probiodrug has never been profitable and has incurred losses each year since its incorporation.

Up until now, Probiodrug has not generated any revenues from the product candidates it currently develops. The Company expects that its product candidates may provide multiple sources of potential revenues in the future, as the product candidates are intended to be developed to stages that provide a basis for the out-licensing of its technology to, or entering into co-development or collaborative partnerships with, pharmaceutical companies. Presently, however Probiodrug does not have any product candidates with the necessary regulatory approval for marketing and has not entered into any licensing or collaborative or partnering agreements. Therefore, at this moment no sources for the generation of operational revenues exist.

Despite the absence of any revenues, Probiodrug incurs expenses, in particular for research and development and general administration associated with the development of its product candidates. As a result, Probiodrug’s losses were EUR -9.9 million, EUR -18.9 million and EUR -16.4 million for the years ended 31 December 2013, 2012, and 2011, respectively, and EUR -3.8 million and EUR -5.0 million for the six-month periods ended 30 June 2014 and 2013, respectively.

Therefore, until Probiodrug enters into any licensing or collaborative or partnering agreements or generates other sources of income from the commercialization of its product candidates or future products, Probiodrug will continue to incur significant expenses and operating losses for as long as it continues with the development of its product candidates. It is also expected that Probiodrug will incur significant expenses for the foreseeable future as it continues the development and clinical and preclinical studies of, seeks regulatory approval for, and pursues potential commercialization of its product candidates, resulting in the need to raise additional capital to fund its operations. Probiodrug’s future funding requirements will depend on many factors, including, but not limited to, the following:

- The scope, rate of progress, results and cost of its clinical and preclinical studies, non-clinical testing, and other related activities;
- The cost of manufacturing clinical supplies and establishing commercial supplies of its product candidates;
- The cost, timing and outcome of regulatory approvals;
- The cost and period of maintaining expanding and protecting its patent portfolio;
- The terms and timing of any licensing, collaborative, partnering, and other arrangements that it may establish, including any milestone and royalty payments thereunder; and
- The cost and timing of establishing production, sales, marketing and distribution capabilities to support the commercialization of its future drug products.

The proceeds from the Offering will be used to finance the next development stage of the product candidates, see “*REASONS FOR THE OFFERING, USE OF PROCEEDS AND COSTS OF THE ISSUE*”. However, it cannot be excluded that the Company will incur further future funding needs to further progress with the development of its product candidates.

In this case, it cannot be ensured that future funding of Probiodrugs will be available on commercially acceptable or sensible terms when needed or at all, see also “*RISK FACTOR – FINANCIAL RISKS*”.

Furthermore, drug development is a highly speculative undertaking and involves a substantial degree of uncertainty. Probiodrugs is dependent on the success of its product candidates and it cannot be ensured that any of them will prove to be safe and effective, will receive regulatory approval or can be successfully commercialized, see also “*RISK FACTORS – RISKS RELATING TO PROBIODRUG’S BUSINESS*”.

### **Material Factors affecting the Results of Operations**

The successful development of research programs and product candidates is uncertain and the Company expects to continue to incur operating losses and a negative operational cash flow for the foreseeable future while developing its product candidates and research programs. At this time, the Company cannot reasonably estimate the precise timing and detailed costs and expenses of the efforts that will be necessary to complete the remainder of the development of its research and /or development programs and product candidates such that the Company can successfully commercialize its product candidates. The Company is also unable to predict if or when material cash inflows will commence from the sales or licensing of, or from partnerships in relation to, any of its product candidates. In the view of the Company, its results of operations, financial condition and liquidity have been influenced and will continue to be influenced by the following key developments and operational characteristics.

#### ***Income***

To date, Probiodrugs does not generate any income from its product candidates. The product candidates which the Company develops are expected to provide multiple sources of potential income in the future. The Company plans to develop its product candidates to stages where it will seek suitable partners for the further development and commercialization of its product candidates and possible products in the future. Presently the Company does not have any product candidates with regulatory approval for marketing and has not yet generated any revenues from product sales, out-licensing or partnership agreements.

#### ***Future Collaborative and Licensing Arrangements***

Whereas the Company has not yet entered into any collaborative, partnering or licensing arrangements in respect of any of its product candidates, the Company will seek suitable partners for the further development and commercialization of its product candidates and possible products in the future. In this connection, the results of operations of the Company will particularly be influenced by the following factors: (i) the terms and timing of any licensing, collaborative, partnering and other arrangements that the Company may establish, including any milestone and royalty payments thereunder, and (ii) the cost and timing of establishing production, sales, marketing and distribution capabilities (see also “*RISK FACTORS – COMMERCIALIZATION AND MARKET RISKS*”).

#### ***Competition***

Probiodrugs’s competitors are also seeking to develop new product candidates in the therapeutic areas targeted by Probiodrugs. These competing product candidates may prove to have a better effectiveness, tolerability or side effect profile and might also be preferred by the Competent Authorities in the approval process, which could limit or eliminate the market opportunity for Probiodrugs’s product candidates. As a result, Probiodrugs’s product candidates might not be approved for the market or might not be sustainably established in the market. In addition, the Company may fail to agree on licensing partnerships for the licensing of its product candidates or on cooperations or potential licensing partners may fail to further develop, file for market approval or market Probiodrugs’s relevant product candidates. As a consequence,

Probiodrug may be unable to receive revenue or potential milestone payments or licenses fees or revenue participation out of licensing agreements with pharmaceutical or biotechnical companies in the future (see also “*RISK FACTORS – COMPETING PRODUCT CANDIDATES COULD PREFERABLY BE APPROVED ON THE MARKET – COMMERCIALIZATION AND MARKET RISKS*”).

### *Regulatory Requirements*

Nearly all aspects of Probiodrug’s activities are subject to substantial regulation. No assurance can be given that any of Probiodrug’s product candidates will fulfill the relevant regulatory requirements. The failure to comply with such regulatory requirements could result in delays, suspensions, refusals and withdrawals of approvals as well as fines and could make it impossible for the Company to commercialize its possible future products and /or product candidates. Furthermore, Probiodrug’s research programs and product candidates must undergo rigorous preclinical tests and clinical studies, the start, timing of completion, number and results of which are uncertain and could substantially delay or prevent the product candidates from ever reaching the market. If serious adverse side effects are identified for any of its product candidates, Probiodrug may need to abandon or limit its development of that product candidate, which may delay or prevent marketing approval, or, if approval is received for the product candidate, require it to be taken off the market, require it to include safety warnings or otherwise limit its sales. If Probiodrug cannot commercialize its product candidates due to regulatory requirements, Probiodrug will not be able to generate any income in the future, and if regulatory requirements lead to a delay in the development of its product candidates, this will delay accordingly the generation of future income. Therefore, it is uncertain whether, and if so when, Probiodrug will be able to successfully commercialize any of its product candidates. Even if Probiodrug obtains regulatory approval for a product candidate, the approved product will remain subject to on-going regulatory obligations. Therefore, even if the commercialization of any of its future products has begun, there is no assurance that such commercialization will continue (see also “*RISK FACTORS – RISKS RELATING TO THE REGULATORY ENVIRONMENT*”).

### *Dependence on Third Parties and Key Personnel*

Probiodrug is, and expects to continue to be, dependent on collaborations with partners relating to the development and commercialization of its existing and future research programs and product candidates. Probiodrug currently has various research relationships with various academic and research institutions worldwide. Probiodrug also relies upon third-party contractors and service providers for the execution of most aspects of its development programs. Failure of these third parties to provide services of a suitable quality and within acceptable timeframes may cause the delay or failure of Probiodrug’s development programs. In addition, Probiodrug relies on third parties to supply and manufacture its product candidates, and it expects to rely on third parties to manufacture its products, if approved. The development of such product candidates and the commercialization of any products, if approved, could be stopped or delayed if any such third party fails to provide sufficient quantities of product candidates or products or fails to do so at acceptable quality levels or prices or fails to maintain or achieve satisfactory regulatory compliance. Probiodrug’s success significantly depends also on its cooperation with certain external key advisors and on its ability to attract and retain key personnel and managers. Finally, Probiodrug depends on the recruitment of sufficient volunteers and patients for clinical studies. Therefore, any such dependencies on third parties could negatively affect the generation of future income (see also “*RISKS RELATED TO PROBIODRUG’S DEPENDENCE ON THIRD PARTIES AND KEY PERSONNEL*”).

### *Costs and Expenses*

#### *Research and Development Expenses*

The Company’s research and development expenses are significant and represent its principal element of costs and expenses. Research and development expenses may vary substantially from period to period based on the timing of the Company’s research and development activities, including due to the timing of the initiation of clinical studies and the enrollment of patients in clinical studies. Research and development expenses of the Company are and will primarily be determined by following the factors: (i) the scope, rate of progress, results and cost of the Company’s clinical study, non-clinical testing, and other related activities; (ii) the cost of manufacturing clinical supplies for the Company’s product candidates; and (iii) the cost, timing and outcome of regulatory approvals. In this connection, the Company believes that its research and development expenses will continue to grow in the future due to the advancing of the development and the entering into further and more advanced clinical studies of its product candidates. All such expenses are recognized when they incur, unless under applicable accounting principles the conditions for their capitalization are met. Thus far, the Company has not capitalized any of its research and development expenses.

#### *General and Administrative Expenses*

The general and administrative expenses of the Company consist of the remuneration of its employees and other related expenses for personnel in management, finance, accounting and communication functions, including fees incurred in relation to functions that are outsourced by the Company such as audit, legal, IP and IT.

In 2012, the Company commenced an internal transformation in order to change from a research and discovery company to a product development company regarding its product candidates and their potential future commercialization. In the course of this transformation the Company reduced the spending in research, including a significant reduction of the number of its employees in the research field. The overall decrease of the position research and development expenses results from this reduction of research expenses and not from reductions of spending in development. The general and administrative expenses were reduced as well, but due to the need to manage outsourced activities of the Company appropriately not in a proportional manner. As the Company progresses towards more advanced stages in clinical studies, commercialization and marketing with respect to its product candidates and future products, the Company expects that its administrative costs will increase further (see also “*RISK FACTORS – OPERATING RISKS – PROBIODRUG MAY NOT BE ABLE TO MANAGE FUTURE ADDITIONAL OPERATIONAL CHALLENGES*”).

General administrative expenses are also expected to further increase as a result of the Company becoming a publicly listed entity by reason of the additional responsibilities associated therewith, such as investor relations, preparation of interim financial statements, and preparation and conduct of annual general meetings for a larger shareholders base.

#### *Costs Associated with Maintaining, Expanding and Protecting its Patent Portfolio*

Since the Company started researching and developing therapies for the treatment of AD, it has established an extensive patent portfolio that addresses composition and medical use of QC-inhibitors in AD, inflammatory diseases and other indications. Overall, the Company has rights to 42 patent families. The Company filed for over 650 patent applications, most of which were granted, including with respect to PQ912, PBD-C06 and PQ1565. As a result of an increasing competition in the development of drug products targeting AD, the Company might incur higher expenses in connection with maintaining, expanding and protecting its intellectual property portfolio which form part of the general and administrative expenses. Furthermore, if any of the risks associated with the protection of the Company’s intellectual property rights or know-how are realized, this would increase the expenses accordingly (see also “*RISK FACTORS – RISKS RELATING TO PROBIODRUG’S INTELLECTUAL PROPERTY AND KNOW HOW*”).

#### *Operational Risks*

The Company is also subject to certain operational risks which may have an impact on its future financial position if such risks are realized. For example, if any product liability lawsuits are successfully brought against Probiodrug or any of its partners, Probiodrug may incur substantial liabilities and may be required to limit the commercialization of its product candidates. Probiodrug may also not have or be able to obtain adequate insurance cover in particular in connection with drug or product liability risks. Furthermore, Probiodrug’s employees, principal investigators, consultants and collaborative partners may engage in misconduct or other improper activities, including non-compliance with regulatory requirements and Probiodrug’s business may be adversely affected as a result of computer system failures (see also “*RISK FACTORS – OPERATIONAL RISKS*”). Thus far, no such operational risks have been realized. However, if any of these risks are realized, this may have a material negative effect on Probiodrug’s future costs and expenses.

#### **Taxation**

In 2004, Probiodrug sold its diabetes program (DP4 inhibitors) including all related IP rights, generating a taxable profit in that year. Following a tax audit in 2008, the tax authorities retroactively increased the taxable profits for 2004 by approximately EUR 10 million, resulting in a tax claim for corporate income tax, solidarity surcharge and trade tax of EUR 1.64 million plus interest of 0.5% per month since 1 April 2006. The potential tax liability amounts to a total of EUR 2.5 million as of 30 June 2014 (including accrued interest). The Company believes that the better arguments speak against the tax authorities’ view and has contested the claims of the tax authorities. The matter is now pending with the competent tax court. As a matter of precaution, the Company has recognized in its financial statements a tax reserve corresponding to the amount in dispute (including accrued interest). Nevertheless, should the Company be eventually required to make such tax payments, this would have a corresponding material adverse effect on Probiodrug’s liquidity and cash flow position and may negatively affect its business, prospects and financial conditions (see also “*BUSINESS – LITIGATION*” and “*RISK FACTORS – FINANCIAL RISKS*”).

#### **Description of the individual items from the statement of income**

The following is an explanation of the individual items from the Group's consolidated statement of profit or loss and other comprehensive income.

#### **Revenue**

Probiodrug has so far not generated any revenue from its product candidates. In the past, some revenue was generated by Ingenium from the commercialization and delivery of animal models.

### *Research and development expenses*

Research and development expenses comprise personnel costs and costs of materials and other costs and expenses attributable to the research and development of its product candidates.

### *General and administrative expenses*

General and administrative expenses comprise personnel costs and costs of materials as well as amortization and depreciation attributable to the administrative area and other operating expenses, including fees incurred in relation to functions that are outsourced by the Company, such as audit, legal, IP and IT.

### *Other operating income*

Other operating income consists primarily of payments under grants and subsidies and the release of provisions.

### *Financial profit /loss*

Financial profit/loss is a sub-total which includes the interest income, interest expense and other financial income. This item includes interest generated from cash held in bank accounts as well as interest recognized in connection with the pension obligations of the Company and accrued interest on the alleged tax claims.

### *Income tax expense*

Income tax expense consists of expenses in relation to the alleged and disputed tax claims, in this particular case the trade tax claim.

## **Results of Operations**

### *Consolidated statement of comprehensive income*

The consolidated statement of comprehensive income of Probiodrug for the years ended 31 December 2013, 2012 and 2011 as well as for the six-month periods ended 30 June 2014 and 2013 is set forth below.

in TEUR	1 January to 30 June		1 January to 31 December		
	2014	2013	2013	2012	2011
	(unaudited)		(audited)		
<b>I. Profit or Loss</b>					
<i>Continuing operations</i>					
Revenue .....	0	0	0	6	21
Cost of sales.....	0	0	0	0	0
<b>Gross profit</b> .....	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>21</b>
Research and development expenses.....	-2,820	-3,720	-8,004	-9,255	-13,229
General and administrative expenses.....	-961	-1,206	-2,394	-2,341	-3,084
Other operating income .....	43	163	747	1,032	2,023
<b>Operating profit/loss</b> .....	<b>-3,738</b>	<b>-4,763</b>	<b>-9,651</b>	<b>-10,558</b>	<b>-14,269</b>
Interest income .....	2	6	9	22	42
Interest expense .....	-58	-57	-115	-340	-71
Other financial income .....	-	-	0	4	37
<b>Financial profit/loss</b> .....	<b>-56</b>	<b>-51</b>	<b>-106</b>	<b>-314</b>	<b>8</b>
<b>Loss before tax</b> .....	<b>-3,794</b>	<b>-4,814</b>	<b>-9,757</b>	<b>-10,872</b>	<b>-14,261</b>
Income tax expense .....	0	0	0	-656	6
<b>Loss from continuing operations</b> .....	<b>-3,794</b>	<b>-4,814</b>	<b>-9,757</b>	<b>-11,528</b>	<b>-14,255</b>

### *Discontinued operations*

<b>Loss after tax of the discontinued operations</b> .....	-32	-181	-172	-7,192	-2,052
<b>Net loss for the period</b> .....	<b>-3,826</b>	<b>-4,995</b>	<b>-9,929</b>	<b>-18,720</b>	<b>-16,307</b>

### **II. Other comprehensive income (loss)**

Items not to be reclassified subsequently to profit or loss

Remeasurement of the net defined benefit pension liability.....	0	18	35	-203	-45
<b>Total other comprehensive income (loss)</b> .....	<b>0</b>	<b>18</b>	<b>35</b>	<b>-203</b>	<b>-45</b>

<b>III. Comprehensive income (loss)</b> .....	<b>-3,826</b>	<b>-4,977</b>	<b><u>-9,894</u></b>	<b><u>-18,923</u></b>	<b><u>-16,352</u></b>
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### *Comparison of results of operations for the half-year periods ended 30 June 2014 and 2013*

#### *Revenue*

Probiodrug's revenue was TEUR 0 both in the half-year ended 30 June 2014 and in the half-year ended 30 June 2013.

#### *Research and development expenses*

Probiodrug's research and development expenses decreased from TEUR -3,720 in the half-year ended 30 June 2013 to TEUR -2,820 in the half-year ended 30 June 2014. This reduction is due primarily to the transformation of Probiodrug from a research and discovery company to a development company that began in 2012. As the Company ceased its in-house discovery activities and began developing its existing product candidate portfolio relying on more cost efficient outsourcing to third parties, its research expenses decreased substantially. The restructuring of the Company that began in 2012 was completed in the first half of 2013, resulting in reduced research and development expenses in the first half-year 2014. The major part of its research and development expense in the first half-year 2014 related to expenses in connection with the preparation for entering into the Phase 2a clinical studies of its lead product candidate PQ912.

#### *General and administrative expenses*

Probiodrug's general and administrative expenses decreased from TEUR -1,206 in the half-year ended 30 June 2013 to TEUR -961 in the half-year ended 30 June 2014 which can be explained by the restructuring of the Company that commenced in 2012 and the reduced activities of Ingenium.

#### *Other operating income*

Probiodrug's other operating income decreased from TEUR 163 in the half-year ended 30 June 2013 to TEUR 43 in the half-year ended 30 June 2014 as a result of a decrease of advances under grants and subsidies. The decline in grant programs was mainly caused by the transformation of Probiodrug from a research and discovery company to a development company in 2012 resulting in outsourcing of its research and development activities to external organizations and advisors. Under most grant programs, external research and development activities are usually eligible for subsidization only to a limited extent. To date, substantially all funds obtained by the Company in form of grants and subsidies have been fully expended.

#### *Financial profit /loss*

The financial profit /loss was constant with TEUR -56 (TEUR 2 interest income and TEUR -58 interest expense) in the financial half-year ended 30 June 2014 compared to TEUR -51 (TEUR 6 interest income and TEUR -57 interest expense) in the half-year ended 30 June 2013. Interest income results mainly from interest in connection with cash held in bank accounts. Interest expenses are recognized primarily for the accrual of interest in connection with the alleged and disputed tax claims against the Company (see also "CRITICAL ACCOUNTING POLICIES" and "BUSINESS – LITIGATION").

### *Loss before tax*

Probiodrug's loss before tax was TEUR -3,794 in the financial half-year ended 30 June 2014, compared to TEUR -4,814 in the financial half-year ended 30 June 2013. The decrease of losses by TEUR 1,020, or 21%, is due primarily to the reduction of the research expenses as well as partly by the reduction of general and administrative expenses as described above.

### *Income tax expense*

No income tax expenses were recognized in the relevant reporting periods.

### *Loss after tax of the discontinued operations*

The loss after tax of the discontinued operations of Probiodrug was TEUR -32 in the financial half-year ended 30 June 2014 compared to TEUR -181 in the half-year ended 30 June 2013. Whereas most of the business of Ingenium was discontinued by 2012, some areas of activity relating to Ingenium's CDK 9 project continued until 2014 in a decreasing manner until the sale and transfer of the CDK 9 program was completed in March 2014. Therefore, Probiodrug still recognized in 2014 some results after tax of the discontinued operations. A more detailed explanation of Ingenium and the sale of its CDK 9 program can be found below.

### *Net loss for the period*

Probiodrug's net loss for the period was TEUR -3,826 in the financial half-year ended 30 June 2014 compared to TEUR -4,995 in the financial half-year ended 30 June 2013. The decrease of losses by TEUR 1,169, or 23%, was due primarily to the reduction of the research expenses as well as partly by the reduction of the general and administrative expenses as described above as well as reduced losses from discontinued operations, i.e. in connection with Ingenium.

### *Other comprehensive income*

Probiodrug's other comprehensive income was TEUR 0 in the financial half-year ended 30 June 2014 and merely TEUR 18 in the financial half-year ended 30 June 2013.

### *Comprehensive income (loss)*

As a result of the foregoing, i.e. in particular due to the reduction of its research expenses and its general and administrative expenses, Probiodrug's comprehensive income (loss) was TEUR -3,826 in the half-year ended 30 June 2014 as compared to TEUR -4,977 in the half-year ended 30 June 2013.

## ***Comparison of the years ended 31 December 2013, 2012 and 2011***

### *Revenues*

Probiodrug's revenues were TEUR 0 in 2013, compared to TEUR 6 in 2012 and TEUR 21 in 2011. The moderate revenues generated in the financial years 2011 and 2012 resulted mainly from revenues generated by Ingenium from the commercialization and delivery of animal models in the past. The Company itself did not generate any revenues and has completely disposed of the business of Ingenium in 2013 and transferred the shares of Ingenium in 2014 to a third party without consideration and without any obligations remaining with the Company.

### *Research and development expenses*

Probiodrug's research and development expenses were TEUR 8,004 in 2013, compared to TEUR 9,255 in 2012 and TEUR 13,229 in 2011. The decrease of TEUR 3,974, or approximately 30%, from TEUR 13,229 in 2011 to TEUR 9,255 in 2012 and the further decrease of TEUR 1,251, or approximately 14%, from TEUR 9,255 in 2012 to TEUR 8,004 in 2013 were due primarily to the transformation of Probiodrug from a research and discovery company to a development company that began in 2012. As the Company ceased its in-house discovery activities and began developing its existing product candidate portfolio, its research expenses decreased substantially. The reduction of the internal research was appropriate as the development of Probiodrug's product candidates had advanced to stages where research at the previous levels was no longer necessary to support further development. This relates primarily to its leading product candidate PQ912 once it entered clinical studies and also to the other product candidates of Probiodrug (PBD-C06 and PQ1565) once the latter entered the preclinical research stage. The cost reduction was caused mainly due to the reduction of the number of employees in the field of research and reduced laboratory expenses.

### *General and administrative expenses*

Probiodrug's general and administrative expenses were TEUR -2,394 in 2013, compared to TEUR -2,341 in 2012 and TEUR -3,084 in 2011.

The decrease of TEUR 743, or approximately 24%, from TEUR 3,084 in 2011 to TEUR 2,341 in 2012 was due primarily to the transformation of Probiodrug that started in 2012. The close-down of Ingenium's facilities in Munich in 2012 and the reduction and scaling down of the facilities for research and development in Halle resulted in a reduction of the general and administrative expenses of the Company, including lease payments and lease related costs, lower material costs, and lower personnel costs. The slight increase of TEUR 53, or 2%, from TEUR 2,341 in 2012 to TEUR 2,394 in 2013 was due primarily to an increase in certain administrative and operating expenses resulting from the management of the increased outsourcing activities. These additional resources are being recognized in the general and administrative expenses and partially off-set the cost saving measures implemented in 2012 in respect of the Company's research and development expenses due to a reduction of Probiodrug's research activities.

The expenses for the protection of the intellectual property of the Company, which form part of the general and administrative expenses, remained relatively stable over the reporting periods with TEUR 746 in 2011, TEUR 863 in 2012 and TEUR 737 in 2013 (without related expenses in relation to Ingenium's intellectual property, which is reflected since 2012 in the line item "discontinued operations" and which were TEUR 51 in 2011, TEUR 122 in 2012 and TEUR 86 in 2013).

### *Other operating income*

Probiodrug's other operating income was TEUR 747 in 2013, compared to TEUR 1,032 in 2012 and TEUR 2,023 in 2011. The decrease of TEUR 991, or approximately 49%, from TEUR 2,023 in 2011 to TEUR 1,032 in 2012 and the decrease of TEUR 285, or approximately 28%, from TEUR 1,032 in 2012 to TEUR 747 in 2013 were due particularly to the decline in public grant programs for Probiodrug's research and development activities. The decline in grant programs was mainly caused by the transformation of Probiodrug that began in 2012 resulting in outsourcing of its research and development activities to external organizations and advisors. Under most grant programs, external research and development activities are usually eligible for subsidization only to a limited extent.

### *Financial profit/loss*

The financial profit /loss of Probiodrug was TEUR -106 in 2013, compared to TEUR -314 in 2012 and TEUR 8 in 2011. Probiodrug's interest income was TEUR 9 in 2013, compared to TEUR 22 in 2012 and TEUR 42 in 2011 and remained relatively constant at low levels. Probiodrug's interest expense was TEUR -115 in 2013, compared to TEUR -340 in 2012 and TEUR -71 in 2011. The increase of TEUR 269, or approximately 379%, from TEUR 71 in 2011 to TEUR 340 in 2012 was due primarily to the recognition of the accumulated interest on the alleged tax claims for corporate and trade tax with respect in the income generated in the financial year 2004 (see also "*MATERIAL FACTORS AFFECTING THE RESULTS OF OPERATIONS – TAXATION*"). The decrease of TEUR 225, or 66%, from TEUR -340 in 2012 to TEUR -115 in 2013 was due primarily to the non-recurring effect of the recognition in 2012 of the accumulated interest on the disputed tax claims. In 2012, the alleged tax claim in respect of the trade tax was recognized for the first time and the accumulated interest thereupon was therefore recognized as interest expense in 2012. The other financial result was TEUR 0 in 2013, compared to TEUR 4 in 2012 and TEUR 37 in 2011.

### *Loss before tax*

Probiodrug's loss before tax was TEUR -9,757 in 2013, compared to TEUR -10,872 in 2012 and TEUR -14,261 in 2011. The decrease of losses by TEUR 3,389, or 24%, from TEUR -14,261 in 2011 to TEUR -10,872 in 2012 and the decrease of losses by TEUR 1,115, or 10%, from TEUR -10,872 in 2012 to TEUR -9,757 in 2013 are due primarily to the reduction of the research expenses as described above.

### *Income tax expense*

Probiodrug's income tax expense was TEUR 0 in 2013, compared to TEUR -656 in 2012 and TEUR 6 in 2011. The decrease of TEUR 662, from TEUR 6 in 2011 to TEUR -656 was due primarily to the increase of the reserves built for the risks in relation to the disputed tax claim of the tax authorities with respect to the revenues generated in the financial year 2004. The change from TEUR -656 in 2012 to TEUR 0 in 2013 was due to the non-recurring effect of the increase of the reserves with respect to the disputed tax claim in 2012 (see also "*CRITICAL ACCOUNTING POLICIES*").

### *Loss after tax of the discontinued operations*

Probiodrug's loss after tax of the discontinued operations relates to the decision of the Company to sell the research program CDK 9 of Ingenium and was TEUR -172 in 2013, compared to TEUR -7,192 in 2012 and TEUR -2,052 in 2011. The increase of the losses by TEUR 5,140, or approximately 250%, from TEUR -2,052 in 2011 to TEUR -7,192 in 2012 was due primarily to the extraordinary depreciation of the goodwill and book value of the intangible assets recognized for Ingenium and its research program CDK 9 in the balance sheet of Probiodrug. The decrease of losses by TEUR 7,020 from TEUR -7,192 in 2012 to TEUR -172 in 2013 was due primarily to the non-recurring effect of the reclassification of Ingenium and its assets in 2012.

In 2012, the Company decided to sell Ingenium's CDK 9 research program entirely, which resulted in a reclassification of Ingenium's assets as "held for sale", and to treat this asset as "discontinued operations". As a consequence, instead of the book value recognized in the balance sheet the Company had to apply the expected purchase price for the CDK 9 research program of Ingenium. The purchase price was expected to be TEUR 750 for Ingenium's research program and TEUR 7 for Ingenium's plant and equipment. This resulted in an extraordinary depreciation of TEUR 5,983, of which TEUR 1,996 was allocated to Ingenium's goodwill and TEUR 3,987 was allocated to Ingenium's CDK 9 research program.

The value of the intangible assets in respect of the research program CDK 9 of Ingenium and the goodwill in respect of Ingenium was, until 2012, reviewed on a yearly basis by way of an impairment test. Thereby, the future expected profits of the cash generating unit were determined on the basis of the value in use. The last impairment test was conducted as of 30 June 2012 and the CDK 9 research program of Ingenium was identified as the smallest cash generating unit. The value of use was determined on the basis of future expectations on the basis of the finance plan of the management. Furthermore, the determined fair value was compared with other comparable transactions in the market. Both methods came to consistent results that were also consistent with the book value of Ingenium and its research program CDK 9 as recognized in the balance sheet of the Company on the basis of the value of use. On the basis of a net present value calculation, the fair value of Ingenium even exceeded the book value, therefore an extraordinary depreciation was not necessary.

Prior to the reclassification of the assets for sale as discontinued operations, the Company conducted another impairment test on the basis of the expected cash generated from the sale of the CDK 9 research program of Ingenium less associated expenses ("fair value less costs to sell-method"). As a result, the goodwill had to be extraordinarily depreciated entirely and the expected purchase price for the research program CDK 9 was determined to be TEUR 750.

In 2013, the Company sold the research program CDK 9 of Ingenium to AstraZeneca for a purchase price of USD 1.0 million.

### *Net loss for the period*

Probiodrug's net loss for the period was TEUR -9,929 in 2013, compared to TEUR -18,720 in 2012 and TEUR -16,307 in 2011. The increase of losses by TEUR 2,413, or approximately 15%, from TEUR 16,307 in 2011 to TEUR 18,720 in 2012 was due primarily to the depreciation of the goodwill and the book value of the intangible assets recognized for Ingenium and its research program CDK 9, partially off-set by the reduction of research expenses and general and administrative expenses. The decrease of losses by TEUR 8,791, or 47%, from TEUR -18,720 in 2012 to TEUR -9,929 in 2013 was due primarily to the reduction of research expenses in 2013 compared to 2012 and the non-recurring effect of the depreciation of Ingenium and its assets in 2012.

### *Other comprehensive income (loss)*

Probiodrug's total other comprehensive income was TEUR 35 in 2013, compared to TEUR -203 in 2012 and TEUR -45 in 2011. The increase in losses by TEUR 158 from TEUR -45 in 2011 to TEUR -203 in 2012 was due primarily to the remeasurement of the net defined benefit pension liabilities of the Company in 2012. The remeasurement comprises the actuarial gains and losses resulting from the measurement of the gross pension obligation of defined benefit plans as well as reflecting the difference between the realized return on plan assets and the expected return at the beginning of the period based on the discount rate of the corresponding gross defined benefit gross obligation (see also "*CRITICAL ACCOUNTING POLICIES – PENSIONS*").

### *Comprehensive income (loss)*

As a result of the foregoing, Probiodrug's comprehensive loss was TEUR -9,894 in 2013, compared to TEUR -18,923 in 2012 and TEUR -16,352 in 2011.

## Liquidity and Capital Resources

### Overview

The liquidity requirements of Probiodrug primarily relate to the funding of its research and development expenses and its general and administrative expenses. Historically, Probiodrug was funded by equity investments, the issue of convertible bonds and the receipt of public grants and subsidies. Following the Offering and the application of the Net Proceeds as described in the Section “REASONS FOR THE OFFERING, USE OF PROCEEDS AND COSTS OF THE ISSUE” in this Prospectus, the principal source of funds is expected to be cash on hand. However, the Company will also actively seek to obtain appropriate grants and subsidies in the future. Furthermore, the Company will seek to find suitable collaboration partners in order to generate revenues in the future from its research and development programs. Finally, the Company may raise additional funds in the future by issuing additional shares or convertible bonds or other financial instruments.

### Consolidated Cash Flow Statements

The consolidated cash flow statements of Probiodrug for the years ended 31 December 2013, 2012 and 2011 and for the six-month periods ended 30 June 2014 and 2013 are set forth below.

in TEUR	1 January to 30 June		1 January to 31 December		
	2014	2013	2013	2012	2011
	(unaudited)		(audited)		
Net loss for the period .....	-3,826	-4,995	-9,929	-18,720	-16,307
Income tax expense / income.....	0	0	0	656	-6
Net interest expense.....	56	51	106	318	32
Non-cash losses from impairment write-downs .....	-	-	25	5,983	0
Depreciation and amortization.....	61	107	314	352	413
Gain on disposal of plant and equipment .....	-3	-9	-21	-267	0
Release of deferred investment grants.....	-6	-14	-43	-34	-54
Other non-cash expense.....	0	10	305	146	414
Interest paid .....	0	0	0	0	-5
Interest received.....	2	6	9	22	44
Income taxes paid.....	-1	-2	-2	-7	-11
Income taxes received .....	6	10	11	35	55
<i>Changes in working capital</i>					
Changes in inventories .....	-	-	18	0	24
Changes in trade receivables .....	0	5	320	-4	3
Changes in other assets.....	360	162	-214	153	720
Changes in pension liabilities.....	-13	5	8	-4	-10
Changes in provisions.....	92	218	218	-109	360
Changes in trade payables .....	-346	-64	596	-484	277
Changes in other liabilities .....	-5	-147	-247	-76	-270
<b>Cash flows from operating activities.....</b>	<b>-3,623</b>	<b>-4,657</b>	<b>-8,526</b>	<b>-12,040</b>	<b>-14,321</b>
Proceeds from investment grants.....	-	-	0	15	28
Proceeds from the disposal of securities.....	-	-	0	1,019	0
Proceeds from disposal of plant and equipment .....	25	31	36	359	0

Proceeds from disposal of intangible assets .....	362	0	362	0	0
Acquisition of plant and equipment.....	0	-1	-5	-64	-84
Acquisition of intangible assets .....	0	-34	-60	-55	-14
Investments in securities.....	-	-	0	0	-1,016
<b>Cash flows from investing activities .....</b>	<b>387</b>	<b>-4</b>	<b>333</b>	<b>1,274</b>	<b>-1,086</b>
Proceeds from stock issue.....	-	-	0	9,213	18,765
Transaction costs of equity transaction.....	-	-	0	-16	-124
Proceeds from convertible bonds issue.....	4,276	0	5,346	0	0
<b>Cash flows from financing activities .....</b>	<b>4,276</b>	<b>0</b>	<b>5,346</b>	<b>9,197</b>	<b>18,641</b>
<b>Net increase in cash and cash equivalents .....</b>	<b>1,040</b>	<b>-4,661</b>	<b>-2,847</b>	<b>-1,569</b>	<b>3,234</b>
<b>Cash and cash equivalents at the beginning of period.....</b>	<b>4,879</b>	<b>7,726</b>	<b>7,726</b>	<b>9,295</b>	<b>6,061</b>
<b>Cash and cash equivalents at the end of period .....</b>	<b>5,919</b>	<b>3,065</b>	<b>4,879</b>	<b>7,726</b>	<b>9,295</b>

### ***Comparison of the first half of the financial year 2014 with the first half of the financial year 2013***

#### *Net cash flows generated from operating activities*

Probiodrug's cash flows from operating activities were TEUR -3,623 in the first half-year 2014, compared to TEUR -4,657 in the first half-year 2013. This reduction by TEUR 1,034, or 22%, was primarily due to the decrease of the Company's expenses for research and, to a lesser extent, general administration.

The major cash-outflows in respect of its operating activities result primarily from the payments for materials, external development, personnel (salaries and social security), intellectual property protection, consultancy services and other operating expenses. The major part of the cash-outflows from operating activities in the first half-year 2014 related to expenses in connection with the preparation for the entering in Phase 2 clinical studies of its lead product candidate PQ912.

#### *Cash flows from investing activities*

Probiodrug's cash flows from investing activities were TEUR 387 in the first half-year 2014, compared to TEUR -4 in the first half-year 2013, which is primarily due to the receipt of the second tranche of the purchase price from the sale of the CDK 9 research program of Ingenium in 2014.

#### *Cash flows from financing activities*

Probiodrug's cash flows from financing activities were TEUR 4,276 in the first half-year 2014, compared to TEUR 0 in the first-half year 2013, which stem from the issuance of convertible bonds to investors in the first half-year 2014.

### ***Comparison of the financial years 2013, 2012 and 2011***

#### *Cash flows generated from operating activities*

Probiodrug's cash flows from operating activities were TEUR -8,526 in 2013, compared to TEUR -12,040 in 2012 and TEUR -14,321 in 2011. The reduction of the negative cash flows by TEUR 2,281, or 16%, from TEUR -14,321 in 2011 to TEUR -12,040 in 2012 and by TEUR 3,514, or 29%, from TEUR -12,040 in 2012 to TEUR -8,526 in 2013 were due

primarily to the transformation measures initiated by the Company in 2012 which resulted primarily in a decrease of its research expenses.

#### *Cash flows from investing activities*

Probiodrug's cash flows from investing activities were TEUR 333 in 2013, compared to TEUR 1,274 in 2012 and TEUR -1,086 in 2011. The cash outflow of TEUR -1,086 in 2011 changed to a cash inflow of TEUR 1,274 in 2012 due primarily to the transaction consisting of the purchase of a money market fund of TEUR 1,016 in 2011 and its sale for TEUR 1,019 in 2012, which is recognized under IFRS as an investment in "securities". Furthermore, this change was due to the receipt of proceeds from the disposal of plants and equipment in the amount of TEUR 359 relating to divestments of laboratory equipment from the research department of the Company. The decrease by TEUR 941, or 74%, from TEUR 1,274 in 2012 to TEUR 333 in 2013 was due primarily to the receipt of the first tranche of the sale price for Ingenium's development program in the amount of TEUR 362 in 2013.

#### *Cash flows from financing activities*

Probiodrug's cash flows from financing activities were TEUR 5,346 in 2013, compared to TEUR 9,197 in 2012 and TEUR 18,641 in 2011. In 2011 and 2012, the cash flow from financing activities correlated with the proceeds from the issuance of new shares less transaction costs. The decrease of TEUR 9,444, or 51%, from TEUR 18,641 in 2011 to TEUR 9,197 in 2012 reflects Probiodrug's reduced financing activities. In 2013, the cash flow from financing activities correlated with the proceeds from the issuance of convertible bonds. The decrease of TEUR 3,851, or 42%, from TEUR 9,197 in 2012 to TEUR 5,346 in 2013 reflects again Probiodrug's reduced financing activities.

#### **Investments**

During the relevant reporting periods and until the date of this Prospectus, Probiodrug did not make any significant investments. In the financial years 2011, 2012 and 2013 Probiodrug invested TEUR 99 in a data management system. Otherwise, investments consisted of minor replacements of equipment.

There are no material investments of the Company in progress as of the day of this Prospectus.

The Company does not plan to make any significant investments in the near future and expects that costs for the replacement of equipment will be incurred at usual levels, which are not significant.

#### **Funding sources**

As of 30 June 2014, Probiodrug's cash and cash equivalents were TEUR 5,919. The material components of the Company's financing structure are equity funding by way of share issues, convertible bonds, public grants and subsidies.

In 2011 the Company received proceeds in an amount of EUR 13.2 million from the issuance of the second tranche of preference shares that had been resolved upon in 2009. In 2011 and 2012, the Company raised a total amount of EUR 14.8 million by the issuance of preference shares in three tranches, of which EUR 5.6 million were received in 2011 and EUR 9.2 million were received in 2012.

In 2013 and 2014, the Company issued two convertible bonds with proceeds in an aggregate amount of EUR 9.6 million. In 2014 the Company agreed with the bondholders, being mainly its shareholders, on a conversion of all outstanding convertible bonds into preference shares. Following this conversion, all preference shares in the Company were converted into common shares at a ratio of 1:1. For further information on the conversion of the preference shares into ordinary shares and the redemption of the convertible bonds against the issuance of ordinary shares, see also "*CAPITALIZATION AND INDEBTEDNESS, WORKING CAPITAL*" and "*RECENT DEVELOPMENTS AND OUTLOOK*".

Between 2004 and the date of this Prospectus the Company obtained subsidies in an aggregate amount of EUR 10.4 million from a total of 16 grant programs for its research and development efforts in the field of QC, AD, neurodegeneration and related administrative measures. These grant programs were mainly awarded by the federal state of Saxony-Anhalt, the German federal government and the European Union. Some programs contain certain requirements for the utilization of proceeds generated as a result of the publicly sponsored projects, e.g. proceeds in case of a sale or licensing of products and /or product candidates or patents developed under these projects. Under these requirements, the Company is obliged to reinvest such proceeds in the Company up to the amount of the respective grants received. These obligations have a term of five years after the termination of the sponsored project. As of the date of this Prospectus, programs with a total amount of approximately EUR 2.86 million are still affected by this obligation. If the Company is in non-compliance with the restrictions and conditions of the grant programs, a partial or complete repayment cannot be

excluded. However, the Company has longstanding experience in handling grant programs of different size and origin and it considers this risk of a reclaim of granted subsidies as manageable.

For most of the projects the proof of use (*Verwendungsnachweis*) was audited by the competent authorities, in each case without major findings. For three projects with subsidies in the aggregate amount of approximately TEUR 670 the audit of the authorities is still outstanding. Materially all subsidized projects are completed as of the date of this Prospectus. The Company will continue to seek further funds that are non-dilutive for the shareholders of the Company for the next development steps of the Company. However, the Company expects that future funding needs will be primarily financed by equity or equity related instruments.

The net proceeds from the Offering will be used primarily to finance the next stage of the development of the product candidates of Probiodrug, see also “*REASONS FOR THE OFFERING, USE OF PROCEEDS AND COSTS OF THE ISSUE*”. If the Offering is not successfully completed, the Company will not be able to progress with the development of its product candidates as planned. However, even if the Offering is not successfully completed, the Company is of the view that the liquid funds of Probiodrug are sufficient to meet its current liquidity requirements. In this connection, the Company has also secured a loan facility in the amount of up to EUR 3 million which can be drawn by the Company in case the Offering is not successfully completed in an amount that is, in the view of the Company, sufficient to meet its liabilities when due for at least the next 12 months.

### Contractual Obligations

Liquidity risk denotes the risk that current or future payment obligations cannot be fulfilled when due. In order to control its liquidity requirements, the Company uses financial planning tools to ensure that it meets its financial obligations as and when they come due. The following table shows the contractual due dates of Probiodrug’s financial liabilities as of 30 June 2014. The Company has no debt instruments outstanding. The convertible bonds issued in 2013 and 2014 were converted into shares in August 2014 and are therefore no longer part of Probiodrug’s liabilities. The liabilities are therefore mainly due to the obligations of the Company from the operation of its business and investments. The residual contract periods of financial liabilities is presented below.

TEUR	book value	up to 30 days	1 to 3 months	3 months to 1 year	1 to 5 years	More than 5 years
<b>As of 30 June 2014</b>						
<b>non derivative financial liabilities</b>						
trade payables .....	981	981	0	0	0	0
convertible bonds <sup>(1)</sup> .....	9,622	-	9,622	0	0	0
other financial liabilities .....	108	108	0	0	0	0
<b>Total .....</b>	<b>10,711</b>	<b>1,089</b>	<b>9,622</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>(1)</sup> Converted into shares of the Company in August 2014.

### Quantitative and qualitative information on market risks

The Company has no particular interest rate risks as it has no debt financing outstanding.

Credit risk defines the risk of a default by the Company’s customers or other contractual partners on trade receivables or other amounts due under financial instruments. Due to the current lack of revenues, credit risks currently exist with regard to the financial instruments of the Company, especially with respect to cash held in bank accounts. The Company also believes that its credit risk, relating to receivables, is limited because most of its receivables are with creditworthy organizations and public institutions. The maximum credit risk of the financial instruments corresponds to the book value.

The following table shows the maximum default risk of the financial instruments of the Company as at the respective dates:

**Book value as equivalent of the maximum default risk**

	<b>30.06.2014</b>	<b>31.12.2013</b>	<b>31.12.2012</b>	<b>31.12.2011</b>	<b>01.01.2011</b>
trade receivables.....	0	0	5	1	4
other financial assets.....	12	872	2	9	27
Securities.....	0	0	0	1,019	0
cash and cash equivalents.....	5,919	4,879	7,726	9,295	6,061
<b>Total.....</b>	<b>5,931</b>	<b>5,751</b>	<b>7,733</b>	<b>10,324</b>	<b>6,092</b>

Currency risk may arise if revenues are generated, or liabilities incurred, in currencies other than Euro. As the Company does not currently generate revenues and its liabilities are currently denominated in Euro, Probiodrug does not face any currency risks. The purchase price for Ingenium's research program was denominated in USD. Therefore, in the years 2013 and 2014 in which the purchase price installments became due and payable, a certain currency risk existed in this respect which was not hedged by any instruments.

**Off-Balance Sheet Arrangements**

During the years ended 31 December 2013, 2012 and 2011, as well as for the six-month periods ended 30 June 2014 and 2013, as well as of the date of this Prospectus, Probiodrug did not and does not have any off-balance sheet arrangements.

**Critical Accounting Policies**

This management's discussion and analysis of the results of operations and the cash flows of the Company is based on the consolidated IFRS Financial Statements of Probiodrug.

The preparation of these financial statements required that the management of the Company applies accounting methods and policies that are based on estimates and assumptions considered to be reasonable and realistic on the basis of the information available and in view of the circumstances at the time of estimation. These estimates and assumptions affect in particular the carrying amounts of assets and liabilities and the disclosure of contingent liabilities as of the closing dates as well as the amounts of sales and expenses for the various reporting periods. Actual results may differ from these estimates given the uncertainty inherent in such estimates and assumptions.

The use of these accounting methods and policies require that management exercise judgment and make assumptions due to the inherently uncertain nature of the facts involved so that changes in the underlying facts may significantly affect the results shown in the consolidated financial statements.

The following are some examples where the management had to apply its discretion.

***Intangible Assets***

Expenses for research and development are recognized as expenses in the period when they are realized. Pursuant to IAS 38 such expenses are recognized as intangible assets if certain conditions are met. However, such conditions are not met by the Company and, therefore, research and development expenses are not recognized as intangible assets.

***Stock Option Plans and Phantom Stocks***

Probiodrug has established stock option plans and issued options to employees and other beneficiaries that entitle them to acquire shares of the Company. Share based compensation schemes are recognized pursuant to IFRS 2 at the respective fair value. The fair value of the stock options is determined at the time they are issued. The expenses resulting therefrom are allocated over the vesting period and are adapted by the actual number of vested stock options (see also "DESCRIPTION OF THE SHARE CAPITAL OF THE COMPANY AND APPLICABLE REGULATIONS – CONVERSATION AND STOCK OPTION RIGHTS" AND "GOVERNING BODIES – MANAGEMENT BOARD").

In addition, the Company has issued Phantom Stocks to employees, members of the management board and other third party advisors. The fair value of such Phantom Stocks has been determined as of the end of the respective reporting period and any changes compared to the preceding period will be reflected in the non-current liabilities (see also "DESCRIPTION OF THE SHARE CAPITAL OF THE COMPANY AND APPLICABLE REGULATIONS – CONVERSATION AND STOCK OPTION RIGHTS" AND "GOVERNING BODIES – MANAGEMENT BOARD").

### ***Convertible Bonds***

In 2013 and 2014, Probiodrug issued convertible bonds. Pursuant to IAS 32.28 a convertible bond should be presented in the balance sheet partly as liability (repayment of the nominal amount) and partly as equity (option right), if the holders have the right to choose whether they may receive compensation in cash or shares. According to the terms and conditions of the convertible bonds a conversion into shares is provided for in any case. The fair value of the convertible bonds was determined on the assumption that the optional conversion event converting all convertible bonds into shares of the Company would occur in the fourth quarter 2014, when all convertible bonds would be converted into shares of the Company. At the time of issue the fair value of the convertible bonds was determined as the nominal value of the convertible bonds and recognized under “current liabilities”.

In August 2014, all convertible bonds were converted into shares of the Company. The effects of such conversion are shown in the sections “*CAPITALIZATION AND INDEBTEDNESS, WORKING CAPITAL*” and “*RECENT DEVELOPMENT AND OUTLOOK*”.

### ***Public Grants and Subsidies***

Public grants and subsidies are recognized as other operating income in the income statement. The Company exercised its right to choose pursuant to IAS 20 and recognizes such public grants as deferred income and realizes such grants allocated proportionately over the average period of use of the subsidized assets. Public grants and subsidies are recognized when received or if it is sufficiently probable that the conditions for the granting will be met and when the grants are authorized.

### ***Ingenium and the sale of the CDK 9 program***

The Company decided in 2012 to sell and dispose of the research program CDK 9 of Ingenium. The sale was intended to be realized within one year. Therefore, as of 31 December 2012 the non-current assets of Ingenium were recognized as “held for sale” and reclassified as “discontinued operations”.

In 2012, Ingenium’s operational activities were terminated and discontinued. In 2013, the major assets of Ingenium, consisting of its CDK 9 program, were sold to Astra Zeneca for USD 1.0 million. The transfer of the CDK 9 research program from Ingenium to Astra Zeneca was eventually completed in March 2014. Certain functions necessary in order to divest the assets of Ingenium in an orderly manner were maintained and continuously decreased until the transfer was completed.

After the transfer of the CDK 9 research program of Ingenium was completed, the Company transferred and disposed of the shares of Ingenium for no consideration to a third party in July 2014 without any obligations remaining with the Company.

The reclassification of Ingenium’s assets as “held for sale” and the treatment of its remaining activities as “discontinued operations” had the consequence that, instead of the book value recognized in the balance sheet, Probiodrug had to recognize in 2012 the expected purchase price for the CDK 9 research program of Ingenium. Such purchase price was expected to be TEUR 750 for Ingenium’s CDK 9 program and TEUR 7 for Ingenium’s plant and equipment. This resulted in a depreciation of the goodwill of Ingenium in an amount of TEUR 1,996 and a depreciation of Ingenium’s research program CDK 9 in an amount of TEUR 3,987, leading to a total depreciation in respect of Ingenium of TEUR 5,983 as of 31 December 2012. As the book value of the assets of Ingenium was adjusted in Probiodrug’s balance sheet to TEUR 750 as of 31 December 2012, neither the sale of the CDK 9 research program to Astra Zeneca for USD 1 million nor the transfer of the shares in Ingenium in July 2014 had any material effect on the balance sheet of Probiodrug.

Also, neither the sale of the CDK 9 program nor the transfer of the shares in Ingenium had any effect on Probiodrug’s income statements in 2013 or in the first half-year of 2014. Neither Ingenium nor the Company generated any revenues in these reporting periods. As described above, minor activities relating to Ingenium’s CDK 9 research program were kept, although in a decreasing manner, until the transfer of such program was completed in March 2014. As a result, Probiodrug recognized in 2013 and in the first half-year of 2014 some income and expenses and therefore results after tax in respect of Ingenium under the line item “discontinued operations”. The net result from the discontinued operation for the financial year 2013 and the first half-year 2014 as compared to the continuing operations of Probiodrug for the same periods is presented below:

TEUR	1 January - 30 June 2014 Discontinued Operations	1 January - 30 June 2014 Probiodrug	1 January - 31 December 2013 Discontinued Operations	1 January - 31 December 2013 Probiodrug
Income .....	2	43	43	747
Expenses .....	-34	-3,781	-206	-10,398
Loss on sale .....	0	0	-9	0
Operating result .....	-32	-3,738	-172	-9,651
Financial result .....	0	-56	0	-106
Result before tax .....	-32	-3,794	-172	9,757
Income taxes .....	0	0	0	0
After tax result .....	-32	-3,794	-172	9,757

### **Taxation**

Since its inception, the Company has not made any profits and has therefore not paid corporate taxes with the exception of the year 2004. In 2004, the Company generated a taxable income due to the sale of its diabetes program (DP4 inhibitors) including all related IP rights. As of 30 June 2014, the accumulated tax loss carry forwards of the Company amounted to EUR 85.23 million. These tax loss carry forwards may potentially be used to offset future profits subject to German minimum taxation rules, which limit the deductibility of loss carry forwards exceeding EUR 1 million to 60% of the taxable income of a tax period. Under IFRS, the Company can only recognize tax loss carry forwards as a tax asset in its balance sheet if it is sufficiently certain that the Company will generate sufficient taxable income in the future that can be effectively offset with the tax loss carry forwards. Due to the current stage of the development of its product candidates, the generation of future taxable income is not sufficiently certain to recognize the tax loss carry forwards as deferred tax assets.

However, the basis of assessment of the Company's taxation in Germany is the tax balance sheet (*Steuerbilanz*), which is similar, but not necessarily identical, to the commercial balance sheet (*Handelsbilanz*) in accordance with German GAAP.

In addition, it is uncertain whether the tax loss carry forwards will still be available in the future. Tax loss carry forwards can only be used if specific conditions are met. Due to changes of the corporate structure of the Company in the past, in particular changes in the shareholder structure, and also depending on the outcome of the Offering, it cannot be excluded that the tax loss carry forwards may not be available in the future to offset any profits.

### **Pensions**

A company pension scheme can either be in the form of defined benefit plans or defined contribution plans. With respect to defined contribution plans the Company does not have any obligations other than the payment of the contribution amount. The contributions are recorded within personnel expense when they are due. These plans include the employer portion of the statutory pension scheme. In the case of defined benefit plans, the company is obliged to make payments of the benefits due to both active and former employees under the plan. The actuarial valuation of the pension commitments (defined benefit plans) is accounted for using the projected unit credit method in accordance with IAS 19. The measurement of the pension provision is based on actuarial calculations. The discount rate used represents the market yield at the end of the reporting period for high quality fixed rate corporate bonds.

The pension expense to be recorded is determined on the basis of the relevant data at the beginning of the financial year but has a value date at the end of the year. Actuarial gains and losses are immediately recorded in equity in other comprehensive income. The fair value of the plan assets (insurance amount) is deducted from the budgeted gross pension obligation (IAS 19.63). The corresponding plan assets (insurance amount) reduce the amount of the obligation as the income resulting from the insurance policy can only be used to make payments to the beneficiaries. As a result of their being pledged to the beneficiaries, even in the case of insolvency, they are not available to the company's creditors.

On the one hand the remeasurement comprises the actuarial gains and losses resulting from the measurement of the gross pension obligation of defined benefit plans while on the other hand it includes the difference between the realized return on plan assets and the expected return at the beginning of the period based on the discount rate of the corresponding gross defined benefit gross obligation. Actuarial gains and losses result from changes in actuarial assumptions respectively from deviations between previous actuarial assumptions and actual developments. All remeasurement effects are directly recorded in other comprehensive income without an impact on profit and loss. The expense resulting from the funding of the pension provision is recorded within the costs of the functional area. The net interest expense associated with defined benefit plans is presented in the financial result.

Probiodrug entered into pension commitments in respect of two of its employees, and therefore has two defined benefit pension plans. The specified annual retirement pension is paid once the retirement age is reached, which is probably in four and five years, respectively. In addition, a pension commitment for a survivor's pension in a predetermined amount per entitled individual was committed to for survivors.

To cover its pension commitments, the Company has entered into insurance contracts which are pledged to the beneficiaries of the pension commitments. The asset values of the insurance contracts are off-set against the pension obligations. The amount of the actuarial present value of the accrued pension entitlements is determined on the basis of actuarial methodologies which require the use of estimates. The calculation was based on the Heubeck 2005 G mortality tables and the discount rate was determined based on industrial bonds with an AA rating and a comparable term. In addition, an annual salary increase of 0 % and an increase in the pension of 15 % were assumed.

As of 31 December 2013, the present value of the pension commitments (defined benefit obligations) amounted to TEUR 1,109 compared to TEUR 1,062 as of 31 December 2012 and TEUR 795 as of 31 December 2011. The actuarial gains (unrecognized actuarial gain/loss) included within other comprehensive income amounted to TEUR -199 as of 31 December 2013, compared to TEUR -234 as of 31 December 2012 and TEUR -31 as of 31 December 2011.

In the financial year 2013 pension expenses amounting to TEUR 106, compared to TEUR 91 in 2012 and TEUR 86 in 2011 were recorded, of which TEUR 71 (2012 TEUR 58 and 2011 TEUR 53) consisted of service costs and TEUR 34 (2012 TEUR 35 and 2011 TEUR 33) of interest expenses. 50% of the service cost was recorded in general and administrative expenses and 50% was recorded in research and development expenses.

The plan assets comprise the insurance pledged to the beneficiaries which may only be used to make pension payments to the beneficiaries and is, thereby, not available to other creditors of the Company. The present value of the plan assets as of 31 December 2013 amounted to TEUR 574, compared to TEUR 517 as of 31 December 2012 and TEUR 462 as of 31 December 2011. Interest income earned on plan assets is presented within the net interest expense and amounted to TEUR 18 as of 31 December 2013, compared to TEUR 22 as of 31 December 2012 and TEUR 21 as of 31 December 2011.

As such, the net commitment (defined benefit liability) as of 31 December 2013 amounted to TEUR 535, compared to TEUR 545 as of 31 December 2012 and TEUR 333 as of 31 December 2011.

The total expenses associated with defined benefit plans include employer's contributions to the statutory pension scheme amounting to TEUR 78 as of 31 December 2013, as compared to TEUR 208 as of 31 December 2012 and TEUR 297 as of 31 December 2011.

For 2014, plan contributions amounting to TEUR 56 are expected. The weighted average duration of the pension commitments is 16 years.

As of 30 June 2014, the pension liabilities recognized in the balance sheet amounted to TEUR 531.

## **Segment reporting**

Probiodrug only has operations in one business segment and in one regional segment. Other than the insignificant revenues which resulted from the provision of services by Ingenium in 2011 and 2012, revenues were not realized in the reporting periods. All assets included within the noncurrent assets are located in Germany.

## **Comparability of the Company's Financial Statements**

The principal accounting policies applied in the preparation of the IFRS Financial Statements were consistently applied to all the financial years presented in this Prospectus, unless otherwise described herein.

For the financial year 2013 the following changes of standards and interpretations, as published by the IASB and /or IFRIC, became binding for the first time:

- Amendments to IAS 1 Presentation of Items of Other Comprehensive Income
- IFRS 19 Employee Benefits (revised 2011)
- IFRS 13 Fair Value Measurement
- Amendments to IAS 12 Deferred Tax: Recovery of Underlying Assets

- Amendments to IFRS 7 Financial Instruments: Disclosure – Offsetting Financial Assets and Financial Liabilities
- Improvements of IFRS 2009-2011.

These new standards and interpretations were applied by the Company, which however had no material effects on the presentation of the financial statements.

### **German GAAP Annual Financial Statements as of 31 December 2013**

The financial information presented in this Prospectus includes the financial statements prescribed by statute for the Company according to the German Commercial Code (*Handelsgesetzbuch*) (the “**German GAAP Financial Statements**”).

Under German law, taxes dependent on income are calculated on the basis of the German GAAP annual financial statements of the Company. However, the basis of assessment of the Company’s taxation in Germany is the tax balance sheet (*Steuerbilanz*), which is similar, but not necessarily identical, to the commercial balance sheet (*Handelsbilanz*) in accordance with German GAAP.

Furthermore, a resolution on a dividend and its payment may only be adopted based on a balance sheet profit shown in the annual financial statements prepared in accordance with German GAAP.

The German GAAP Financial Statements of the Company as at 31 December 2013, showed a net loss for the financial year ended 31 December 2013 of EUR 10.1 million.

The transition of the recognition and measurement policies from German GAAP to IFRS was retrospectively recorded in accordance with IFRS 1 (first-time adoption). IFRS was applied in the preparation of the financial statements of Probiobdrug as of 31 December 2013, the prior year figures as of 31 December 2012 and 2011 and the opening IFRS balance sheet as of 1 January 2011 (date of transition).

As of 31 December 2013, the Company presented a net deficit not covered by equity amounting to EUR 4.1 million. The creditors of the convertible bonds with a nominal amount of EUR 5.3 million issued a letter of subordination in respect of the convertible bonds. As a consequence, the Company was not over indebted as of 31 December 2013.

### ***Major changes in the German GAAP balance sheet as of 31 December 2013 as compared to as of 31 December 2012***

The following is a brief discussion of the major changes in the German GAAP balance sheet as of 31 December 2013 as compared to as of 31 December 2012.

#### *Fixed assets*

The fixed assets were TEUR 425 as of 31 December 2013 as compared to TEUR 996 as of 31 December 2012. This reduction by TEUR 571 was primarily due to a reduction of the position “Other equipment, operating and office” which reflects the reduction of the research activities of the Company leading in particular to reduced laboratory and office space needs and stem also from the sale of certain equipment.

#### *Current assets*

The current assets were TEUR 5,760 as of 31 December 2013 as compared to TEUR 8,568 as of 31 December 2012. This reduction of the current assets was primarily due to a reduction of cash in an amount of TEUR 3,135. The current assets all have a remaining term of up to one year. They primarily consist of receivables from the sale of tangible fixed assets in an amount of TEUR 507 as of 31 December 2013 (in the prior year TEUR 0), receivables from the fiscal authorities in an amount of TEUR 50 as of 31 December 2013 (in the prior year TEUR 202) and subsidies receivable in an amount of TEUR 26 as of 31 December 2013 (in the prior year TEUR 31). The reduction of the cash is due to the lack of revenues combined with the payment of costs and expenses.

#### *Equity*

The equity of the Company was TEUR 0 as of 31 December 2013 as compared to TEUR 5,482 as of 31 December 2012. This reduction is primarily due to the increase of the net accumulated losses by TEUR 10,096 (from TEUR 71,206 as of 31 December 2012 to TEUR 81,302 as of 31 December 2013). Therefore, the net deficit of the Company not covered by equity amounted to TEUR 4,078 as of 31 December 2013. The creditors of the convertible bonds with a nominal amount

of TEUR 5,346 issued a letter of subordination to the Company in respect of the convertible bonds. As a consequence, the Company was not over-indebted as at 31 December 2013.

#### *Provisions*

The provisions were TEUR 4,142 as of 31 December 2013 as compared to TEUR 3,808 as of 31 December 2012. The increase of a total amount of TEUR 334 was due in particular to an increase of the other provisions, pension provisions and the tax provisions in connection with the alleged tax claim of the tax authorities where interest accrues and thus leads to a corresponding increase of this provision. The other provisions consist primarily of provisions in respect of future obligations under the phantom stocks.

#### *Liabilities*

The liabilities increased from TEUR 394 as of 31 December 2012 to TEUR 6,217 as of 31 December 2013 primarily due to the issuance of convertible bonds in 2013 for which – as described above – the creditors issued a letter of subordination to the Company. In addition, the trade payables increased from TEUR 305 in 2012 to TEUR 838 in 2013 resulting from the delivery of goods and services primarily from third party service providers in connection with the Company's development activities.

#### ***Major changes in the German GAAP income statement for the period 1 January to 31 December 2013 as compared to the period 1 January to 31 December 2012***

The following is a brief discussion of the major changes in the German GAAP income statements for the period 1 January to 31 December 2013 as compared to the period 1 January to 31 December 2012.

In accordance with Section 275 (2) HGB, the Company elected the “total cost method” of presentation.

#### *Revenues*

The revenues of the Company were TEUR 0 in 2013 as compared to TEUR 6 in 2012.

#### *Other operating income*

The other operating income was TEUR 704 in 2013 as compared to TEUR 1,176 in 2012. This reduction of TEUR 472 was due to the fact that grants and subsidies were reduced in 2013 and a reduced release of provisions in 2013 as compared to 2012.

#### *Cost of materials*

The costs of materials were TEUR 4,305 in 2013 as compared to TEUR 4,433 in 2012 and remained largely stable. The costs of materials consist of the purchase of supplies and the payment of third party services.

#### *Personnel expenses*

The personnel expenses were TEUR 1,782 in 2013 as compared to TEUR 3,246 in 2012. This reduction of personnel expenses by TEUR 1,464, or 45%, was primarily due to the transformation of the Company from a research company to a development company. This transformation included a reduction of the internal labor force and thereby leads to a corresponding significant reduction of the personnel expenses.

#### *Amortization of intangible fixed assets and depreciation of tangible fixed assets*

The amortization of intangible fixed assets and depreciation of tangible fixed assets were TEUR 314 in 2013 as compared to TEUR 270 in 2012 and remained rather constant.

#### *Other operating expenses*

The other operating expenses were TEUR 4,545 in 2013 as compared to TEUR 8,043 in 2012. The other operating expenses include lease payments, insurance premiums, costs for patents and IP, phantom stocks, advisory costs, other operating expenses and depreciation. The reduction of the other operating expenses by TEUR 3,498, or 43%, was primarily due to the depreciation of payment claims against Ingenium from shareholder loans of TEUR 4,526 in 2012. In 2013, the further depreciation of claims against Ingenium was TEUR 360 and a waiver of claims against Ingenium in an amount of TEUR 500 was granted.

#### *Other interest and similar income*

The other interest and similar income remained stable with TEUR 869 in 2013 as compared to TEUR 863 in 2012. This position reflects primarily interest claims against Ingenium, which are neutralized by a corresponding depreciation that is reflected in the position "other operating expenses".

#### *Write-off on financial assets*

The write-off in respect of financial assets decreased from TEUR 5,380 in 2012 to TEUR 50 in 2013. In 2012, the acquisition costs for Ingenium were completely depreciated. With an additional depreciation of the book value of Ingenium in 2013, the book value of Ingenium was reduced to TEUR 0.

Of the receivables from affiliated companies (TEUR 728; in the prior year TEUR 730), TEUR 725 (in the prior year TEUR 725) consist of loans receivables from Ingenium. The receivables against Ingenium had been depreciated in the previous periods (up to 2012). No depreciation was recorded in 2013 and the receivables correspond to the purchase price received from the sale of the CDK 9 research program in 2013.

#### *Interest and similar expenses*

The interest and similar expenses increased by TEUR 317 from TEUR -355 in 2012 to TEUR -672 in 2013. This increase was due to the recognition of the discount to the convertible bonds issued in 2013, i.e. the recognition of the intrinsic interest part of the issued convertible bonds.

#### *Net loss*

As a result of the above, the Company recorded a net loss of TEUR 20,338 in the financial year 2012 and a net loss of TEUR 10,096 in the financial year 2013. As the loss carry forwards from preceding financial years amounted to TEUR 50,868 in 2012, the net accumulated losses amounted to TEUR 71,206 in 2012 and TEUR 81,302 in 2013, which are reflected in the equity shown on the balance sheet.

## MARKET AND COMPETITION

### Market

Probiodrug AG is a biopharmaceutical company that focuses on the research and development and the potential future commercialization of new therapeutic products for the treatment of Alzheimer's disease ("AD").

#### *Background on AD and the global market*

AD is the most common form of dementia. The disease worsens as it progresses. Although AD develops differently for every individual, there are many common symptoms. In the early stages, the most common symptom is difficulty in remembering recent events, known as short-term memory loss. As the disease advances, symptoms can include confusion, irritability, aggression, mood swings, trouble with language, and long-term memory loss. Gradually, bodily functions are lost, ultimately leading to death. Because AD cannot be cured and is degenerative, the affected patients must increasingly rely on others for assistance.

At present, approved pharmacotherapies for AD consist only of symptomatic treatments. These drugs provide a modest positive effect on cognitive function and activities of daily living in some patients without any impact on the disease progression itself (Han and Mook-Jung, 2014; Buckholtz 2011; Gravitz 2011; Jackson 2014). These drugs include Aricept from Pfizer, Namenda from Forest Laboratories and Exelon from Novartis. Namenda alone generated AD specific sales of USD 1.3 billion in the U.S., Japan and five major EU markets (Datamonitor Healthcare, Alzheimer Disease, 2014). Overall, combined sales of drugs for Alzheimer's disease across the U.S., Japan, and five major EU markets (France, Germany, Italy, Spain, and the UK) totaled USD 4.0 billion in 2012. By 2021, the market is forecast to grow to USD 10.1 billion, at a compound annual growth rate (CAGR) of 11.0%. The catalysts for this growth include an increasingly elderly population, earlier and improved diagnosis, and the introduction of new therapies that will be prescribed as adjuncts to existing treatments (Datamonitor Healthcare, Alzheimer Disease, 2014).

In the past decade, drug discovery has been directed at "disease-modifying drugs" that seek to counteract the progression of AD by intervening in specific steps of its neuropathological process (Selkoe et al., 2004).

Today, over 35 million people worldwide live with the condition and this number is expected to double by 2030 and to more than triple by 2050 to 115 million (World Alzheimer Report, 2013).

The cost of treating AD is a growing problem for Western societies. It is the most expensive disease condition in the United States. The annual cost in the United States alone for treating the disease is estimated to be USD 214 billion in 2014 (Alzheimer's Association, 2014). Given the expected increase in the population suffering from AD and given the higher reimbursement expected for disease-modifying therapies, this amount is expected to increase in the United States to USD 1.2 trillion by 2050 (Alzheimer's Association, 2014).

Therefore, the Company believes that a therapy that successfully impacts the disease progression and thus responds to this yet unmet medical need in the treatment of AD presents a significant opportunity for both AD patients and the pharmaceutical industry.

Today, there are well confirmed AD diagnostic tests available. Typically, people noticing deficits in acute memory seek advice in memory clinics for clarification of the cause. Various diagnostic techniques are applied in the diagnosis of AD, such as 'paper and pencil' tests to evaluate cognition, measuring Abeta levels and phospho-tau ("p-tau") levels in spinal fluid or applying imaging techniques such as magnetic resonance imaging ("MRI") to show brain shrinkage and positron-emission-tomography ("PET") to reveal Abeta-plaques.

#### *The market for AD modifying drugs*

Probiodrug develops product candidates for the treatment of AD that are designed to slow or halt the progression of AD.

The following is a brief description of the AD pathology and the different approaches for a treatment of AD in order to better understand the market in which the Company competes. For a more detailed description of the macroscopic and microscopic features of AD biology and the approach of Probiodrug for its product candidates see "*BUSINESS – PRODUCT CANDIDATES – ALZHEIMER'S DISEASE PATHOLOGY*" and "*BUSINESS – PRODUCT BACKGROUND*".

#### *Brief description of structures giving rise to AD*

Brains of patients with AD show several striking structural features, which are (i) shrinking of the brain, and (ii) distinct protein deposits called "senile plaques", often just called 'plaques' and "neurofibrillary tangles", often just called

‘tangles’, which are considered the classical pathological microscopic changes in the Alzheimer brain. Plaques are generally understood to be mostly constituted of Amyloid beta (Abeta) peptides, while tangles mostly consist of a protein called Tau (Querfurth and LaFerla, 2010; Selkoe, 2001). Originally these ‘plaques’ were believed to be the underlying cause of dementia. Today the prevailing view is more refined and substantive evidence exists that indicates that certain soluble forms of Abeta aggregations, which are called “Abeta oligomers”, are causing the early pathological changes such as synaptic impairment and reduced neuronal connectivity, which correlates with first memory impairments in the early stage of the disease (Shankar and Walsh, 2009; Sheng et al., 2012; Shankar et al., 2008; Walsh and Selkoe, 2004), followed by tau-pathology and inflammation, which eventually lead to chronic neuro-degeneration (Querfurth and LaFerla, 2010).

Probiodrug and others worked out that a specific form of Abeta, namely pGlu-Abeta, is likely to be a key trigger and building block for the toxic oligomer formation. Probiodrug’s scientists first discovered that the production of pGlu-Abeta requires an enzyme called QC (Schilling et al., 2004). Therefore, in the Company’s view, QC is an important link between pGlu-Abeta, the toxic oligomers and eventually neuronal death and cognitive decline.

#### *Different approaches to treat AD with modifying therapies*

While most of the biotech and pharma companies in the field of AD aim to reduce normal Abeta or Abeta plaques by targeting Abeta in general, Probiodrug differentiates itself from these Abeta-directed approaches by targeting pGlu-Abeta, a subtype of Abeta. Probiodrug’s has two types of product candidates: (i) QC inhibitors PQ912 and PQ1565, which seek to prevent the formation of pGlu-Abeta, and (ii) an anti-pGlu-Abeta monoclonal antibody PBD-C06 aiming to selectively clear the brain specifically from pGlu-Abeta leaving the normal Abeta untouched (see “*BUSINESS – PRODUCT BACKGROUND*”).

#### **Competition**

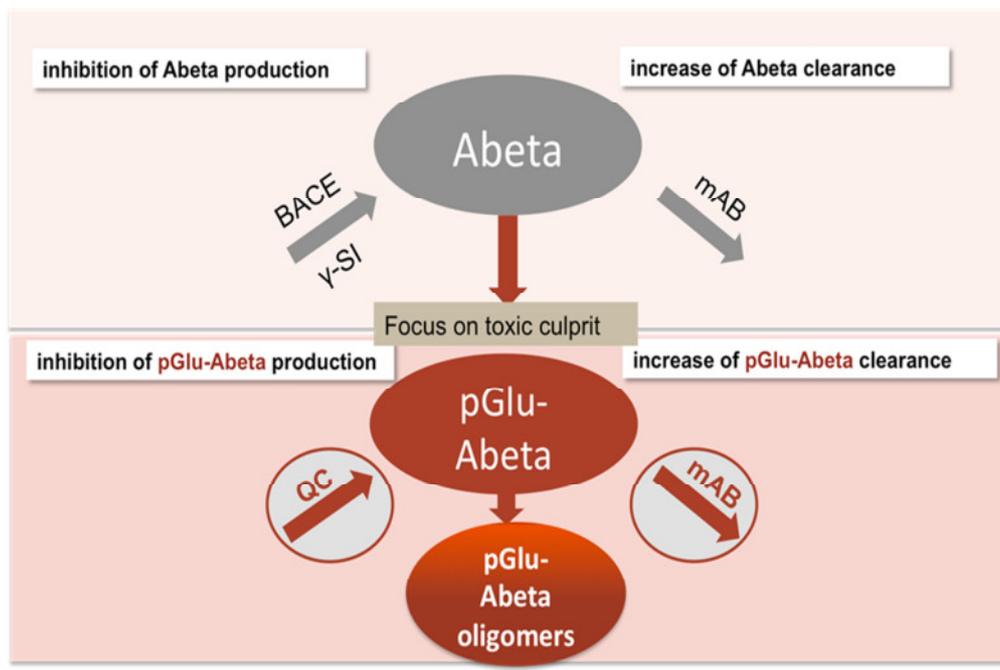
As of today, five drugs are approved for the symptomatic treatment of AD including four acetyl cholinesterase inhibitors (*tacrine, donepezil, rivastigmine, galantamine*) and an *N*-methyl-D-aspartate (NMDA) receptor AD antagonist (*memantine*). The respective approvals were granted in the 1990’s /early 2000’s. No new treatments have been approved for AD since 2007.

All of these approved drugs treat merely the AD symptoms with only limited efficacy and without affecting the underlying disease pathology, thus, they have no disease-modifying potential (Han and Mook-Jung, 2014; Buckholtz, 2011; Gravitz, 2011; Jackson, 2014).

Several different attempts to target AD pathophysiology have been undertaken with both small molecule and immunotherapy approaches. Immunotherapy approaches means drug therapies that actively or passively utilize the human immune system to treat the disease. Most advanced clinical studies are directed at lowering the brain concentration of the Abeta peptide and have either failed or shown only some limited efficacy in post-hoc analyses, as more fully described below. In summary, today there is no clinical proof of concept for a disease-modifying therapy in AD available (Cummings et al., 2014).

Currently, the following approaches are being pursued to develop a disease-modifying therapy, as more fully described below:

- Programs directed towards an unspecific Abeta lowering using
  - Inhibitors of Abeta generating enzymes
  - Anti-Abeta antibodies (passive immunization)
  - Anti-Abeta antibodies through vaccination (active immunization)
  - Abeta aggregation inhibitors
- Programs directed towards lowering of specific forms of Abeta by targeting pGlu-Abeta
- Other Programs that are Tau-related programs and cognition enhancers



**Figure 1:** ‘First generation’ (upper part) of drug candidates targeting normal Abeta, either by inhibition of production by  $\gamma$ -secretase ( $\gamma$ -SI)- or beta secretase (BACE) inhibitors or by increasing Abeta clearance from the brain by means of human monoclonal antibodies (mAB). These approaches are based on the classical Amyloid hypothesis that the Abeta plaques are the toxic entities. Probiodrug’s and other new generation concepts (lower part) are focusing on today’s modified hypothesis, which says that the toxic culprits are soluble aggregates of Abeta, called oligomers, which are seeded by the modified Abeta peptide version pGlu-Abeta. Therapeutic approaches are analogous to the first generation, but here focusing on the toxic element pGlu-Abeta, either by inhibiting its production (QC-Inhibition) or by increasing its clearance via a monoclonal antibody.

### Programs directed towards normal Abeta lowering

Most of today’s competitive research programs aim at the reduction of normal Abeta without focusing on specific sub-types of Abeta. Such approaches either focus on reducing the production or increasing the clearance of Abeta. Molecules designed to reduce the overall production of Abeta have targeted enzymes that generate Abeta by catalyzing specific steps in the amyloid precursor protein (“APP”) metabolism. The initial steps in the formation of Abeta are the cleavage of the APP by two enzymes: gamma secretase and beta secretase (“BACE”). Both enzymes have therefore been targets for the pharmaceutical industry.

A number of potential therapies designed to delay or reverse the progression of AD based on the concept of lowering Abeta have been tested in clinical studies. While some of these product candidates have demonstrated encouraging results in the early stage of their testing, to date, to the Company’s knowledge none have proven to have significant efficacy in pivotal clinical studies. An overview of different approaches towards normal Abeta lowering and the respective results to date is shown below.

### Abeta generating enzymes

Beta and gamma secretases generate Abeta by splitting at different sites at APP. Its inhibition leads to a decreased Abeta level. Inhibitors of gamma secretase have been pursued by multiple pharmaceutical companies. A number of them are associated with unacceptable toxicity which is believed to be due to side effects of inhibiting gamma secretase (Doody et al., 2013; Henley et al., 2014). The most advanced gamma secretase inhibitor was *Semagacetat*, which was taken into a Phase 3 study by Eli Lilly. This study was halted because an interim analysis indicated that patients receiving the compound did worse in cognition and functional ability. *Semagacetat* was not only worsening cognitive deficits but showed additional adverse events (Extance, 2010; Doody et al., 2013; Henley et al., 2014).

To the Company’s knowledge, at least half a dozen BACE inhibitors have been or are being tested in clinical studies. The Company believes that Merck & Co.’s compound MK-8931 is the most advanced of all compounds that are based on the BACE inhibition concept. Merck & Co. reported that MK-8931 was able to reduce Abeta in cerebrospinal fluid (“CSF”) by 90% in healthy adults (NeuroPerspectives, No 226, Sep 2014, ISSN 1537-6346). Merck & Co is currently testing MK-8931 in Phase 2/3 studies, while other companies such as AstraZeneca and Biogen/Eisai are in earlier stage studies (www.clinicaltrials.gov). Eli Lilly and Roche have both disclosed that they have halted their BACE inhibitor programs.

The reasons are unknown. Companies pursuing BACE inhibitors also have to be concerned that treatments may affect other physiological functions of BACE, such as processing of neuregulin, required for myelination, i.e. the electrical insulation of neurons (Yan and Vassar, 2014; Willem et al., 2006).

Moreover, evidence shows that when BACE is inhibited, compensatory alternative APP cleavage enzymes come into play producing Abeta forms which can still be used by the QC enzyme to produce the toxic pGlu-Abeta (Hook et al., 2014).

A recent event in the field of disease-modifying drugs targeting AD is the partnering agreement between AstraZeneca and Eli Lilly, announced on 16 September 2014. AstraZeneca and Eli Lilly agreed to jointly develop and commercialize AZD3293, a BACE inhibitor ready to enter Phase 2 /3 clinical trials. According to this announcement, Eli Lilly will pay AstraZeneca up to USD 500 million in regulatory and development milestones, a first USD 50 million payment is anticipated in the first half-year 2015 ([www.astrazeneca.com/Media/Press-releases/Article/astrazeneca-and-lilly-announce-alliance](http://www.astrazeneca.com/Media/Press-releases/Article/astrazeneca-and-lilly-announce-alliance)). In the Company's view, this deal shows a rising interest of the industry to support novel treatments of AD (see "*RECENT DEVELOPMENTS AND OUTLOOK*").

#### *Anti-Abeta monoclonal antibody approaches*

Similarly, multiple monoclonal antibodies directed against Abeta (passive immunotherapy) have been tested in clinical studies. To the Company's knowledge, the most advanced of these are *solanezumab* developed by Eli Lilly, *gantenerumab* (still in Phase 3) developed by Roche, and *bapineuzumab* developed by Janssen /Pfizer (Doody et al., 2014; Novakovic et al., 2013; Salloway et al., 2014). While there have been reports of changes to molecular biomarkers such as Abeta in CSF or levels of p-tau, to the Company's knowledge none of these have yet demonstrated that they can achieve the primary goal of cognitive improvement. A recent report on two Phase 2b studies on *crenezumab* developed by Genentech /Roche (Cummings et al., 2014) reported failure of primary outcome measures during an 18-month treatment period. A post-hoc analysis revealed, similar to *solanezumab*, that a slight cognitive improvement could be detected in earlier AD patients. To the knowledge of the Company, a decision for advancing *crenezumab* into Phase 3 on the basis of these data has not yet been reported.

Several competitors have attempted an active immunization approach in which patients are vaccinated with a portion of Abeta with the intention that they can stimulate their own immune system to clear Abeta and plaques. One of the first of these programs, *Betabloc*, developed by Elan, failed because it induced brain inflammation (Elan drops Alzheimer's vaccine, "Access in Brief" in *Nature Biotechnology* 20, 327 – 329, 2002). However, other programs using different portions of Abeta are still in the clinical testing. Phase 2 results on CAD106, an active Abeta immunotherapy of Novartis, have been recently reported (Caputo et al., 2014; Riviere et al., 2014; Graf et al., 2014). Concomitantly, Novartis reported it intends to advance this anti-amyloid treatment into a prevention study with people carrying a genetic risk of developing AD. According to Novartis, this study will start in 2015 (Novartis press release, 15 July 2014).

The evaluation and analysis of why the plausible and rational hypothesis to reduce Abeta unspecifically has not translated into clinical benefits to date is ongoing. Characterization of the sequence of pathological events suggests that Abeta deposition can precede the first signs of cognitive impairment by many years (Villemagne et al., 2013). In moderate and late stage AD, the Abeta load in the brain does not further increase with clinical deterioration (Jack, 2010). In response, a common recommendation (Sperling, 2013) has been an earlier initiation of treatment, such as at the stage of mild cognitive impairment ("MCI"), early AD, or even before the onset of clinical symptoms. Another consideration is that the general Abeta clearance approach by antibodies would not yield enough target occupancy to sufficiently reduce the relevant Abeta species, i.e. there are not enough antibodies crossing the blood brain barrier to neutralize the huge amount of normal Abeta to yield a therapeutic effect.

Moreover, normal Abeta peptides do have several physiological functions, among others a protective effect on functionality of synapses needed for memory retention. Thus reducing total Abeta might not sufficiently outweigh the drawbacks of inhibiting the physiological function of Abeta (NeuroPerspectives, No 226, Sep 2014, ISSN 1537-6346).

The Company believes that Abeta is still regarded as an important therapeutic target. However, further in-depth evaluation has revealed that the original amyloid plaque hypothesis needs further refinement regarding the precise mechanism of cognitive decline and neuronal loss (NeuroPerspectives, No 226, Sep 2014, ISSN 1537-6346).

In essence, plaques are no longer seen as the key toxic component – but the soluble Abeta oligomers, the formation of which is triggered by pGlu-Abeta constituting the modified Abeta hypothesis.

#### ***Programs directed towards specific pGlu-Abeta lowering***

Treatment strategies which are aimed to reduce pGlu-Abeta are clearly distinct from other, unspecific anti-Abeta therapy approaches as described above. The approach to specifically target pGlu-Abeta aims to solely tackle a pathological Abeta

species involved in the initiation and progression of the disease leaving physiological Abeta species /mechanisms untouched. This is the approach that Probiodrug is pursuing with its product candidates PQ912, PBD-C06 and PQ1565. Inhibition of the QC-enzymes by the small molecules PQ912 and PQ1565 prevents formation of pGlu-Abeta, while the specific antibody, PBD-C06, is clearing only pGlu-Abeta. The advantage thereof is that the limited amount of antibody, which crosses the blood brain barrier, is sufficient to neutralize/target the amount of pGlu-Abeta, which is much smaller than that of total Abeta.

In addition to Probiodrug’s pGlu-Abeta product candidates, Eli Lilly has stated that it is also developing a monoclonal antibody that aims to clear pGlu-Abeta. Eli Lilly’s candidate, LY3002813, is currently being evaluated in a Phase 1 study.

There may also be a rationale to apply targeted anti-pGlu-Abeta approaches in combination with other product candidates. For example, it has recently been shown that the application of a pGlu-specific monoclonal antibody together with a BACE inhibitor resulted in additively /synergistically reducing insoluble Abeta in a mouse model of AD (DeMattos et al., 2014).

### ***Other approaches***

This section summarizes current approaches, which have a different mode of action compared to all approaches described above.

Aggregation inhibitors are small molecules, which are developed to prevent the aggregation of either Abeta or Tau peptides, as a treatment for AD. The Company is aware of two Abeta and Tau aggregation inhibitors which are clinically advanced on the basis of results obtained in clinical Phase 2 or Phase 3 studies of the respective active component. One is the anti-tau aggregation compound TRx0237, currently in Phase 3, based on Phase 2 data of TRx0014 by TauRx Corp. The other compound is the Abeta aggregation inhibitor ALZ801, based on a subgroup analysis of failed Phase 3 studies of Tramiprosate, now in Phase 1 by Alzheon.

Other approaches in early stages of preclinical or clinical development include an Anti-tau antibody (by iPierian and Eli Lilly, preclinical) and an Anti-tau vaccine (by Axon Neuroscience, Phase 1), which seek to utilize specific kinase inhibitors to block tau phosphorylation, or to provide stem cell therapy and RNA interference (“RNAi”).

Cognition enhancers are symptomatic treatments which improve cognitive and clinical functionalities through specific synaptic receptor interactions. However, they do not affect the underlying biology and have no effect on the progression of the disease (no disease-modifying efficacy). Currently, to the Company’s knowledge, the following cognition enhancers are in development:

- (i) EVP-6124 (Forum Pharmaceuticals), nicotinic  $\alpha 7$  acetylcholine receptor agonist, Phase 3 and
- (ii) Lu AE58054 (Lundbeck, Otsuka) serotonin 5-HT6 antagonist, Phase 2

### ***Overview of various approaches, compounds / product candidates and development status***

The next table provides a relevant selection of the current status of the AD product candidate pipeline in the view of the Company - describing the companies following the various approaches, the products and the current development status of such products (Source: clinicaltrials.gov, company websites):

<b>APPROACH</b>	<b>PRODUCT CANDIDATE</b>	<b>COMPANY</b>	<b>STATUS<sup>(1)</sup></b>
LOWERING UNSPECIFIC ABETA			
Anti-Abeta Antibodies (passive immunization)	Solanezumab anti-Abeta monomer antibody	Eli Lilly	Phase 3
	Gantenerumab anti-sAbetao & A $\beta$ plaque antibody	Roche /MorphoSys	Phase 3
	Crenezumab non-selective Abeta antibody	Genentech (now Roche)/ AC Immune	Phase 2
	BAN2401 anti-protofibril & fibril antibody	BioArctic/Eisai/Biogen Idec	Phase 2

		BIIB037/BART anti-sAbeta & Abeta plaque antibody	Neuroimmune /Biogen Idec	Phase 1
		SAR228810 anti-sAbeta & Abeta plaque antibody	Sanofi Aventis	Phase 1
Anti-Abeta through vaccination (active immunization)	Antibodies	CAD 106 Abeta vaccine	Novartis	Phase 2
		ACC-001 Abeta vaccine	Pfizer/J&J	Phase 2
		AD02 Abeta vaccine	Affiris	Phase 2
		ACI-24 Abeta vaccine	AC Immune	Phase 1/2a
Abeta inhibitors	Aggregation	ALZ-801	Alzheon	Phase 1
BACE Inhibitors		MK8931 beta-secretase inhibitor	Merck & Co.	Phase 2 /3
		AZD3293 beta-secretase inhibitor	AstraZeneca/Eli Lilly	Phase 1 (Phase 2/3 ready)
		E2609 beta-secretase inhibitor	Eisai/ Biogen Idec	Phase 1b
<hr/>				
TARGETING pGLU-ABETA SPECIFICALLY				
QC-Inhibitor		PQ912 glutaminy cyclase inhibitor	Probiodrug	Phase 1
		PQ1565 glutaminy cyclase inhibitor	Probiodrug	preclinical
Anti-pGLU-ABETA Antibody		LY3002813 pGlu-Abeta-specific mAB	Eli Lilly	Phase 1
		PBD-C06 pGlu-Abeta-specific mAB	Probiodrug	preclinical
<hr/>				
OTHER APPROACHES				
Gamma secretase inhibitors		EVP-0962 Gamma secretase inhibitors	Alz forum	Phase 2
		CHF-5074 Gamma secretase inhibitors	Cerespir	Phase 2
Tau-related Programs		TRx0237 tau aggregation inhibitor	TauRx	Phase 3
		Anti-tau antibody	iPierian, Eli Lilly	preclinical
		Anti-tau vaccine	Axon Neuroscience	Phase 1
		ACI-35 Phospho-tau vaccine	AC Immune	Phase 1
Cognition Enhancers		(EVP-6124), nicotinic $\alpha 7$ acetylcholine receptor agonist	EnVivo	Phase 3
		Lu AE58054 serotonin 5-HT6 antagonist	Lundbeck, Otsuka	Phase 3

(1) For the description of the different clinical phases, see “LEGAL ENVIRONMENT – LEGAL FRAMEWORK – PRECLINICAL AND CLINICAL DEVELOPMENT PLANS”

## BUSINESS

### Overview

Probiodrug AG is a biopharmaceutical company that focuses on the research and development and the potential future commercialization of new therapeutic products for the treatment of Alzheimer's disease ("AD"). The Company is developing a proprietary, focused pipeline of product candidates against AD.

Current approved drugs for AD treat symptoms of the disease only and neither halt the progression nor provide sustainable improvement of the disease. The positive effects of these treatments on cognitive functions and activities of daily living are at best modest and transient and may have side effects.

Scientific insight into the disease has identified a major hallmark of its biology, Abeta peptides. These peptides were identified as being the main constituent of senile plaques which were originally regarded as the toxic component that destroys brain cells, also referred to as neurodegeneration. On this basis, therapeutic concepts were developed aiming at modifying the disease by halting or slowing the progression of the neurodegeneration (disease modification). The first generation of disease-modifying approaches focused on inhibiting the plaque production or reducing existing plaques by targeting Abeta in general. These approaches, however, did not meet the expectations.

The prevailing scientific view today is that not the plaques but certain soluble forms of Abeta aggregates, which are called "Abeta oligomers", cause the early pathological changes in AD (Shankar and Walsh, 2009; Sheng et al., 2012; Shankar et al., 2008; Walsh and Selkoe, 2004; Walsh and Selkoe, 2007). It has been shown that the formation of these toxic soluble Abeta oligomers is triggered by a specific form of Abeta, namely pyroglutamate-Abeta ("pGlu-Abeta") (Nussbaum et al., 2012). Probiodrug's scientists discovered in 2004 that Abeta peptides need a specific enzyme to be transformed into pGlu-Abeta, which is called Glutaminyl Cyclase ("QC") (Schilling et al., 2004). The discovery of this key enzymatic function leading to pGlu-Abeta is Probiodrug's basis for developing small molecule inhibitors as a specific pGlu-Abeta targeting treatment approach.

Probiodrug is developing product candidates to specifically target toxic pGlu-Abeta via two modes of action, i.e. by (i) inhibiting the production of pGlu-Abeta; and (ii) clearing existing pGlu-Abeta from the brain, which the Company believes are complementary. The Company's current development pipeline consists of the following product candidates:

- PQ912 is the lead product candidate of the Company, currently entering into a Phase 2a study. PQ912 is a small molecule that was discovered and profiled by Probiodrug and was nominated by the Company for regulatory development in 2010. PQ912 is a specific inhibitor of QC, which has shown therapeutic benefit in Alzheimer animal models. PQ912 was shown to be safe and well tolerated and revealed a high level of QC-inhibition in a Phase 1 study with 200 healthy young and elderly volunteers. The preparation of the Phase 2a study started in March 2014. The Clinical Trial Application ("CTA") filing started in August 2014. The first patient is expected to be treated with PQ912 in the first quarter of 2015 with the first data expected to be available in mid 2016.
- PBD-C06 is a monoclonal antibody, currently in preclinical research. PBD-C06 targets pGlu-Abeta, aiming to selectively clear the brain from pGlu-Abeta while leaving non-toxic forms of Abeta untouched. The Company believes that, due to the high specificity of PBD-C06 for pGlu-Abeta, the amount of antibody reaching the brain will be sufficient to neutralize the toxic peptides.
- PQ1565 is a QC-inhibitor, currently in late preclinical research. The product candidate has shown attractive drug-like properties in preclinical studies.

Probiodrug has an extensive patent portfolio which it believes sufficiently protects its product candidates and the QC target by composition of matter and medical use claims in AD, but also in inflammatory diseases and other indications, such as the Down syndrome. The continuously expanding patent portfolio currently consists of 42 patent families, which comprise more than 650 national patent applications and issued patents worldwide.

In 2012, the Company commenced the transformation from a research and discovery company to a product development company, thereby focusing on its advanced product candidates using skillsets needed for preclinical and clinical development and reducing internal resources for research. Most of the current research and development activities of the Company are being provided by third parties, such as scientific advisors or contract research organizations ("CROs"), so that the Company focuses on overall management tasks with high levels of outsourcing resulting in flexibility and cost-efficiency. The Company uses its expertise in building and managing networks of advisors and of pharma experts on both the science and the clinical aspects of AD. The Company believes that it has created and maintained strong credibility over the years with the scientific community, with clinicians, and with many pharmaceutical companies that pursue therapies for central nervous system and degenerative diseases such as AD.

As of today, regarding its research and development activities in the field of AD, the Company has not entered into any partnering or licensing arrangements in respect of any of its product candidates and is currently mainly financed by equity and to lesser extent by grants and subsidies. Since 2007 until the date of this Prospectus, the Company has raised approximately EUR 78.4 million from investors and the management.

## History of the Company

The history of the Company can be best described in four stages (overlapping in part), i.e.:

1997 — 2004	Research and development of DP4 inhibitors for the treatment of diabetes since the establishment of the Company until the sale of this diabetes program in 2004
1999 — 2006	Discovery of QC and research for evaluating its role in AD
2007 — 2011	Discovery and preclinical development of QC-Inhibitors and first financing rounds
2011 — today	Clinical phase 1 studies of its QC-Inhibitor PQ912 alongside with the preparation of preclinical development of the pGlu-Abeta antibody PBD-C06 and the follower QC-Inhibitor PQ1565. Transformation of the Company from a research and discovery business towards a development business

The following timetable gives an overview over the milestones reached by the Company within the different stages (see above) since its foundation:

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### **1997-2004      Research and development of DP4 inhibitors for the treatment of diabetes since the establishment of the Company until the sale of the diabetes program in 2004**

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1997	<ul style="list-style-type: none"> <li>• Foundation of the Company by Dr. Konrad Glund and Prof. Dr. Hans-Ulrich Demuth as ProBioTec GmbH, which in 2001 was changed into Probiodrug AG</li> <li>• The foundation of the Company was based on research on the enzymology and physiology of the DP4 enzyme and the discovery that its inhibition normalizes elevated blood glucose levels (Demuth et al., 1997) which provided the basis for the development of a breakthrough generation of novel antidiabetics, the gliptins</li> </ul>
2000	<ul style="list-style-type: none"> <li>• License agreement with Merck &amp; Co.</li> </ul>
2002	<ul style="list-style-type: none"> <li>• License agreements with Ferring and Ortho McNeil Pharmaceuticals</li> </ul>
2004	<ul style="list-style-type: none"> <li>• License agreement with Novartis</li> <li>• Sale of the Company's diabetes program (DP4 inhibitors) including all related IP rights to (OSI) Pharmaceuticals. The medical use patents for this therapy are owned today by Royalty Pharma which generates substantial royalty revenues from the sale of antidiabetic drugs based on DP4 inhibition, e.g. Januvia® and Janumet®. The purchase price that the Company received for the sale of its program was EUR 28.7 million, of which EUR 9.4 million were distributed to the shareholders of the Company through a share buyback in 2005 and 2006. The remaining proceeds less tax payments were applied to finance the new research activities of the Company in the field of AD.</li> </ul>

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### **1999-2006      Discovery of QC and the research for evaluating its role in AD**

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- During its diabetes research Probiodrug discovered that certain peptide hormones (e.g. glucagon) are modified at their N-terminus. The N-terminus refers to the start of a peptide or a protein by an amino acid with a free amine group (-NH<sub>2</sub>). These peptide hormones are modified to the respective pGlu-peptide, i.e. the terminal amino acid glutamine is cyclized to form the pGlu version of the peptide hormone. The modification changes the physicochemical and biological properties of the peptide hormone (Hinke et al., 2000). Searching for other pGlu-modified peptides in literature revealed that pGlu-Abeta is a constituent of Alzheimer plaques (Saido et al., 1995, Günthert et al., 2006). This was the beginning of Probiodrug's AD research.
- A Probiodrug research team under the leadership of Prof. Hans-Ulrich Demuth identified QC as the enzyme catalyzing the modification of truncated Abeta into pGlu-Abeta and describes its results in a landmark paper (Demuth et al., 2004; Schilling et al., 2004). The Company then focused on the concept of preventing the formation of pGlu-Abeta as a

therapeutic strategy for the treatment of AD and the discovery and development of QC-inhibitors.

- Characterization of QC as a metalloenzyme (enzyme that contains a metal ion involved in catalytic function), identification and application of first inhibitors (Schilling et al., 2003)
- Probiodrug continues its work on the identification and optimization of various chemical classes as starting point for QC-Inhibitors and begins to build-up *in vitro* and *in vivo* test systems for measuring efficacy of inhibitors.
- Filing for core medical use patents and first composition of matter patents

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**2007 — 2011      Discovery and preclinical development of QC-Inhibitors and first financing rounds**

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|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2007                | <ul style="list-style-type: none"> <li>• Proceeding with Probiodrug's research on the function of pGlu-Abeta, QC and QC-inhibitors by designing, characterizing and applying new animal models directed to study the pGlu-Abeta hypothesis (2007-2011) (Wirhth et al., 2009; Jawhar et al., 2011; Alexandru et al., 2011; Becker et al., 2013)</li> <li>• Probiodrug further pursues medicinal chemistry for the optimization of QC inhibitors towards higher specificity, potency and drug-like features.</li> <li>• Raising approximately EUR 17.6 million from the issuance of ordinary and preference shares in a capital increase against cash contributions</li> <li>• The Company acquires Ingenium, a company experienced in and focused on the creation of novel animal models and a program on the development of CDK 9 inhibitors as anti-inflammatory drugs in discovery stage</li> </ul> |
| 2008                | <ul style="list-style-type: none"> <li>• First publication of the concept of QC-inhibition to prevent pGlu-Abeta formation for the treatment of AD in a landmark paper (Schilling et al., 2008)</li> <li>• Issuance of convertible bonds in an aggregate amount of EUR 10 million</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 2009                | <ul style="list-style-type: none"> <li>• Pharmacological testing of promising QC-inhibitors in different proprietary and newly developed animal models (Schilling et al., 2008; Cynis et al., 2011)</li> <li>• Finance round in respect of the issuance of preference shares in a total volume of EUR 26.4 million with proceeds amounting to EUR 13.2 million from the issuance of the first tranche and the convertible bonds issued in 2008 were converted into preference shares</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                       |
| 2010                | <ul style="list-style-type: none"> <li>• Nomination of PQ912 for regulatory development and performing GMP manufacturing and GLP Toxicology</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2011                | <ul style="list-style-type: none"> <li>• Filing of additional medical use patents, the majority of composition of matter patents, patents for pGlu-Abeta antibodies, the majority of patents for animal models and patents for diagnostic assays</li> <li>• Issuance of the second tranche of the preference shares as agreed in 2009 generating further EUR 13.2 million</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>2011 — today</b> | <p><b>Clinical phase 1 studies of its QC-Inhibitor PQ912 alongside with the preparation of preclinical development of the pGlu-Abeta antibody PBD-C06 and the follower QC-Inhibitor PQ1565. Transformation of the Company from a research and discovery business towards a development business</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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- |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2011 | <ul style="list-style-type: none"> <li>• Preparation and start of Phase 1 study with PQ912</li> <li>• Issuance of further preference shares issued in three tranches in 2011 and 2012 with total proceeds of EUR 14.8 million</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2012 | <ul style="list-style-type: none"> <li>• Probiodrug continues with the Phase 1 study for PQ912</li> <li>• Proof of principle of the pGlu specific monoclonal antibody PBD-C06 shown in AD animal model with PBD-C06 (Frost et al., 2012, Frost et al., 2013)</li> <li>• Start to progress with PBD-C06 as lead antibody candidate</li> <li>• Start of transforming the Company from a research and discovery to a development oriented company regarding its product candidates and their potential future commercialization, thereby using outsourcing opportunities to reduce its internal costs for research and development</li> </ul> |
| 2013 | <ul style="list-style-type: none"> <li>• Development of a method to detect pGlu-Abeta in human CSF</li> <li>• PQ1565 is nominated as additional molecule and filing of a composition of matter patent covering PQ1565</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |

- Sale of the research program CDK 9 of Ingenium to AstraZeneca for an amount of USD 1.0 million
  - Issuance of convertible bonds with total proceeds of EUR 5.3 million
- 2014
- Issuance of convertible bonds with total proceeds of EUR 4.3 million

## Strategy

The Company's overall objective is to become a leading company in developing AD treatments and to thereby provide a better life for patients with AD, and possibly other indications that may be successfully treated by the product candidates developed by the Company. To commercialize a potentially successful treatment, the Company will consider models appropriate for a biotechnology Company at this stage and size, such as entering into collaborative, partnering or licensing arrangements in respect of its product candidates. The key elements of the Company's strategy to achieve this goal are the following.

### *Continue to develop PQ912 through Phase 2a clinical studies and beyond*

PQ912 is the lead product candidate of the Company. The Company intends to carry out a Phase 2a study. The study preparation started in March 2014. The CTA filing started in August 2014. In this study, the Company will obtain both additional safety data as well as initial efficacy data on short-term memory effects in treatment-naïve patients with mild cognitive impairment or mild dementia known to be associated with AD.

Once the Company has completed Phase 2a, the Company may go directly to a pivotal study in case there are clear positive signals of PQ912 with regard to cognitive domains, neuronal connectivity readout as measured by electroencephalography ("EEG") or rested state functional Magnetic resonance imaging ("rsfMRI") or molecular Biomarkers ("BM"). In case the Phase 2a exploratory objectives do not yield clear results, i.e. no clear effect is observed in any of the cognition, BM or EEG readouts, the Company intends to execute a Phase 2b study to evaluate the efficacy in a longer treatment period. In the latter case, a Phase 2b proof of concept study, with about 600 patients over 18 months with interim analysis is envisaged by the Company.

### *Advance development of PBD-C06 and PQ1565 to the clinical stage*

The Company intends to progress the development of its other two product candidates, i.e. the antibody PBD-C06 and the other small molecule PQ1565 that inhibits QC-activity. Both product candidates are still in the preclinical research and formal preclinical studies have yet to be entered into.

### *Enter into partnerships with biotechnology and pharmaceutical companies*

For the development of PQ912 beyond Phase 2a, as well as for the other product candidates, the Company intends to seek out and enter into partnerships with biotechnology and pharmaceutical companies. Such partnerships can provide significant clinical and technical expertise as well as financial support and would allow the Company not only to continue to focus on the development of its product candidates but also to pursue the possibilities of developing other product candidates and /or to explore the efficacy of its product candidates in other indications.

### *Expand the Company's intellectual property position in QC-inhibitors*

The Company intends to expand its intellectual property position on QC-inhibitors and antibodies against pGlu-Abeta by filing patent applications in major commercially relevant jurisdictions and, where deemed appropriate, will contest any infringements.

### *Explore benefits of combination therapies between the Company's product candidates and other products*

As the mode of action of the Company's product candidates is different from existing AD therapies and AD therapies in development in the industry generally and the safety profile of the Company's lead product candidate PQ912 to date has been attractive, the Company may be well positioned to explore synergies of combination strategies with other therapies. Therefore, the Company aims to explore the rationale to combine its own product candidates PQ912, PQ1565 and PBD-C06 and other therapies such as BACE inhibitors. It has already been shown preclinically that a combination of a BACE inhibitor with a pGlu-Abeta specific antibody revealed a synergistic effect, i.e. the effect of the combination is bigger than the sum of the effect of the single compound, in AD-like animal models (DeMattos et al., 2014). The Company also aims to explore possible synergies by applying a combination of PQ912 and PBD-C06.

***Evaluate the potential of the Anti-pGlu-Abeta approach for other indications, such as the Down syndrome or age-dependent macular degeneration (AMD)***

The Company aims to make use of Investor-Initiated Studies to explore the application of its product candidates to these, and possibly other, indications for which a biological rationale exists such as the Down syndrome and AMD (Ding et al., 2008; Ding et al., 2011; Selkoe, 2001).

**Competitive strengths**

The Company believes that it has the following competitive strengths.

***The Company pursues a unique approach to develop an effective treatment of AD***

The Company focuses on pGlu-Abeta, which it believes, as do many other scientists, is a key factor in the development of AD. This sets the Company apart from other approaches to treat AD. Most other Abeta focused drug approaches target Abeta in general and do not specifically target this sub-set of Abeta-peptides. The Company discovered QC as an attractive target for the treatment of AD and has developed small molecules addressing this new target. PQ912 is the only small molecule in its class currently in clinical development for AD. Moreover, PQ912 and the second small molecule inhibitor PQ1565 can both be taken orally. In essence, the Company's pipeline is clearly differentiated from other approaches in AD.

***Pursuing differentiated and complementary modes of actions to develop treatments in AD***

The Company is pursuing a double-pronged approach to address pGlu-Abeta, i.e. by the inhibition of the enzyme QC, that is required for the formation of pGlu-Abeta and subsequently the building of toxic oligomers, by the small molecules PQ912 and PQ1565 on the one hand, and by driving the clearance of pGlu-Abeta in the brain by the monoclonal antibody PBD-C06 on the other hand.

***AD is a large underserved market open for new drug approaches***

The handful of Alzheimer drugs on the market, most of which were approved more than a decade ago, treat merely the symptoms of cognitive decline. They include Aricept from Pfizer, Namenda from Forest Laboratories and Exelon from Novartis. Namenda alone generated AD specific sales of USD 1.3 billion in the U.S., Japan and five major EU markets (Datamonitor Healthcare, Alzheimer Disease, 2014). Overall, combined sales of drugs for Alzheimer's disease across the U.S., Japan, and five major EU markets (France, Germany, Italy, Spain, and the UK) totaled USD 4.0 billion in 2012. By 2021, the market is forecast to grow to USD 10.1 billion, at a compound annual growth rate (CAGR) of 11.0%. The catalysts for this growth include an increasingly elderly population, earlier and improved diagnosis, and the introduction of new therapies that will be prescribed as adjuncts to existing treatments (Datamonitor Healthcare, Alzheimer Disease, 2014). There are, as of today, no treatments available that stop or reverse the progression of the disease. Therefore, if the product candidates of the Company prove to be successful and could at least stop the progress of the disease these product candidates could provide AD patients with a leading therapy in the market.

***The Company's drug development competencies and network and its specific AD expertise enable it to develop its product candidates in an efficient way***

Whereas in the past the Company did its research mainly with in-house resources, the Company transformed its business model successfully into a development company with high levels of outsourcing resulting in flexibility and cost-efficiency. At the same time, the Company kept the access to the established formerly in-house scientific AD experts through advisory contracts. According to its needs, the Company has retained and extended the number of very committed senior industry experts for the program who ensure that the Company has access to the expertise for all relevant functions needed for a competent and efficient clinical and non-clinical development of its product candidates. The Company's expertise also includes translational preclinical and clinical development aspects with specific emphasis on the development and use of innovative exploratory biomarkers and effective clinical study designs. In the past, it was difficult to find the right AD patients for clinical studies as there were no relevant biomarkers to identify AD at an early stage. The Company, however, believes it is in a good position to identify early stage AD patients by using the right combination of measures and markers in order to get reliable results in the further clinical development of PQ912. The Company has deep and longstanding expertise in building and managing networks of international advisors on both the science and the clinical aspects of AD. The Company has created and maintained strong credibility over the years with the scientific community, with clinicians, and with the many pharmaceutical companies that pursue therapies for central nervous system and degenerative diseases such as AD.

### ***The Company has an experienced senior leadership team***

The Company's leadership team consists of highly experienced industry professionals with complementary skill sets. Several key members of the Company's team have worked together for about ten years. The team has a long and distinguished track record of pursuing drug discovery and development as well as deal making objectives both in biotechnology and with large pharmaceutical companies.

### ***The Company's pending and granted patent claims protect its access to the QC-target and its product candidates***

The Company believes that it is in a strong position to pursue all of its therapeutic programs, which are protected by both medical use and composition of matter patents. The first patent on a QC-inhibitor was issued to the Company in 2008. Since then, such patents have been granted worldwide. The medical use patents will start expiring in 2024 (plus five-year extensions). Patent coverage on the Company's product portfolio will start to expire in 2029 (PQ912, plus standard five-year extension until 2034). Other patents, once granted, will expire in the 2029-2039 time frame (plus five-year extensions).

### ***The Company is structured in a cost efficient manner***

The Company operates in a lean and cost efficient manner. The Company relies primarily on outside experts and contractors for many key functions which provides the Company with high flexibility and ensures cost-effectiveness. Generating a product candidate that can now enter into the Phase 2 studies on the basis of the amounts thus far invested in the Company is in the view of the Company a significant achievement. The Company intends to operate in the future in a cost efficient manner to achieve its business goals.

## **Product candidates**

### ***Alzheimer's disease pathology***

#### *Introduction to macroscopic and microscopic features of Alzheimer's disease biology*

It has been known for decades that brains of patients with AD show several striking structural features, which are (i) shrinking of the brain, and (ii) distinct protein deposits called plaques and tangles.

The shrinking of the brain results from the loss of brain cells (neuron loss) and the loss of connections between such cells (synaptic loss) in different parts of the brain, which ultimately results in the clinical manifestations of the disease (Querfurth and LaFerla, 2010; Selkoe, 2001).

Plaques and tangles are distinct features of the disease, which are considered the classical pathological microscopic changes in the Alzheimer brain. Plaques are mostly constituted of Amyloid beta (Abeta) peptides, while tangles mostly consist of a protein called Tau (Querfurth and LaFerla, 2010; Selkoe, 2001).

The relation between plaques and tangles in the context of disease progression has been a long-time focus of scientific investigation. It has recently been established that Abeta amyloid pathology appears to be a prerequisite for tau precipitation in tangles to occur (Nussbaum et al., 2012; Jack et al., 2010; Ittner and Gotz, 2011).

#### *Amyloid cascade and specific role of oligomers and pGlu-Abeta*

The plaques mostly consist of an abnormal extracellular deposition of the Abeta peptide. This peptide is a normal product of the metabolism of the Amyloid Precursor Protein (APP) that occurs in the brain. In AD the process of Abeta formation and clearance is distorted. This distortion triggers a cascade, often called the amyloid cascade, that, via multiple and important steps, ultimately results in the formation of plaques (Hardy and Selkoe, 2002; Hardy and Higgins, 1992). Over the years, substantial evidence has built up that Abeta has an early and key role in all forms of AD (Citron, 2010). For the specific role of pGlu-Abeta see below.

#### *Involvement of toxic Abeta oligomers*

It has been established that Abeta peptides display high heterogeneity in AD (Harigaya et al., 2000; Hosoda et al., 1998; Iwatsubo et al., 1996; Mandler et al., 2014; Piccini et al., 2005; Rijal Upadhaya et al., 2014; Russo et al., 1997; Russo et al., 2000; Russo et al., 2002; Saido et al., 1995) and various arguments have been established outlining that the underlying mechanism by which Abeta contributes to AD is specific for certain forms of Abeta:

- (i) Post mortem analysis of tissue from AD patients and controls suggests that the level of soluble and modified Abeta species found in the brain and the cerebrospinal fluid correlates with clinical AD symptoms, rather than the level of amyloid plaques themselves (Selkoe, 2002; Shankar et al., 2008; Lambert et al., 1998).
- (ii) Normal unchanged Abeta itself may play a protective physiological role (Puzzo and Arancio, 2013).
- (iii) Shorter forms of Abeta (Abeta38 and Abeta40) have been described as preventing the aggregation of the presumably more toxic peptide Abeta42 (McGowan et al., 2005).

Further research has led to the understanding that soluble Abeta oligomers are key in the Abeta patho-biology. These soluble Abeta oligomers are clusters of Abeta of different size, 3-dimensional structure and length. It has now been established that these soluble oligomers are neurotoxic and are considered to be a key factor in the development of AD pathology (Benilova et al., 2012). Presence of soluble Abeta oligomers in the brain is also considered to be a decisive difference between normal aging and AD (Shankar et al., 2008; Walsh and Selkoe, 2004; Freir et al., 2011; Deshpande et al., 2006; Lesne et al., 2013).

The toxic Abeta oligomers are assumed to cause synaptic impairment and reduced neuronal connectivity early in AD, which correlates with first memory impairments (Shankar and Walsh, 2009; Sheng et al., 2012; Shankar et al., 2008; Walsh and Selkoe, 2004), which is followed by tau-pathology and inflammation leading to chronic neuro-degeneration (Wyss-Coray, 2006).

The toxic effect of Abeta oligomers has been shown to be mediated via interaction with various types of cell membrane receptors, amongst others, selected glutamatergic transmitter receptors (Li et al., 2011; Selkoe, 2008).

The acute and chronic toxicities of soluble Abeta oligomers suggest that they are an interesting therapeutic target for AD drug development.

#### *A specific form of Abeta, pGlu-Abeta, is crucial in the formation of toxic Abeta oligomers*

Together with its academic partners, Probiodrug's proprietary research has led to important insights into the underlying molecular events of Abeta oligomer formation and function (Jawhar, 2011). Probiodrug and others identified that a specific form of Abeta, namely pGlu-Abeta, is a key trigger and building block for toxic oligomer formation. pGlu-Abeta is formed via a modification (cyclization) of certain Abeta species (truncated species which carry a glutamate residue at the N-terminus).

pGlu-Abeta was first identified in brain biopsies from AD patients in 1995 (Saido et al., 1995). Since then, extensive scientific evidence suggesting oligomers containing pGlu-Abeta play a crucial role as a driver of the amyloid pathology has been developed by, amongst others, Probiodrug and its academic partners to the current stage (see "*PRODUCT BACKGROUND – TARGET VALIDATION: PGLU-ABETA AND QC*").

- (i) pGlu-Abeta has been shown to accumulate in the course of development of sporadic AD (Güntert et al., 2006). Importantly, pGlu-Abeta has been shown to be specifically increased within the soluble Abeta pool from AD tissue, while being underrepresented in normal aging tissue (Piccini et al., 2005).
- (ii) pGlu-Abeta species exert a much higher neurotoxicity compared to full-length (normal) Abeta-oligomers. Moreover, pGlu-Abeta is able to transfer its molecular properties and "infect" other non-modified peptides to form new neurotoxic oligomers (Nussbaum et al., 2012).
- (iii) pGlu-Abeta is implicated to play a role in the relationship between Abeta and Tau. These findings suggest that pGlu-Abeta is upstream and early to tau in the toxicity cascade.

#### *Toxic pGlu-Abeta is formed by Glutaminyl Cyclase (QC)*

Probiodrug's scientists first discovered that pGlu-Abeta requires an enzyme to be produced and does not arise spontaneously (Demuth et al., 2004; Schilling et al., 2004). The identified enzyme is Glutaminyl Cyclase (QC), which catalyzes the conversion of N-terminal glutamate into oxoproline (pyroglutamate). Subsequently, the Company established QC's correlation with AD pathology through continued preclinical research together with its academic partners (Hartlage-Rubsamen et al., 2011; Morawski et al., 2010; Morawski et al., 2014).

QC is an important link between Abeta and neuronal death and cognitive decline. By targeting pGlu-Abeta specifically, Probiodrug differentiates itself from other Abeta-directed drug development approaches, which are aimed at reducing normal Abeta or Abeta plaques.

## Product background

### Introduction

The core research and development focus of Probiodrugs has been to establish and develop product candidates that address pGlu-Abeta in AD. To date, Probiodrugs's pipeline consists of two specific small molecule inhibitors of the QC-enzyme: PQ912 and PQ1565, and a monoclonal antibody targeted against pGlu-Abeta: PBD-C06.

The QC-inhibitors are intended to block the formation of pGlu-Abeta, thereby aiming to prevent the critical steps in the process of Abeta monomers to become toxic oligomers and thus to reduce or halt the underlying AD pathology. The Company's monoclonal antibody is designed to solely clear pGlu-Abeta from the brain.

The Company believes that the pGlu-Abeta constitutes a pioneering and focused approach to modify the underlying AD, and Probiodrugs has undertaken a systematic effort to:

- understand the role of QC and its relation to pGlu-Abeta
- understand pGlu-Abeta pathobiology in AD
- create product candidates that target pGlu-Abeta via multiple modes of action: specific inhibitors of the QC-enzyme and antibody mediated clearance of pGlu-Abeta

### Target validation: pGlu-Abeta and QC

#### QC and pGlu-Abeta association with Alzheimer's disease

Several studies suggest that QC upregulation, pGlu-Abeta accumulation and downstream pathophysiology go in parallel. Alzheimer patients have significantly higher levels of QC-messenger RNA and protein compared to unaffected individuals (De Kimpe et al., 2012; Morawski et al., 2014; Schilling et al., 2008). Upregulation of the QC enzyme is a very early event in the AD pathology (De Kimpe et al., 2012). Correspondingly, also the levels of pGlu-Abeta in Alzheimer patients are much higher than in normal individuals (Figure 2). Recent work on post mortem tissue suggests differential upregulation of QC in cortical layers and a correlation of the pGlu-Abeta content with the cognitive state of the patients as measured by the so-called Mini Mental State Examination ("MMSE") (Morawski et al., 2014). pGlu-Abeta load also correlates with the severity of AD neuropathology, clinical dementia and synaptic damage (Mandler et al., 2014).

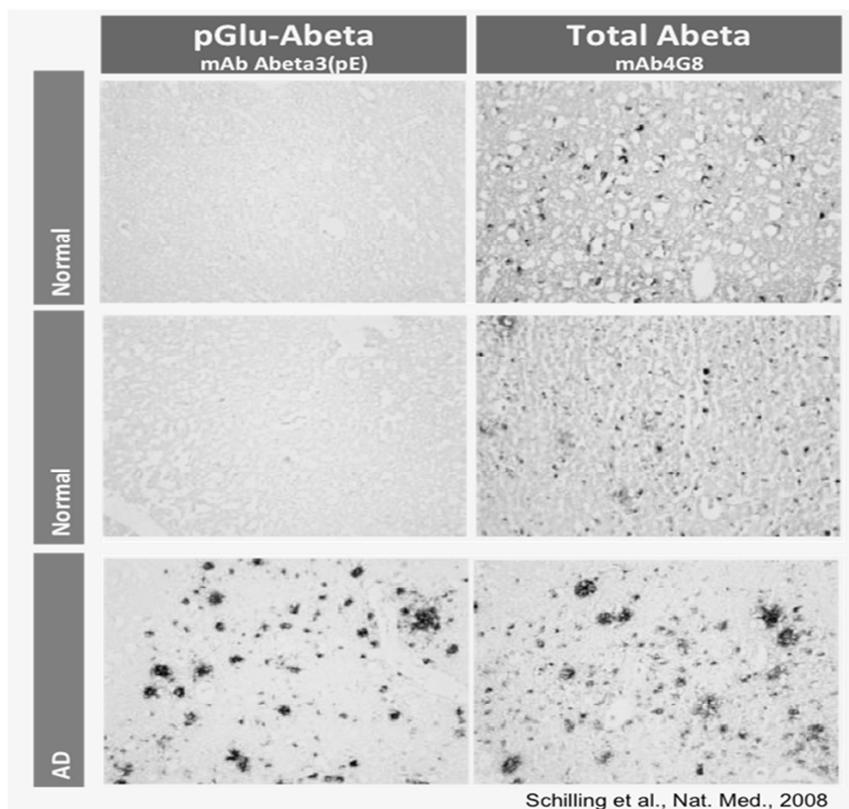


Figure 2: Slices of brain biopsies taken post-mortem from normal subjects (Normal) or from AD-patients. Black dots indicate staining (by use of appropriate antibodies) of total Abeta (right) or pGlu- Abeta only (left). While Abeta is expressed in both normal and diseased brain tissue, pGlu-Abeta is highly overexpressed in Alzheimer as compared to normal (Schilling et al, 2008).

### Increase in pGlu-Abeta in mice leads to neurodegeneration and cognitive disabilities

To determine the importance of pGlu-Abeta for the development of AD, several different transgenic mouse models have been genetically engineered to increase pGlu-Abeta production (Alexandru et al., 2011; Jawhar et al., 2011; Becker et al., 2013). All models share the common feature that the increase of pGlu-Abeta production results in behavioral impairment, while QC-inhibition or genetic ablation decreased this pathology.

For example (as shown in Figure 3 below), an overexpression of human QC in double transgenic human Amyloid Precursor Protein (APP) mice is reflecting some features of the pathological process seen in humans. The brains of these mice have higher levels of pGlu-Abeta and Abeta oligomers and, at the same time synapses are lost and the spatial learning and memory abilities of the animals are jeopardized (Alexandru et al., 2011; Jawhar et al., 2011; Becker et al., 2013).

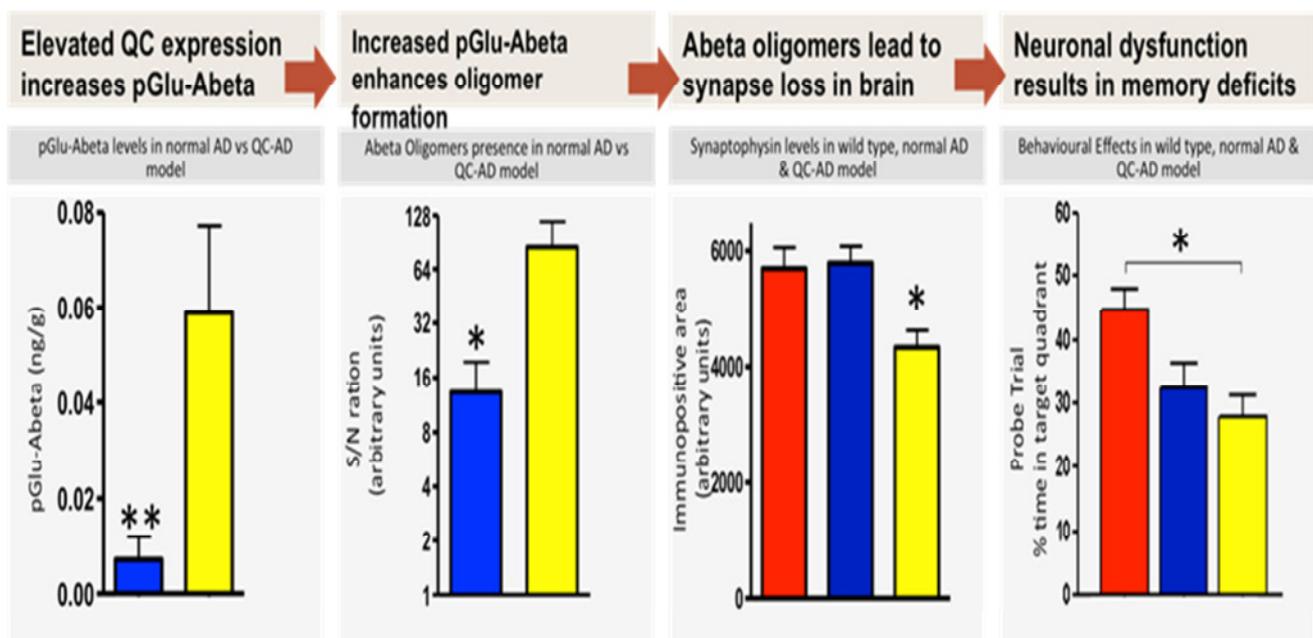


Figure 3: Effect of overexpression of the human QC enzyme in an animal AD-model carrying mutations in Amyloid Precursor Protein as found in familiar human AD (APP Swedish /London transgenic mice; Nussbaum et al., 2012)

Red column: Normal unmodified mice (Wild Type)

Blue column: Mice are genetically modified to express the human Amyloid Precursor Protein (APP) carrying mutations as found in familiar human Alzheimer. This leads to enhanced Abeta production in these animals (Alzheimer Model).

Yellow columns: Alzheimer model mice which carry an additional genetic modification which in addition leads to overexpression of the human QC-enzyme in these animal (Alzheimer model plus human QC-overexpression)

Parameters measured in the brains of the different animals are (from left to right): level of pGlu-Abeta, level of Abeta-oligomers, and level of synaptophysin (which stands for amount of synapses, i.e. contact points between nerve cells). Right-most column: behavioral test with the different animals indicative for memory and learning.

Conclusion: the addition of the QC enzyme leads to a chain of pathological events in the animals resembling what is seen in AD-patients: More QC-activity leads to enhanced level of pGlu-Abeta, accompanied by an increase in the amount of Abeta-Oligomer (blue versus yellow); toxic oligomers lead to loss of synapses which is reflected by a reduction in learning and memory of the animal (behavioral effects).

\*/\*\* : statistically significant differences between blue and yellow columns (AD-model with and without overexpression of QC) and between red (normal unmodified animals) and yellow. Number of stars represents significance level.

#### pGlu-Abeta may be the key link between Abeta and tau

Mice that have high levels of pGlu-Abeta show histological signs of neurodegeneration. If, however, the expression of tau is eliminated by inactivating ("knocking out") the tau gene, then the brains of these Abeta overexpressing mice appear to be protected against this damage (Yazi et al., 2012). The importance of having both pGlu-Abeta and tau can also be demonstrated using cultured mouse neurons (Nussbaum et al., 2012). Purified pGlu-Abeta, but not full length Abeta, is toxic to cells (Nussbaum et al., 2012). However, this cytotoxicity is eliminated if the mouse neurons are isolated from mice where the gene for tau has been knocked out (Nussbaum et al., 2012). Likewise, a correlation between pGlu-Abeta and p-tau (a modified version of Tau) pathology has been demonstrated in post-mortem brain tissue (Mandler et al., 2014).

#### pGlu-Abeta and its role in forming toxic oligomers

Abeta-oligomer's composition and structure seemingly play a critical role for its degree of toxicity and its propensity to grow to oligomeric aggregates (Schlenzig et al., 2012).

Abeta peptides will aggregate into oligomers under specific conditions. However, the formation of these oligomers typically requires several hours to begin. In contrast, pGlu-Abeta peptides rapidly aggregate (Schlenzig, 2009). pGlu-Abeta has been shown to be able to seed the aggregation of unmodified Abeta *in vitro* and thus may also accelerate the formation of oligomers and eventually more plaques in Alzheimer patients (Schilling et al., 2006). Oligomers containing pGlu-Abeta have been demonstrated to be much more toxic to neuronal cells (*in vitro*) compared to oligomers being constituted of other Abeta species (Abeta 1-40 and Abeta 1-42) (Nussbaum et al., 2012). The toxic form of Abeta has been shown to induce massive signs of inflammation, which is critical to foster a vicious cycle in the sense that pGlu-Abeta increases the level of inflammatory cytokines which in turn further lead to increased level of QC enzyme and thus pGlu-Abeta (Alexandru et al., 2011).

The Company therefore expects that inhibiting the formation of pGlu-Abeta should inhibit the formation of soluble Abeta oligomers and reduce Abeta oligomer toxicity and, potentially, the overall disease progression in AD patients.

#### Inhibition of QC leads to decreases in pGlu-Abeta *in vitro* and *in vivo*

PBD150, an inhibitor of QC, was created by Probiodrugs and served as a research tool that can be considered as a precursor of the Company's current QC-inhibitors PQ912 and PQ1565. PBD150 was able to inhibit pGlu-Abeta production in a dose-dependent manner in an *in vitro* system. This confirms that QC drives the *in vitro* formation of pGlu-Abeta (Schilling et al., 2008). To test whether QC is responsible for pGlu-Abeta production *in vivo*, the Company dosed transgenic mice that overexpressed Abeta with PBD150 for 6 months. As shown in Figure 3, mice treated with PBD150 had significant decreases in the levels of pGlu-Abeta in their brains compared to the non-treated control animals. Treatment with PBD150 also led to a reduction in the levels of other insoluble forms of Abeta, providing further support for the hypothesis that pGlu-Abeta is a driver for the formation of Abeta aggregates which accumulate in the brain (Schilling et al., 2008). Mice treated with the high dose of PBD150 had significant improvements in a conditioned fear assay compared to untreated controls (Figure 4) (Schilling et al., 2008).

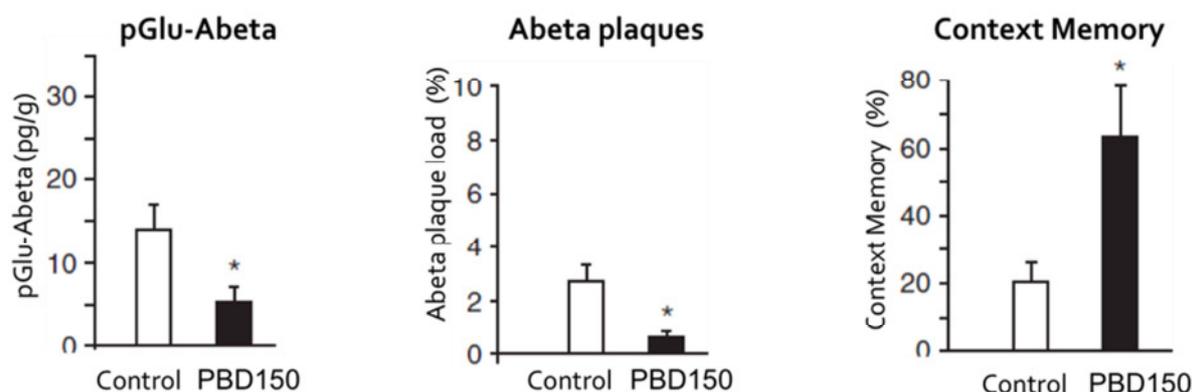


Figure 4: Inhibition of QC by PBD150 in AD-like mouse model in which the Amyloid precursor protein (APP) was overexpressed. 4 months old TAD-41 mice treated with PBD150 for 3 months via food showed significant reductions in

overall levels of pGlu-Abeta as well as Abeta plaques. Compound treatment was also associated with a significant improvement in a behavioral test called conditioned fear test (Schilling et al., 2008).

#### Evidence of therapeutic window for QC-inhibitors

To establish the safety of inhibiting QC activity, a mouse strain was created in which the gene for producing QC was deleted. These mice had no significant differences in feeding, growth, general behavior, performance of specific motor neuron and cognitive tests compared to normal mice (Schilling et al., 2011). They showed a very mild secondary hypothyroidism. The lack of any serious phenotype changes resulting from the knockout of QC and the pharmacological safety experiment in mice and the critical role of this enzyme in the formation of pGlu-Abeta highlights the attractiveness of QC as a target for novel Alzheimer therapies.

#### QC-Inhibition may have a second complementary mechanism of action

In addition to the direct effect on the production of pGlu-Abeta, QC-inhibitors may also reduce inflammation, as mammals have two QC genes: (i) QC, that is highly expressed in the brain and (ii) its isoenzyme (= closely related variants of enzymes that differ in amino acid sequence but catalyze the same chemical reaction) iso-glutaminy cyclase (“isoQC”), which appears to be distributed more ubiquitously and has been proposed to have a role in post-translational processing of secreted chemokines (Cynis et al., 2008 and 2011). It has been shown that inactivation of isoQC significantly lowers levels of pGlu-CCL2, a specific form of CCL2, which has a pivotal role in the inflammatory pathway, responsible for the attraction of monocytes to the sites of tissue injury. Inhibition of isoQC is therefore expected to have anti-inflammatory activity (Cynis et al. 2011). Moreover, QC-inhibitors showed efficacy in animal models of disorders that are strictly associated with inflammatory (macrophage) activity such as accelerated atherosclerosis, non-alcoholic fatty liver disease and septic arthritis (Cynis et al., 2011; Hellvard, 2013; Cynis, 2013).

Inhibition of QC activity in mice with the lead product candidate PQ912 has shown dose-dependent decreases in pGlu-CCL2. In a peritonitis mouse model of inflammation, PQ912 inhibited the infiltration of monocytes confirming both the importance of pGlu-CCL2 *in vivo* as well as the essential role of QC activity (Probiodrugs' internal result, unpublished).

These findings are relevant for AD, as pGlu-Abeta, Abeta oligomers and plaques provoke neuro-inflammation through the innate immune system, ultimately resulting in activation of microglia and attraction of monocytes (Akiyama et al., 2000; Fassbender et al., 2004; Wyss-Coray 2006; Yang et al., 2011). The result of this inflammatory response is neuronal death (Fuhrmann et al., 2010). QC-inhibitors thus have the potential to not only prevent the formation of toxic pGlu-Abeta, but they may also aid in reducing inflammation induced by existing damage.

#### ***Probiodrugs' product pipeline***

*Lead compound PQ912 – a small molecule inhibitor of QC*

##### Pharmacology

PQ912 is a proprietary, potent and selective inhibitor of human QC being developed for AD. To verify the usefulness of the compound as a potential AD-treatment, its safety and efficacy has been characterized in various *in vitro* and *in vivo* animal models.

##### Proof of principle

Proof of principle for PQ912 was established in an AD mouse model as shown in Figure 5.

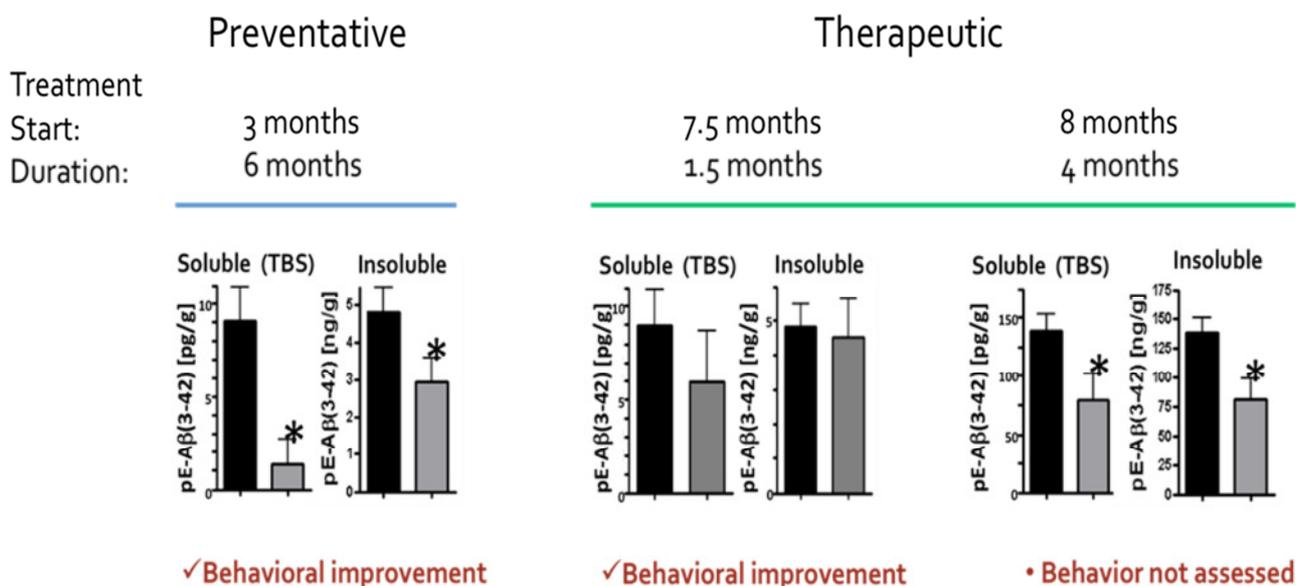


Figure 5: PQ912 given via chow (corresponding to 200mg/kg per day) to transgene Alzheimer disease-mice at different stages of disease development. Treatment with PQ912 starting at 3 months of animal age in a preventative mode leads to significant reductions in both soluble and insoluble pGlu-Aβeta. In experiments designed to model treatment of established AD, therapeutical treatment with PQ912 starting at the age 7.5 or 8 months also decreases soluble and insoluble pGlu-Aβeta. Behavioral improvements using the water maze paradigm were observed in the preventative and short-term therapeutic modes (data not shown). Behavioral changes were not assessed in the long-term therapeutic experiment.

PQ912 was effective in lowering pGlu-Aβeta and rescued the behavioral phenotype. It is worth noting that the therapeutic effect specifically on spatial learning and memory was already robustly noticeable after a short-term treatment of 6 weeks. The effective dose used resulted in a mean concentration of PQ912 in the CSF, which corresponds to target occupancy between 40% and 70%. The Company believes that a target occupancy of about 70% is sufficient for a therapeutic effect.

### Clinical Phase 1

PQ912 is the first QC-inhibitor tested in humans. It was evaluated in 200 healthy volunteers in a clinical Phase 1 study in Europe to determine safety and tolerability as well pharmacokinetic and pharmacodynamic parameters. It has been demonstrated that PQ912 was safe and very well tolerated after single administration in a dose range of 10 mg up to 3600 mg and after twice a day administration up to a dose of 500 mg in non-elderly and 800 mg in elderly subjects. No serious adverse events were reported in the Phase 1 study. Nearly all adverse events were CTC (common toxicity criteria) grade 1 and 2, mild to moderate severity grade, and no apparent overall differences in the distribution of adverse events between placebo treated and PQ912 exposed humans could be detected. The most frequently observed adverse event was headache and occurred largely in volunteers with lumbar puncture. Nausea was the second most frequent adverse event observed and the relatively high number of tablets of 2 times 4 tablets may have contributed to this effect. Maximal tolerated dose was not achieved.

The pharmacokinetics was dose-proportional at lower doses of PQ912 and 2 times over-proportional at higher doses. Plasma and CSF concentrations of PQ912 were higher in elderly than in non-elderly subjects suggesting a decrease in clearance with age. PQ912 was determined to have a half-life of 2.2 hours in plasma and, importantly, 6 hours in CSF as an indicator for the half-life in the brain. Exposure in CSF was about 30% of the unbound fraction in plasma. Increasing compound levels in plasma and CSF correlated tightly with the degree of inhibition of QC-activity. By day 11 of dosing with 300 and 400 mg bid PQ912 observed mean concentrations in CSF corresponded to a target engagement of 70% in younger and elderly subjects, respectively. Increasing doses of PQ912 lead to increasing drug level in the brain and in CSF. A given concentration in brain and CSF leads to a certain inhibition of QC-activity. The estimated CSF exposure achievable with twice daily 800 mg in elderly subjects was on average 90%.

Data from this Phase 1 trial have been presented at two international Alzheimer meetings (Weber et al., 2013; Black et al., 2013).

### Development plan

Based on data obtained from extensive evaluation in preclinical animal models and in Phase 1, the Company believes that there is a strong rationale to advance PQ912 to a three month Phase 2a clinical study in patients with early AD. The goals of the Phase 2a study are to

- demonstrate longer-term safety in non-hospitalized early stage AD patients as primary endpoint, and
- assess efficacy of PQ912 based on composite exploratory endpoints, which are:
  - patho-physiologically relevant molecular biomarkers such as pGlu-Abeta, Abeta oligomers and pGlu-CCL2, and other inflammatory markers,
  - readouts indicative for changes in synaptic plasticity like the EEG and on neuronal connectivity such as the functional MRI,
  - a tailored composite assessment of short term memory and verbal function (Neuropsychological test battery (NTB))

The rationale behind using this broad array of molecular, electrophysiological and cognitive tests is to determine whether (i) the drug directly inhibits the QC target as anticipated, (ii) the level of inhibition achieved has any direct effect on molecular markers that are immediately downstream of the target, and (iii) there is any sign of therapeutic benefit. The study design aims to capture early signals of acute cognitive improvement. Exploring a wide range of exploratory measures in this Phase 2a study would help focus subsequent studies, involving larger numbers of patients, on the most appropriate criteria to use for definitive studies required to prove efficacy for regulatory approval.

The double blind, placebo controlled study will be performed at 12 centers in 5 European countries (the Netherlands, Germany, Denmark, Sweden, Finland). It will enroll 110 patients with half of the patients receiving PQ912, 800 mg, twice a day, with an option to decrease the dose if necessary, the other half will receive a placebo. The exposure calculated for the 800 mg twice daily is expected to inhibit QC in the brain on average by 90%. Eligible patients are considered to be early stage AD and will be selected based on generally accepted parameters in AD drug development, namely standard MMSE testing scores (>20), signature patterns of Abeta (below cut-off 638ng/L) and Tau /p-tau (above cut-off >52ng/L) in CSF. Dosing will continue for 12 weeks with a 4-week follow up. The principal investigator (“PI”) of the study is Philip Scheltens, Head of the Alzheimer Center at the VU University Medical Center, Amsterdam. Philip Scheltens is a renowned expert in the field, being part of the spearheading group of academic clinicians developing new paradigms for clinical testing in early AD. Depending on the progress of the Phase 2a study, the development plan may be adapted to changing circumstances, if any.

Regarding the planning and execution of the Phase 2a study of PQ912, also called PBD-01071 or the “**Saphir Study**”, the Company signed a letter of agreement with the Academic Research Organization, Julius Clinical, Zeist, the Netherlands. Said letter of agreement shall form the basis for drafting and finalizing the ultimate service agreement regarding the Saphir Study.

Approvals from the Competent Authorities as well as from ethical committees in the five EU countries where the Phase 2a study will be performed are required. Approvals from authorities in the Netherlands are already granted.

Probiodrug's Phase 2a study will be registered in [www.clinicaltrials.gov](http://www.clinicaltrials.gov) before starting patient treatment. ClinicalTrials.gov is a service of the U.S. National Institute of Health. It is a registry and results database of publicly and privately supported clinical studies of human participants conducted around the world.

#### *PBD-C06 – a monoclonal antibody targeted against pGlu-Abeta*

The Company's lead monoclonal antibody molecule, PBD-C06, selectively targets pGlu-Abeta. Preclinical experiments demonstrate the ability of this antibody to reduce soluble and insoluble pGlu-Abeta as well as total Abeta (Frost et al., 2012) in both preventative and therapeutic studies in animal models. Moreover, PBD-C06 according to Company data also rescues short-term memory deficits induced by Abeta oligomers in an animal model and showed significant improvement of learning and memory after chronic treatment of a transgenic mouse model. This antibody approach has also recently been preclinically validated by a group at Eli Lilly (deMattos et al., 2012).

PBD-C06 has been successfully humanized and also de-immunized to avoid detection by the patient's endogenous immune system. Currently experiments are running to identify the optimal immunoglobulin isotype. Toxicology studies are expected to start in the second half of 2015.

#### *PQ1565 – a second QC-inhibitor*

Probiodrug is also advancing PQ1565, a second QC-inhibitor from the same structural class as PQ912, for clinical development. In preclinical experiments, compared to PQ912, this molecule has demonstrated increased pharmacological

properties leading to higher CSF exposure and QC-inhibition in the CSF at comparably lower dose levels as shown in non-human primates. Regulatory toxicology studies are in preparation and production of this molecule is currently being scaled up in anticipation of longer-term safety studies.

## **Intellectual property rights**

### ***Patents and patent applications***

A robust intellectual property position is of prime importance in the sector in which the Company operates.

Probiodrug is significantly dependent on a number of patents with respect to its technologies and product candidates. As a consequence, the protection of proprietary technologies, product candidates and products plays an important role for the business activities of Probiodrug. The Company considers on a case-by-case basis filing patent applications with a view to protect certain proprietary technologies, technical processes and product candidates processes used to prepare these product candidates, proprietary molecules contained in these product candidates, and medical treatment methods. Probiodrug may also in the future in-license or acquire ownership rights to patents, patent applications or other intellectual property owned by third parties, for example by academic partners or commercial companies.

From its inception, the Company has implemented an intellectual property protection policy with the objective of broadly protecting its know-how and certain proprietary molecules. The Company pursues a strategy of protecting its core technologies and product candidates by broadly filing patent applications and by securing its key processes as proprietary know-how.

The Company has built a significant worldwide patent portfolio covering its proprietary technologies. The continuously expanding patent portfolio currently consists of 42 patent families, which comprise more than 650 national patent applications and issued patents worldwide. The Company believes that said patent estate is strong and provides a robust and, in the field of inhibiting glutaminy cyclase (“**QC**”) (enzyme which is different in structure but catalyzes the same chemical reaction) or its isoenzyme (“**isoQC**”), a dominant position.

The patent portfolio is focused on the Company’s R&D programs relating to QC and isoQC and N-terminally modified forms of Abeta peptide as the medical targets: approximately 13% of the patent families focus on broad medical treatment methods, which are based on the target QC or isoQC. The most prominent part of the IP portfolio relates to composition-of-matter patents with approximately 58% of all patent applications covering proprietary small molecules as inhibitors of QC and /or isoQC. A further approximately 7% of the patent families protect monoclonal antibodies targeting the pGlu-Abeta peptides as well as the pGlu-CCL2. The other IP position further extends to tools that are necessary for the development of small-molecule QC-inhibitors and the monoclonal antibodies. These are patent applications and patents relating to diagnostic assays (approximately 9%) and proprietary animal models (approximately 13%).

The Company owns a broad patent portfolio protecting its proprietary technologies and compounds for the treatment of neurodegenerative and inflammatory diseases. Past investments in this field have been significant and will be continued to build a leading position of the Company. As a practical matter and because the United States represents a significant share of the world market for pharmaceuticals, the Company follows a policy of filing priority applications primarily in the United States. Within 12 months after filing the first application in the United States, an international patent application (PCT application) is filed, which is later typically nationalized in countries of interest to the Company’s business, e.g. Europe, United States, Japan, Australia, Canada and, if deemed appropriate, Brazil, China, Eurasia, Hong Kong, India, Israel, Mexico, New Zealand, Singapore and South Africa.

Prosecuting a patent application typically involves the examination of the patentability of the Company’s patent applications by the governmental or supranational authority that issues the patent (examining authority), e.g. the United States Patent and Trademark Office (“**USPTO**”) or the European Patent Office (“**EPO**”) or other national or regional patent offices. In the course of such examination, the examining authority may initially reject the patent application claims, for example, based on its interpretation of prior art, and, from time to time, may issue a “final” ruling rejecting certain patent application claims.

However, in response to rejections released by the examining authorities in the relevant jurisdictions, claims may be modified or deleted, or the same or similar patent application claims may be pursued by way of a continuation application, a request for continued examination, or a divisional application, depending upon the applicable jurisdiction.

Moreover, patents can generally claim an “apparatus” and /or a “method”. Patent law in the European Union and some other jurisdictions prohibits the patenting of methods of medical treatment. Therefore, patents for methods of treatment can only be obtained in jurisdictions where this type of claims is not excluded from patentability, such as in the U.S. In other jurisdictions, it is possible to obtain granted claims covering so-called second medical uses or purpose-related uses

of the Company's therapeutic agents instead. Such medical use claims protect the use of the Company's therapeutic agents in the treatment of the claimed diseases. Medical use patents have been granted for the Company in important jurisdictions outside the U.S., such as Australia, Canada, China, Eurasia, Europe, Hong Kong, India, Israel, Mexico, New Zealand and South Africa.

In the United States, the Hatch-Waxman Act (Drug Price Competition and Patent Term Restoration Act) permits a patent term extension for FDA-approved drugs of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time the drug is under regulatory review. Patent extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug may be extended. Similar provisions are available in other jurisdictions to extend the term of a patent that covers an approved drug, or to offer similar protection for an extended period, as is the case in the European Union where supplementary protection certificates (SPCs) may be granted for a maximum period of five years after expiry of the relevant patent. In the future, if and when the Company's product candidates receive approval from Competent Authorities, the Company expects to apply for patent term extensions/SPCs on patents covering those products. The Company intends to seek patent term extensions to any of its issued patents in any jurisdiction where these or SPCs are available, however there is no guarantee that the Competent Authorities will agree with the Company's assessment of whether such extensions should be granted, and even if granted, the length of such extension.

The Company had established an in-house patent department which handled all necessary patent activities for more than ten years until May 2012. The Company's patent attorney then joined the patent law firm Maikowski & Ninnemann, Berlin and Leipzig, Germany ("Maikowski & Ninnemann"), in June 2012 and since then Maikowski & Ninnemann handles all intellectual property matters of the Company also by coordinating national IP lawyers in foreign jurisdictions of interest.

The Company's patent portfolio of granted patents and pending applications is summarized in the following table (the respective attribute refers to the chemical structural aspects of the respective QC-inhibitors):

PBD Family	Publication or Filing Number	Keyword	International Filing Date	Pending in	Granted /Allowed in
<i>Category: Medical treatment methods</i>					
28	WO 2004/098625	Use of QC-inhibitors for treatment of AD and Down Syndrome	05.05.2004	BR, JP	3x AU, CA, CN, EA, 3x EP, HK, IN, IL, 3x MX, 3x NZ, 4x US, ZA
36	WO 2005/039548	Use of QC-inhibitors for treatment of FBD and FDD	15.10.2004	JP	CA, EP, IL, 2x KR, MX, NZ, 2x US
37	WO 2005/049027	Combinations for treating neuronal disorders	29.10.2004		AU, IL, NZ, ZA
60	WO 2008/034891	Screening methods for isoQC-inhibitors	21.09.2007	BR, CA, CN, EP, HK, IL, IN	2x AU, EA, KR, MX, 2x NZ, 2x US, ZA
62	WO2008/104580	Use of QC-inhibitors for treatment of inflammatory diseases	28.02.2008	BR, CA, EA, EP, IL, JP, KR, MX	AU, NZ, SG, US, ZA
73	WO 2010/026209	Medical use of IsoQC-inhibitors	04.09.2009	EP, JP, US	
<i>Category: Small-molecule inhibitors of glutaminyl cyclase</i>					
29	WO 2004/098591	Imidazole QC-inhibitors	05.05.2004		EP, JP, 2x US

38	WO 2005/075436	Imidazole QC-inhibitors	04.02.2005	BR	AU, CA, CN, EA, EP, HK, IL, IN, JP, KR, MX, NZ, 2x US, ZA
49	WO2008/065141	Benzimidazole QC-inhibitors	28.11.2007	IN, US	EP, JP
50	WO 2008/110523	1,5-imidazopyridine QC-inhibitors	10.03.2008	JP	EP, US
51	WO 2008/128981	Nitrovinyl QC-inhibitors	18.04.2008	JP	EP, US
52	WO 2008/128982	Amide QC-inhibitors	19.04.2008	JP, US	EP
53	WO 2008/128983	Cyanoguanidine QC-inhibitors	20.04.2008	JP	EP, US
54	WO 2008/128984	Pyridine QC-inhibitors	21.04.2008	JP	EP, US
55	WO 2008/128985	Thiourea QC-inhibitors	22.04.2008	EP, JP, US	
56	WO 2008/128986	Novel urea-based QC-inhibitors	23.04.2008	EP, JP, US	
57	WO 2008/055945	Pyrrolidone QC-inhibitors	08.11.2007	EP, IN	JP, US
58	WO 2008/055947	Imidazolidinone QC-inhibitors	09.11.2007	IN	EP, JP, US
59	WO 2008/055950	1,5-substituted tetrazole QC-inhibitors	10.11.2007	IN, JP	EP, US
64	WO 2008/128987	2,2-Diamino-1-nitroethene QC-inhibitors	18.04.2008	JP	EP, US
65	WO 2011/131748	Benzimidazolamine QC-inhibitors	21.04.2011	EP, JP	US
69	WO 2010/026212	QC-inhibitors	04.09.2009	AU, BR, CA, CN, EA, EP, HK, IL, IN, JP, KR, MX, SG, US	NZ, ZA
71	WO 2011/029920	Pyrrolidinone QC-inhibitors	13.09.2010	AU, BR, CA, EA, EP, HK, IL, IN, JP, KR, SG	CN, MX, NZ, US, ZA
78	WO 2011/107530	Heterocyclic QC-inhibitors	03.03.2011	EP, JP, US	
81	WO 2012/022804	Crystal structure of glutaminyl cyclase	19.08.2011	EP, JP	2x US
82	WO 2011/110613	Heterocyclic QC-inhibitors	10.03.2011	AU, BR, CA, CN, EA, HK, IL, IN, JP, KR, SG	EP, MX, NZ, 2x US, ZA
85	WO 2012/059413	Crystal structure of isoQC	28.10.2011	EP, JP	US
86	WO 2012/123563	Tetramic acid QC-inhibitors	16.03.2012	EP, JP	US
88	WO 2012/163773	Radiolabeled QC-inhibitors	24.05.2012	AU, BR, CA, CN, EA, EP, HK, IL, IN, JP, KR, MX,	

122	PCT/EP 2014/055106 <sup>(1), (2)</sup>	Novel QC-inhibitors	14.03.2014	NZ, SG, US, ZA WO	
<i>Category: Diagnostic assays</i>					
72	WO 2010/012828	QC, diagnostic marker, ND diseases	31.07.2009	AU, BR, CA, EA, EP, IL, IN, JP, KR, MX, SG, US	CN, NZ, ZA
75	WO 2011/033046	Plasma Abeta 1-40 assay	17.09.2010	CA, CN, EP, IN, JP, SG, US	
79	WO 2011/101433	MCP-1 assay	18.02.2011	CA, CN, EP, IN, JP, SG, US	
<i>Category: Monoclonal antibodies</i>					
68	WO 2010/020669	pGlu-MCP-1 antibodies	20.08.2009	AU, CA, EP, IL, IN, JP	NZ, SG, US, ZA
70	WO 2010/009987	pGlu-Abeta antibodies	10.07.2009	AU, CA, EP, IL, IN, JP	NZ, SG, US, ZA
84	WO 2012/123562	pGlu-Abeta (11-X) antibodies	16.03.2012	AU, BR, CA, CN, EA, EP, HK, IL, IN, JP, KR, MX, NZ, SG, US, ZA	US
<i>Category: Animal models</i>					
61	WO 2008/087197	QC transgenic mouse	18.01.2008	US	EP
66	WO 2009/034158	Mice overexpressing pGlu- Abeta	12.09.2008	EP	US
67	WO 2009/090190	QC k.o. mice	14.01.2009	US	EP
74	WO 2010/133620	QPCTL k.o. mice	19.05.2010	EP, US	
83	WO 2012/028706	isoQC transgenic mice	02.09.2011	US	
89	WO 2013/024043	hAPPwt x hQC double transgenic mice	10.08.2012	EP, US	

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- (1) A Patent Cooperation Treaty (PCT) patent application preserves a right to pursue patent rights in any of the more than 140 PCT signatory states
- (2) Application number

In the view of the Company, specifically important IP rights of the Company are the patent families 28, 70, 71, 82, 84 and 122. Patent family 28 covers one of the core technologies of the Company, i.e. the medical use of inhibitors of QC for the treatment and prevention of neurodegenerative disorders, in particular AD. Desired claims of family 28 comprise preferably the term “inhibitor of glutaminyl cyclase”, regardless of its chemical or structural nature, thereby covering the application of any glutaminyl cyclase inhibitor as follows:

### ***Rest of World***

*1. Use of an inhibitor of glutaminyl cyclase for the production of a medicament for the treatment or prevention of a disease selected from AD and Down syndrome.*

*2. An inhibitor of glutaminyl cyclase for use in the treatment or prevention of a disease selected from AD and Down syndrome.*

### ***United States***

*1. A method of treating or preventing AD and Down syndrome, comprising administering to a mammalian subject in need thereof a composition comprising an inhibitor of glutaminyl cyclase, or a pharmaceutically acceptable salt thereof.*

Claims of similar scope are granted in Australia, Canada, China, Eurasia, Europe, Israel, India, Mexico, New Zealand, U.S. and South Africa. The granted Eurasian Patent covers 9 countries including Russia. The granted European Patent covers 28 countries in Europe including Germany, Great Britain and France. Patent family 28 is pending in Brazil and Japan. Here, the national phases are within the examination procedure or examination has not yet started.

A special and in the view of the Company particularly favorable situation exists in the U.S., where the Company has secured broad combination claims for the treatment of AD. Patent No. US 7,732,162 B2 has been issued with claims covering medical treatment methods for various neurodegenerative diseases (including AD, mild cognitive impairment, neurodegeneration in Down Syndrome and Familial British/ Danish Dementia), and further covering broad combination therapies, comprising of glutaminyl cyclase inhibitors with other treatments for said neurodegenerative diseases. Such combinations include combination therapies of glutaminyl cyclase inhibitors with, e.g. Abeta antibodies, beta secretase inhibitors, gamma secretase inhibitors, acetylcholinesterase (AChE) inhibitors and NMDA receptor antagonists.

Also in the field of the application of QC-inhibitors for preventing AD the Company made significant progress in securing a robust patent position.

Most recently, patent no. 8,809,010 B2 has been issued by the U.S. Patent and Trademark Office, covering a broad method of prophylactically treating AD, comprising administering a therapeutically effective amount of at least one inhibitor of QC or a pharmaceutical composition comprising a therapeutically effective amount of at least one inhibitor of QC. Claims covering the use of glutaminyl cyclase for the prevention of AD are also granted in various countries outside the U.S.. For example, European Patent No. 1 620 082 B1 and the corresponding patent CA 2,524,009 in Canada were granted in April 2014.

Further in the U.S., Patent No. US 8,338,120 B2 has been issued for claims covering broad medical treatment methods for inflammatory diseases including mild cognitive impairment comprising QC-inhibitors alone or in combination with other drugs, such as anti-inflammatory drugs and beta amyloid synthesis inhibitors.

Claims relating to the treatment of selected inflammatory diseases with any inhibitor of QC have also been granted outside the U.S., e.g. the European Patent No. EP 1 961 416 B1.

Patent families 71, 82 and 122 cover the small-molecule development candidates of the Company. All three patent families, have in the opinion of the Company, a very favorable patent life-time until 2030 (family 71), 2031 (family 82) and 2034 (family 122). Families 71 and 82 are already granted in major markets such as EP and U.S. as Patent No. US 8,486,940 B2, EP 2 545 047 B1, Patent No. US 8,269,019 B2 and Patent No. US 8,420,828 B2.

Patent families 72, 75 and 79 contain diagnostic claims in the field of AD and other neurodegenerative diseases. Among them (patent family 72) are the claims covering QC as a diagnostic marker for AD.

Patent families 70 and 84 protect the Company's monoclonal antibodies targeting the pGlu-Abeta peptides. The patent life-time of these families reaches until 2029 and 2032, respectively. Patents have already been issued in the U.S. (Patent No. US 8,058,405 B2 and Patent No. US 8,809,508 B2) and various other markets.

Patent families 61, 66, 67, 74, 83 and 89 contain the claims for the animal model suite of the Company, which was developed during the research program around QC and pGlu-Abeta. Among them are animal models used for a part of the *in vivo* testing of the QC-inhibitors of the Company (patent families 61 and 89).

#### ***Other protective measures and inventions by employees***

To protect its business secrets, know-how, technologies and processes, the Company usually requires employees, consultants, external collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of their relationship with Probiodrug. These agreements provide that all confidential information developed by or made known to the individual during the course of the individual's relationship with Probiodrug is to be kept confidential and not disclosed to third parties, subject to a right to publish certain information in scientific literature in certain circumstances and to other specific exceptions. In accordance with these agreements, the third parties are required to transfer developments, discoveries and inventions to Probiodrug and support Probiodrug with regard to the intellectual property rights proceedings. Furthermore, Probiodrug has not granted access to its own intellectual property rights in the contractual agreements with any of its research and development partners. In the case of the employees of Probiodrug AG, the agreements provide that all inventions conceived by the individual in the course of his or her employment will be the exclusive property of Probiodrug AG.

All employees, contractors and founders of the Company who were involved in the creation or development of any of the Company's product candidates or services, or any intellectual property securing the Company's business, have assigned all of their rights in such intellectual property to the Company.

#### **Manufacturing**

Probiodrug has adopted a manufacturing strategy of utilizing third party contract manufacturers who act in accordance with (current) good manufacturing practices ("cGMP") and regulatory standards required for the manufacture of drug substances and products. Additional contract manufacturers are used to fill, label, package and distribute investigational drug products.

Currently drug substances are produced by Carbogen Amcis, located in Switzerland, a Dishman Group Company and the drug product (IMP) is manufactured by Haupt Pharma, a subsidiary of the Aenova Group located in Wülfing, Germany.

#### **Real estate**

The Company does not own any real estate. The Company rents approximately 550 square meters of office space including small laboratory facilities and archives at its business seat in Halle/Saale. As tangible assets, the Company owns usual furniture and office equipment as well as leasehold improvements and software.

#### **Employees**

As of the date of this Prospectus, the Company employs 12 highly experienced employees based on long-standing relationships. The Company considers its relations with its employees to be good.

The table below summarizes the number of employees of the Company as fulltime equivalents (including members of the management board) since 2011 in average for the respective year:

	<b>2013</b>	<b>2012</b>	<b>2011</b>
Research and development	11	43	67
General and Administrative	8	9	13
<b>Total</b>	<b>19</b>	<b>52</b>	<b>80</b>

The Company's employees decreased between 2011 and 2013 due to the transformation from a research to a development company plus a partial substitution of certain employment relationships by advisor relationships.

In addition to the employees, the Company relies on approximately 10 highly experienced and specialized advisors and consultants involved on a regular basis plus approximately the same number who are involved on a case by case basis.

The Company intends to retain its key advisors on the basis of a long term relationship and to develop its network of consultants and advisors according to the need and development stage of its programs.

### **Environmental matters**

There are no environmental issues that may affect the utilization of Probiodrug's fixed assets.

### **Insurance**

The Company maintains insurance policies, which the Company believes provide coverage customary for a business of the kind the Company is pursuing.

These insurances include, among others, business liability insurance, a business interruption insurance and several insurances for the benefit of test persons taking part in clinical studies and in other studies.

The Company also maintains a directors and officers ("D&O") insurance for the members of its governing bodies. The D&O insurance has a total coverage of up to EUR 5 million annually and per claim and provides for a deductible for all members of the management board in line with the provisions of the German Stock Corporation Act (*Aktiengesetz*).

Although the Company believes that the scope of its insurance coverage is consistent with levels that are customary in the industry, Probiodrug cannot guarantee that it will not incur losses or suffer claims beyond the limits of, or outside the relevant coverage of, the current insurance policies.

### **Material agreements**

#### ***Manufacturing***

The Company presently relies on, and plans to continue to rely on, contract manufacturers to manufacture its development candidates for use in the conduct of its preclinical and clinical studies and ultimately for commercial supply, if its product candidates are approved and if the product rights are still with the Company at this point in time.

The Company has contracted Carbogen Amcis, Bubendorf, Switzerland, for the manufacturing of PQ912. The relationship is on a non-exclusive basis. The transfer to another contract manufacturer is feasible, but, if and insofar as initiated, may result in time delays regarding the supply of PQ912. The relationship between Probiodrug and Carbogen Amcis is regulated by a Master Service Agreement amended by certain addendums and individual (sub) orders.

The Company has made no decisions yet regarding the contract manufacturer for PQ1565 or PBD-C06 and the cell line for PBD-C06 to be used for production purposes.

#### ***License and Delimitation Agreement***

The Company entered into a License and Delimitation Agreement with Fraunhofer Society, Munich, Germany, in December 2013. Said agreement regulates the relationship between the Company and Fraunhofer Society in the fields the Company is active in. Fraunhofer Society has set up a Department of Drug Design and Target Validation (MWT), Halle, Germany, headed by the Company's former executive and cofounder Prof. Dr. Hans Ulrich Demuth and employing former employees and present consultants of the Company. Fraunhofer Society and the Company agreed on terms which protect the Company's commercial interest in the field of QC and related enzymes, anti-pGlu-Abeta antibodies and AD and related neurodegenerative disorders. At the same time the Company granted Fraunhofer Society a license to noncore assets outside the fields the Company is currently active in.

#### ***General client agreement with patent lawyers***

The Company entered into a general client agreement with the patent law firm Maikowski & Ninnemann, Berlin, Germany, regarding the maintenance and prosecution of the whole IP portfolio of the Company in June 2012. The relationship is an exclusive one. The patent attorney responsible at Maikowski & Ninnemann is a former employee of the Company and the Company, Maikowski & Ninnemann and the said patent attorney agreed in 2012 that he would join Maikowski & Ninnemann to maintain and prosecute the whole IP portfolio of the Company on the basis of the general client agreement.

### ***Letter of Agreement with Julius Clinical***

The Company signed a letter of agreement with Julius Clinical, Zeist, the Netherlands, regarding the planning and execution of the Phase 2a study of PQ912, also called PBD-01071 or the “Saphir Study”. Said letter of agreement shall form the basis for drafting and finalizing the ultimate service agreement regarding the Saphir Study.

### ***Consultancy Agreement with Neuro Consult BV***

The Company entered into a consultancy agreement with Neuro Consult NV, Amstelveen, Netherlands, regulating the involvement of Prof. Philipp Scheltens in consulting the Company in the field of AD in general and the preparation of the Saphir Study in particular.

### ***Sale of CDK 9 program***

In 2013, the research program CDK 9 was sold to Astra Zeneca for a purchase price of USD 1.0 million.

### **Litigation**

With the exception of the proceeding described below, over the previous twelve months Probiodrug has not been involved in any governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which Probiodrug is aware) which may have, or have had significant effects on the Company’s and /or Probiodrug’s financial position or profitability.

In 2004, Probiodrug sold its diabetes program (DP4 inhibitors) including all related IP rights generating a taxable profit in that year. Following a tax audit in 2008, the tax authorities retroactively increased the taxable profits for 2004 by approximately EUR 10 million, resulting in a tax claim for corporate income tax, solidarity surcharge and trade tax of EUR 1.64 million plus interest of 0.5% per month since 1 April 2006. The potential tax liability amounts to a total of EUR 2.5 million as of 30 June 2014 (including accrued interest). The Company believes that the better arguments speak against the tax authorities’ view and has contested the claims of the tax authorities. The matter is now pending with the competent tax court. As a matter of precaution, the Company has recognized in its financial statements a tax reserve corresponding to the amount in dispute (including accrued interest). Nevertheless, should the Company be eventually required to make such tax payments, this would have a corresponding material adverse effect on the Company’s and /or Probiodrug’s liquidity and cash flow position and may negatively affect their business, prospects and financial conditions.

## LEGAL ENVIRONMENT

### Legal framework

#### *Overview*

In each country where it conducts its research and intends to market its products and /or product candidates, Probiodrug has to comply with regulatory laws and regulations (hereinafter collectively the “**Regulatory Regulations**”), including regulations laid down by regulatory agencies and by other national or supra-national regulatory authorities (hereinafter, collectively the “**Competent Authorities**”), as well as industry standards incorporated by such Regulatory Regulations, that regulate nearly all aspects of Probiodrug’s activities. The Competent Authorities notably include the European Medicines Agency (“**EMA**”) in the EU and the Food and Drug Administration (“**FDA**”) in the U.S.

In the various jurisdictions, Probiodrug’s activities are potentially also subject to certain regulations by federal, state, and local authorities, such as in the United States the Centers for Medicare and Medicaid Services, divisions of the U.S. Department of Health and Human Services other than the FDA, the U.S. Department of Justice or individual U.S. Attorney offices within the Department of Justice.

Probiodrug’s product candidates are subject to substantial requirements that govern their testing, manufacturing, quality control, safety, efficacy, labeling, storage, record keeping, marketing approval, advertising, promotion and pricing. The process of maintaining continued compliance with the regulatory regulations requires the expenditure of substantial amounts of time and money.

#### *Preclinical and clinical development plans*

Competent Authorities are aware of the specificities of small molecule and biological product candidates, and give much attention to their upfront characterization, including the development of assays to measure their biological activity. After the completion of the preclinical research stage, the formal preclinical and clinical development paths are broadly similar in the EU and in the U.S. Initially, preclinical studies are conducted to evaluate the mode of action (pharmacology) and safety (toxicology) either *in vitro* or *in vivo*. Upon successful completion of non-clinical studies, a request for a Clinical Trial Authorization in the EU or an Investigational New Drug (“**IND**”) application in the U.S. must be approved by the relevant Competent Authorities for studies to be allowed to start. Clinical studies are typically conducted sequentially from Phase 1 (lasting typically 1 year), Phase 2 (lasting typically 2 to 3 years) and Phase 3 (lasting typically 2 to 5 years) to Phase 4 studies conducted after marketing approval. Under certain circumstances, these phases may be compressed, overlap or even omitted.

Competent Authorities typically have between one and six months from the date of receipt of the Clinical Trial Authorization or IND application to raise any objections to the proposed study and they often have the right to extend this review period at their discretion. Competent Authorities may also require additional data before allowing studies to commence and could demand that studies be discontinued at any time, for example if there are significant safety issues. In addition to obtaining Competent Authority approval, clinical studies must receive Ethics Committee (in the EU) or Institutional Review Board (“**IRB**”) (in U.S.) approval in every hospital where the clinical studies are conducted.

#### *Phase 1 clinical studies*

After a Clinical Trial Authorization in Europe or an Investigational New Drug (IND) application in the U.S. becomes effective, Phase 1 clinical studies on humans may start.

Phase 1 clinical studies are initially conducted in a limited population to evaluate a drug candidate’s safety profile and the range of doses that can be administered, including the maximum tolerated dose that can be given to patients. Phase 1 studies of small molecules and antibodies also determine how the drug candidate is distributed and cleared from the body (pharmacokinetics). In the case of products for AD, the initial human testing is often conducted in healthy volunteers. These studies may provide preliminary evidence of efficacy. Probiodrug completed a clinical Phase 1 study for PQ912 in compliance with internationally recognized standards of Good Manufacturing Practices (“**GMP**”) and Good Clinical Practices (“**GCP**”) as well as related implementing measures and applicable guidelines.

#### *Phase 2 clinical studies*

As in Phase 1 studies, relevant Ethics Committee or IRB and Competent Authority approvals are required before initiating Phase 2 clinical studies. These studies are conducted in a limited patient population to evaluate the efficacy of a drug candidate in specific indications, determine its optimal dosage and further describe the safety profile. The initial Phase 2 studies of a development program, which is sometimes referred to as Phase 2a, may be conducted in few patients to demonstrate preliminary safety and initial signs of efficacy. Additional Phase 2 studies, which may be referred to as

Phase 2b, may be conducted in a larger number of patients to confirm the safety and efficacy data generated in the Phase 2a studies and to refine optimal dosing. In some instances, a Phase 2 study may be declared acceptable by Competent Authorities to obtain the marketing approval for the drug. Probiodrug aims at starting a Phase 2a study for its product candidate PQ912 in the fourth quarter 2014.

### *Phase 3 clinical studies*

As in Phase 1 and Phase 2 studies, relevant Ethics Committee or IRB and Competent Authority approvals are required before initiating Phase 3 clinical studies. These studies, which are sometimes referred to as registration or pivotal studies, are usually undertaken once Phase 2 clinical studies suggest that the drug candidate is effective and has an acceptable safety profile and an effective dosage has been identified. The goal of Phase 3 studies is to demonstrate evidence of clinical benefit, usually expressed as a positive benefit-risk assessment, of the investigational new drug in a patient population with a given disease and stage of illness.

In Phase 3 clinical studies, the drug is usually tested in randomized studies comparing the investigational new drug to an approved form of therapy in an expanded and well-defined patient population, usually recruited from a large number of hospitals and medical practices. When no alternative is available, investigational drugs may be tested against a placebo. Stringent criteria of statistical significance apply to Phase 3 studies.

### *Marketing approval*

Although different terminology is used, the data requirements, overall compliance to GMP, GCP and other regulatory requirements and the assessment and decision making process for marketing approval are similar in the EU and in the U.S. Upon availability of initial efficacy data from Phase 2 clinical studies and confirmatory Phase 3 clinical study data, Probiodrug may submit a request for marketing approval to the Competent Authorities (a Marketing Authorization Application (“**MAA**”) to EMA in the EU or a New Drug Application (“**NDA**”) and Biologics License Application (“**BLA**”) to the FDA in the U.S.). The FDA and /or EMA may grant an approval, deny the approval or request additional studies or data. If the marketing approval is granted, the approved products may be commercially launched in the relevant territory. There can be no guarantee that such approval will be obtained or maintained. In practice, effective market launch is often further conditioned upon completion of pricing and reimbursement negotiations with Competent Authorities involved in healthcare and pharmaceutical expenditure at the national or regional level.

When granting a marketing approval, Competent Authorities may impose an obligation to conduct additional clinical testing, sometimes referred to as Phase 4 clinical studies, or other post-approval commitments to monitor the product after commercialization. Additionally, marketing authorization may be subjected to limitations on the indicated uses for the product. Also, after a marketing approval has been granted, the marketed product and its manufacturer will continue to be subject to Regulatory Regulations and ongoing monitoring by Competent Authorities. The conditions for marketing approvals include requirements that the manufacturer of the product complies with applicable Regulatory Regulations including GMP, related implementing measures and applicable guidelines that involve, amongst others, ongoing inspections of manufacturing and storage facilities.

### *Pricing and reimbursement*

In Europe, pricing and reimbursement for pharmaceutical products are not harmonized and fall within the exclusive competence of the respective national authorities, provided that basic transparency requirements defined at the European level are met as set forth in the EU Transparency Directive 89/105/EEC, which is currently under revision. As a consequence, reimbursement mechanisms by private and public health insurers vary from country to country. In public health insurance systems, reimbursement is determined by guidelines established by the legislature or a competent national authority. In general, inclusion of a product in reimbursement schemes is dependent upon proof of the product efficacy, medical need, and economic benefits of the product to patients and the healthcare system in general. Acceptance for reimbursement comes with cost, use and often volume restrictions, which again vary from country to country.

In many countries sales of any products for which Probiodrug receives regulatory approval for the commercial sale will depend in part on the availability of coverage and adequate reimbursement from third party payers. Third party payers include government payer programs at the federal and state levels, such as Medicare and Medicaid in the U.S., managed care providers, private health insurers and other organizations. The process for determining whether a third party payer will provide coverage for a drug product may be separate from the process for setting the price or reimbursement rate that the third party payer will pay for the drug product. Third party payers may limit coverage to specific drug products on an approved list or formulary, which might not include all of the approved drug products for a particular indication. Third party payers are increasingly challenging the price and examine the medical necessity and cost-effectiveness of medical products and services in addition to their safety and efficacy. Probiodrug may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of its product candidates, in addition to the costs required to obtain the approvals for the marketing of its products from the Competent Authorities. Its

product candidates may not be considered medically necessary or cost-effective by third party payers. The decision of third party payers to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Adequate third party payer's reimbursement may not be available to enable Probiodrug to maintain price levels sufficient to realize an appropriate return on the investments made in the development of the product.

EU member states may approve a specific price for a drug product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the drug product on the market. Alternatively, EU member states may allow companies to fix their own prices for drug products, but monitor such controlled companies' profits.

The price and reimbursement level for Probiodrug's possible future products will depend on the strength of the clinical data set and, as for most novel therapies, restrictions may apply. In most countries, national Competent Authorities ensure that the prices of registered medicinal products sold in their territory are not excessive. In making this judgment, they usually compare the proposed national price either with prices of existing treatments and /or prices in other countries also taking into account the type of treatment (preventive, curative or symptomatic), the degree of innovation, the therapeutic breakthrough, volume of sales, sales forecast, size of the target population and /or the improvement (including cost savings) over comparable treatments. Given the growing burden of medical treatments on national health budgets, reimbursement and insurance coverage is an important determinant of the accessibility of medicines. The various public and private plans, formulary restrictions, reimbursement policies, patient advocacy groups and cost-sharing requirements may play a role in determining access to products marketed by Probiodrug. The respective national Competent Authorities may also use a range of policies and other initiatives intended to influence pharmaceutical consumption. To address the above, Probiodrug integrates as part of its clinical development programs the collection of data aimed at facilitating the evaluation of the therapeutic benefit in terms of efficacy and /or reduction in side effect profile and of its cost. Concomitantly with marketing approval applications, Probiodrug intends to engage in a dialogue with key decision makers of different third party payers in order to identify unique preferences and concerns of such third party payers and to obtain insight into the perceived value drivers, reimbursement barriers and price elasticity for its products.

#### **Legal framework — Germany**

In Germany, the business activities of Probiodrug are regulated by various national acts and regulations as well as European directives. The Company's product candidates are subject to substantial requirements that govern their testing, manufacturing, quality control, safety, efficacy, labeling, storage, record keeping, marketing approval, advertising, promotion and pricing. Maintaining continued compliance with the regulatory requirements requires substantial amounts of time and money.

The regulatory provisions stipulated by the aforementioned frameworks include aspects of commercial, environmental, gene technology, copyright and medicine law.

The most important national acts of legislation include

- the German Medicines Act (*Arzneimittelgesetz – AMG*),
- the German Medical Products Act (*Medizinproduktegesetz – MPG*),
- the German Chemicals Act (*Chemikaliengesetz – ChemG*),
- the German Product Liability Act (*Produkthaftungsgesetz – ProdHaftG*),
- the German Gene Technology Act (*Gentechnikgesetz – GenTG*) and
- the German Gene Technology Safety Regulation (*Gentechnik-Sicherheitsverordnung – GenTS*).

The most relevant European acts of regulation include the following directives and regulations

- Clinical Trials Directive 2001/20/EC (as amended),
- Council Directive 98/81/EC of 26 October 1998 amending Directive 90/219/EEC on the contained use of genetically modified micro-organisms,
- Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms (as amended),

- Regulation (EC) 726/2004 on Community procedures for the authorization and supervision of medicinal products for human and veterinary use and establishing a European Medicines Agency and
- Council Directive 89/105/EEC (as amended) (Transparency Directive) defining the common procedural framework to ensure that national pricing and reimbursement decisions are made in a transparent manner and do not disrupt the operation of the internal market

The following sections describe the legal framework relevant for the business activities of Probiodrug.

### ***Medical Law***

As Probiodrug develops product candidates that are at later stages intended to be used by the pharmaceutical industry, some areas of medical law may be relevant for its business activities. Against this background, the German Medicines Act (*Arzneimittelgesetz – AMG*) may become relevant. With respect to medicinal products the AMG covers, for example, manufacture, marketing approval, registration and sale. The AMG also regulates the import and export of products and the competence of the authorities.

By means of the German Medical Products Act (*Medizinproduktegesetz – MPG*) the German legislature implemented the European directives 90/385/EEC, 93/42/EEC and 98/79/EC, respectively. The MPG provides for technical, medical and informational requirements for the putting into circulation of medical products, .e.g. medical instruments or software used for the diagnosis and treatment of diseases.

### ***Chemical Law***

With regard to the development of its product candidates Probiodrug is affected by the provisions stipulated by the German Chemicals Act (*Chemikaliengesetz – ChemG*). This act aims to protect human beings and the environment against harmful effects of dangerous substances, i.e. chemical elements and mixtures, by preventing their existence and making them recognizable. It provides for obligations regarding, for example, the classification, labeling and packaging of the aforementioned substances and mixtures that may need to be complied with by Probiodrug. The ChemG also establishes principles of good laboratory practice (*Grundsätze der Guten Laborpraxis (GLP)*) that may apply to Probiodrug.

### ***Liability Law***

With respect to potential legal liabilities of Probiodrug the German Product Liability Act (*Produkthaftungsgesetz – ProdHaftG*) plays a significant role. The act stipulates that if, as a result of a defect of a product, a human being is killed, injured or affected in his health, or a thing is damaged, the producer may be obliged to compensate the person for the damages incurred. The obligation to pay damages is excluded if the producer has not put the product into circulation, i.e. if the product has been stolen, embezzled or lost. Accordingly, if the before mentioned criteria are fulfilled with regard to any future products produced by Probiodrug AG, Probiodrug AG may be subject to liability claims based on the ProdHaftG.

### ***Gene Technology Law***

#### *Gene Technology and its relevance for the business activities of Probiodrug*

Biotechnology refers to, for example, the use of micro-organisms to generate new products or processes. It includes using bacteria or enzymes to develop or improve medical treatments. Gene technology – sometimes called ‘genetic engineering’ or ‘genetic modification’ – refers to certain aspects of biotechnology in which the genetic material of living things is modified to enhance or remove a particular feature and allow an organism to perform new functions. The term “biotechnology” comprises the use and implementation of findings in the fields of biochemistry and biology in such a way that these findings may be used technically. Modern biotechnology is primarily based on methods used in the fields of gene technology and molecular biology. Accordingly, there are certain aspects in which these terms have the same meaning and may thus apply also to Probiodrug.

#### *National Acts of Regulation*

The German Gene Technology Act (*Gentechnikgesetz – GenTG*) provides for the avoidance of risks arising in connection with this technology, thereby protecting the consumers. The act covers (a) release and putting into circulation of genetically modified products, (b) the administrative approval procedure, including the competence of authorities, (c) liabilities and (d) obligations to give information to parties having suffered damages. The GenTG, however, excludes questions regarding the development of genetically modified organisms for human use which are primarily dealt with by

the German Stem Cell Act (*Stammzellengesetz – StZG*) and the German Embryo Protection Act (*Embryonenschutzgesetz – EschG*), neither of which are relevant for the business activities of Probiodrug.

Various regulations supplement the provisions of the German GenTG thereby affecting the business activities of Probiodrug. Among those regulations is the German Gene Technology Safety Regulation (*Gentechnik-Sicherheitsverordnung – GenTSV*). GenTSV covers, for example, various safety measures as well as obligations to provide information to employees. These provisions may need to be complied with by Probiodrug depending on the context at hand.

#### *European Acts of Regulation*

On the European level the aforementioned Council Directive 98/81/EC regulates the use of genetically modified micro-organisms in contained systems as well as measures for the protection of human health. The Directive 2001/18/EC (as amended) covers the procedure of the deliberate release into the environment of genetically modified organisms and the putting into circulation of genetically modified products. The directive enhanced the efficiency of the approval procedure and established new methods of supervision.

Both of these directives are relevant for the business activities of Probiodrug. Future amendments may increase their significance as the national legislator would have to amend the national legislation, e.g. the GenTG, accordingly.

#### **Legal Framework - International Conference on Harmonization (ICH)**

The International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use (“**ICH**”), is a project that brings together the regulatory authorities of Europe, Japan and the United States and experts from the pharmaceutical industry in the three regions to discuss scientific and technical aspects of pharmaceutical product registration. The purpose of ICH is to reduce or obviate the need to duplicate the testing carried out during the research and development of new medicines by recommending ways to achieve greater harmonization in the interpretation and application of technical guidelines and requirements for product registration. Harmonization would lead to a more economical use of human, animal and material residues, and the elimination of unnecessary delay in the global development and availability of new medicines while maintaining safeguards on quality, safety, and efficacy, and regulatory obligations to protect public health.

ICH guidelines have been adopted as law in several countries, but are only used as guidance for example by the FDA. Nevertheless, in many areas of drug regulation ICH has resulted in comparable requirements, for instance with respect to the Common Technical Document (“**CTD**”), which has become the core document for filings for market authorization in several jurisdictions. Thus, ICH has facilitated a more efficient path to markets.

## SHAREHOLDER STRUCTURE

The following table shows the percentage of total share capital held by the principal existing shareholders, i.e. shareholders who hold more than 3% of the Company's share capital, before and after the completion of the Offering (under certain assumptions). This information on the percentage of total share capital held, in particular regarding aggregate shareholdings, is based on information provided by the respective shareholder to the Company.

Shareholder	Immediately prior to the Offering	Upon completion of the Offering (assuming placement of all New Shares and no exercise of Greenshoe Option)	Adjustment assuming shareholders purchasing Offer Shares in the Offering in the aggregated amount of EUR 15 million <sup>(1)</sup>	Upon completion of the Offering (assuming placement of all New Shares, all Additional New Shares and full exercise of Greenshoe Option) <sup>(2)</sup>	Adjustment assuming shareholders purchasing Offer Shares in the Offering in the aggregated amount of EUR 15 million <sup>(1)</sup>
<b>Shareholdings of Probiodrug AG (in %)</b>					
IBG Beteiligungsgesellschaft Sachsen-Anhalt mbH, Germany <sup>(3)</sup>	0.63	0.49	0.49	0.46	0.46
IBG Risikokapitalfonds I GmbH & Co. KG, Germany <sup>(3)</sup>	9.51	7.42	7.42	6.93	6.93
IBG Innovationsfonds GmbH & Co. KG, Germany <sup>(3)</sup>	0.26	0.20	0.20	0.19	0.19
IBG Risikokapitalfonds II GmbH & Co. KG, Germany <sup>(3)</sup>	7.71	6.02	6.71	5.62	6.27
Bio Discovery III F.C.P.R., Paris, France (managed by an entity belonging to the Rothschild-Group)	15.67	12.23	13.97	11.42	13.04
Biotech Growth N.V., Curacao, Netherlands Antilles	15.06	11.75	15.23	10.98	14.22
TVM V Life Science Ventures GmbH & Co. KG, Germany	9.53	7.43	8.22	6.94	7.67
HBM Healthcare Investments (Cayman) Ltd., Cayman Islands	9.44	7.37	10.84	6.88	10.13
Coöperatief LSP IV U.A., 1071 DV Amsterdam, The Netherlands	8.45	6.59	8.33	6.16	7.78
Biogen Idec MA Inc., Cambridge, Massachusetts, USA	4.04	3.15	4.04	2.94	2.94
CFH Beteiligungsgesellschaft mbH, Germany	3.72	2.90	2.90	2.71	2.71
North River Partners, L.P., USA <sup>(4)</sup>	0.73	0.57	0.57	0.53	0.53
North River Investors (Bermuda) L.P., Bermuda <sup>(4)</sup>	0.49	0.38	0.38	0.36	0.36
Salthill Partners, L.P., USA <sup>(4)</sup>	0.62	0.49	0.49	0.45	0.45
Salthill Investors (Bermuda) L.P., Bermuda <sup>(4)</sup>	0.51	0.40	0.40	0.37	0.37
Hawkes Bay Master Investors LP, Cayman Islands <sup>(4)</sup>	1.70	1.33	1.33	1.24	1.24
Other Investors <sup>(5)</sup>	11.93	31,28	18.48	35.82	24.71

<sup>(1)</sup> Certain existing shareholders of the Company have committed to purchase Offer Shares in an aggregated amount of approximately EUR 15 million in the course of the Offering whereby the final number of Offer Shares to be allocated to such existing shareholders will be finally determined by the Company and Kempen & Co at their full discretion. On the assumption that the final Offer Price will be at the mid-point of the Price Range, the existing shareholders may purchase a maximum number of 881,752 Offer Shares on the basis of their commitments subject to full allocation. Therefore, the Offer Shares could be allocated to existing shareholders according to their commitments as follows:

<u>Shareholder</u>	<u>Committed Amount (in TEUR)</u>	<u>Number of Offer Shares</u>
IBG Risikokapitalfonds II GmbH & Co. KG, Germany	800	46,715
Bio Discovery III F.C.P.R., Paris, France (managed by an entity belonging to the Rothschild-Group)	2,000	116,788
Biotech Growth N.V., Curacao, Netherlands Antilles (investment vehicle of BB Biotech)	4,000	233,577
TVM V Life Science Ventures GmbH & Co. KG, Germany	900	52,555
HBM Healthcare Investments (Cayman) Ltd., Cayman Islands	4,000	233,577
Coöperatief LSP IV U.A., 1071 DV Amsterdam, The Netherlands	2,000	116,788
Biogen Idec MA Inc., Cambridge, Massachusetts, USA <sup>(x)</sup>	1,200	70,072
Sycamore GmbH, Germany	75	4,380
Dr. Liebers, Germany	25	1,460
Dr. Glund, Germany	25	1,460
Dr. Lues, Germany	25	1,460
Prof. Frank, Germany	25	1,460
PlatzerInvest AG, Switzerland	25	1,460
<b>Total</b>	<b>15,100</b>	<b>881,752</b>

<sup>(x)</sup> Biogen Idec MA Inc. has agreed to purchase such number of Offer Shares reflecting 4% of the aggregate amount of the New Shares and the Additional New Shares (without consideration of any Greenshoe Shares); therefore, there is no fixed amount committed and the figure above has been calculated on the assumption that both the New Shares and the Additional New Shares will be placed and rounded.

- <sup>(2)</sup> Certain Shareholders have granted a share loan to Kempen & Co in its capacity as stabilization manager also on behalf of Petercam to cover any possible over-allotments. If and to the extent that Kempen & Co exercises the Greenshoe Option, the Company has agreed to issue to Kempen & Co such number of Greenshoe Shares from a capital increase out of the authorized capital against cash contribution (Greenshoe Capital Increase) in the amount of the Offer Price per share less fees and commissions. Therefore, the number of shares held by the Lending Shareholders will not be affected by the issue of the Greenshoe Shares. However, the issue of the Greenshoe Shares would lead to a proportionate dilution of the existing and the new shareholders (see “*DILUTION*”).
- <sup>(3)</sup> Entities with aggregated shareholdings of 18.11% of the Company’s share capital managed by IBG Beteiligungsgesellschaft Sachsen-Anhalt mbH.
- <sup>(4)</sup> Entities with aggregated shareholdings of 4.05% of the Company’s share capital are advised by Wellington Management Company, LLP, an investment adviser registered under the U.S. Investment Advisers Act of 1940, as amended.
- <sup>(5)</sup> Shareholders each holding less than 3% of the share capital of the Company. For shareholdings of the members of the management board and of the supervisory board see “*GOVERNING BODIES – MANAGEMENT BOARD – SHAREHOLDING OF THE MANAGEMENT BOARD MEMBERS*” and “*GOVERNING BODES – SUPERVISORY BOARD – SHAREHOLDINGS OF THE SUPERVISORY BOARD MEMBERS*”.

## GENERAL INFORMATION ON THE COMPANY

### Formation, Company, name, registered office, financial year and duration of the Company

The Company was founded for an indefinite period of time by a memorandum of association dated 1 August 1997 in the legal form of a limited partnership with a limited liability company as general partner under German law (*Gesellschaft mit beschränkter Haftung & Companies Kommanditgesellschaft, GmbH & Co. KG*) with the name ProBioTec Gesellschaft für Arzneimittelforschung mbH & Co. KG. In December 1997, the general partner ProBioTec Gesellschaft für Arzneimittelforschung und Verwaltung GmbH, a limited liability company under German law (*Gesellschaft mit beschränkter Haftung, GmbH*), having its registered seat in Halle /Saale, acquired and continued the Company's business operations while ProBioTec Gesellschaft für Arzneimittelforschung mbH & Co. KG was dissolved. In July 1998, the legal name of the Company was changed to Probiodrug Gesellschaft für Arzneimittelforschung mbH. In 2001, the Company's legal form was changed from a limited liability company into a stock corporation under German law (*Aktiengesellschaft*).

The Company is registered with the name Probiodrug AG with the commercial register of the local court (*Amtsgericht*) of Stendal under the registration number HRB 213719. Its commercial name is Probiodrug. The Company's registered office and business address is Weinbergweg 22, 06120 Halle /Saale, Germany, Tel.: +49 (0) 345 5559900.

The Company's financial year is the calendar year. As a German stock corporation (*Aktiengesellschaft*), the Company is subject to the German Stock Corporation Act (*Aktiengesetz*) and other German laws.

### Corporate purpose of the Company

Pursuant to Article 2 of its articles of association (the "**Articles of Association**") (*Satzung*), the Company's corporate purpose is the research and development, the preclinical and clinical testing as well as the admission and the marketing of drugs. Furthermore, the Company is authorized to take all actions and measures which are directly or indirectly useful in promoting the corporate purpose. The Company may establish, acquire or take participating interests in other companies whose purposes are comparable or of similar nature, conduct their management and may unite such companies in part or as a whole under uniform management. Further, the Company may spin off or transfer its operations to affiliated enterprises in which the Company holds a direct or indirect ownership interest in full or in part. The Company may establish branches both in Germany and abroad. The Company may restrict itself to the administration of its affiliated enterprises.

### Subsidiaries

In 2007, the Company acquired Ingenium Pharmaceuticals AG, Munich ("**Ingenium**"), that was shortly afterwards converted into a limited liability company under German law (*Gesellschaft mit beschränkter Haftung, GmbH*). In 2008, a part of the business of Ingenium was sold, and in 2013 the remaining business of Ingenium, the research program CDK 9, was sold. In 2014, all shares of Ingenium were sold and transferred to SHS Vermögensverwaltungsgesellschaft mbH, Munich, without consideration and without obligations remaining with the Company.

In 2013, the Company founded Probiodrug Inc., a corporation under the laws of Delaware, USA, which is fully owned by the Company but not yet operational.

As of the date of this Prospectus, the Company does not have any other subsidiaries.

## TRANSACTIONS AND LEGAL RELATIONSHIPS WITH RELATED PARTIES

The following individuals and entities were considered related parties of Probiodrug AG:

- Shareholders of Probiodrug AG with a controlling or significant influence on Probiodrug AG
- The key management personnel of the Company or a parent of the Company
- Enterprises which can be controlled by aforementioned individuals

Other than compensation paid to members of the management board or of the supervisory board, including pension commitments and granted stock options and/or phantom stocks (see “*GOVERNING BODIES – MANAGEMENT BOARD – COMPENSATION OF THE MANAGEMENT BOARD MEMBERS*” and “*GOVERNING BODIES – SUPERVISORY BOARD – COMPENSATION OF THE SUPERVISORY BOARD MEMBERS*”), there were no transactions or business activities with related parties as of the date of this Prospectus.

## DESCRIPTION OF THE SHARE CAPITAL OF THE COMPANY AND APPLICABLE REGULATIONS

### Share capital and shares

The Company's share capital currently amounts to EUR 5,241,693.00 and is divided into 5,241,693 ordinary bearer shares with no par value each with a notional par value of EUR 1.00 per share. The share capital has been fully contributed.

Following the registration of the completion of the Capital Increase resolved by the extraordinary shareholders' meeting on 9 October 2014 with the commercial register, the Company's share capital will increase by up to EUR 1,696,720.00 to up to 6,938,413.00 and will be divided into up to 6,938,413 ordinary bearer shares with no par value each with a notional par value of EUR 1.00 per share.

Following the registration of the completion of the Greenshoe Capital Increase, if any, from authorized capital to be resolved by the management board with the consent of the supervisory board in the commercial register, the Company's share capital will further increase by up to EUR 254,508.00 to up to 7,192,921.00 and will be divided into up to 7,192,921 ordinary bearer shares with no par value each with a notional par value of EUR 1.00 per share.

Concerning the content of shareholders' rights and the form and certification of the shares, see "THE OFFERING OF THE OFFER SHARES – GENERAL AND SPECIFIC INFORMATION ON THE SHARES OF THE COMPANY" and "GOVERNING BODIES – SHAREHOLDERS' MEETING".

### Development of the Company's share capital

Since the change of the legal form of the Company from a limited liability company under German law (*Gesellschaft mit beschränkter Haftung*) to a stock corporation under German law (*Aktiengesellschaft*), a series of corporate actions has been implemented as a result of which the Company's share capital totaled EUR 15,718,325.00 at the beginning of fiscal year 2011. It was divided into 15,718,325 shares with no par value with a notional value of EUR 1.00 each.

The table below provides an overview of the history of the Company's share capital since 2011. The overview should be read together with the notes set out below the table.

<u>Date of registration with the commercial register</u>	<u>Transaction</u>	<u>Number and class of shares issued</u>	<u>Capital increase (EUR)</u>	<u>Share capital after transaction (EUR)</u>	<u>Aggregate number of shares after transaction</u>
24 February 2011	Capital Increase from authorized capital	4,897,768 preference shares	4,897,768.00	20,616,093.00	20,616,093
11 November 2011	Capital Increase	2,078,069 preference shares	2,078,069.00	22,694,162.00	22,694,162
27 January 2012	Capital Increase	557,385 preference shares	557,385.00	23,251,547.00	23,251,547
22 August 2012	Capital Increase from authorized capital	2,277,382 preference shares	2,277,382.00	25,528,929.00	25,528,929
28 August 2014	Conversion of the convertible bonds /Capital increase from contingent capital	5,921,229 preference shares		31,450,158.00	31,450,158
5 September 2014	Transformation of preference shares into ordinary bearer shares	- ordinary bearer shares		31,450,158.00	31,450,158

	shares				
17 September 2014	Capital decrease and reverse share split in the ratio of 6:1	- 26,208,465	- 26,208,465.00	5,241,693.00	5,241,693

The capital decrease resolved by the shareholders in the extraordinary shareholders' meeting on 8 September 2014 and registered with the commercial register on 17 September 2014 was done by way of a simplified capital reduction pursuant to Sections 229 et seq. of the German Stock Corporation Act (*Aktiengesetz*) with the intention to cover incurred losses. The existing no par ordinary bearer shares were consolidated in the proportion 6:1. As a consequence, the share capital was decreased by EUR 26,208,465.00 from EUR 31,450,158.00 to EUR 5,241,693.00. The number of ordinary bearer shares with no par value was reduced by 26,208,465 from 31,450,158 to 5,241,693.

On 9 October 2014, the extraordinary shareholders' meeting resolved on the capital increase required for the purpose of the Offering (the "**Capital Increase**"). See also the section "*THE OFFERING OF THE OFFER SHARES*". For the recent developments of the share capital see also "*RECENT DEVELOPMENTS AND OUTLOOK – SIGNIFICANT CHANGES IN CORPORATE STRUCTURE SINCE 30 JUNE 2014*".

### Authorized capital

As of the date of this Prospectus, the Articles of Association (*Satzung*) do not provide for an authorized capital.

The extraordinary shareholders' meeting on 9 October 2014 has resolved on the creation of authorized capital of up to EUR 2,620,846.00 ("**Authorized Capital**"). Under the Authorized Capital, when registered in the commercial register, the management board will be authorized, subject to the consent of the supervisory board, to increase the Company's share capital by issuing a total of 2,620,846 ordinary bearer shares with no par value each with a notional par value of EUR 1.00 per share by one or more issuances against cash contribution or contributions in kind on or before the 30 September 2019. The management board will be authorized, with the consent of the supervisory board, to exclude pre-emptive rights of shareholders. In particular, the management board of the Company, with the consent of the supervisory board, will be authorized to exclude the shareholders' pre-emptive rights, in order to effect the Greenshoe Capital Increase.

Furthermore, following the determination of the Offer Price and the number of Offer Shares sold, and thereby of the amount of the Capital Increase, it is expected that the Authorized Capital will be increased, by way of a resolution of an extraordinary shareholders' meeting, to an amount corresponding to 50% of the share capital of the Company following the registration of the completion of the Capital Increase.

### Contingent capital

According to Article 5 (4) of the Company's Articles of Association the registered share capital of the Company is increased conditionally by up to EUR 11,300.00 by issuing up to 11,300 new ordinary bearer shares with no par value with a notional value of EUR 1.00 ("**Contingent Capital 2008/I**"). Furthermore, according to Article 5 (5) of the Company's Articles of Association the registered share capital of the Company is increased conditionally by up to EUR 16,950.00 by issuing up to 16,950 new ordinary bearer shares with no par value with a notional value of EUR 1.00 ("**Contingent Capital 2008/II**"). The Contingent Capital 2008/I and the Contingent Capital 2008/II serve to redeem stock options issued in relation to the Stock Option Program 2007.

Moreover, according to Article 5 (6) of the Company's Articles of Association the registered share capital of the Company is increased conditionally by up to EUR 85,901.00 by issuing up to 85,901 new ordinary bearer shares with no par value with a notional value of EUR 1.00 ("**Contingent Capital 2010/I**"). The Contingent Capital 2010/I increase serves to redeem stock options issued in relation to the Stock Option Program 2010.

On 29 September 2014, the extraordinary shareholders' meeting resolved a new contingent capital increase pursuant to which the registered share capital of the Company is increased conditionally by up to EUR 410,018.00 by issuing up to 410,018 new ordinary bearer shares with no par value with a notional value of EUR 1.00 ("**Contingent Capital 2014/I**"). The Contingent Capital 2014/I serves to redeem stock options issued in relation to the Stock Option Program 2014.

## **Stock option rights**

The Company has implemented three stock option programs, Stock Option Program 2007, Stock Option Program 2010 and Stock Option Program 2014. The stock options under these programs were or may be issued to members of the management board and employees of the Company and board members or employees of current or future associated companies.

### ***Stock Option Program 2007***

On 21 February 2008 the shareholders' meeting of the Company authorized the management board with the consent of the supervisory board to issue stock options. As of the date of this Prospectus, overall 201,420 stock options were issued. 120,852 option rights thereof entitle the holder to purchase preference shares Series A, one preference share Series A for each option right (preference option) and 80,568 thereof entitle the holder to purchase registered common non-par value shares with restricted transferability, one common non-par value share with restricted transferability for each option right (common option), in accordance with the respective regulations, terms and conditions governing the options. As of 1 January 2011, 34,255 options had expired. In the financial years 2011 to 2013 a further 3,590 options had expired. As of 31 December 2013, 163,575 options remained outstanding. The options were issued in the ratio of three preference options to two common options. In order to create new shares the Company had implemented Contingent Capital 2008/I and Contingent Capital 2008/II.

All option rights granted under the Stock Option Program 2007 have a 10-year term (maximum term). The vesting period begins with the respective date of issue, i.e. 27 February 2008, 1 August 2008 and 1 December 2008, and amounts to two years regarding 50%, three years regarding a further 25% and four years regarding the remaining 25% of the option rights. Within the vesting period, a minimum holding period pursuant to Section 193 (2) no. 4 of the German Stock Corporation Act (*Aktiengesetz*) applies. Generally, the exercise price for preference options is EUR 7.03, for common options EUR 3.96, adjusted in accordance with the terms governing the options (exercise price). The option rights are not transferable. In case of a conversion of one preference share into one common share, the exercise price shall remain unchanged.

The holders of the stock options may exercise their option rights in case of an IPO (i) after the expiry of a waiting period lasting at least two years after the issue, (ii) in case the shares are traded officially on the regulated market or unregulated market on a national or foreign stock exchange, (iii) in case the agreed or applicable lock up period has expired, and (iv) in case the preference share price (or of the class of shares into which these have been converted) within the last five consecutive trading days before the exercise of the option right is at least 120% of EUR 7.03.

The Stock Option Program 2007 also provides for the terms of phantom stocks (see "*GOVERNING BODIES – MANAGEMENT BOARD – COMPENSATION OF THE MANAGEMENT BOARD MEMBERS*" and "*GOVERNING BODIES – SUPERVISORY BOARD – COMPENSATION OF THE SUPERVISORY BOARD MEMBERS*").

Upon registration of the capital decrease with the commercial register on 17 September 2014 by which the shares of the Company were consolidated in the proportion 6:1 (see – *DEVELOPMENT OF THE COMPANY'S SHARE CAPITAL*), the number of stock options as well as the exercise price were automatically adjusted according to the terms and conditions of the Stock Option Program 2007, i.e. the number of options decreased by the factor 6, whereby the exercise price was increased by the same factor. Furthermore, the shareholders' meeting on 8 September 2014 resolved on a reduction of Contingent Capital 2008/I from EUR 67,800.00 to EUR 11,300.00 and on a reduction of Contingent Capital 2008/II from EUR 101,700.00 to EUR 16,950.00.

### ***Stock Option Program 2010***

On 18 May 2010, the shareholders' meeting of the Company authorized the supervisory board to issue stock options designated for members of the management board of the Company, for current employees of the Company and associated companies and for future employees of Probiodrug and current or future associated companies. The Stock Option Program 2010 expired on 31 December 2013.

As of the date of this Prospectus, 85,899 stock options (adjusted following the capital decrease in 2014 from 515,403 stock options) were issued to the members of the management board of the Company. In 2013, 255,289 stock options were issued to an employee of the Company. As of 31 December 2013, 127,644 stock options had expired and 643,048 stock options remained outstanding.

The option rights confer the right to purchase restricted common non-par value shares with registered transferability, in accordance with the respective regulations, terms and conditions governing the options. In order to create new shares to satisfy these options, the Company has implemented Contingent Capital 2010/I.

Generally, the exercise price for the option rights is EUR 1.00, adjusted in accordance with the terms governing the options. The term of the option rights issued in 2010 is six years. The term of the option rights issued in 2013 is four years. The minimum holding period is four years.

The vesting period begins with the respective date of issue, i.e. 30 June 2010 for the options issued in 2010 and 24 June 2013 for the options issued 2013. After the expiration of the vesting period, the issued option rights become non-forfeitable, even in case of the termination of employment. The vesting period amounts to seven months for 1/3 of the option rights, 19 months for 1/3 of the option rights and 31 months for 1/3 of the option rights.

All option rights under the Stock Option Program 2010 have a 10-year term (maximum term) and are gradually forfeited in case of a termination of the employment as defined in the respective terms governing the option rights within 31 months (vesting period). In case of an IPO within the vesting period, 50% of the unvested options shall vest immediately. The minimum holding period remains unaffected.

The owners of the stock options may exercise their options rights in case of an IPO (i) after the expiry of a waiting period lasting at least four years after the issue and the expiration of the vesting period, (ii) in case the shares are traded officially on the regulated market or unregulated market on a national or foreign stock exchange, and (iii) in case the agreed or applicable lock up period has expired.

Upon registration of the capital decrease with the commercial register on 17 September 2014 by which the shares of the Company were consolidated in the proportion 6:1 (see – *DEVELOPMENT OF THE COMPANY'S SHARE CAPITAL*), the number of stock options as well as the exercise price were automatically adjusted according to the terms and conditions of the Stock Option Program 2010, i.e. the number of options decreased by the factor 6, whereby the exercise price was increased by the same factor. Furthermore, the shareholders' meeting on 8 September 2014 resolved on a reduction of Contingent Capital 2010/I from EUR 515,430.00 to EUR 85,901.00.

#### ***Stock Option Program 2014***

On 29 September 2014, the shareholders' meeting of the Company authorized the supervisory board to issue stock options designated for members of the management board of the Company, for current and future employees of the Company with the consent of the supervisory board. Up to 410,018 stock options may be issued until 31 December 2016, thereof up to 314,501 options shall be issued to members of the management board and up to 95,517 to future and current employees of the Company. With regard to the issue to members of the management board only the supervisory board is authorized to issue these options. On 30 September 2014 the supervisory board authorized its chairperson to issue the respective stock options to Dr. Glund and Dr. Liebers on the date of the initial listing of the Company at Euronext Amsterdam and to Dr. Lues on the effective date of her appointment as a member of the management board of the Company.

The option rights confer the right to purchase ordinary bearer shares with no par value in accordance with the respective regulations, terms and conditions governing the options. In order to create new shares, the Company has implemented Contingent Capital 2014/I.

Generally, the exercise price for the option rights issued before the IPO is the issue price in the IPO. For option rights issued within the first twenty stock exchange trading days after the IPO, the exercise price is the simple average of the relevant stock exchange prices of all stock exchange trading days prior to the issue of the options and for option rights issued after the first twenty stock exchange trading days after the IPO, the exercise price is the simple average of the relevant stock exchange prices of twenty stock exchange trading days prior to the issue of the options. The exercise price will be adjusted in accordance with the terms governing the options. With few exceptions, the option rights are not transferable. After the IPO, the management board – in the case of options rights of the management board, the supervisory board – may decide that all or some options are freely assignable and tradable after the lapse of the lock-up period agreed for the time after the IPO.

. In case of a termination of the employment as defined in the respective terms governing the option rights, the options are gradually forfeited over 36 months beginning with the respective date of issue (vesting period). The vesting period in case of the issue within the first twenty stock exchange trading days after the IPO amounts to twelve months for 60% of the option rights, 24 months for 40% of the option rights and 36 months for 20% of the option rights. The vesting period in case of the issue after the first twenty stock exchange trading days after the IPO and within the first twenty stock exchange trading days of the first quarter, second quarter, third quarter and fourth quarter of any financial year of Probiodrug amounts to twelve months for 100% of the option rights, 24 months for 66.7% of the option rights and 36 months for 33.33% of the option rights. Generally, the maximum term of the options rights is 8 years from the day of their issue.

The holders of the stock options may exercise their option rights (i) after the expiry of a waiting period at least four years after the issue and – where applicable – the vesting period has expired, (ii) the shares are traded officially on the regulated market or unregulated market on a national or foreign stock exchange, (iii) the agreed or applicable lock up period has expired, and (iv) simple average of the relevant stock exchange prices of the last twenty stock exchange trading days prior to the day of exercise exceed the exercise price by at least 10%. Generally, option rights may only be exercised three times per fiscal year within four weeks commencing on the third banking day after the ordinary shareholders' meeting and the publication of the reports for the second and third quarter.

#### **Authorization to acquire own shares**

The Company currently does not hold any of its own shares nor does a third party on behalf of the Company. The extraordinary shareholders' meeting on 9 October 2014 resolved to authorize the Company to acquire own shares as follows:

The management board is, subject to approval of the supervisory board, authorized to repurchase shares of the Company in the nominal amount of up to slightly less than 10% of the Company's share capital existing at the date of the resolution and subject to the Company complying with the restrictions in Sections 71 (2) and (3) of the German Stock Corporations Act (*Aktiengesetz*) on or before the 30 September 2019. The aggregate amount of own shares owned by the Company or attributable to the Company pursuant to Sections 71d and 71e of the German Stock Corporation Act (*Aktiengesetz*) must, however, not exceed at any time 10% of the share capital of the Company. The authorization can also be exercised by a third party acting on behalf of the Company.

The purchase may solely be carried out on the stock exchange or by way of a public offer to all shareholders or a public request to submit sale offers addressed to all shareholders in accordance with the principle of equal treatment of all shareholders pursuant to Section 53a of the German Stock Corporation Act (*Aktiengesetz*) or by issuing sellback rights to the shareholders or by using derivatives (put options or call options or a combination of both). In case of a purchase on the stock exchange, the payment per share made by the Company – excluding ancillary purchase costs – may not exceed by more than 10% the initial quotation for shares in the Company on the three trading days prior to accepting the obligation to purchase own shares and may not fall below the amount of EUR 0.01 per share. The initial quotation for shares in the Company is generally determined by the initial quotation at Euronext Amsterdam.

If the purchase is made by way of a public offer to all shareholders or a public request to submit sale offers addressed to all shareholders, the purchase price offered per share may not fall below the amount of EUR 0.01 per share and may not exceed by more than 20% the average closing price applicable on the three trading days prior to the date of the publication of the offer or, as the case may be, the public invitation to all shareholders of the Company to make an offer for sale, at Euronext Amsterdam. If the aggregate amount of the acceptance of the offer or the shares offered by the shareholders exceeds the volume of the public purchase offer or the public request to submit sale offers, the purchase can be made based on the ratio of shares offered; if a shareholder offers 100 shares or fewer, acceptance of such offer can be given precedence.

If the purchase is made by the way of sellback rights provided to the shareholders, the sellback rights can be allocated to the shareholders per share in the Company. Based on the proportion of the Company's share capital in relation to the volume of the shares to be repurchased by the Company, a number of sellback rights determined accordingly entitles to the sale of one share in the Company to the Company. Alternatively, sellback rights can be allocated in a way that one sellback right each is allocated per number of shares resulting from the proportion of the share capital in relation to the repurchase volume. No fractions of sellback rights are allocated. The price and the limiting values of the offered purchase price margin are determined similar to as described above concerning the public offer to all shareholders or a public request to submit sale offers.

If the purchase is made using derivatives, i.e. put or call options or a combination of both, the option transaction shall be made with a financial institution at close-to-market conditions. The terms of the options must not exceed one year and shall end not later than on 30 September 2015. The purchase price for the shares payable upon the exercise of the options must not fall below the amount of EUR 0.01 per share and must not exceed the arithmetic mean value of the prices of the Company's shares at Euronext Amsterdam by more than 10%.

The authorization can be exercised in full or in part and in the latter case on multiple occasions until the maximum authorized purchase volume is reached for any purpose that is legally permissible in accordance with the respective statutory provisions. The purposes for which the management board may use the shares acquired on the basis of the authorization include, in particular, the following purposes:

- (i) The shares may be redeemed without such redemption or its implementation requiring a further resolution of the shareholders' meeting thereby reducing the share capital of the Company in the amount of the portion of the share capital relating to the shares redeemed.

- (ii) Sale of the shares in a way described above, provided that the sale takes place pursuant to Section 186 (3) sentence 4 of the German Stock Corporation Act (*Aktiengesetz*) in exchange for cash payment and at a price not falling significantly below the stock exchange price of the shares in the Company. This authorization is limited to the sale of such number of shares which are together with (a) new shares being issued during the duration of the authorization exempting the subscription rights in accordance with Section 186 (3) sentence 4 of the German Stock Corporation Act (*Aktiengesetz*) and (b) new shares being issued during the duration of the authorization exempting the subscription rights in accordance with Section 186 (3) sentence 4 of the German Stock Corporation Act (*Aktiengesetz*), equivalent to a maximum total amount of 10% of the existing share capital at the time of the resolution of the shareholders' meeting or, if this amount is lower, at the time of the exercise of this authorization.
- (iii) The shares may be transferred as contributions in kind in connection with, *inter alia*, the acquisition of companies, parts of companies or equity investment in companies as well as a merger.
- (iv) The shares may be used for the listing of shares in the Company at foreign stock exchanges where they had not previously been admitted to trading.

Should the shares owned by the Company be used in a way described under (ii), (iii), or (iv) above, shareholders' subscription rights are excluded. The aforementioned authorizations can be used once or several times, each individually or in conjunction, covering either partial volumes or the total quantity of the shares owned by the Company.

The exercise of the authorization to acquire own shares may be decided upon by the management board only with the approval of the supervisory board.

#### **General provisions relating to profit allocation and dividend payments**

The shares of the Company entitle their holders to a share in the profits for the financial year beginning on 1 January 2014 and for all following financial years of the Company.

Resolutions relating to profit allocation and thus the distribution of dividends for a given financial year are adopted by the shareholders' meeting held in the subsequent financial year. Such meeting must always take place within the first eight months of the financial year. The management board and the supervisory board must provide a proposal for the resolution.

German law provides that a resolution concerning dividends and the distribution thereof may be adopted only on the basis of a balance sheet profit shown in the Company's unconsolidated financial statements. In determining the balance sheet profit available for distribution, the annual net income or loss of the respective year must be adjusted for profits and losses carried forward from the previous year and for deposits into or withdrawals from reserves. In doing so, it must be borne in mind that German law requires that certain reserves are created and therefore deducted, where applicable, when calculating the balance sheet profits available for distribution.

Generally, the management board and the supervisory board are authorized to place no more than half of the annual net income in other revenue reserves. As part of any resolution concerning the allocation of profits, the shareholders' meeting may resolve that additional amounts should be placed in revenue reserves or be carried forward as profits rather than distributed.

Dividends resolved by the Company's shareholders' meeting are paid annually, usually shortly after the shareholders' meeting, in compliance with the rules of the respective clearing system. Dividend payment claims are subject to a three-year statute of limitations. Announcements concerning the distribution and payment of dividends will be published in the Federal Gazette (*Bundesanzeiger*).

However, according to section 21 (5) of the Articles of Association the management board, with the consent of the supervisory board, may grant a dividend advance after expiration of a business year pursuant to section 59 of the German Stock Corporation Act (*Aktiengesetz*).

Due to the share capital decrease by way of simplified share capital reduction pursuant to Section 229 et. seq. of the German Stock Corporation Act (*Aktiengesetz*), additionally, the restrictions of Section 233 of the German Stock Corporation Act (*Aktiengesetz*) apply in relation to distribution of profits, i.e. no profits must be distributed prior to legal reserves together with the capital reserve amounting to 10% of the share capital of the Company. Furthermore, in principle, the payment of dividends of more than 4% is only possible for a business year commencing two years after resolving the simplified capital reduction. Finally, amounts arising out of the release of capital and revenue reserves as well as the capital reduction must not be distributed as profits.

## **Rights of liquidation**

Apart from liquidation as a result of insolvency proceedings, the Company may be liquidated only with a vote of at least 75% of the share capital represented at the shareholders' meeting at which such vote is taken. In such a case, the shareholders are entitled to the liquidation proceeds remaining following payment of all of the Company's liabilities which would be distributed among the shareholders in proportion to their share of the share capital. In doing so, certain provisions of German law protecting creditors must be observed.

## **General provisions relating to a change in the Company's share capital**

The share capital of a stock corporation (*Aktiengesellschaft*) may be increased in return for cash contributions or contributions in kind by a resolution at the shareholders' meeting, which must be adopted with a vote of at least 75% of the share capital represented at the meeting convened to pass such a resolution unless the Company's Articles of Association provide for other majority requirements. Article 20 of the Company's Articles of Association provides that resolutions of the shareholders' meeting may be adopted in case of a capital majority by a simple majority of the share capital represented at the shareholders' meeting convened to pass such resolutions and that this also applies, as far as legally permissible, in cases in which the law prescribes a capital majority in addition to a simple majority. Shareholders shall, in principle, be granted preferential subscription rights, which may, however, be excluded in certain circumstances.

In addition to the ordinary cash or non-cash capital increase, it is possible to create authorized or contingent capital. In the case of authorized capital the management board is authorized by the shareholders' meeting to increase the share capital by issuing new shares up to an amount to be specified within a period of no more than five years. The shareholders' meeting may authorize the management board, subject to the consent of the supervisory board, to exclude all or part of the subscription rights of the shareholders. The resolution adopted by the shareholders' meeting concerning the creation of authorized capital and, where applicable, concerning the exclusion of the subscription rights requires a majority of at least 75% of the share capital represented at the meeting convened to pass such a resolution in order to be effective. The nominal amount of the authorized capital may not exceed half of the share capital that exists at the time when the authorization becomes effective, i.e. the time when the resolution concerning the authorized capital is registered with the commercial register.

The shareholders' meeting may, in addition, resolve on an increase of the share capital, which is only to be implemented to the extent that exchange or subscription rights granted by the Company in respect of the new shares (pre-emptive shares) have been exercised (contingent capital increase). A resolution on a contingent capital increase may only be adopted for the purpose of granting exchange or subscription rights to creditors of convertible bonds or other securities, which confer a right to the subscription of shares, for the purpose of preparing mergers with other companies and for the purpose of granting subscription rights to employees and members of the management of the Company or its affiliates. There is no statutory subscription right in favor of shareholders in respect of shares issued as a result of a contingent capital increase. The resolution of the shareholders' meeting approving such an increase requires a majority of at least 75% of the share capital represented at the meeting convened to pass such a resolution in order to be effective. The nominal value of the contingent capital may not exceed half – or, in the case of the conferral of subscription rights to executives and employees – 10% of the share capital that exists at the time when the resolution is adopted by the shareholders' meeting.

A resolution to reduce the share capital must be adopted by a majority of at least 75% of the share capital represented at the meeting convened to pass such a resolution.

## **General provisions relating to subscription rights**

In the event of a capital increase – with the exception of a contingent capital increase – shareholders are, in principle, entitled by law to subscription rights regarding the new shares to be issued in accordance with their current equity quota. The same applies to the issue of convertible bonds, participating bonds, profit-sharing rights or warrant-linked bonds. The subscription rights may be exercised within a period of no less than two weeks. Such subscription rights are, in principle, freely assignable and the Company may provide that subscription rights may be traded on a stock exchange for a certain period within the subscription period.

The shareholders' meeting may pass a resolution to partially or completely exclude subscription rights with a majority of the votes cast and at least 75% of the share capital represented at the meeting convened to pass such a resolution. The management board must present a written report to the shareholders' meeting concerning the reason for the partial or complete exclusion of subscription rights; the report must include a justification of the proposed offer price for the new shares. An exclusion of the subscription rights is permissible if the Company's interest in such exclusion outweighs the shareholders' interest in the conferral of the subscription rights. Subscription rights may be excluded without such justification in the case of a capital increase if such capital increase is effected against cash contributions, the amount of

the capital increase does not exceed 10% of the existing share capital, and the offer price of the new shares is not substantially below the exchange price of the shares already traded on the stock exchange.

Subscription rights are not considered to have been excluded if, pursuant to the resolution, the new shares are subscribed by a credit institution or an enterprise active in the banking sector in accordance with Section 53 (1) sentence 1 or Section 53b (1) sentence 1 or Section 53b (7) of the German Banking Act (*Kreditwesengesetz*) with the obligation of offering them to shareholders pursuant to Section 186 (5) sentence 1 of the German Stock Corporation Act (*Aktiengesetz*) (so-called indirect subscription right).

### **Squeeze-out of minority shareholders**

Pursuant to the provisions of Sections 327a et seq. of the German Stock Corporation Act (*Aktiengesetz*), the shareholders' meeting of a stock corporation can, at the request of a shareholder holding at least 95% of the share capital (the "**Principal Shareholder**"), resolve to transfer the shares of the remaining shareholders (the "**Minority Shareholders**") to the Principal Shareholder against payment of an adequate cash consideration (so-called "squeeze-out" of minority shareholders). The amount of the cash consideration to be paid to the Minority Shareholders must consider "the Company's situation" at the time the resolution is passed by the shareholders' meeting. The amount of the cash consideration is based on the full value of the Company, which is generally determined using the discounted earnings method (*Ertragswertberechnung*). Upon registration of the resolution of the shareholders' meeting on the squeeze-out with the commercial register, the shares of the Minority Shareholders are automatically transferred to the Principal Shareholder.

Pursuant to Section 1 (2) of the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*), the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*) shall be applied to issuers whose shares carry voting rights and are admitted to trading on an organized market not in Germany but in another Member State of the European Economic Area (EEA), to the extent that it regulates, *inter alia*, the possibility of a squeeze-out of minority shareholders after a public takeover offer. According to Section 39a of the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*), a bidder that holds 95% of the voting share capital of a target company after a public takeover may within a period of three months following the expiration of the offer period file an application with the local court (*Amtsgericht*) of Frankfurt am Main to issue a court order to transfer the remaining voting shares against an adequate consideration. A resolution of the shareholders' meeting is not required. The consideration offered has to correspond to the consideration in connection with the public takeover offer or the mandatory public takeover offer and a cash consideration has to be offered alternatively. According to Section 39c of the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*), shareholders also have the right to request the acquisition of their shares in case the bidder is entitled to obtain such a court order.

The German Transformation Act (*Umwandlungsgesetz*) provides for a third possibility of a squeeze-out of minority shareholders in the context of a merger. According to Section 62 (5) of the German Transformation Act (*Umwandlungsgesetz*) in connection with Sections 327a et seq. of the German Stock Corporation Act (*Aktiengesetz*), the shareholders' meeting of a transferring company may adopt, within three months after closing of the merger agreement, a squeeze-out resolution pursuant to the provisions of the German Stock Corporation Act (*Aktiengesetz*), provided that the principal shareholder holds at least 90% of the share capital of the company. The merger agreement or its draft must specify that in the context of a merger a squeeze-out of Minority Shareholders is intended. In contrast to the rules governing squeeze-outs pursuant to Sections 327a et seq. of the German Stock Corporation Act (*Aktiengesetz*), a squeeze-out merger is only possible if the principal shareholder holding at least 90% is a German stock corporation (*Aktiengesellschaft*), a German partnership limited by shares (*Kommanditgesellschaft auf Aktien, KGaA*) or a Societas Europea (SE) domiciled in Germany.

In addition, the German Stock Corporation Act (*Aktiengesetz*) in Sections 319 et seq. provides for the so-called integration of companies. According to these regulations, the shareholders' meeting of a company may resolve on the integration of a company if at least 95% of the shares of the company to be integrated are held by the future principal company. The former shareholders of the integrated company are entitled to an adequate compensation that generally must be granted in the form of shares in the principal company. The amount of the compensation is calculated using the so-called "merger value ratio" (*Verschmelzungswertrelation*) between the two companies, in other words, the exchange ratio that would be deemed to be appropriate in the event of a merger of the two companies. In contrast to the rules governing squeeze-outs pursuant to Sections 327a et seq. of the German Stock Corporation Act (*Aktiengesetz*), integration is only possible if the future principal company is a German stock corporation (*Aktiengesellschaft*) or a Societas Europea (SE) domiciled in Germany.

## Shareholding disclosure and reporting duties

The German Securities Trading Act (*Wertpapierhandelsgesetz*) contains various notification requirements in connection with shareholdings in listed companies the country of origin (*Herkunftsstaat*) of which is Germany, i.e. the issuer of shares having its registered seat in Germany and whose shares are admitted to trading on an organized market in another member state of the European Union. Upon admission of the Company's shares to trading on the Euronext Amsterdam, the Company, as a listed company, will become subject to the provisions of the German Securities Trading Act (*Wertpapierhandelsgesetz*), to the extent that it regulates, *inter alia*, the obligation to submit notifications once certain voting right thresholds are reached, exceeded or fallen below:

- A shareholder who reaches, exceeds or falls below, through purchase, sale or any other manner 3%, 5%, 10%, 15%, 20%, 25%, 30%, 50% or 75% of the voting rights in a listed company must, without undue delay but at the latest within four trading days, submit written notifications to the relevant company and to the German Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht, "BaFin"*) stating that it has reached, exceeded or fallen below the aforementioned thresholds and indicating its share of the voting rights. Upon receipt of a notification in this manner, the listed company must publish this notification without undue delay, but at the latest within three trading days, in media for distribution in the European Union and inform BaFin of such notification.
- A shareholder who reaches or exceeds 10%, 15%, 20%, 25%, 30%, 50% or 75% of the voting rights in a listed company is obliged to inform the company within 20 trading days about (i) the financing sources for such investment and (ii) its investment purposes, unless this obligation has been dispensed within the articles of association of the company, which is not the case in the Articles of Association.
- A person who directly or indirectly holds financial instruments or other instruments that grant the holder the unilateral right under a legally binding agreement to acquire previously issued voting shares of a listed company is subject to a notification obligation if the sum of the shares they can so acquire, together with any voting rights they may already hold in the issuer or which are attributable to them, reaches, exceeds or falls below 5%, 10%, 15%, 20%, 25%, 30%, 50% or 75% of the voting shares in a listed company.
- A person who directly or indirectly holds financial instruments or other instruments, which are not covered by the abovementioned reporting requirement and which due to their structure "make it possible" (*ermöglichen*) for their respective holder or a third party to acquire previously issued voting shares of a listed company, is also subject to a notification obligation if its holding reaches, exceeds or falls below the abovementioned thresholds. The German Securities Trading Act (*Wertpapierhandelsgesetz*) provides for two non-exhaustive examples for the constituent element of "making it possible". According to the first example, the notification is required with respect to instruments in respect of which the respective counterparty of the holder can exclude or limit its risk from such instruments by holding shares. The second example covers financial instruments or other instruments which establish either a right or an obligation to acquire shares. The German Securities Trading Act (*Wertpapierhandelsgesetz*) provides also for an aggregation of such hypothetical voting rights subject to reporting obligations and other holdings subject to reporting obligations.

In connection with these notification requirements, the German Securities Trading Act (*Wertpapierhandelsgesetz*) contains various provisions designed to ensure that shareholdings in listed companies are attributed to those parties who in fact control the voting rights associated with such shares. For example, if one person controls another person which owns shares in a listed company, such shares are also attributed to the controlling person. If one person holds shares on behalf of another person, or persons controlled by such other person, shares are also attributed to such other person. If the required notification described above is not filed, the relevant person may be precluded from exercising rights (including voting and dividend rights) attached to the shares for the duration of such failure to comply with the notification duty and – under certain circumstances – also for six months after the notification duty has been fulfilled. In addition, a fine may be imposed for failure to comply with the notification requirements.

### ***Shareholder Notification Obligations due to the Implementation of the Capital Increase and the Greenshoe Capital Increase***

The Capital Increase will be implemented after the Existing Shares have been admitted to trading on Euronext Amsterdam and the Greenshoe Capital Increase, if any, will be implemented after the Existing Shares and the New Shares and Additional Shares, if any, have been admitted to trading on Euronext Amsterdam.

Once the Capital Increase and the Greenshoe Capital Increase, if any, have been implemented by registration with the Commercial Register, the total share capital of the Company, and thereby also the total number of issued and outstanding shares of the Company, will, in each case, be increased accordingly, see also “*THE OFFERING OF THE OFFER SHARES – SUBJECT MATTER OF THE OFFERING*”. As a consequence, the relative percentage of the voting rights of shareholders of the Company will change due to such implementation of the Capital Increase and the Greenshoe Capital Increase, if any, see also “*DILUTION*”.

Therefore, shareholders may be required to make a voting rights notification, if they fall below any relevant voting rights thresholds due to the implementation of the Capital Increase or the Greenshoe Capital Increase, if any, as the case may be. As soon as the implementation of the Capital Increase and the Greenshoe Capital Increase, if any, has been registered with the Commercial Register, the Company will issue an ad hoc announcement stating the amount of the implemented Capital Increase, or Greenshoe Capital Increase, if any, and the date when the implementation became effective.

#### **Duty to submit a public takeover offer**

Pursuant to Section 1 (2) of the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz, WpÜG*), the WpÜG applies to issuers whose shares carry voting rights and are admitted for trading on an organized market not in Germany but in another EEA Member State, to the extent that it regulates, *inter alia*, the obligation to submit a public takeover offer. According to the provisions of the WpÜG any person whose voting interest reaches or exceeds 30% of the voting rights in a company must, no later than the seventh calendar day following the date on which the 30% threshold is reached or exceeded, publish this fact, including the new percentage of its voting rights, in at least one national newspaper designated for stock exchange notices or by means of an electronic financial information dissemination system. Subsequently, unless an exemption from this obligation has been granted, such person must submit a mandatory public takeover offer to all holders of the Company’s ordinary shares outstanding.

#### **Notices, paying and depository agents**

Pursuant to the Company’s Articles of Association, Company notices are published exclusively in the Federal Gazette (*Bundesanzeiger*), except as otherwise provided by law. To the extent the law requires disclosure of statements or information to shareholders without specifying a specific form of disclosure, posting of such statements or information on the Company’s website, [www.probiodrug.de](http://www.probiodrug.de), will suffice. Any notices related to the shares will also be published in the Federal Gazette (*Bundesanzeiger*) and in at least one official national publication for statutory stock market notices of Euronext Amsterdam. All notices required under German securities laws will be published in an official national publication for statutory stock market notices of Euronext Amsterdam and, if required, in the Federal Gazette (*Bundesanzeiger*).

Notices in connection with the approval of this Prospectus or any supplements thereto will be published in accordance with the German Securities Prospectus Act (*Wertpapierprospektgesetz*), in the manner of publication provided for in this Prospectus, i.e. through publication on the website of the Company ([www.probiodrug.de](http://www.probiodrug.de)) and by making available printed copies at the Company.

Deutsche Bank AG, Taunusanlage 12, 60325 Frankfurt am Main, Germany, has been designated as the paying and depository agent.

## **Inside Information**

With regard to the disclosure of inside information, Section 5:25i (2) of the Dutch Financial Supervision Act (*Wet op het financieel toezicht*) requires the Company, once it has made a request for admission of its shares to trading on Euronext Amsterdam's regulated market, to disclose to the public any inside information that directly relates to itself. This requirement applies on a continuous basis as long as the Company's shares are traded on Euronext Amsterdam's regulated market. Inside information shall be disclosed by a press release issued in the Netherlands and in any other member state of the European Economic Area where the Company's shares are traded on a regulated market (or where a request for admission to such market has been made), as the case may be. Disclosure should be done in a manner ensuring fast access to such information on a non-discriminatory basis. In doing so, the Company must make use of media that may reasonably be assumed to guarantee a fast and effective distribution of the inside information within all member states of the European Economic Area. The Company shall simultaneously inform the AFM of that information and shall, forthwith, post the information on its website. The Company must keep the information available on its website for at least one year.

Notwithstanding the above, the Company may delay the disclosure of inside information if all of the three following conditions are met: (i) the delay serves the legitimate interests of the Company, (ii) the delay is unlikely to mislead the public, and (iii) the Company is able to ensure the confidentiality of the information.

Furthermore, where the Company or a person representing the Company deliberately discloses inside information in the normal course of the exercise of its employment, profession or duties to a third party, the Company shall simultaneously disclose that information to the public, unless the person receiving the information owes a duty of confidentiality in respect of that information and the other conditions for delaying disclosure (see above) are also satisfied. Where inside information is not deliberately disclosed to a third party, the Company must always promptly disclose the same information to the public.

## GOVERNING BODIES

### Overview

The governing bodies of the Company are the management board (*Vorstand*), supervisory board (*Aufsichtsrat*) and the shareholders' meeting (*Hauptversammlung*). The rights and duties of these entities are determined by the German Stock Corporation Act (*Aktiengesetz*), the articles of association of the Company (the "**Articles of Association**") (*Satzung*) and the internal rules of procedure (*Geschäftsordnungen*) of the management board and of the supervisory board.

The management board conducts its business in accordance with German law, the Company's articles of association, its internal rules of procedure and its business allocation plan (*Geschäftsverteilungsplan*). It represents the Company in dealings with third parties. The management board is responsible for ensuring that appropriate risk management and risk control systems exist within the Company to provide timely warning of any developments that might jeopardize its continued existence. Furthermore, the management board is obligated to report to the supervisory board, at least every quarter, on the development of the business, in particular details of the turnover and the situation of the Company and its subsidiaries, and, at the last supervisory board meeting of each financial year, it has to report on intended business policies and other key issues relating to corporate planning, and to present a budget for the following financial year and a medium term business plan. In addition, the management board is required to report to the supervisory board on any transactions that may have a significant effect on the profitability or liquidity of the Company in sufficient time to allow the supervisory board to express its opinion on such transactions prior to their implementation. The management board must report any important matters to the chairperson of the supervisory board, including any matter involving affiliates that becomes known to it and that could have a significant effect on the situation of the Company. In principle, it is not possible to serve simultaneously on the management board and the supervisory board. This is, however, allowed in exceptional cases for a maximum period of one year if a member of the supervisory board is sent to the management board. During this period, the member sent to the management board may not perform any duties for the supervisory board.

The task of the supervisory board is primarily to supervise the management board. The supervisory board appoints the members of the management board and is entitled to dismiss them for good cause. The supervisory board advises and oversees the management board in its management of the Company, but pursuant to the German Stock Corporation Act (*Aktiengesetz*) it is not authorized to manage the Company. However, under the internal rules of procedure for the management board, as issued by the supervisory board, the management board is required to obtain the supervisory board's consent to certain transactions, as a rule prior to implementation of such transactions. The management board must also obtain the consent of the supervisory board if it participates in transactions of the above nature at affiliates or subsidiaries, by means of instruction, consent, voting right or in any other way.

Members of the management and supervisory boards owe a duty of confidentiality, care and loyalty to the Company. The members of these boards must pay due regard to a broad range of interests, in particular those of the Company, its shareholders, its employees and its creditors. The management board must also take into consideration shareholders' rights to equal treatment and equal access to information. Should the members of the management or supervisory board breach their duties, they may be jointly and severally liable to the Company for compensatory damages. Insofar as appears expedient, the Company maintains for members of the management board and, pursuant to Article 15 (4) of its Articles of Association, for members of the supervisory board a Directors and Officers (D&O) insurance policy. The D&O insurance policy offers the members of the management board and the supervisory board insurance cover up to a specific amount for claims resulting from their activities as board members. The Company currently has D&O insurance with a total coverage of up to EUR 5 million annually and per claim for the members of its management and supervisory board.

If members of the management or supervisory board have breached their fiduciary duties with respect to the Company and, as a result, the Company has incurred a loss, it may be entitled to assert claims for compensatory damages directly against the members of the management or supervisory boards. In the event of such claims against supervisory board members, the Company is represented by its management board, and in the event of claims against management board members, the Company is represented by its supervisory board. According to a ruling by the German Federal Court of Justice (*Bundesgerichtshof*), the supervisory board is in fact obligated to assert claims for compensatory damages on the part of the Company against the management board if these are likely to be successful. This does not apply where important grounds related to the well-being of the Company would conflict with such an assertion of claims and such grounds are at least on a par with the grounds in favor of an assertion of claims.

The claims must in any event be asserted if the shareholders' meeting passes a resolution to this effect with a simple majority of votes. Furthermore, shareholders whose aggregate shareholdings amount to at least 1% of the Company's share capital or the proportional amount of EUR 100,000 at the time of application may apply to court for admission of such claims for compensatory damages in their own name. Unless there are no significant reasons relating to the welfare of the Company, admission of the suit is contingent on the shareholders having unsuccessfully requested the Company to

assert such claim itself, upon giving the Company a reasonable period in which to do so, and on facts being known that justify suspicion that the Company has suffered damage due to dishonesty or gross violations of the law or of the articles of association. Furthermore, shareholders must prove that they purchased the shares prior to the time they gained knowledge of an alleged breach of fiduciary duties. The Company is entitled to assert a claim for compensatory damages itself at any time. If the Company itself files suit, any pending admission proceedings or legal proceedings by the shareholders will become inadmissible. The Company may not waive or settle a claim for compensatory damages against board members until three years following its accrual, and can only do so if the shareholders adopt a corresponding resolution by simple majority of the shareholders' meeting and if no minority of shareholders, holding an aggregate of 10% or more of the Company's share capital, objects in writing.

Under German stock corporation law, individual shareholders (as any other individuals) are prohibited from using their influence on the Company to cause a member of the management or supervisory board to act in a way harmful to the Company. Shareholders with a controlling influence may not use their influence to cause the Company to act against its own interests, unless the resulting disadvantages are compensated. Any person who uses his or her influence to cause a member of the management board or supervisory board, an authorized representative (*Prokurist*) or any person holding a commercial power of attorney to act in a manner harmful to the Company or its shareholders is liable to the Company and its shareholders for the resulting damage. In addition, the members of the management board and supervisory board are jointly and severally liable in such a case, if they have acted in breach of their duties.

### **Management Board**

The Company's management board currently consists of two members. Pursuant to Article 6 of the Articles of Association the supervisory board determines the number of the members of the management board. The supervisory board may appoint one management board member as chairperson and another member as deputy chairperson.

The supervisory board appoints members of the management board for a maximum term of five years. Reappointment or extension of the term of office is permissible for a maximum of five years in each case. The supervisory board may revoke the appointment of a management board member prior to the expiration of his or her term for good cause. Good cause in accordance with the German Stock Corporation Act (*Aktiengesetz*) is, in particular, deemed to be a gross breach of fiduciary duties, an inability to properly carry out managerial measures, or if the shareholders' meeting passes a vote of no confidence. The supervisory board is also responsible for entering into, amending and terminating employment agreements with the members of the management board.

Article 7 (1) of the Company's Articles of Association provides that the management board may issue internal rules of procedure (*Geschäftsordnung*) for the management board unless the supervisory board issues such internal rules of procedure (*Geschäftsordnung*) for the management board. The supervisory board issued such internal rules of procedure for the management board (*Geschäftsordnung*) on 30 September 2014.

The internal rules of procedure (*Geschäftsordnung*) for the management board currently provide that, *inter alia*, the following transactions require the prior consent of the supervisory board, unless the transactions listed below have already been provided for and discussed in detail in an annual budget adopted by the supervisory board:

- the one-year planning of the Company (budget plus mid-term planning for two calendar years) and revisions hereto;
- acquisition and sale of real estate as well as the encumbrance of real estate;
- acquisition of companies, assets, set-up of business establishments and branch establishments as well as interests in companies if the value exceeds 1% of the company's equity capital in the individual case;
- conclusion of enterprise agreements and agreements pursuant to the German Transformation Act (*Umwandlungsgesetz*), including adoption of resolutions on such actions for holding companies;
- issue of bonds;
- raising or granting financial credits if the credit sum exceeds the amount of 1% of the company's equity capital in the individual case;
- granting of surety, guarantees, letters of comfort or similar liabilities outside the usual course of business if the value exceeds 1% of the company's equity capital in the individual case;

- investment projects the volume of which exceeds 5% of the respective share capital in the individual case irrespective of whether the investments are made in one financial year or are scheduled over several financial years;
- other transactions fundamentally altering the situation of the company in terms of assets, finance or earnings or the company's risk exposure;
- important transactions between the Company and the members of the management board as well as persons the board members are close to or companies they have personal association with.

Pursuant to Article 7 (2) of the Company's Articles of Association, the Company is represented by (a) the sole member of the management board if only one member has been appointed or (b) if more than one member has been appointed by any two members of the management board or by one member of the management board together with an authorized representative (*Prokurist*). The supervisory board may grant sole power of representation to individual members of the management board and/or may exempt them subject to the limitations of Section 112 of the German Stock Corporation Act (*Aktiengesetz*), from the prohibition on multiple representations (*Verbot der Mehrfachvertretung*) set forth by Section 181 of the German Civil Code (*Bürgerliches Gesetzbuch*). Both Dr. Konrad Glund and Dr. Hendrik Liebers have been granted sole power of representation.

Section 77 (2) of the German Stock Corporation Act (*Aktiengesetz*) provides that if, as at the date of this Prospectus, more than one member has been appointed as member of the management board, resolutions of the management board must be passed unanimously, unless other majorities are established by statute, the articles of association or the rules of procedure. According to the internal rules of procedure (*Geschäftsordnung*) of the Company's management board, the management board shall adopt its resolutions unanimously, if possible. In case no agreement on a matter subject to decision can be reached, the chairperson of the management board meeting decides whether a vote should be held for which the simple majority would be sufficient or if the adoption of the resolution should be suspended. In case of a tie the vote of the chairperson prevails if the management board consists of more than two members.

The members of the management board bear joint responsibility for the entire management. The distribution of tasks within the management board emerges from the business allocation plan adopted by the management board with the consent of the supervisory board. In principle, each member of the management board manages the business segments allotted to him /her on his /her own responsibility within the scope of the resolutions of the management board. If measures of a business segment at the same time affect one or several other business segments, the management board member in question must first coordinate with the other management board member or members insofar as this is possible without serious detriment to the Company. The entire management board must decide on all matters for which a joint decision by the management board is provided for by statute, the articles of association or the rules of procedure of the management board. This concerns in particular transactions of particular significance and consequence for the Company or a group company as well as transactions entailing an unusual economic risk.

The management board chairperson (Chief Executive Officer, "CEO") is responsible for managing oral and written correspondence with the supervisory board and the shareholders. Furthermore, he or she represents the Company in public, in particular vis-à-vis authorities, associations and economic organizations, insofar as he or she does not delegate this task to another management board member. The CEO is also responsible for the preparation and management of the meetings of the management board.

The members of the Company's management board and their current areas of responsibility, as well as their current appointments as members of an administrative, management or supervisory body or partner in entities outside the Company and its subsidiaries, and their mandates as members of an administrative, management or supervisory body or as a partner of companies other than the Company and its subsidiaries which have been terminated within the past five years, are listed in the following overview:

<b>Name</b>	<b>Age</b>	<b>Appointed</b>	<b>Appointed until</b>	<b>Responsibility</b>	<b>Other appointments</b>
Dr. Konrad Glund	61	2006	Nov. 2017 <sup>(1)</sup>	Chief Executive Officer (CEO)	Currently none – Dr. Glund was previously a member of the management of the Company from 1997 to 2004.

Dr. Hendrik Liebers	43	2007	Nov. 2017 <sup>(1)</sup>	Chief Financial Officer (CFO)	Dr. Liebers is member of the supervisory board of Löser Medizintechnik GmbH, Leipzig
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<sup>(1)</sup> On 30 September 2014 the supervisory board appointed Dr. Glund and Dr. Liebers for a term of three years effective as of 1 December 2014. See “*RECENT DEVELOPMENTS AND OUTLOOK – MANAGEMENT MATTERS*”.

Dr. Konrad Glund has been CEO since 2006 and is the co-founder of Probiodrug. Prior to setting up Probiodrug in 1997, Dr. Glund founded IFB Halle GmbH. After Probiodrug sold its DP-4 diabetes assets to (OSI) Pharmaceuticals in June 2004, he joined (OSI) Prosidion, the metabolic subsidiary of (OSI) Pharmaceuticals, based in Oxford, UK, as Chief Operating Officer and Vice President of Business and Corporate Development. During this time at (OSI) Prosidion he helped integrate the diabetes program and has been responsible for several licensing deals with pharma companies. He returned to Probiodrug in 2006 as CEO. Dr. Glund holds a PhD in Biochemistry from the Martin-Luther-University of Halle. After completing his studies in biochemistry, he spent about 15 years as academic lecturer and conducted research in biochemistry as project and team leader at the University of Halle. Dr. Glund is author or co-author of over sixty publications and is co-inventor on more than 10 patents.

Dr. Hendrik Liebers has been CFO of Probiodrug since 2007. Prior to joining the company as CFO in 2007, Dr. Liebers spent nine years with several private equity and venture capital firms with a focus on biotech, pharma, medtech, agrobiotechnology and fund in fund investments. He successfully executed numerous private placements, trade and asset sales, fund in fund investments, mergers and acquisitions as well as licensing and co-development transactions in Europe and the USA. From 2004 to 2007 he was Head of Life Science at IBG, and was responsible for IBG’s Life Science team and activities. From 1998 to 2004 he held several positions with Corporate Finance Holding GmbH (CFH), lastly as Investment Director. Dr. Liebers has served on numerous boards, among them as vice chairperson of Probiodrug’s supervisory board until 2007. He holds a diploma in economics from University of Leipzig, a diploma of biology from Eberhard Karls University of Tuebingen, and a Dr. rer. med. from the Medical Faculty of the University of Leipzig.

Dr. Inge Lues was appointed as an additional member of the management board in the function of Chief Development Officer (CDO) effective as of 1 November 2014 by the supervisory board on 30 September 2014. Dr. Lues has been active in the pharmaceutical industry for more than 25 years. Dr. Lues is well connected in the pharmaceutical industry and has expertise in setting-up and managing an organization that engages in drug discovery and development. She joined Probiodrug as a research and development advisor in 2008 and since the beginning of 2013 she acts as Chief Development Officer of the Company (without being a member of the management board). Between 2007 and 2013 she was advising biotech-companies, was interacting with venture capital and private equity companies and acted as reviewer for public research institutions. From 2007 until the end of 2011 she advised the family office of E.Merck KG in R&D matters. From 2002 until early 2007, Dr. Lues was Head of Global Drug Discovery and Non-Clinical Development Pharma of Merck KGaA and as Executive Vice President she was a member of the Pharma Board. During her leadership, she intensified oncology research, restarted diabetes research, established biomarker research in R&D and consolidated research sites including the integration of the U.S. Biotech Company Lexigen /Boston. She contributed essentially to the development of the R&D strategies of Merck KGaA. She developed a blueprint for the Proof of Concept Organization, with a special emphasis on translational research. Between 1998 and 2002 she headed Merck’s business area CNS. The CNS products developed during that time have been successfully out-licensed, and the antidepressant Vilazodone was launched as Viibryd in 2011 and Asimadoline is currently in clinical development for gastrointestinal diseases and pruritus. At the same time, she was Head of Drug Discovery and Preclinical Development/Europe at Merck KGaA, with six R&D sites in Europe. Until 1997 Dr. Lues held various positions within Merck’s R&D organization. Dr. Lues got her Ph.D. in physiology in 1978 and a postdoctoral training in pharmacology and toxicology between 1980 and 1984 – before starting her career in the pharmaceutical industry. For further details see section “*RECENT DEVELOPMENTS AND OUTLOOK – MANAGEMENT MATTERS*”.

The members of the management board can be reached at the Company’s address: Probiodrug AG, Weinbergweg 22, 06120 Halle, Germany.

The members of the management board have not been convicted in relation to fraudulent offences for at least the previous five years nor have they been involved in any bankruptcies, receiverships or liquidations. Furthermore, the members of the management board have not been involved in any official public incrimination and /or sanctions by statutory or regulatory authorities (including designated professional bodies) nor have they been disqualified by a court from acting as a member of administrative, management or supervisory bodies of an issuer or from acting in the management or conduct of the affairs of any issuer for at least the previous five years.

## ***Compensation of the management board members***

The compensation granted by the Company to the members of the management board is not disclosed individually in the IFRS Financial Statements of the Company. For the financial year ended 31 December 2013 the total compensation of the members of the management board was TEUR 569, of which TEUR 419 was a fixed compensation and TEUR 149 a variable compensation. These numbers include the compensation paid to Prof. Dr. Hans-Ulrich Demuth who resigned from the management board as of 31 January 2013. The total compensation of the members of the management board includes also the reimbursement for business-related travel expenses, a pension contribution for Prof. Dr. Hans-Ulrich Demuth and Dr. Konrad Glund as well as insurance premia and subsidies with respect to insurance policies. As of the date of this prospectus, in the event that one or more investors acting in concert acquire a controlling stake in the Company (“**Change of Control**”), the management board members are not entitled to an extraordinary termination right. However, pursuant to the new terms of the management agreements effective as of 1 December 2014, Dr. Glund and Dr. Liebers have an extraordinary termination right in case of a change of control, as described below.

The management agreements with the members of the management board, Dr. Glund as CEO and Dr. Liebers as CFO, have been amended in October 2014. Pursuant to the new terms of these agreements effective as of 1 December 2014 Dr. Glund and Dr. Liebers shall receive a fixed remuneration of EUR 210,000 per year each. If the financial and profit situations allows, each will receive a variable compensation for their respective achievement on objectives (variable compensation I). The variable compensation shall not exceed 30% of the fixed remuneration. In addition, the supervisory board may grant a further variable compensation (variable compensation II) if there are unscheduled successes and circumstances which have not been taken into consideration with regards to the variable compensation I. The variable compensation II together with the variable compensation I may not exceed 45% of the fixed remuneration. If the Company is listed on the Euronext Amsterdam or a similar stock exchange by not later than 31 December 2014 as is contemplated herein, each will receive a bonus of EUR 50,000. Dr. Glund and Dr. Liebers are entitled to a pension commitment with lifetime old-age pension of EUR 3,500 per month with a dynamization 1% p.a., disability pension of EUR 3,500 per month with a dynamization 1% p.a. and survivor annuity of EUR 2,100 per month with a dynamization 1% p.a. Both receive a lump-sum reimbursement of EUR 1,500 for travel expenses per month. The Company pays the usual insurance premia (D&O, legal costs etc.). Dr. Glund and Dr. Liebers each are entitled to resign from the management board in case a shareholder achieves the majority of voting rights in the Company and their respective appointment ends as a result of a reorganization without any appointment as management board member with a legal successor at terms and conditions being substantially equivalent to the present ones or if the competence, the rights and the responsibilities as member of the management board are restricted more than insignificantly. In case of such termination, the Company will pay indemnity compensation to Dr. Glund or Dr. Liebers, as applicable. The indemnity compensation consists of the fixed remuneration (including the allowance for health and nursing insurance) that would have been paid between the date of termination and the regular end of the service agreement plus a part of variable compensation I above on the basis of 100 % target achievement pro rata temporis up to termination.

Upon registration of the capital decrease with the commercial register on 17 September 2014 by which the shares of the Company were consolidated in the proportion 6:1 (see “*DESCRIPTION OF THE SHARE CAPITAL OF THE COMPANY AND APPLICABLE REGULATIONS – DEVELOPMENT OF THE COMPANY’S SHARE CAPITAL*”), the number of stock options and phantom stocks as well as the respective exercise price were automatically adjusted according to the terms and conditions of the stock option programs, i.e. the number of phantom stocks or stock options decreased by the factor 6, whereby the respective exercise price was increased by the same factor.

Under the Stock Option Program 2007, 23,712 common stock options (adjusted following the capital decrease to 3,952 common stock options), 35,568 preference options (converted into common options due to the conversion of preference shares, see “*DESCRIPTION OF THE SHARE CAPITAL OF THE COMPANY AND APPLICABLE REGULATIONS – DEVELOPMENT OF THE COMPANY’S SHARE CAPITAL*”, and adjusted following the capital decrease to 5,928 common stock options) and 59,280 phantom stocks (adjusted following the capital decrease to 9,880 phantom stocks) were issued to Prof. Demuth, Dr. Glund and Dr. Liebers. The phantom stocks were calculated on the value of the preference shares (or of the class of shares these have been converted into). One phantom stock entitles the owner to a cash payment equal to the difference between the exercise price in respect of the preference option and the price upon the trigger event, which is an IPO or trade sale or merger. The cash payment based on the phantom stocks is subject to (i) the expiration of at least two years after the issue of the phantom stocks, (ii) the occurrence of a trigger event, (iii) in some cases the ongoing employment of the member of the management board, (iv) the value of the preference shares (or of the class of shares these have been converted into) being at least 20% above the exercise price of the preference shares (or of the class of shares these have been converted into) and (v) the exercise of at least 50% of the stock option exercisable at that point in time by the member of the management board (see also “*DESCRIPTION OF THE SHARE CAPITAL OF THE COMPANY AND APPLICABLE REGULATIONS – CONVERSION AND STOCK OPTION RIGHT – STOCK OPTION PLAN*”).

Under the Stock Option Program 2010, 515,403 options on common shares (adjusted following the capital decrease to 85,899 common stock options) as well as 61,848 phantom stocks (adjusted following the capital decrease to 10,308

phantom stocks) were issued to members of the management board, at this time Prof. Dr. Hans-Ulrich Demuth, Dr. Konrad Glund and Dr. Hendrik Liebers. The phantom stock entitles a cash payment calculated on the value of registered common non-par value shares, equal to the difference between the exercise price of one phantom stock and the price per common share upon the occurrence of the relevant trigger event, i.e. IPO, trade sale, merger or asset deal. The vesting period amounts to seven months for 1/3 of the phantom stocks, 19 months for 1/3 of the phantom stocks and 31 months for 1/3 of the phantom stocks. The exercise price was EUR 1.00 and was automatically adjusted to EUR 6.00 following the capital decrease.

The respective member of the management board is entitled to a cash payment for the phantom stocks if a trigger event occurs. In the event of an IPO, the cash payment of the phantom stock is subject to (i) the common shares being traded officially on the regulated market or unregulated market on a national or foreign stock exchange, and (ii) the expiration of the agreed or applicable lock up period.

In the event of an IPO, the cash payment due under the phantom stocks may be fully or partly replaced by common shares in the Company at the Company's sole discretion.

In case the net proceeds of the trigger event exceeded EUR 200 million (trigger event threshold), Prof. Dr. Hans-Ulrich Demuth, Dr. Konrad Glund and Dr. Hendrik Liebers shall receive 10,308 phantom stocks (adjusted following the capital decrease to 1,718 phantom stocks) each for each full EUR 25 million the net proceeds realized during the first 24 months following the trigger event exceeding the trigger event threshold to the maximum of 329,856 phantom stocks each (adjusted following the capital decrease to 54,976 phantom stocks) (see also "*DESCRIPTION OF THE SHARE CAPITAL OF THE COMPANY AND APPLICABLE REGULATIONS – CONVERSION AND STOCK OPTION RIGHTS – STOCK OPTION PLAN*").

### ***Shareholdings of management board members***

As of the date of this Prospectus

- Dr. Konrad Glund holds 142,911 shares in the Company, 16,722 of those shares as a trustee, and
- Dr. Hendrik Liebers holds 30,019 shares in the Company.

The envisaged future member of the management board Dr. Inge Lues holds 1,539 shares in the Company.

### **Supervisory board**

In accordance with Article 8 (1) of the Articles of Association of the Company, the supervisory board consists of six members, all appointed by the shareholders' meeting. The current members of the Company's supervisory board have been elected until the end of the ordinary shareholders' meeting that formally ratifies the actions of the members of the supervisory board for the financial year which ends 31 December 2014. If a supervisory board member retires during his or her period of office, insofar as no substitute member had been elected for the retiring supervisory board member, the election of a successor should take place in the next shareholders' meeting. Members of the supervisory board can be reelected.

The members and, if applicable, any substitute members of the supervisory board may effectively retire (*Amts niederlegung*) with one month notice from their office at any time by means of a declaration addressed to the Company represented by the management board or the chairperson of the supervisory board. The right to resign from office for good cause without notice remains unaffected. The shareholders' meeting can revoke the appointment of supervisory board members before the end of their period of office without stating reasons.

The supervisory board elects a chairperson and vice chairperson from among its members with a simple majority of votes cast. Should the chairperson of the supervisory board or the vice chairperson leave the supervisory board prior to the end of his or her term of office, the supervisory board must conduct new elections without undue delay for the remainder of the period of office of the leaving member. The supervisory board chairperson, or if he or she is unable to attend, his /her substitute, are obligated to convene and chair the meetings of the supervisory board.

The supervisory board is authorized to establish internal rules of procedure and to form committees from among its members and to assign them decision-making powers insofar as this is permitted by law. The supervisory board has amended the existing internal rules of procedure (*Geschäftsordnung*) in a resolution dated 30 September 2014. The supervisory board must hold at least two meetings per half a calendar year while at least two meetings shall be held in person. Meetings of the supervisory board are usually convened upon a two weeks' advance notice in text form. The day on which the notice is sent and the day of the supervisory board's meeting are not included in the calculation of this

period. In urgent cases, the chairperson can shorten the period and can also convene the supervisory board meeting via telephone.

The supervisory board has achieved quorum when all members have been given proper notice of the meeting and two thirds of the total number of its members, at least three members (including the chairperson or his/her deputy), participate in voting on a resolution, a member also takes part in the adoption of the resolution if he or she abstains from voting. The supervisory board decides with a simple majority of the votes cast, insofar as no other majority is stipulated by law. Any abstention from voting is not considered as a vote cast. In case of a tie, the chairperson of the supervisory board has the deciding vote. If the chairperson of the supervisory board does not take part in the voting, the vote of his /her substitute will decide.

The members of the Company's supervisory board and their current activities, as well as their current appointments as members of an administrative, management or supervisory body or partner in entities outside the Company and its subsidiaries, and their mandates as members of an administrative, management or supervisory body or as a partner of companies other than the Company and its subsidiaries which have been terminated within the past five years, are listed in the following overview:

<b>Name</b>	<b>Age</b>	<b>First appointed</b>	<b>Appointed until</b>	<b>Current professional activity outside of Probiodrug</b>	<b>Other positions</b>
Dr. Erich Platzer  Chairperson of the supervisory board	64	2007 (Chairperson since 2013)	2015 <sup>(1)</sup>	Investment Advisor and industry partner at HBM Partners AG, Zug, Switzerland; Business Angel with StartAngels and BioBAC, Switzerland	<b>Currently</b> Member of the board of PlatzerInvest AG, Basel, Switzerland; Managing director of Platzer Consult GmbH, Basel, Switzerland; Member of the board of Léman Micro Devices SA, Ecublens, Lausanne, Switzerland; Chairperson of the board of Advanced Osteotomy Tools (AOT) AG, Basel, Switzerland; Chairperson of the board of credentis ag, Windisch Switzerland; Member of the board of Viroblock SA, Plan-Les-Ouates, Switzerland; Member of the board of Cylene Pharmaceuticals Inc., San Diego, USA <b>Previously</b> Vice chairperson of mtm laboratories AG, Heidelberg; Member of the board of Nereus Pharmaceuticals Inc., San Diego, USA; Member of the board of Locus Pharmaceuticals Inc., BlueBell, USA Member of the board YouRehab AG, Zurich
Dr. Dinnies Johannes von der Osten  Vice chairperson of the supervisory board	53	2007 (Vice chairperson since then)	2015 <sup>(1)</sup>	CEO/Partner at GoodVent Beteiligungsmanagement GmbH & Co KG, Magdeburg, Germany; CEO of Cedrus Private Equity I GmbH & Co. KG, Magdeburg, Germany	<b>Currently</b> Member of the supervisory board of Market Logic Software AG, Berlin, Germany <b>Previously</b> Vice chairperson of the supervisory board of Codixx AG, Magdeburg, Germany; Vice chairperson of the supervisory board of Q-Cells AG, Thalheim-Wolfen, Germany; Vice chairperson of the supervisory board of ProBioGen AG, Berlin, Germany; Member of the supervisory board of CSG Solar AG, Thalheim, Germany; Member of the supervisory board of Curacyte AG, Munich, Germany

Dr. Jörg Neermann	47	2011	2015 <sup>(1)</sup>	Investment manager and partner at LSP Life Science Partners CEO of LSP Service Deutschland GmbH	<p><b>Currently</b> Member of the supervisory board of Curetis AG, Holzgerlingen, Germany; Member of the supervisory board of Affimed AG, Heidelberg, Germany; Member of the board of Eyesense AG, Basel, Switzerland; Member of the advisory board (<i>Beirat</i>) of Ventaleon GmbH, Gauting, Germany</p> <p><b>Previously</b> Chairperson of the supervisory board of 4SC AG, Martinsried, Germany; Chairperson of the board of Vivendy Ltd, Basel, Switzerland; Member of the advisory board (<i>Beirat</i>) of Activaero GmbH, Gemünden, Germany</p>
Prof. Dr. Georg Frank	72	2002	2015 <sup>(1)</sup>		<p><b>Currently</b> Chairperson of the supervisory board of Metropolregion Mitteldeutschland Management GmbH, Leipzig, Germany; Member of the supervisory board of Mitteldeutsche Flughafen AG, Leipzig, Germany</p>
Dr. Hubert Birner	48	2014	2015 <sup>(1)</sup>	Managing partner at TVM Capital GmbH, Munich, Germany; Managing partner at TVM Life Science Management GmbH, Munich, Germany; Managing partner at TVM Life Science Management Inc., Westmount, Canada	<p><b>Currently</b> Chairperson of the board of Argos Therapeutics Inc., Durham, USA; Member of the board of Proteon Therapeutics, Inc, Kansas City, USA Board of Directors SpePharm Holding, B.V, Amsterdam, the Netherlands</p> <p><b>Previously</b> Member of the board of directors of Horizon Pharma plc, Dublin, Ireland Member of the supervisory board of Evotec AG, Hamburg, Germany Member of the board of directors of Nitec Pharma AG, Reinach, Switzerland</p>
Dr. Olivier Litzka	46	2009	2015 <sup>(1)</sup>	Partner at Edmond de Rothschild Investment Partners, Paris, France	<p><b>Currently</b> Board of directors of JenaValve Inc., Irvine, USA; Supervisory board of Noxxon Pharma AG, Berlin, Germany; Supervisory Board of Supersonic Imagine, Aix-en-Provence, France; Board of Allecra Pharmaceuticals GmbH, Weil am Rhein, Germany</p> <p><b>Previously</b> Board of Sapiens Steering Brain Stimulation BV, Eindhoven, the Netherlands; Co-managing partner of Edmond de Rothschild Investment Partners, Paris, France; Board of Parvulus Medical SAS (up until the company's acquisition in August 2014); Board of Endosensen SA, Meyrin, (up until the company's acquisition in August 2013)</p>

<sup>(1)</sup> The supervisory board members are appointed until the end of the annual shareholder's meeting that resolves on the release (*Entlastung*) for the financial year ended 31 December 2014 (i.e. 2015).

The members of the supervisory board can be reached at the Company's address: Probiodrug AG, Weinbergweg 22, 06120 Halle, Germany. The members of the supervisory board are all of German nationality and, with the exception of Dr. Platzer, reside all in Germany. Dr. Platzer resides in Switzerland.

Dr. Erich Platzer is investment advisor and industry partner at HBM Partners AG, a venture capital company, which he co-founded in 2001. Further Dr. Platzer acts as a business angel with StartAngels and BioBAC advising and investing in early-stage companies, in particular with biochemical, pharmaceutical or similar businesses. He currently serves as chairperson of privately held biotech companies, AOT AG and credentis AG. Until 1999, Dr. Platzer worked in various functions in product development and marketing at F. Hoffmann - La Roche, Basel, most recently as Business Director Oncology supervising the therapeutic area of oncology and responsible for various strategic corporate partnerships. Prior to that, Dr. Platzer actively worked in academic medicine and research and had a key role in the team succeeding in the first purification of natural human G-CSF, a glycoprotein that stimulates the bone marrow to produce granulocytes and stem cells and release them into the bloodstream, which lead to the development of Neupogen<sup>®</sup> and Neulasta<sup>®</sup>. Dr. Platzer holds a MD from the Medical School of the University of Erlangen where he also earned his MD.Ph.D. (*Habilitation*).

Dr. Dinnies Johannes von der Osten is CEO /Partner at GoodVent Beteiligungsmanagement GmbH & Co KG and CEO of Cedrus Private Equity I GmbH & Co. KG. Between 1998 and 2007 he was sole managing director of IBG Beteiligungsgesellschaft Sachsen-Anhalt mbH. Before that Dr. von der Osten worked as managing director of VWM Waste und Beteiligungsgesellschaft mbH (1994-1997) after having been BDO of TechnoCommerz GmbH, a Treuhandanstalt owned company (1993-1994). Dr. von der Osten holds a Ph.D. in Economics from Free University of Berlin, a diploma in Economics from Ludwig-Maximilians-University, Munich and a Bachelor of Business and Engineering from TU Karlsruhe.

Dr. Jörg Neermann is partner at LSP Life Science Partners, a venture capital company focusing on financing life-science companies since 2007. He is responsible for sourcing, selecting and managing deals and portfolio companies in German speaking and other European areas. Until 2007, Dr. Neermann worked at DVC Deutsche Venture Capital, a subsidiary of Deutsche Bank AG, where he became partner and head of Life Science in 2000 and managing partner in 2002. Since 2005, Dr. Neermann has been active at Dicke & Wicharz GmbH, Neuss, Germany, as a top management consultant. Until 1998 he worked for Atlas Venture, a venture capital company. Dr. Neermann holds a master's degree in Biotechnology from TU Braunschweig and received his Ph.D. in 1996.

Prof. Dr. Georg Frank was the Managing Director of Bayer Bitterfeld GmbH. From 1973 to 2005 he had several Executive Management positions at Bayer AG in Germany and in the U.S. including director of research and development and director of strategic development of the self-medication division. He holds a master's degree in Biology and a Ph.D. in chemistry and is an honorary professor in chemistry at the University of Halle (Saale).

Dr. Hubert Birner is managing partner at TVM Capital GmbH, Munich, Germany, at TVM Life Science Management GmbH, and TVM Life Science Management Inc. Before that he was Head of Business Development Europe and Director of Marketing for Germany at Zeneca Group PLC. Dr. Birner joined Zeneca Group PLC from McKinsey & Company's European Health Care and Pharmaceutical practice. As a management consultant, he gained experience in research and development management, marketing and sales, and joint venture structuring and business development. Dr. Birner was also an assistant professor for biochemistry at the Ludwig-Maximilians-University, Munich. In this capacity, he directed various research projects for large pharmaceutical companies. Dr. Birner holds an MBA from Harvard Business School and a Ph.D. in biochemistry from Ludwig-Maximilians-University, Munich.

Dr. Olivier Litzka has been a partner at Edmond de Rothschild Investment Partners (EdRIP) since 2006. He is responsible for investments primarily in European biotechnology and medtech companies as well as some investments in the United States. Before that Dr. Litzka worked six years for 3i's life science venture capital practice, where he served on the boards of several portfolio companies and made a range of international investments. Until 2000, he worked as a strategy consultant with Mercer Management Consulting for several years. Dr. Litzka holds a Ph.D. in molecular microbiology from the Institute for Microbiology at the University of Munich.

The members of the supervisory board have not been convicted in relation to fraudulent offences for at least the previous five years nor have they been involved in any bankruptcies, receiverships or liquidations except as follows:

Dr. Erich Platzer was involved in liquidation proceedings for Locus Pharmaceuticals Inc. and Nereus Pharmaceuticals Inc. Both companies were orderly wind downs, i.e. all assets of the respective companies were sold, all business activity ended and the respective companies were dissolved. In case of Nereus Pharmaceuticals Inc. earnout payments to shareholders are still outstanding. Dr. Jörg Neermann was involved in liquidation proceedings for Vivendy Ltd which was orderly liquidated in 2013 after all assets had been sold and the purpose of business was eliminated.

Furthermore, the members of the supervisory board have not been involved in any official public incrimination and /or sanctions by statutory or regulatory authorities (including designated professional bodies) nor have they been disqualified by a court from acting as a member of administrative, management or supervisory bodies of an issuer or from acting in the management or conduct of the affairs of any issuer for at least the previous five years.

### ***Supervisory board committees***

Pursuant to Article 11 (1) of the Company's Articles of Association, the supervisory board may form committees from among its members. According to the supervisory board's rules of procedure (section 8.1) the supervisory board shall form an audit committee and a compensation committee. Other committees may be formed, if necessary. The supervisory board's decision-making authority may be delegated to these committees to the extent permitted by law and the Articles of Association. In case of delegation of the decision-making authority such committee has at least three members; in each committee one of its members is elected chairperson of the committee by the members of the committee, unless the chairperson of the committee is named by the supervisory board. In case of a tie, the vote of the chairperson of the respective committee prevails.

The following committees have been established by the supervisory board:

The audit committee (*Prüfungsausschuss*) is concerned, in particular, with the preparation of resolutions of the supervisory board on the approval of certain transactions of the management board requiring the approval of the supervisory board, issues of risk management, especially the oversight of the Company's accounting processes and the effectiveness of its internal controls and auditing and the preparation of the supervisory board's resolution on the adoption of the annual financial statements and the consolidated financial statements. In course of the preparation of the resolution on the adoption of the annual financial statements and the consolidated financial statements the audit committee shall carry out an advanced examination of these statements, deal with the required independence of the auditor and prepare the conclusion of audit agreements with the auditor, including the determination of the focus points for the audit and the respective fee agreements.

The current members of the audit committee are Dr. Birner, Dr. Neermann and Dr. von der Osten as chairperson of the audit committee.

In accordance with Section 107 (4) of the German Stock Corporation Act (*Aktiengesetz*) the Company must have at least one independent member of the audit committee with experience in the fields of accounting or auditing within the meaning of Section 100 (5) of the German Stock Corporation Act (*Aktiengesetz*). Members of the supervisory board are considered to be independent if such members have no business or personal relations with the Company, its management board, controlling shareholders or related parties which could cause a substantial and not merely temporary conflict of interests. Regarding the supervisory board and the audit committee of the Company, all current members are considered to possess the respective expertise and independence.

The compensation committee (*Vergütungsausschuss*) shall prepare decisions of the supervisory board concerning personnel, in particular with respect to the conclusion, amendment and termination of employment contracts with members of the management board and their respective remuneration.

The current members of the compensation committee are Dr. Litzka, Prof. Dr. Frank and Dr. Platzer as chairperson of the compensation committee.

### ***Compensation of supervisory board members***

In the last business year ended 31 December 2013, the compensation of the members of the supervisory board amounted to TEUR 24. The members of the supervisory board received expense allowances and are included in the D&O insurance policy and, in the case of Prof. Dr. Georg Frank and Dr. Claus Braestrup, who resigned from the board as of 28 February 2013, received an annual compensation.

There are no agreements in place under which the members of the supervisory board would be entitled to a contractual compensation in the event of the termination of their service agreements.

### ***Phantom Stock Program 2008***

On 30 June 2008, the shareholders' meeting resolved upon the introduction of a phantom stock program for Prof. Dr. Georg Frank (Phantom Stock Program 2008) consisting of phantom stocks calculated on the value of preference shares Series A (preference phantom stock) and phantom stocks calculated on the value of common shares (common phantom stock). Under the Phantom Stock Program 2008, 4,500 preference phantom stocks and 3,000 common phantom stocks were issued to Prof. Dr. Frank.

The preference phantom stock entitles Prof. Dr. Frank to a cash payment equal to the difference between the exercise price of the phantom stock and the price of a preference share Series A share upon the occurrence of a relevant trigger event. The common phantom stock entitles to a cash payment equal to the difference between the exercise price of the phantom stock and the price of a common share upon the occurrence of a relevant trigger event. The phantom stock is gradually forfeited in case of a termination of the employment as defined in the respective terms governing the phantom stock within four years (vesting period). Generally, the exercise price for preference phantom stock is EUR 7.03 and for common phantom stock is EUR 3.96, as adjusted in accordance with the terms governing the respective phantom stock (exercise price).

Prof. Dr. Frank is entitled to a cash payment if (i) the phantom stock is not forfeited, (ii) a trigger event occurs, i.e. an IPO or a trade sale, merger or asset deal, (iii) the agreed or applicable lock up period has expired, and (iv) the value of the preference shares Series A (or of the class of shares these have been converted into) is at least 20% above the execution price of the preference shares (or of the class of shares these have been converted into).

Upon registration of the capital decrease with the commercial register on 17 September 2014 by which the shares of the Company were consolidated in the proportion 6:1 (see *DESCRIPTION OF THE SHARE CAPITAL OF THE COMPANY AND APPLICABLE REGULATIONS – DEVELOPMENT OF THE COMPANY'S SHARE CAPITAL*), the number of phantom stocks as well as the exercise price were automatically adjusted according to the terms and conditions of the Phantom Stock Program 2008, i.e. the number of phantom stocks decreased by the factor 6, whereby the exercise price was increased by the same factor.

### ***Shareholdings of supervisory board members***

As of the date of this Prospectus

- Dr. Erich Platzer holds 140,692 shares in the Company via PlatzerInvest AG;
- Prof. Dr. Georg Frank holds 24,147 shares and Phantom Stocks (2008) in the amount of EUR 1,250.00;
- Dr. Jörg Neermann holds no shares in the Company;
- Dr. Hubert Birner holds no shares in the Company;
- Dr. Dinnies Johannes von der Osten holds no shares in the Company;
- Dr. Olivier Litzka holds no shares in the Company.

### **Senior management**

Because of its organizational structure, Probiodrug AG has no senior management.

### **Shareholders' meeting**

#### ***Convening meetings and announcement of the agenda***

Article 16 (2) of the Company's Articles of Association provides that the Company must hold the shareholders' meeting at its registered office or in a city in Germany having a stock exchange or in Amsterdam, the Netherlands. According to Article 16 (1) of the Company's Articles of Association, which is in compliance with Section 120 (1) German Stock Corporation Act (*Aktiengesetz*), the ordinary shareholders' meeting must take place within the first eight months of the financial year. The shareholders' meeting is generally convoked by the management board at least 30 days prior to the day by the end of which shareholders must register to attend the shareholders' meeting by publication in the Federal Gazette (*Bundesanzeiger*). The day of convocation and the day by which shareholders must register are not included. Shareholders are entitled to participate in the shareholders' meeting and to exercise voting rights if they have submitted a timely registration to the management board at the registered office of the Company. A confirmation of their respective bank in relation to their shareholding can be provided in text form. A minimum of six days must remain free between receipt of the registration and the date of the shareholders' meeting. The management board can set a shorter period.

The shareholders' meeting may also be convoked extra ordinarily by the supervisory board if it is necessary for the benefit of the Company. According to Section 122 of the German Stock Corporation Act (*Aktiengesetz*), shareholders holding 5% of the share capital may request a shareholders' meeting and present their request and the reason for their request to the management board. In addition, the respective shareholders have to prove that they have held their shares

for at least three months and that they will hold their shares until a decision with respect to their request is taken. If their request is denied, a court may authorize the shareholders who filed the request to convoke the shareholders' meeting. The convocation or the notification has to refer to such authorization.

### ***Competence and resolutions***

In accordance with Article 18 (1) of the Company's Articles of Association, each non-par value bearer share confers one vote. Unless otherwise stipulated by mandatory statutory provisions, resolutions are adopted by a simple majority of the votes cast, or, if a capital majority is prescribed by law in addition to the majority of votes, by a simple majority of the share capital represented in the shareholders' meeting adopting the resolution. The resolutions which, in addition to the majority of votes, require a prescribed majority of 75% of the share capital represented on taking the resolution generally include:

- the creation of authorized or contingent capital;
- exclusion of subscription rights in the case of a capital increase;
- capital increases;
- capital decreases;
- the dissolution of the Company, as well as continuation of the dissolved Company;
- execution of an amendment to intercompany agreements (such as, for example, controlling agreements and profit /loss transfer agreements);
- transfer of the Company's entire assets, or of almost all of its assets;
- conversions (mergers, spin-offs, changes of legal form) and integration under the German Reorganization Act (*Umwandlungsgesetz*); and
- any change in the Company's objects or other amendments of the Company's Articles of Association.

Neither German law nor the Company's Articles of Association restrict the right of shareholders not domiciled in Germany to hold shares or to exercise the voting rights associated with their shares.

### ***Right to participate in the shareholders' meeting and shareholders' rights at the shareholders' meeting***

Each non-par value bearer share carries one voting right in the shareholders' meeting. Pursuant to Section 71b of the German Stock Corporation Act (*Aktiengesetz*), the Company is not entitled to any voting rights for own shares.

Each shareholder has the right to speak and to ask questions in the shareholders' meeting which is subject to certain restrictions, in particular with respect to confidentiality concerns of the Company and an orderly and expeditious course of the shareholders' meeting. According to Article 19 (4) of the Company's Articles of Association, the chairperson of the shareholders' meeting is authorized to impose reasonable time restrictions on the shareholders' right to speak and to ask questions. In doing so, the chairperson of the shareholders' meeting should be guided by the goal of completing the shareholders' meeting within a reasonable and appropriate period of time.

### ***Potential Conflicts of interest /Family relationships***

There are currently no conflicts of interest and no potential conflicts of interest between the duties of the members of the management board or the supervisory board towards the Company and their private interests or other duties. In particular, there are no consulting or other service agreements between members of the management board, the supervisory board, or the companies in which members of the management board or the supervisory board hold not only insubstantial participations on the one hand, and the Company and its subsidiary on the other.

There are no family relationships between the members of the management board or the members of the supervisory board or between a member of the management board and a member of the supervisory board.

## Declaration regarding corporate governance

The German Corporate Governance Code (*Deutscher Corporate Governance Kodex*, the “Code”) contains suggestions (*Anregungen*) and recommendations (*Empfehlungen*) regarding the management and monitoring of companies listed on a German stock exchange.

In accordance with Section 161 of the German Stock Corporation Act (*Aktiengesetz*), the management board and supervisory board of a listed stock corporation under German law (*börsennotierte Aktiengesellschaft*) must declare once per year that the recommendations of the “Government Commission on the German Corporate Governance Code” published by the German Federal Ministry of Justice in the Federal Gazette have been met and are being met, or which recommendations have not been applied or are not being applied and why not. There is no legal obligation to comply with the recommendations and support of the Code. The disclosure must be made permanently accessible to shareholders.

The Code, adopted in February 2002 and last amended on 24 June 2014 includes, in addition to a partial repetition of statutory provisions, recommendations and suggestions for the management and supervision of listed German companies with regard to shareholders and shareholders’ meetings, management board and supervisory board, transparency, accounting and audit of financial statements. Companies may deviate from recommendations insofar as they disclose the respective deviation. Deviation from the suggestions contained in the Code, by contrast, need not be disclosed. As a rule, the management board and supervisory board intend to follow the recommendations contained in the applicable version of the Code.

After becoming listed during the current financial year the Company will submit a declaration in accordance with Section 161 of the German Stock Corporation Act (*Aktiengesetz*) and make it permanently accessible to the shareholders.

Prior to the intended Listing, the Company is not subject to the obligation to render a declaration as to the compliance with the Code. However, as of the date of this Prospectus, the Company complies with, and intends to comply after the Listing, with all recommendations in the Code except for the following:

The Code recommends in section 3.8 that in case a D&O insurance for the members of the management board, a retained amount (*Selbstbehalt*) shall be agreed upon of at least 10% of the respective claim for damages and up to a maximum of the amount of one and a half times the fixed annual compensation of the management board member. The same retained amount shall be agreed upon in any D&O insurance for the members of the supervisory board. As the members of the supervisory board do currently – with the exception of Prof. Frank – not receive remuneration, a retained amount corresponding to the one applicable for the members of the management board is considered to be disproportionate and therefore, such corresponding retained amount for the D&O insurance of the members of the supervisory board is not provided for.

The Code recommends in section 4.2.3 that the amount of compensation shall be capped, both overall and for individual compensation components. The members of the management board have been granted phantom stocks which can be exercised upon the Listing. These phantom stocks do not provide for a maximum limit. Furthermore, the members of the management board have been granted stock options that also do not provide for a maximum amount in case of the exercise of these options. Apart from that, the service agreements between the Company and the members of its management board provide for a maximum limit.

The Code also recommends in section 4.2.3 that in concluding management board contracts, care shall be taken to ensure that payments made to a management board member on premature termination of his/her contract, including fringe benefits, do not exceed the value of two years’ compensation (severance pay cap). The current management board contracts do not provide for a severance pay cap. In connection with the transformation of the Company, the Company is focussed on ensuring the future cooperation with the management board members. Regarding the uncertainty as to the future shareholder structure and the further development of the Company following the Listing, it does not seem appropriate to agree with the management board members on provisions that deviate from the existing management board contracts.

The Code recommends in section 5.1.2 that the supervisory board shall respect diversity regarding the composition of the management board and shall in particular aim for an appropriate proportion of female members. With Dr Inge Lues, the supervisory board has appointed a female member of the management board as of 1 November 2014 leading to a quota of 1/3 of female members in the management board. However, the Company does not consider fixed quotas to promote diversity in case no sufficiently qualified members can be identified and therefore reserves the right to deviate from this recommendation.

The Code recommends in section 5.4.1 that the supervisory board shall name precise objectives regarding its composition. As objectives for its constitution, the supervisory board decided that members should be experienced in the

field of pharmaceutical research, the research into the Alzheimer's disease and similar diseases as well as in the public capital markets. In addition, due to the alignment of the company the members should have U.S. experience. Furthermore, the Code recommends in the same section that these precise objectives shall, in particular, stipulate an appropriate degree of female representation. Given the qualifications required for members of the supervisory board and the difficulties to find suitable candidates connected therewith, the supervisory board does not consider fixed quotas to promote diversity.

The Code recommends in section 5.4.6 that the remuneration of the members of the supervisory board shall take into account the function of a chairperson or deputy chairperson as well as the membership in committees of the supervisory board. With the exception of Prof. Frank, members of the supervisory board do currently not receive a remuneration. Therefore, neither the chairperson, nor the deputy chairperson or the chairpersons of the committees will receive an increased remuneration in this case.

## TAXATION OF SHAREHOLDERS IN GERMANY

Shareholders are generally subject to German taxation with their German source income, in particular dividend distributions and capital gains.

The following section summarizes certain material German tax principles that may become relevant when holding or transferring the Company's shares. This section is not meant to be a comprehensive or complete description of all German tax aspects that may be relevant for shareholders. The summary is based on the German tax law applicable as of the date of this Prospectus. It should be noted that the law may change following the issuance of this Prospectus and that such changes may have retroactive effect.

**The following generally summarizes the material German tax principles of purchasing, owning and transferring of shares. This discussion is intended only as a descriptive summary and does not purport to be a comprehensive or complete analysis or listing of all potential tax effects of the purchase, ownership or disposition of shares. All of the following is subject to change. Such changes could apply retroactively and could affect the consequences described below.**

**Shareholders are advised to consult their own tax advisers with regard to the application of German tax law to their particular situations, in particular with respect to the procedure to be complied with to obtain a relief of withholding tax on dividends and on capital gains (*Kapitalertragsteuer*) and with respect to the influence of double tax treaty provisions, as well as any tax consequences arising under the laws of any state, local or other foreign jurisdiction.**

**This summary does not constitute a legal opinion or tax advice. Potential purchasers of the Company's shares are urged to consult their own tax advisers regarding the tax consequences of the purchase, ownership and disposition of shares in light of their particular circumstances.**

### Taxation of dividends

#### *Withholding tax on dividends*

Generally, dividends distributed from the Company to its shareholders are subject to withholding tax, subject to exemptions (e.g. repayments of capital from the tax equity account (*steuerliches Einlagekonto*)), as the case may be. The withholding tax rate is 25% plus 5.5% solidarity surcharge (Solidaritatzuschlag) thereon (in total 26.375%) of the gross dividend approved by the ordinary shareholders' meeting. If the dividends paid to the shareholders of the Company are subject to withholding tax in Germany, the withholding tax is withheld and passed on for the account of the shareholders, by a domestic branch of a domestic or foreign credit or financial services institution (*Kredit- und Finanzdienstleistungsinstitut*), by the domestic securities trading Company (*inländisches Wertpapierhandelsunternehmen*) or a domestic securities trading bank (*inländische Wertpapierhandelsbank*) which keeps and administers the shares and disburses or credits the dividends or disburses the dividends to a foreign agent, or by the securities custodian bank to which the shares were entrusted for collective custody if the dividends are distributed to a foreign agent by such securities custodian bank (hereinafter in all cases, the "**Dividend Paying Agent**"). The Company does not assume any responsibility for the withholding of the withholding tax.

In principle, such withholding tax is levied and withheld irrespective of whether and to what extent the dividend distribution is taxable at the level of the shareholder and whether the shareholder resides inside or outside Germany.

Certain exceptions may apply to corporations resident in another European Union member state to which the EU Parent/Subsidiary Directive applies (EU Directive 2011/96/EU of the Council of November 30, 2011, as amended). A partial exemption from withholding tax may also be available under the respective double tax treaty if Germany and the shareholder's country of residence have entered into a double tax treaty. In addition, according to German tax law, corporations resident outside of Germany may be subject to a reduced withholding tax under certain conditions (irrespective of any double tax treaty). In this case, the withholding tax in excess of 15.825% (including solidarity surcharge) will be refunded; a further reduction of withholding tax under the applicable double tax treaty or pursuant to the EU Parent /Subsidiary Directive is possible. However, the applicable withholding tax relief will be granted only if the restrictive preconditions of the German anti-avoidance rules (so-called Directive Override or Treaty Override) pursuant to Section 50d (3) of the German Income Tax Act (*Einkommensteuergesetz*) have been fulfilled. In order to receive such withholding tax relief the shareholder must apply to the German Federal Tax Office (*Bundeszentralamt für Steuern*, [www.bzst.de](http://www.bzst.de)), An der Kuppe 1, 53225 Bonn, Germany. Application forms may be obtained from the German Federal Tax Office as well as from German embassies and consulates.

For individual or corporate shareholders tax resident outside Germany not holding the Company's shares through a permanent establishment (*Betriebsstätte*) in Germany or as business assets (*Betriebsvermögen*) for which a permanent

representative (*ständiger Vertreter*) has been appointed in Germany, the remaining and paid withholding tax (if any) is final (i.e. not refundable) and, in principle, settles the shareholder's limited tax liability in Germany. For individual or corporate shareholders tax resident in Germany (that is, for example, shareholders whose residence, domicile, registered office or place of management is located in Germany) holding their shares as business assets, as well as for shareholders tax resident outside of Germany holding their shares through a permanent establishment in Germany or as business assets for which a permanent representative has been appointed in Germany, the withholding tax withheld (including solidarity surcharge) is credited against the shareholder's personal income tax or corporate income tax liability in Germany. Any withholding tax (including solidarity surcharge) in excess of such tax liability is refunded. For individual shareholders tax resident in Germany holding the Company's shares as private assets, the withholding tax is, in principle, a final tax (*Abgeltungsteuer*), subject to certain exceptions (see the following section).

#### ***Taxation of dividend income of shareholders tax resident in Germany holding the Company's shares as private assets***

For individual shareholders (natural persons) resident in Germany holding the Company's shares as private assets, dividends are subject to a flat rate tax withheld at source (*Abgeltungsteuer*). Accordingly, dividend income will be taxed at a flat tax rate of 25% plus 5.5% solidarity surcharge thereon (in total 26.375%) and, as the case may be, church tax. With regard to dividends received after December 31, 2014 an automatic procedure for deduction of church tax by way of withholding will apply to shareholders being subject to church tax unless the shareholder has filed a blocking notice (*Sperrvermerk*) with the German Federal Tax Office (details related to the computation of the concrete tax rate including church tax are to be discussed with the individual tax advisor of the relevant shareholder). Except for an annual lump sum savings allowance (*Sparer-Pauschbetrag*) of up to EUR 801 (for individual filers) or up to EUR 1,602 (for married couples and for partners in accordance with the registered partnership law (*Gesetz über die Eingetragene Lebenspartnerschaft*) filing jointly), private individual shareholders will not be entitled to deduct expenses incurred in connection with the capital investment from their dividend income.

The income tax owed for the dividend income is in general satisfied by the withholding tax withheld by the Dividend Paying Agent. However, there are certain exceptions, according to which the final withholding tax is not applicable. *Inter alia*, if the flat tax results in a higher tax burden as opposed to the private shareholder's individual tax rate, the private shareholder may opt for taxation at his individual personal income tax rate. In that case, the final withholding tax will be credited against the income tax. However, pursuant to the German tax authorities, private shareholders are nevertheless not entitled to deduct expenses incurred in connection with the capital investment from their income, different views are taken by scholars in this respect. The option may be exercised only for all capital income from capital investments received in the relevant assessment period uniformly and married couples as well as partners in accordance with the registered partnership law filing jointly may only jointly exercise the option.

Exceptions from the flat rate tax withheld at source (*Abgeltungsteuer*) may apply – i.e. only upon application – for shareholders who have a shareholding of at least 25% in the Company and for shareholders who have a shareholding of at least 1% in the Company and work for the Company in a professional capacity. In such a case, the same rules apply as for sole proprietors holding the shares as business assets (see below “– TAXATION OF DIVIDEND INCOME OF SHAREHOLDERS TAX RESIDENT IN GERMANY HOLDING THE COMPANY'S SHARES AS BUSINESS ASSETS – SOLE PROPRIETORS”).

#### ***Taxation of dividend income of shareholders tax resident in Germany holding the Company's shares as business assets***

If a shareholder holds the Company's shares as business assets, the taxation of the dividend income depends on whether the respective shareholder is a corporation, a sole proprietor or a partnership:

##### *Corporations*

Dividend income of corporate shareholders is generally exempt from corporate income tax, provided that the incorporated entity holds a direct participation of at least 10% in the registered share capital of the Company at the beginning of the calendar year in which the dividends are paid. The acquisition of a participation of at least 10% in the course of a calendar year is deemed to have occurred at the beginning of such calendar year for the purpose of this rule. Participations in the share capital of the Company which a corporate shareholder holds through a partnership, including co-entrepreneurships (*Mitunternehmerschaften*), are attributable to such corporate shareholder only on a pro rata basis at the ratio of the interest share of the corporate shareholder in the assets of the relevant partnership. However, 5% of the tax exempt dividends are deemed to be non-deductible business expenses for tax purposes and therefore are subject to corporate income tax (plus solidarity surcharge) and trade tax; i.e. tax exemption of 95%. Business expenses incurred in connection with the dividends received are entirely tax deductible.

For trade tax purposes the entire dividend income is subject to trade tax (i.e. the tax exempt dividends must be added back when determining the trade taxable income), unless the corporation shareholder holds at least 15% of the Company's registered share capital at the beginning of the relevant tax assessment period (*Erhebungszeitraum*).

Special regulations may apply which may abolish the 95% tax exemption, if the Company's shares are held by a credit institution, a financial service institution or a financial enterprise within the meaning of the German Banking Act (*Kreditwesengesetz*) as well as by a life insurance Company, a health insurance Company or a pension fund.

Repayments of capital from the tax equity account (*steuerliches Einlagekonto*) are generally, subject to certain prerequisites, not taxable.

#### *Sole proprietors*

For sole proprietors (natural persons) resident in Germany holding the Company's shares as business assets dividends are subject to the partial income rule (*Teileinkünfteverfahren*). Accordingly, only 60% of the dividend income will be taxed at his /her individual personal income tax rate plus 5.5% solidarity surcharge thereon and church tax (if applicable) and 60% of the business expenses related to the dividend income are deductible for tax purposes. In addition, the dividend income is entirely subject to trade tax if the Company's shares are held as business assets of a permanent establishment in Germany within the meaning of the German Trade Tax Act (*Gewerbesteuer*gesetz), unless the shareholder holds at least 15% of the Company's registered share capital at the beginning of the relevant assessment period. The trade tax levied, depending on the applicable municipal trade tax rate and the individual tax situation, may partly or entirely be credited against the shareholder's personal income tax liability. Repayments of capital from the tax equity account (*steuerliches Einlagekonto*) are generally, subject to certain prerequisites, not taxable.

#### *Partnerships*

In case Company's shares are held by a partnership, the partnership itself is not subject to corporate income tax or personal income tax. In this regard, corporate income tax or personal income tax as well as solidarity surcharge are levied only at the level of the partner with respect to their relevant part of the profit and depending on their individual circumstances.

If the partner is a corporation, the dividend income will be subject to corporate income tax plus solidarity surcharge (see “– *TAXATION OF DIVIDENDS – TAXATION OF DIVIDEND INCOME OF SHAREHOLDERS TAX RESIDENT IN GERMANY HOLDING THE COMPANY'S SHARES AS BUSINESS ASSETS – CORPORATIONS*”).

If the partner is a sole proprietor (natural person), the dividend income will be subject to the partial income rule (see “– *TAXATION OF DIVIDENDS – TAXATION OF DIVIDEND INCOME OF SHAREHOLDERS TAX RESIDENT IN GERMANY HOLDING THE COMPANY'S SHARES AS BUSINESS ASSETS – SOLE PROPRIETORS*”).

The dividend income is subject to trade tax at the level of the partnership (provided that the partnership is generally liable to trade tax), unless the partnership holds at least 15% of the Company's registered share capital at the beginning of the relevant assessment period, in which case the dividend income is exempt from trade tax. However, if and to the extent a corporation is partner, the tax base is only reduced to 5%.

If a partner is a natural person, depending on the applicable municipal trade tax rate and the individual tax situation, the trade tax paid at the level of the partnership may partly or entirely be credited against the partner's personal income tax liability.

In case of a corporation being a partner, special regulations will apply with respect to credit institutions, financial service institutions or financial enterprises within the meaning of the German Banking Act (*Kreditwesengesetz*) or life insurance companies, health insurance companies or pension funds.

Thus, the concrete trade tax charge, if any, at the level of the partnership depends on the shareholding quota of the partnership and the nature of the partners (e.g. individual or corporation).

#### ***Taxation of dividend income of shareholders tax resident outside of Germany***

For foreign individual or corporate shareholders tax resident outside of Germany not holding the Company's shares through a permanent establishment in Germany or as business assets for which a permanent representative has been appointed in Germany, the deducted withholding tax (possibly reduced by way of a tax relief under a double tax treaty or domestic tax law, e.g. in connection with the EU Parent/Subsidiary Directive) is final (i.e. not refundable) and, in principle, settles the shareholder's limited tax liability in Germany. In some cases, the shareholder is entitled to apply for a withholding tax refund or exemption.

In contrast, individual or corporate shareholders tax resident outside of Germany holding the Company's shares through a permanent establishment in Germany or as business assets for which a permanent representative has been appointed in Germany are subject to the same rules as applicable (and described above) to shareholders resident in Germany holding the shares as business assets. The withholding tax withheld (including solidarity surcharge) is credited against the shareholder's personal income tax or corporate income tax liability in Germany.

## **Taxation of capital gains**

### ***Withholding tax on capital gains***

Capital gains realized on the disposal of the Company's shares are only subject to withholding tax in certain limited cases and if a German branch of a German or foreign credit or financial institution, a German securities trading Company or a German securities trading bank stores or administers or carries out the sale of the Company's shares and pays or credits the capital gains. In those cases the institution (and not the Company) is required to deduct the withholding tax at the time of payment for the account of the shareholder and has to pay the withholding tax to the competent tax authority.

### ***Taxation of capital gains realized by shareholders tax resident in Germany holding the Company's shares as private assets***

For individual shareholders (natural persons) resident in Germany holding the Company's shares as private assets, capital gains realized on the disposal of the Company's shares are in principle subject to final withholding tax. Accordingly, capital gains will be taxed at a flat tax rate of 25% plus 5.5% solidarity surcharge thereon (in total 26.375%) and, as the case may be, church tax. With regard to capital gains received after December 31, 2014 an automatic procedure for deduction of church tax by way of withholding will apply to shareholders being subject to church tax unless the shareholder has filed a blocking notice (*Sperrvermerk*) with the German Federal Tax Office (details related to the computation of the concrete tax rate including church tax are to be discussed with the individual tax advisor of the relevant shareholder). The taxable capital gain is calculated by deducting the acquisition costs of the shares and the expenses directly related to the disposal from the proceeds of the disposal. Apart from that, except for an annual lump sum savings allowance (*Sparer-Pauschbetrag*) of up to EUR 801 (for individual filers) or up to EUR 1,602 (for married couples and for partners in accordance with the registered partnership law (*Gesetz über die Eingetragene Lebenspartnerschaft*) filing jointly), private individual shareholders will not be entitled to deduct expenses incurred in connection with the capital investment from their capital gain.

There are certain exceptions according to which the final withholding tax is not applicable. *Inter alia*, if the flat tax results in a higher tax burden as opposed to the private shareholder's individual tax rate the private shareholder may opt for taxation at his individual personal income tax rate. In that case, the withholding tax (including solidarity surcharge) withheld will be credited against the income tax. However, pursuant to the German tax authorities the private shareholders are nevertheless not entitled to deduct expenses incurred in connection with the capital investment from their income, different views are taken by scholars in this respect. The option may be exercised only for all capital income from capital investments received in the relevant assessment period uniformly and married couples as well as for partners in accordance with the registered partnership law filing jointly may only jointly exercise the option.

Capital losses arising from the sale of the Company's shares may only be offset against other capital gains resulting from the disposition of the Company's shares or shares in other stock corporations during the same calendar year. Offsetting of overall losses with other income (e.g. business or rental income) and other capital income is not possible. Such losses are to be carried forward and to be offset against positive capital gains deriving from the sale of shares in stock corporations in future years.

The final withholding tax will not apply if the seller of the shares or in case of gratuitous transfer, its legal predecessor has held, directly or indirectly, at least 1% of the Company's registered share capital at any time during the five years prior to the disposal. In that case capital gains are subject to the partial income rule. Accordingly, only 60% of the capital gains will be taxed at his individual personal income tax rate plus 5.5% solidarity surcharge thereon and church tax (if applicable); 60% of the business expenses related to the capital gains are deductible for tax purposes. The withholding tax withheld (including solidarity surcharge) will be credited against the shareholder's personal income tax liability in Germany.

### ***Taxation of capital gains realized by shareholders tax resident in Germany holding the Company's shares as business assets***

If a shareholder holds the Company's shares as business assets, the taxation of capital gains realized on the disposal of such shares depends on whether the respective shareholder is a corporation, a sole proprietor or a partnership:

### *Corporations*

Capital gains realized on the disposal of the Company's shares by a corporate shareholder are generally exempt from corporate income tax and trade tax. However, 5% of the tax exempt capital gains are deemed to be non-deductible business expenses for tax purposes and therefore are subject to corporate income tax (plus solidarity surcharge) and trade tax; i.e. tax exemption of 95%. Business expenses incurred in connection with the capital gains are entirely tax deductible.

Investors should note that there is a political discussion pending pursuant to which a capital gain derived by a corporate shareholder from the disposal of shares shall no longer be effectively 95% exempt from corporate income tax (and solidarity surcharge) and trade tax if the corporate shareholder holds less than 10% in the registered share capital of the Company. At the time of this Prospectus, details have not yet been made available.

Capital losses incurred upon the disposal of the Company's shares or other impairments of the Company's share value are not tax deductible. A reduction of profit is also defined as any losses incurred in connection with a loan or security in the event the loan or the security is granted by a shareholder or by a related party thereto or by a third person with the right of recourse against the before mentioned persons and the shareholder holds directly or indirectly more than 25% of the Company's registered share capital.

Special regulations may apply, if the Company's shares are held by a credit institution, a financial service institution or a financial enterprise within the meaning of the German Banking Act (*Kreditwesengesetz*) as well as by a life insurance company, a health insurance company or a pension fund.

### *Sole proprietors*

If the Company's shares are held by a sole proprietor, capital gains realized on the disposal of the Company's shares are subject to the partial income rule. Accordingly, only 60% of the capital gains will be taxed at his /her individual personal income tax rate plus 5.5% solidarity surcharge thereon and church tax (if applicable) and 60% of the business expenses related to the dividend income are deductible for tax purposes. In addition, 60% of the capital gains are subject to trade tax if the Company's shares are held as business assets of a permanent establishment in Germany within the meaning of the German Trade Tax Act (*Gewerbesteuerengesetz*). The trade tax levied, depending on the applicable municipal trade tax rate and the individual tax situation, may partly or entirely be credited against the shareholder's personal income tax liability.

### *Partnerships*

In case the Company's shares are held by a partnership, the partnership itself is not subject to corporate income tax or personal income tax (since partnerships qualify as transparent for German tax purposes). In this regard, corporate income tax or personal income tax as well as solidarity surcharge are levied only at the level of the partner with respect to their relevant part of the profit and depending on their individual circumstances.

If the partner is a corporation, the capital gains will be subject to corporate income tax plus solidarity surcharge (see "*TAXATION OF CAPITAL GAINS — TAXATION OF CAPITAL GAINS REALIZED BY SHAREHOLDERS TAX RESIDENT IN GERMANY HOLDING THE COMPANY'S SHARES AS BUSINESS ASSETS — CORPORATIONS*"). Trade tax will be levied additionally at the level of the partner insofar as the relevant profit of the partnership is not subject to trade tax at the level of the partnership. However, with respect to both corporate income and trade tax, the 95%-exemption rule as described above should apply.

If the partner is a sole proprietor (natural person), the capital gains are subject to the partial income rule (see "*TAXATION OF CAPITAL GAINS — TAXATION OF CAPITAL GAINS REALIZED BY SHAREHOLDERS TAX RESIDENT IN GERMANY HOLDING THE COMPANY'S SHARES AS BUSINESS ASSETS — SOLE PROPRIETORS*").

In addition, if the partnership is liable to trade tax, 60% of the capital gains are subject to trade tax at the level of the partnership, to the extent the partners are individuals, and 5% of the capital gains are subject to trade tax, to the extent the partners are corporations. However, if a partner is a natural person, depending on the applicable municipal trade tax rate and the individual tax situation, the trade tax paid at the level of the partnership may partly or entirely be credited against the partner's personal income tax liability.

With regard to corporate partners, special regulations may apply if they are credit institutions, financial service institutions or financial enterprises within the meaning of the German Banking Act or life insurance companies, health insurance companies or pension funds.

### ***Taxation of capital gains realized by shareholders tax resident outside of Germany***

Capital gains realized on the disposal of the Company's shares by a shareholder tax resident outside of Germany are subject to German taxation provided that (i) the Company's shares are held as business assets of a permanent establishment or as business assets for which a permanent representative has been appointed in Germany, or (ii) the shareholder or, in case of a gratuitous transfer, its legal predecessor has held, directly or indirectly, at least 1% of the Company's registered shares at any time during the five-year period prior to the disposal. In this case, in principle, capital gains are subject to the same rules as described above for shareholders resident in Germany.

However, except for the cases referred to in (i) above, some of the double tax treaties concluded with Germany provide for a full exemption from German taxation.

### **Inheritance and gift tax**

The transfer of the Company's shares to another person by way of succession or donation is generally subject to German inheritance and gift tax (*Erbschaft- und Schenkungsteuer*) in particular provided that:

- (i) the decedent, the donor, the heir, the donee or any other beneficiary has his /her /its residence, domicile, registered office or place of management in Germany at the time of the transfer, or is a German citizen who has not stayed abroad for more than five consecutive years without having a residence in Germany; or
- (ii) (irrespective of the personal circumstances) the Company's shares are held by the decedent or donor as business assets for which a permanent establishment in Germany is maintained or a permanent representative is appointed in Germany; or
- (iii) the decedent or donor holds, either individually or collectively with related parties, directly or indirectly, at least 10% of the Company's registered share capital at the time of succession or donation.

Special regulations may apply to certain German citizens who maintain neither a residence nor their domicile in Germany and to former German citizens. The few double tax treaties on inheritance and gift tax which Germany has entered into generally provide that German inheritance and gift tax is levied only in case (i) and, with certain restrictions, in case (ii).

### **Other taxes**

No German capital transfer tax (*Kapitalverkehrsteuer*), stock exchange transfer tax (*Börsenumsatzsteuer*), value added tax (*Umsatzsteuer*), stamp duty (*Stempelgebühr*) or similar taxes are levied when acquiring, holding or transferring the Company's shares. However, in case of certain conditions being met, entrepreneurs may opt for value added tax on a transaction that would normally be tax exempt. Net wealth tax (*Vermögensteuer*) is currently not levied in Germany.

On January 22, 2013, the Council of the European Union approved the resolution of the minister of finance from eleven EU member states (including Germany) to introduce financial transaction tax within the framework of enhanced cooperation. On February 14, 2013, the European Commission accepted the proposal for a Council Directive implementing enhanced cooperation in the area of financial transaction tax. The plan focuses on levying a financial tax of 0.1% (0.01% for derivatives) on the purchase and sale of financial instruments.

A joint statement issued in May 2014 by ten of the eleven participating EU member states indicated an intention to implement the financial transaction tax progressively, such that would initially apply to shares and certain derivatives, with this initial implementation occurring by January 1, 2016. However, at the moment not many details are available. Thus, it is not known to what extent the elements of the European Commission's proposal outlined in the preceding paragraph will be followed in relation to the taxation of shares. The financial transaction tax proposal remains subject to negotiation between the participating Member States and is subject of legal challenge. It may therefore be altered prior to any implementation, the timing of which remains unclear. Additional EU member states may decide to participate. Prospective holders of the Company's shares are advised to seek their own professional advice in relation to financial transaction tax.

## TAXATION OF SHAREHOLDERS IN THE NETHERLANDS

### Taxation in the Netherlands

This chapter is intended as general information only and it does not present any comprehensive or complete description of all aspects of Dutch tax law which could be of relevance to a holder of shares (a “**Shareholder**”). For Dutch tax purposes, a Shareholder may include an individual who or an entity that does not have the legal title to the shares, but to whom nevertheless the shares are attributed, based either on such individual or entity owning a beneficial interest in the shares or based on specific statutory provisions. These include statutory provisions pursuant to which shares are attributed to an individual who is, or who has directly or indirectly inherited from a person who was, the settlor, grantor or similar originator of a trust, foundation or similar entity that holds the shares.

**The following generally summarizes the material Dutch tax consequences of purchasing, owning and transferring of shares. This discussion is intended only as a descriptive summary and does not purport to be a comprehensive or complete analysis or listing of all potential tax effects of the purchase, ownership or disposition of shares. All of the following is subject to change. Such changes could apply retroactively and could affect the consequences described below.**

**This summary does not constitute a legal opinion or tax advice. Potential purchasers of the Company’s shares are urged to consult their own tax advisers regarding the tax consequences of the purchase, ownership and disposition of shares in light of their particular circumstances.**

**This discussion is intended only as a general summary and does not purport to be a complete analysis or listing of all potential tax effects of the acquisition, ownership or disposition of the shares to any particular investor. Shareholders are advised to consult their own tax advisers with regard to the application of Dutch tax law to their particular situations, as well as any tax consequences arising under the laws of any state, local or other foreign jurisdiction.**

This paragraph is based on Dutch tax law as applied and interpreted by Dutch tax courts and as published and in effect on the date hereof, without prejudice to any amendments introduced at a later date and implemented with or without retroactive effect.

For the purpose of this paragraph, “**Dutch Taxes**” shall mean taxes of whatever nature levied by or on behalf of the Netherlands or any of its subdivisions or taxing authorities.

This description of Dutch tax considerations or consequences set out in the following summary is not intended for any shareholder:

- (i) who is an individual and for whom the income or capital gains derived from the shares are attributable to employment activities, the income from which is taxable in the Netherlands;
- (ii) who has, or that has, a (fictitious) substantial interest in the Company within the meaning of chapter 4 of the Dutch Income Tax Act 2001 (*Wet op de inkomstenbelasting 2001*);
- (iii) that is an entity which is not subject to Dutch corporate income tax or is in full or in part exempt from Dutch corporate income tax (such as pension funds);
- (iv) that is an investment institution (*beleggingsinstelling*) as described in article 6a and 28 of the Dutch Corporate Income Tax Act 1969 (*Wet op de vennootschapsbelasting 1969*, “**CITA**”) respectively; or
- (v) that is entitled to the participation exemption (*deelnemingsvrijstelling*) or the participation credit (*deelnemingsverrekening*) with respect to the shares (as defined in articles 13 CITA and 13aa CITA, respectively).

Generally, a shareholder has a substantial interest (*aanmerkelijk belang*) if such shareholder, in case of an individual alone or together with his partner, directly or indirectly:

- (i) owns, or holds certain rights on, shares representing 5% or more of the total issued and outstanding capital of the Company, or of the issued and outstanding capital of any class of shares of the Company;
- (ii) holds rights to, directly or indirectly, acquire shares, whether or not already issued, representing 5% or more of the total issued and outstanding capital of the Company, or of the issued and outstanding capital of any class of shares of the Company; or

- (iii) owns, or holds certain rights on, profit-participating certificates that relate to 5% or more of the annual profit of the Company or to 5% or more of the liquidation proceeds of the Company.

A shareholder will also have a substantial interest if his partner or one of certain defined relatives of the shareholder or of his partner has a substantial interest.

#### **Withholding tax**

No Dutch dividend withholding tax (*dividendbelasting*) is due upon the distribution of dividends of the Company.

#### **Taxes on income and capital gains**

##### ***Residents in the Netherlands***

The description of certain Dutch tax consequences in this paragraph is only intended for the following Shareholders:

- (i) individuals who are resident or deemed to be resident in the Netherlands for Dutch income tax purposes (“**Dutch Individuals**”); and
- (ii) entities that are subject to the CITA and are resident or deemed to be resident in the Netherlands for corporate income tax purposes (“**Dutch Corporate Entities**”).

A Shareholder will not become resident, or deemed resident, in the Netherlands for tax purposes by reason only of holding the Shares.

##### *Dutch Individuals engaged or deemed to be engaged in an enterprise or in miscellaneous activities*

Dutch Individuals are generally subject to income tax at statutory progressive rates with a maximum of 52% (2014) with respect to any benefits derived or deemed to be derived from shares, or rights to derive benefits from shares:

- (i) that are either attributable to an enterprise from which a Dutch Individual derives profits, whether as an entrepreneur (*ondernemer*) or pursuant to a co-entitlement to the net worth of such enterprise (other than as an entrepreneur or a shareholder); or
- (ii) the benefits of which are attributable to miscellaneous activities (*resultaat uit tructu werkzaamheden*), including, without limitation, activities which are beyond the scope of active portfolio investment activities;

(the “**Dutch Enterprise Shares**”) including any capital gains realized on the disposal thereof.

##### *Dutch Individuals not engaged or deemed to be engaged in an enterprise or in miscellaneous activities*

Generally, a Dutch Individual who owns Shares, excluding Dutch Enterprise Shares, will be subject annually to an income tax imposed on a fictitious yield on such shares. The shares held by such Dutch Individual will be taxed under the regime for savings and investments (*inkomen uit sparen en beleggen*). Irrespective of the actual income or capital gains realized, the annual taxable benefit of all the assets and liabilities of a Dutch Individual that are taxed under this regime, including the Shares, is set at a fixed amount. The fixed amount equals 4% of the fair market value of the assets (including the Shares) reduced by the liabilities and measured, in general, exclusively on 1 January of every calendar year. The tax rate under the regime for savings and investments is a flat rate of 30% (2014). Taxation only occurs if and to the extent the fair market value of the assets (including the Shares) reduced by the liabilities exceeds a certain threshold (*heffingvrij vermogen*).

##### *Dutch corporate entities*

Dutch Corporate Entities are generally subject to corporate income tax at statutory rates up to 25% (2014) with respect to any benefits derived or deemed to be derived (including any capital gains realized on the disposal thereof) of the Shares. A reduced rate of 20% (2014) applies to the first EUR 200,000 of taxable profits.

##### ***Non-residents in the Netherlands***

A Shareholder other than a Dutch Individual or Dutch Corporate Entity will not be subject to any Dutch Taxes on income or capital gains in respect of the purchase, ownership and disposal or transfer of the Shares except if:

- (i) the Shareholder, whether an individual or not, derives profits from an enterprise, whether as entrepreneur or pursuant to a co-entitlement to the net worth of such enterprise other than as an entrepreneur or a shareholder, which enterprise is, in whole or in part, carried on through a permanent establishment (*vaste inrichting*) or a permanent representative (*vaste vertegenwoordiger*) in the Netherlands, to which the shares are attributable;
- (ii) the Shareholder is an individual and derives benefits from miscellaneous activities carried out in the Netherlands in respect of the Shares, including (without limitation) activities which are beyond the scope of active portfolio investment activities;
- (iii) the Shareholder is not an individual and is entitled to a share in the profits of an enterprise or a co-entitlement to the net worth of enterprise, other than by way of securities, which enterprise is effectively managed in the Netherlands and to which enterprise the shares are attributable; or
- (iv) the Shareholder is an individual and is entitled to a share in the profits of an enterprise, other than by way of securities, which enterprise is effectively managed in the Netherlands and to which enterprise the shares are attributable.

#### **Gift tax or inheritance tax**

No Dutch gift tax or inheritance tax is due in respect of any gift of the shares by, or inheritance of the shares on the death of, a Shareholder, except if:

- (i) at the time of the gift or death of the Shareholder, the Shareholder is resident, or is deemed to be resident, in the Netherlands;
- (ii) the Shareholder passes away within 180 days after the date of the gift of the shares and is not, or not deemed to be, at the time of the gift, but is, or deemed to be, at the time of his death, resident in the Netherlands; or
- (iii) the gift of the shares is made under a condition precedent and the Shareholder is resident, or is deemed to be resident, in the Netherlands at the time the condition is fulfilled.

For purposes of Dutch gift tax or inheritance tax, an individual who is of Dutch nationality will be deemed to be resident in the Netherlands if such individual has been resident in the Netherlands at any time during the ten years preceding the date of the gift or his death. For purposes of Dutch gift tax, any individual, irrespective of his nationality, will be deemed to be resident in the Netherlands if such individual has been resident in the Netherlands at any time during the 12 months preceding the date of the gift.

#### **Other taxes and duties**

No other Dutch Taxes, including turnover or value added taxes and taxes of a documentary nature, such as capital tax, stamp or registration tax or duty, are payable by or on behalf of a Shareholder by reason only of the purchase, ownership and disposal of the Shares.

## TAXATION OF SHAREHOLDERS IN THE UNITED STATES

### **Certain U.S. Federal income tax considerations**

The following is a summary of certain material U.S. federal income tax considerations relevant to the acquisition, ownership and disposition of the Offer Shares based on present law, which may change, possibly with retroactive effect. This summary addresses only U.S. Holders (as defined below) that purchase the Offer Shares in the Offering, use the U.S. dollar as their functional currency and will hold the Offer Shares as capital assets.

**The following generally summarizes the material U.S. federal income tax consequences of purchasing, owning and transferring of shares. This discussion is intended only as a descriptive summary and does not purport to be a comprehensive or complete analysis or listing of all potential tax effects of the purchase, ownership or disposition of shares. All of the following is subject to change. Such changes could apply retroactively and could affect the consequences described below.**

**This summary does not constitute a legal opinion or tax advice. Potential purchasers of the Company's shares are urged to consult their own tax advisers regarding the tax consequences of the purchase, ownership and disposition of shares in light of their particular circumstances.**

**This discussion is intended only as a general summary and does not purport to be a complete analysis or listing of all potential tax effects of the acquisition, ownership or disposition of the shares to any particular investor. Shareholders are advised to consult their own tax advisers with regard to the application of U.S. federal income tax law to their particular situations, as well as any tax consequences arising under the laws of any state, local or other foreign jurisdiction.**

This summary does not address the tax treatment of U.S. Holders subject to special treatment under the U.S. federal income tax laws, including banks and certain other financial institutions, insurance companies, regulated investment companies, real estate investment trusts, dealers in securities, securities traders that elect to mark-to-market, investors liable for the alternative minimum tax, certain U.S. expatriates, individual retirement accounts and other tax-deferred accounts, tax-exempt organizations, or investors that will hold the Offer Shares as part of a straddle, hedging, conversion or other integrated financial transaction or investors that own (directly, indirectly or constructively) 10% or more by vote or value of the Company's equity interests. This summary does not address U.S. federal taxes other than the income tax (such as estate or gift taxes), state, local, non-U.S. or other tax laws or matters.

As used herein, the term U.S. Holder means a beneficial owner of the Offer Shares that is, for U.S. federal income tax purposes (i) a citizen or individual resident of the United States, (ii) a corporation, or other business entity treated as a corporation, created or organized under the laws of the United States, any State thereof or the District of Columbia, (iii) an estate the income of which is subject to U.S. federal income tax without regard to its source or (iv) a trust if a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust, or the trust has elected to be treated as a domestic trust for U.S. federal income tax purposes.

If a business entity or arrangement treated as a partnership for U.S. federal income tax purposes acquires, holds or disposes of the Offer Shares, the U.S. federal income tax treatment of a partner in such partnership generally will depend on the status of the partner and the activities of the partnership. Prospective purchasers that are partnerships and their partners should consult their own tax advisors concerning the U.S. federal income tax consequences to their partners of the acquisition, ownership and disposition of the Offer Shares.

### ***Passive Foreign Investment Company Rules***

The taxation of U.S. Holders will depend on whether the Company is treated for U.S. federal income tax purposes as a passive foreign investment company, or PFIC. The Company believes that it likely was a PFIC for its most recently completed fiscal year and likely will qualify as a PFIC for the current fiscal year. Further the Company believes that it likely will continue to constitute a PFIC until it generates sufficient revenue from its pharmaceutical operations, and depending upon the nature of its assets and operations, may remain a PFIC thereafter. A non-U.S. corporation is a PFIC if in any taxable year either (i) at least 75% of its gross income is "passive income" or (ii) at least 50% of the quarterly average value of its assets is attributable to assets that produce or are held to produce "passive income". In applying these tests, the Company generally is treated as holding its proportionate share of the assets and receiving its proportionate share of the income of any other corporation in which the Company owns at least 25% by value of the shares. Passive income for this purpose generally includes dividends, interest, royalties, rent and capital gains, but generally does not include certain royalties derived in an active business. Passive assets are those assets that are held for production of passive income or do not produce income at all. Thus cash, including the proceeds of the Offering, will be a passive asset. Interest, including interest on working capital, is treated as passive income for purposes of the income test. Without

taking into account the value of its goodwill, more than 50% of the Company's assets by value would be passive so that the Company would be a PFIC under the asset test. Based upon its current operations, its goodwill (the value of which should be based upon the Company's market capitalization) may be attributable to its activities that will generate active income and may be treated as an active asset. Even if the Company is not a PFIC under the asset test, the Company may qualify as a PFIC under the income test, since the Company currently has no income from active operations, but expects to have some interest income. Whether the Company will be a PFIC for its current taxable year will depend on the nature of its income and the results of the Offering, including the number of Offer Shares sold, the price at which they are sold and the use of the proceeds of the Offering. Thus, while it appears likely the Company will be a PFIC for its current fiscal year, this cannot be determined with any certainty at this time. Moreover, whether an entity is a PFIC is determined annually. Accordingly, even if the Company is not a PFIC for a particular taxable year, the Company could become a PFIC for future years based on changes in its assets or the value thereof, including the value of its goodwill as indicated by its market capitalization, and based on changes in its activities and income. The Company may own, directly or indirectly, equity interests in other entities which are PFICs (Lower-tier PFICs).

If the Company is or becomes a PFIC while a U.S. Holder holds Offer Shares, unless the U.S. Holder makes a qualified electing fund (QEF) election or mark-to-market election with respect to the Offer Shares, as described below, a U.S. Holder generally would be subject to additional taxes (including taxation at ordinary income rates and an interest charge) on any gain realized from a sale or other disposition of the Offer Shares and on any "excess distributions" received from the Company, regardless of whether the Company continues to be a PFIC in the year such distribution is received or gain is realized. For this purpose, a pledge of the Offer Shares as security for a loan may be treated as a disposition. The U.S. Holder would be treated as receiving an excess distribution in a taxable year to the extent that distributions on the Offer Shares during that year exceed 125% of the average amount of distributions received during the three preceding taxable years (or, if shorter, the U.S. Holder's holding period). To compute the tax on excess distributions or on any gain, (i) the excess distribution or gain would be allocated ratably over the U.S. Holder's holding period, (ii) the amount allocated to the current taxable year and any year before the first taxable year for which the Company was a PFIC would be taxed as ordinary income in the current year, and (iii) the amount allocated to other taxable years would be taxed at the highest applicable marginal rate in effect for each such year (i.e. at ordinary income tax rates) and an interest charge would be imposed to recover the deemed benefit from the deferred payment of the tax attributable to each such prior year.

Under proposed Treasury Regulations that may have retroactive effect if and when they are finalized, a U.S. Holder would be subject to tax under the rules described above on (i) excess distributions by a Lower-tier PFIC and (ii) a disposition of shares of a Lower-tier PFIC, in each case as if the U.S. Holder held such shares directly, even though the U.S. Holder has not actually received the proceeds of those distributions or dispositions. As noted above, the Company may hold equity interests in other entities that are Lower-tier PFICs. Thus, if these proposed regulations are finalized in their current form, U.S. Holders of the Offer Shares would, unless a QEF election is available and made with respect to any Lower-tier PFIC, be subject to tax under the PFIC rules described above if the Company or the entity owning the shares of such Lower-tier PFIC were to receive distributions from, or dispose of the shares of, such Lower-tier PFIC. Because these proposed regulations are not currently in effect, the treatment of distributions with respect to and dispositions of shares of a Lower-tier PFIC is uncertain and, therefore, U.S. Holders should consult their tax advisors as to how to treat distributions by, and dispositions of shares of, a Lower-tier PFIC.

A U.S. Holder may avoid the excess distribution rules described above by electing to treat the Company (for the first taxable year in which the U.S. Holder owns Offer Shares) and any Lower-tier PFIC (for the first taxable year in which the U.S. Holder is treated as owning an equity interest in such Lower-tier PFIC) as QEFs. U.S. Holders can make a QEF election with respect to the Company only if the Company provides certain information, including as to the amount of its ordinary earnings and net capital gains determined under U.S. tax principles. The Company has not determined whether it will provide U.S. Holders with this information if it is a PFIC. If a QEF election is available and a U.S. Holder makes a QEF election with respect to the Company, the U.S. Holder will be required to include in gross income each year, whether or not the Company makes distributions, as capital gains, its pro rata share of the Company's net capital gains and, as ordinary income, its pro rata share of the Company's net earnings in excess of its net capital gains. Such inclusions will increase the U.S. Holder's tax basis in its Offer Shares. Amounts recognized by a U.S. Holder making a QEF election generally are treated as income from sources outside the United States. Because the U.S. Holder has already paid tax on them, distributions of amounts previously included in income will not be subject to tax when they are distributed to the U.S. Holder (except to the extent of any gain or loss attributable to exchange rate movements) but will decrease their tax basis in the Offer Shares. An electing U.S. Holder's tax basis in the Offer Shares will increase by any amounts the holder includes in income currently and decrease by any amounts not subject to tax when distributed. A U.S. Holder that makes a QEF election may recognize taxable income in amounts significantly greater than the distributions received from the Company.

A U.S. Holder that wants to avoid the possible application of the excess distribution rules (including the interest charge and treatment of gain as ordinary income) with respect to interests in any Lower-tier PFICs would be required to make a separate QEF election, if available, with respect to each such Lower-tier PFIC. The Company has not determined, however, whether it will provide the information necessary for a QEF election in respect of any Lower-tier PFICs that the

Company controls, and does not expect that this information will be available for any Lower-tier PFICs that it does not control.

A U.S. Holder making a QEF election other than in respect of the first taxable year in which it owns (or is treated as owning) an equity interest in a PFIC (including the Offer Shares and any equity interest in a Lower-tier PFIC) would continue to be subject to the rules relating to excess distributions and dispositions described above as well as the QEF rules with respect to such PFIC, unless the U.S. Holder makes a “deemed sale” election in the taxable year the QEF election is made and recognizes gain taxed under the disposition regime described above for the relevant equity interest’s appreciation before the year for which the QEF election is made.

As an alternative to a QEF election, a U.S. Holder may also be able to avoid some of the adverse U.S. tax consequences described above with respect to the Offer Shares by electing to mark the Offer Shares to market annually. A U.S. Holder may elect to mark-to-market the Offer Shares only if they are “marketable stock.” The Offer Shares will be treated as “marketable stock” if they are regularly traded on a qualified exchange. The Offer Shares will be treated as regularly traded in any calendar year in which more than a de minimis quantity of the Offer Shares are traded on at least 15 days during each calendar quarter. A foreign exchange will be treated as a qualified exchange if it is regulated or supervised by a governmental authority in the jurisdiction in which the exchange is located and with respect to which certain other requirements are met.

Although the Company expects Euronext Amsterdam, on which the Offer Shares are expected to be listed, would be considered a qualified exchange, no assurance can be given as to whether Euronext Amsterdam is a qualified exchange or that the Offer Shares will be traded with sufficient frequency and in sufficient quantity to be considered “marketable stock” for purposes of the mark-to-market election. U.S. Holders should consult their own tax advisors as to whether Euronext Amsterdam is a qualified exchange for this purpose. If a U.S. Holder makes the mark-to-market election, any gain from marking the Offer Shares to market or from disposing of them would be ordinary income. Any loss from marking the Offer Shares to market would be recognized only to the extent of recognized gains with respect to the Offer Shares previously included in income. Loss from marking the Offer Shares to market would be ordinary, but loss on disposing of them would be capital loss except to the extent of mark-to-market gains previously included in income. U.S. Holders will not be able to make mark-to-market elections with respect to Lower-tier PFICs.

If the Company is treated as a PFIC, each U.S. Holder generally will be required to file a separate annual information return with the United States Internal Revenue Service (**IRS**) with respect to the Company and any Lower-tier PFICs. Failure to file such returns, if required, may result in material adverse effects for U.S. Holders.

U.S. Holders should consult their own tax advisors concerning the Company’s PFIC status and the consequences to them of treatment of the Company and entities in which the Company holds equity interests as PFICs for any taxable year, and the availability and advisability of QEF elections and mark-to-market elections.

### ***Dividends***

Subject to the discussion of the PFIC rules above, distributions with respect to the Offer Shares, including taxes withheld therefrom, if any, generally will be included in a U.S. Holder’s gross income as foreign source ordinary dividend income when received to the extent paid out of the Company’s earnings and profits. To the extent the amount of any distribution exceeds the current and accumulated earnings and profits of the Company, such distribution will be treated (i) first, as a tax-free return of capital to the extent of a U.S. Holder’s tax basis in the Offer Shares (and reducing such U.S. Holder’s adjusted basis of the Offer Shares), and (ii) thereafter, as capital gain from the sale or exchange of Offer Shares. However, because the Company has not determined whether it will keep books recording its earnings and profits as determined for U.S. federal income tax purposes, U.S. Holders may be required to assume that all distributions paid will be dividends. Because the Company may be a PFIC, any dividends it pays may not be eligible for the preferential tax rate applicable to “qualified dividend income” received by individuals and certain other non-corporate U.S. Holders, since this preferential rate does not apply to dividends from PFICs. If the Company were not a PFIC for both its taxable year when dividends are paid and the preceding taxable year, then, subject to applicable limitations, dividends will be eligible for the preferential tax rate applicable to “qualified dividend income” if the Company qualifies for benefits under the U.S. – Germany Income Tax Treaty (the **Treaty**). The Company believes that it will qualify for benefits under the Treaty. Non-corporate U.S. Holders should consult their own tax advisors regarding characterization of dividends paid by the Company as qualified dividend income. Any dividends will not be eligible for the dividends received deduction generally allowed to U.S. corporations. Dividends paid in Euro will be includable in income in the U.S. dollar amount calculated by reference to the exchange rate in effect on the day the dividends are actually or constructively received by the U.S. Holder, regardless of whether the Euro are converted into U.S. dollars at that time. A U.S. Holder will have a basis in the Euro received equal to the U.S. dollar value on the date of receipt. Generally, any gain or loss resulting from currency exchange fluctuations during the period from the date the dividend is includable in the income of the U.S. Holder to the date such payment is converted into U.S. dollars (or the U.S. Holder otherwise disposes of the Euro) will be exchange gain or loss and will be treated as U.S. source ordinary income or loss for foreign tax credit limitation purposes.

If dividends received in Euro are converted into U.S. dollars on the day the dividends are received, the U.S. Holder generally will not be required to recognize foreign currency gain or loss in respect of the dividend income.

A U.S. Holder may be eligible to receive a foreign tax credit (subject to applicable limitations) for tax withheld from dividends (if any) and paid over to a governmental authority at a rate not in excess of the maximum rate applicable to such U.S. Holder after applying any rate reductions available under any applicable treaties.

#### ***Sale or other disposition***

Subject to the discussion of the PFIC rules above, a U.S. Holder generally will recognize gain or loss for U.S. federal income tax purposes on the sale, exchange or other disposition of the Offer Shares equal to the difference, if any, between the amount realized on the sale, exchange or other disposition and the U.S. Holder's adjusted tax basis in such Offer Shares, each determined in U.S. dollars. Gains and losses would generally be long-term capital gain or loss if the U.S. Holder's holding period in the Offer Shares exceeds one year. Any gain or loss generally will be treated as arising from U.S. sources. The deductibility of capital losses is subject to limitations. A U.S. Holder's adjusted tax basis in the Offer Shares generally will be its U.S. dollar cost, except to the extent its basis has been increased as a result of inclusion of undistributed earnings as a result of a QEF election, or is adjusted as a result of a mark-to-market election. If a U.S. Holder receives Euro upon a sale, exchange or other disposition of the Offer Shares, such U.S. Holder generally will realize an amount equal to the U.S. dollar value of the Euro received at the spot rate on the date of disposition (or if the U.S. Holder is a cash-basis or electing accrual basis taxpayer, at the spot rate on the settlement date). A U.S. Holder will have a tax basis in the currency received equal to the U.S. dollar value of the Euro on the settlement date. Any currency gain or loss realized on the settlement date or recognized on the subsequent sale, conversion or other disposition of the Euro for a different U.S. dollar amount generally will be U.S. source ordinary income or loss for foreign tax credit limitation purposes.

#### ***Medicare surtax on net investment income***

Non-corporate U.S. Holders whose income exceeds certain thresholds generally will be subject to 3.8% surtax on their "net investment income" (which generally includes, among other things, dividends on, and capital gain from the sale or other taxable disposition of, the Offer Shares). Absent an election to the contrary, if a QEF election is available and made, QEF inclusions will not be included in net investment income at the time a U.S. Holder includes such amounts in income, but rather will be included at the time distributions are received or gains are recognized. Although it is not entirely clear how the surtax should apply with respect to distributions by, and gains from the sale of shares of, a Lower-tier PFIC, a non-corporate U.S. Holder should generally expect that such distributions and gains would be included in the holder's "net investment income" at the time they would, in the absence of a QEF election in respect of that Lower-tier PFIC, be subject to U.S. federal income tax, even though the holder did not receive the proceeds of such distributions or gains. Non-corporate U.S. Holders should consult their own tax advisors regarding the possible effect of such tax on their ownership and disposition of the Offer Shares, in particular the applicability of this surtax with respect to a non-corporate U.S. Holder that makes a QEF or mark-to-market election in respect of their Offer Shares.

#### ***Backup withholding and information reporting***

Payments of dividends and other proceeds with respect to the Offer Shares may be reported to the IRS and to the U.S. Holder as required under applicable Treasury Regulations. Backup withholding may apply to these payments if the U.S. Holder fails to provide an accurate taxpayer identification number or certification of exempt status. Certain U.S. Holders (including, among others, corporations) are not subject to backup withholding or information reporting. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a U.S. Holder will be refunded (or credited against such U.S. Holder's U.S. federal income tax liability, if any), provided the required information is timely furnished to the IRS. Prospective investors should consult their own tax advisors as to their qualification for exemption from backup withholding and the procedure for establishing an exemption. Certain non-corporate U.S. Holders may be required to report to the IRS information with respect to their investment in the Offer Shares not held through an account with a financial institution. Investors who fail to report required information could become subject to substantial penalties. Prospective investors are encouraged to consult with their own tax advisors regarding information reporting requirements with respect to their investment in the Offer Shares.

**THE DISCUSSION ABOVE IS A GENERAL SUMMARY OF U.S. FEDERAL INCOME TAX CONSEQUENCES. IT DOES NOT COVER ALL TAX MATTERS THAT MAY BE OF IMPORTANCE TO A PARTICULAR INVESTOR. ALL PROSPECTIVE PURCHASERS SHOULD CONSULT THEIR TAX ADVISORS AS TO THE PARTICULAR TAX CONSEQUENCES TO THEM OF OWNING THE OFFER SHARES, INCLUDING THE APPLICABILITY AND EFFECT OF STATE, LOCAL, FOREIGN AND OTHER TAX LAWS AND POSSIBLE CHANGES IN TAX LAW.**

## RECENT DEVELOPMENTS AND OUTLOOK

### Business

PQ912 has shown to be safe and well tolerated and revealed high QC-inhibition in a Phase 1 study with 200 healthy young and elderly volunteers. Therefore, the preparation of Phase 2a study began in March 2014 and the request for a Clinical Trial Authorization in the EU started in August 2014. Regarding the Phase 2a study of PQ912, Probiodrug will conduct a monotherapy study in early Alzheimer patients. In this study, the Company will obtain both additional safety data as well as initial efficacy data on short-term memory effects in treatment-naïve patients with mild cognitive impairment or mild dementia known to be associated with AD. The Company has signed a letter of agreement with Julius Clinical, Zeist, the Netherlands, regarding the planning and execution of the Phase 2a study of PQ912 (the “**Saphir Study**”) (see “*BUSINESS – MATERIAL AGREEMENTS – LETTER OF AGREEMENT WITH JULIUS CLINICAL*”). The Company expects the first patient to be treated in the first quarter of 2015 and first data to be available in mid-2016.

### Market trends

A recent event in the field of disease-modifying drugs targeting AD is the partnering agreement between AstraZeneca and Eli Lilly, announced on 16 September 2014. AstraZeneca and Eli Lilly agreed to jointly develop and commercialize AZD3293, a beta secretase (“**BACE**”) inhibitor ready to enter Phase 2 /3 clinical trials. BACE is an enzyme that generates Abeta. Inhibiting BACE targets at the unspecific reduction of Abeta in the brain. According to this announcement, Eli Lilly will pay AstraZeneca up to USD 500 million in regulatory and development milestones, a first USD 50 million payment is anticipated in the first half-year 2015 ([www.astrazeneca.com/Media/Press-releases/Article/astrazeneca-and-lilly-announce-alliance](http://www.astrazeneca.com/Media/Press-releases/Article/astrazeneca-and-lilly-announce-alliance)). In the Company’s view, this deal shows a rising interest of the industry to support novel treatments of AD.

### Financial development

As in previous reporting periods, Probiodrug did not generate any revenues from its product candidates after 30 June 2014 and the Company cannot predict when it may be able to successfully commercialize any of its product candidates.

The levels of its costs and expenses after 30 June 2014 were at levels materially comparable to those in the first half-year period of 2014. As a consequence, the financial position, in particular the cash position of the Company, as well as the equity of the Company has decreased accordingly. The major part of its costs and expenses incurred since 30 June 2014 and the corresponding cash-outflows from its operating activities were related to the preparation of the Phase 2 study in respect of its product candidate PQ912.

The Company expects that its costs and expenses may increase in the future as the development of its product candidates progresses. If the Offering is successfully completed, the Company will have sufficient cash available to progress the development of its product candidates as envisaged. In case the Offering is not successfully completed, the Company would not progress with the development of its product candidates as envisaged. In any event, in such a case the Company has been provided with a loan facility that would enable the Company to meet its short term obligations when due also without the proceeds of the Offering, even if substantial payments were to be made in respect of the contested alleged tax claims (see “*BUSINESS – LITIGATION*” and “*RISK FACTORS – FINANCIAL RISKS*”). If the Offering is successfully completed, such loan facility will not be used and will expire. The Company believes that payments in respect of the alleged and contested tax claims will not become due within the next 12 months, even if the Company were eventually not successful in contesting such claims before the tax courts.

### Significant changes in the corporate structure since 30 June 2014

By utilization of the Contingent Capital 2013, 3,289,845 new series B preference shares were issued to holders of the Convertible Bond 2013, and by utilization of the Contingent Capital 2014, 2,631,384 new series B preference shares were issued to holders of the Convertible Bond 2014. The issue of these shares was registered in the commercial register on 28 August 2014. The remaining Contingent Capital 2013 and Contingent Capital 2014 were revoked by the shareholders’ meeting on 25 August 2014.

By resolution of the shareholders’ meeting on 25 August 2014 all registered shares of the Company, i.e. all registered no par value common shares and all registered preferred shares of the series B, were converted in ordinary bearer shares with no par value and with a notional value of EUR 1.00 each. As a result, the Company now has only one class of shares issued and outstanding.

The shareholders’ meeting on 8 September 2014 resolved on a reduction of the share capital and a reverse share split in the ratio of 6:1 in preparation for the Offering. The share capital reduction was effected by way of a simplified capital reduction pursuant to Sections 229 et seq. of the German Stock Corporation Act (*Aktiengesetz*) with the intention to cover

incurred losses. As a consequence, the share capital was decreased by EUR 26,208,465.00 from EUR 31,450,158.00 to EUR 5,241,693.00. The number of ordinary bearer shares was reduced by 26,208,465 from 31,450,158 to 5,241,693.

Furthermore, the shareholders' meeting on 8 September 2014 resolved

- on a reduction of Contingent Capital 2008/I from EUR 67,800.00 to EUR 11,300.00,
- on a reduction of Contingent Capital 2008/II from EUR 101,700.00 to EUR 16,950.00, and
- on a reduction of Contingent Capital 2010/I from EUR 515,430.00 to EUR 85,901.00.

On 29 September the shareholders' meeting resolved on the creation of a Contingent Capital 2014/I in the amount of EUR 410,018.00.

On 9 October 2014 an extraordinary shareholders' meeting has resolved upon (i) the Capital Increase, i.e. to increase the existing share capital by up to EUR 1,696,720.00 to effect the Offering and (ii) the Authorized Capital.

After the end of the Offer Period, the amount of the Capital Increase and the number of Offer Shares to be issued will be determined, depending of the outcome of the Offering and the demand of investors. Existing shareholders of the Company have committed to purchase Offer Shares in an amount of approximately EUR 15 million in the course of the Offering. Once the volume of the Capital Increase will have been determined, it is intended that an extraordinary shareholders' meeting will resolve upon an increase of the Authorized Capital to an amount that corresponds to 50% of the then increased share capital following the registration of the implementation of the Capital Increase. After the end of the stabilization period, the stabilization manager will inform the Company to which extent the Greenshoe-Option will be exercised. To the extent the Greenshoe-Option is exercised, the Company will issue additional new shares (Greenshoe Shares) which are intended to be admitted to trading to Euronext Amsterdam as soon and practicable thereafter. This additional issue of Greenshoe Shares, if any, will dilute the shareholders of the Company accordingly and the Company will receive the net proceeds from such share issue (Offer Price times number of the Greenshoe Shares issued minus fees and commissions).

## **Management Matters**

The management agreements with the members of the management board, Dr. Glund and Dr. Liebers, have been amended in October 2014. The new terms are described under "*GOVERNING BODIES – MANAGEMENT BOARD – COMPENSATION OF THE MANAGEMENT BOARD MEMBERS*". In addition, a new stock option plan was adopted on 29 September 2014, under which up to 410,018 stock options may be issued to members of the management board of the Company and current and future employees of the Company, Please see also "*DESCRIPTION OF THE SHARE CAPITAL OF THE COMPANY AND APPLICABLE REGULATIONS – STOCK OPTION RIGHTS – STOCK OPTION PROGRAM 2014*".

Dr. Inge Lues has been appointed as new and additional member of the management board of the Company effective as of 1 November 2014. For details of the experience and qualifications of Dr. Lues see "*GOVERNING BODIES – MANAGEMENT BOARD*". The terms and remuneration of Dr. Lues will correspond to those of Dr. Glund and Dr. Liebers except for the pension commitment, see "*GOVERNING BODIES – MANAGEMENT BOARD – COMPENSATION OF THE MANAGEMENT BOARD MEMBERS*", i.e. Dr. Lues will receive a bonus of EUR 50,000 if the Company is listed on the Euronext Amsterdam or a similar stock exchange by not later than 31 December 2014, as will occur upon completion of the transaction contemplated herein and Dr. Lues is entitled to resign from the management board in case of a change of control.

## UNDERWRITING

### Subject of and agreements on underwriting

Kempen & Co N.V., Beethovenstraat 300, 1077 WZ Amsterdam (the Netherlands) will act as Sole Global Coordinator and Petercam NV/SA, Place Sainte-Gudule 19, 1000 Brussels (Belgium) will act as Co-Bookrunner (Kempen & Co. and Petercam together the “**Syndicate Banks**”).

The Company and the Syndicate Banks entered into an underwriting agreement on 10 October 2014 (the “**Underwriting Agreement**”) with regard to the Offering.

The Offering will consist of 1.951.228 ordinary bearer shares with no par value with a notional value of EUR 1.00 each consisting of

- (i) 1,475,409 New Shares,
- (ii) 221,311 Additional New Shares, and
- (iii) 254,508 Over-allotment Shares,

each of which with a notional par value of EUR 1.00 per share and full dividend rights as of 1 January 2014.

The Offer Shares will be offered as described in the Section of this Prospectus “*THE OFFERING OF THE OFFER SHARES*”.

### Commission

On the assumption that the Offer Shares will be sold at the mid-point of the price range, being EUR 17.125, fees and commissions payable to the Syndicate Banks by the Company are expected to be approximately

- (i) EUR 1,417,011, if only the New Shares are sold, and
- (ii) EUR 2,044,438, if the New Shares and the Additional New Shares are sold and the Greenshoe Option is fully exercised,

thus leading to a range of fees and commissions between EUR 1,417,011 and EUR 2,044,438.

### Settlement

Under the Underwriting Agreement, Kempen & Co, acting also on behalf of Petercam shall be authorised to effect the settlement of the Offering, i.e. delivery of the Offer Shares against payment of the Offer Price, by using Existing Shares borrowed under the Settlement Share Loans from the Lending Shareholders. To the extent the Settlement Share Loans are used to deliver New Shares or Additional New Shares, if any, the redelivery claims of the Lending Shareholders under the Settlement Share Loans will be fulfilled by delivery of the New Shares and Additional Shares, if any, to the Lending Shareholders once the implementation of the Capital Increase has been registered with the Commercial Register.

To the extent the share loans are used to deliver Over-allotment Shares, if any, the redelivery claims of the Lending Shareholders will be fulfilled by delivery of the Greenshoe Shares, if any, to the extent that Kempen & Co, acting also on behalf of Petercam, will have exercised the Greenshoe Option. To the extent the Greenshoe Option will not be exercised, the redelivery claims in respect of Over-allotment Shares will be fulfilled by delivery of shares purchased by Kempen & Co in the market. Any of the shares delivered to fulfil redelivery claims under any of the Settlement Share Loans or the share loans in respect of the Over-allotment will be subject to the market protection agreements entered into with the Lending Shareholders (see also “*THE OFFERING OF THE OFFER SHARES – MARKET PROTECTION AGREEMENT/SELLING RESTRICTIONS (LOCK-UP)*”).

Kempen & Co, also on behalf of Petercam, has agreed to subscribe for the New Shares and the Additional New Shares, if any, to effect the implementation of the Capital Increase and for the Greenshoe Shares, to the extent that the Greenshoe Option is exercised, to effect the implementation of the Greenshoe Capital Increase.

### **Conditions, termination, indemnity**

The Syndicate Banks will deliver the Settlement Loan Shares to investors to whom Offer Shares were sold in the course of the Offering when, as and if delivered to the Syndicate Banks, subject to the satisfaction or waiver of the conditions that are contained in the Underwriting Agreement.

The Underwriting Agreement provides that the Syndicate Banks have the right to terminate the Underwriting Agreement and their obligations thereunder upon the occurrence of certain events, such as circumstances having a material adverse effect on the Company, the state of the financial markets, or if conditions contained in the Underwriting Agreement, such as the delivery of certain documents by the Company, legal opinions and comfort letters, or the due receipt of purchase orders from existing shareholders in accordance with their commitments (see “*THE OFFERING OF THE OFFER SHARES – SUBJECT MATTERS OF THE OFFERING*”) obligations under the lock-up and commitment letters, are not satisfied or waived.

If the Underwriting Agreement is terminated, which can happen at any time until settlement (delivery versus payment), the Offering will not be settled, allocations of the Offer Shares to investors will be cancelled and investors will not have any claim to delivery of the Offer Shares. In such an event the investors will be informed thereof by a publication on the website of the Company.

In the Underwriting Agreement, the Company will make certain representations and warranties and will agree to indemnify the Syndicate Banks against certain liabilities including prospectus liability.

### **Other relationships**

The Syndicate Banks or their affiliates may, from time to time, engage in transactions or perform services to the Company or its subsidiary in the ordinary course of business.

## SELLING AND TRANSFER RESTRICTIONS

The Offer Shares will be offered (i) in the Netherlands by way of a public offering and (i) outside of the Netherlands in a private placement to selected institutional investors, including (A) outside the United States of America in certain member states of the European Union as well as in Switzerland in reliance on Regulation S (“**Regulation S**”) under the U.S. Securities Act of 1933, as amended (“**Securities Act**”), and (B) in the United States of America to qualified institutional buyers (“**QIBs**”) as defined in and pursuant to Rule 144A (“**Rule 144A**”) under the Securities Act (together, the “**Offering**”). The Offering and this Prospectus have not been and will not be submitted for approval to any supervisory authority outside Germany except for notification to the Netherlands Authority for the Financial Markets (*Autoriteit Financiële Markten*) in connection with the Listing and in connection with a public offering of the Offer Shares in the Netherlands. Therefore, no steps may be taken that would constitute or result in a public offering of the Offer Shares outside the Netherlands.

Accordingly, the Offer Shares may not be offered or sold, directly or indirectly, and neither this Prospectus nor any other Offering related documents may be distributed or sent to any person or into any jurisdiction, except in circumstances that will result in the compliance with all applicable laws and regulations. Persons into whose possession this Prospectus may come are required to inform themselves about, and to observe all, such restrictions. Neither the Company nor the Sole Global Coordinator nor the Co-Bookrunner nor the Selling Agent accepts any responsibility for any violation by any person, whether or not it is a prospective purchaser of Offer Shares, of any such restriction.

This Prospectus does not constitute, and neither the Company nor the Syndicate Banks are making, an offer to sell the Offer Shares or soliciting an offer to purchase any of the Offer Shares to any person in any jurisdiction where such an offer or solicitation is not permitted.

The Company and the Sole Global Coordinator and the Co-Bookrunner reserve the right to reject any offer to purchase the Offer Shares in whole or in part and to sell to any prospective investor less than the full amount of the Offer Shares sought by such investor.

### **Notice to investors in the United States of America**

The Offer Shares have not been and will not be registered under the Securities Act, or with any securities regulatory authority of any state or other jurisdiction in the United States of America. Accordingly, the Offer Shares may not be offered, sold, pledged or otherwise transferred within the United States of America unless they are registered under the Securities Act, or pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and in compliance with any applicable securities laws of any state or other jurisdiction of the United States of America. The Offer Shares are being offered (i) in the United States of America only to QIBs in a manner not requiring registration under the Securities Act and (ii) outside the United States of America in “offshore transactions” in accordance with Regulation S under the Securities Act. Any person in the United States of America wishing to purchase Offer Shares will be required to make certain acknowledgements, representations and agreements to the Company and the Sole Global Coordinator and the Co-Bookrunner in a separate investor letter.

Prospective investors are hereby notified that any seller of the Offer Shares may be relying on the exemption from the registration requirements of the Securities Act provided by Rule 144A. The offer or sale of the Offer Shares pursuant to the Offering within the United States in reliance on Rule 144A or another exemption from the registration requirements of the Securities Act, if any, will be made only by broker-dealers who are registered under the U.S. Exchange Act of 1934, as amended. The Offering is being made in the United States through U.S. broker-dealer affiliates or cooperation partners of the Syndicate Banks.

In addition, until the expiration of the period beginning on the later of 40 days after (i) the commencement of the Offering or (ii) the date of closing of the Offering, an offer or sale of Offer Shares within the United States by a broker /dealer (whether or not it is participating in the Offering) may violate the registration requirements of the Securities Act if such offer or sale is made other than to QIBs in transactions exempt from registration under the Securities Act.

**The Offer Shares have not been recommended by any United States federal or state securities commission or regulatory authority. Furthermore, the foregoing authorities have not confirmed the accuracy or determined the adequacy of this Prospectus. Any representation to the contrary is a criminal offense in the United States of America.**

### **Notice to investors in the Netherlands**

For the purpose of the Offering, this Prospectus was notified by BaFin to Netherlands Authority for the Financial Markets (*Autoriteit Financiële Markten*, “**AMF**”) in accordance with the European passport mechanism provided for by

the Prospectus Directive. The notification to the AMF does not imply any judgment by the AMF on the merits or the quality of the Offering, the Offer Shares or the Company.

### Notice to investors in the EEA

This Prospectus has been prepared on the basis that all offers of Offer Shares (other than public offers contemplated in this Prospectus in the Netherlands once this Prospectus has been approved by the BaFin, passported in the Netherlands and published in accordance with the Prospectus Directive (2003/71/EC)) will be made pursuant to an exemption under the Prospectus Directive, as implemented in member states of the European Economic Area (“EEA”), from the requirement to produce a prospectus for offers of securities.

Accordingly, any person making or intending to make any offer within the EEA of Offer Shares outside the Netherlands should only do so in circumstances in which no obligation arises for the Company or the Sole Global Coordinator or the Co-Bookrunner to produce a prospectus for such offer.

In relation to each Member State of the EEA which has implemented the Prospectus Directive, as defined below, (a “**Relevant Member State**”) an offer to the public of Offer Shares contemplated by this Prospectus may not be made in that Relevant Member State unless this Prospectus has been approved by the competent authority in such Member State and published in accordance with the Prospectus Directive as implemented in such Relevant Member State (which approval and publication is only obtained and performed in relation to the Offering in the Netherlands) unless such offer in such Relevant Member State of any Offer Shares is made under the following exemptions under the Prospectus Directive, if and to the extent such exemptions under this Prospectus have been implemented in that Relevant Member State:

- to qualified investors within the meaning of the law in that Relevant Member State implementing the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the Directive 2010/73/EU amending the Prospectus Directive, 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) subject to obtaining the prior consent of the Syndicate Banks for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of Offer Shares shall result in a requirement for the publication by the Company or the Sole Global Coordinator or the Co-Bookrunner of a prospectus pursuant to Article 3 of the Prospectus Directive. For the purposes of this representation, the expression an “offer to the public” in relation to any Offer Shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the Offering and any Offer Shares to be offered so as to enable an investor to decide to purchase Offer Shares, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State, and the expression “**Prospectus Directive**” means Directive 2003/71/EC (and any amendments thereto, including the Directive 2010/73/EU amending the Prospectus Directive, to the extent implemented in the Relevant Member State) and includes any relevant implementing measure in each Relevant Member State.

### Notice to investors in the United Kingdom

This Prospectus is for distribution only to persons who (i) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the “**Financial Promotion Order**”) (ii) are persons falling within Article 49(2)(a) to (d) (“**high net worth bodies corporate, unincorporated associations etc.**”) of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as “**Relevant Persons**”).

Any invitation, offer or agreement related to the purchase of Offer Shares may only be proposed or entered into with Relevant Persons. The Offer Shares may not be offered or issued in favor of persons located in the United Kingdom, with the exception of Relevant Persons. Any person other than a Relevant Person may not use or rely on this Prospectus or any information therein. The individuals responsible for the distribution of this Prospectus must comply with the legal terms applicable to the distribution of this Prospectus.

Each person to whom an offering is made who receives any communication in respect of, or who acquires any of the Offer Shares under, the offers contemplated in this Prospectus will be deemed to have represented, warranted and agreed to and with the Sole Global Coordinator and the Co-Bookrunner and the Company that it is a relevant person.

#### **Notice to investors in Switzerland**

The Offer Shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (“SIX”) or on any other stock exchange or regulated trading facility in Switzerland. This Prospectus has been prepared without regard to the disclosure standards for issuance prospectuses under Article 652a of the Swiss Code of Obligations or Article 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this Prospectus nor any other offering or marketing material relating to the Offer Shares or the Offering may be publicly distributed or otherwise made publicly available in Switzerland. It is the responsibility of any person residing in Switzerland who wishes to take part in this Offering to ascertain that the legislation and formalities applicable in Switzerland are complied with.

## GLOSSARY OF TECHNICAL TERMS

“AD”	Alzheimer’s disease
“Abeta”	Amyloid-beta denoted peptides of 36–43 amino acids that are either soluble or main components of the insoluble amyloid plaques found in the brains of Alzheimer patients
“Abeta-oligomer”	soluble molecular Abeta aggregates of variable size
“acetylcholinesterase inhibitors”	a compound which inhibits acetylcholinesterase activity
“AMD”	age-related macular degeneration
“amyloid”	amyloid are insoluble fibrous protein aggregates sharing specific structural traits
“antibody”	An antibody is a large Y-shape protein produced by plasma cells that is used by the immune system to identify and neutralize foreign objects, e.g. bacteria and viruses and also proteins.
“anti-Abeta”	an antibody directed to the Abeta peptide
“anti-sAbetao”	an antibody directed to soluble amyloid beta oligomers
“APP”	Amyloid precursor protein is an integral membrane protein expressed in many tissues and concentrated in the synapses of neurons
“assay”	a defined laboratory method to analyze something
“atherosclerosis”	A chronic systemic disease of the arteries which is characterized by a thickening of the artery as a result of an inflammatory process which includes invasion and accumulation of white blood cells and of remnants of dead cells, cholesterol, triglycerides and eventually calcium and other crystallized materials. These changes reduce inner lumen of the artery and elasticity of the artery wall.
“arthritis”	inflammatory disease of joints
“BACE”	beta-site APP cleaving enzyme is a family of beta secretases which family includes the aspartic proteases BACE-1 (memapsin 2, EC=3.4.23.46) and BACE-2 (memapsin 1, EC=3.4.23.45) both capable to cleave APP at the N-terminal side of the Abeta peptide. The term is often synonymously used for BACE-1
“beta-secretase”	The term beta-secretase is generally used for enzymes which are capable to cleave the APP at the so called beta side and release the N-terminus of the Abeta peptide.
“beta amyloid synthesis inhibitors”	compounds which suppress the formation of the beta amyloid peptide. It includes inhibitors of the enzymatic activity and the expression of beta- and gamma-secretase and activators of alpha secretase,
“biomarker”	a characteristic that is objectively measured and evaluated

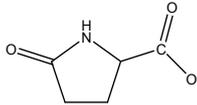
	as an indicator of normal biologic processes, pathologic processes, or pharmacologic responses used for diagnosis or to characterize a therapeutic intervention."
BM	molecular Biomarkers
"CDK 9"	Cyclin-dependent kinase 9 is a cyclin-dependent protein kinase, it functions as component of a multiprotein complex by phosphorylating RNA-polymerase II and is involved in the regulation of several cellular processes.
"cell membrane "	A biological membrane that separates the interior of all cells from the outside environment.
"cell membrane receptors"	A protein molecule which is associated with or integrated into the cell membrane and transduces signals into the cell upon stimulation by specific ligands
"chemokines"	Small proteins whose main function is to regulate cell trafficking. They attract specialized cells, which are important in response to inflammation and for immune reactions of the body  Synonyms: chemokine (C-C motif) ligand 2 (CCL2), small inducible cytokine A2
"chemotactic"	Property of a substance to induce movement of cells or organisms along the concentration gradient of the chemical stimulus.
"CMC"	Chemistry, Manufacturing and Control
"CMO"	Contract manufacturing organisation
"conditioned fear assay"	Experimental setup to analyze a kind of conditioned learning in animals. Fear conditioning is a behavioral paradigm in which organisms learn to predict aversive events. It is a form of learning in which an aversive stimulus (e.g. an electrical shock) is associated with a particular neutral context (e.g. a room) or neutral stimulus (e.g. a tone), resulting in the expression of fear responses to the originally neutral stimulus or context
"cortical layers"	Term which describes the organization of the brain neurons in anatomical distinct layers.
"CSF"	Cerebrospinal fluid
"CRO"	Contract research organization
"crystal structure of glutaminyl cyclase"	3-dimentional structure of the glutaminyl-cyclase solved from a QC protein crystal by X-ray diffraction measurements
"CTA"	Clinical Trial Application
"cytotoxicity"	Property of a compound or physical stimulus to induce cell death
"diagnostic marker"	Biomarker which allows the correct diagnosis of a disease, differentiation from related diseases or the characterization

	of a disease state
“double blind placebo controlled study”	A specific setup of a clinical study which is used during drug development to minimize biases in safety and efficacy assessment caused by the knowledge of taking a treatment or not. Placebo controlled means the comparison of the active formulation with an identical formulation of the drug product without the active component (Placebo). Double blind means that neither the volunteers or patients, nor the investigators know who is getting the placebo and who is getting the treatment.
“Down Syndrome”	Human genetic disorder, which is caused by the presence of all or part of a third copy of chromosome 21.
“downstream”	describes actions or processes which follows after the upstream processes in a directed network or cascade
“DP-4”	Dipeptidyl peptidase-4
“EEG”	Electroencephalography
“endogenous immune system”	the own immune system of a body
“enzyme”	a biomolecule, usually a protein, with catalytic properties
“enzyme inhibitor”	a molecule that binds to enzymes and decreases their catalytic activity
“enzymology”	Science of enzymes.
“Familial British /Danish Dementia	early onset familiar dementias which are caused by two different mutations in the Bri2 gene resulting in formation of amyloidogenic hydrolysis products
“gliptins”	class of oral antidiabetic drugs that inhibit DP-4.
“glutamate”	anionic form of glutamic acid
“glutamatergic cell receptor”	neuronal receptors specific for glutamate
“hAPPwt x hQC double transgenic mice”	transgenic mouse strain with neuronal overexpression of the human APP protein and human glutaminy l cyclase
“hypothyroidism”	endocrine disorder with underactive thyroid gland resulting in low levels of thyroid hormones
“identification and optimization”	Process for selection of new molecular entity based on pre-defined drug like features and for establishing proof of mechanism and efficacy in disease models.
“immunoglobulin isotype”	refers to the genetic variations or differences in the constant regions of the heavy and light chains of antibodies generated from the same gene family the process of classed switching. The isotype of an antibody defines the antigen independent binding properties of an antibody and by this way the kind of immune reaction which is triggerd after binding of an antigen
“IMP”	Investigational Medical Product
“in vitro”	latin: “in a glass”, describes studies which are made with

	cell or biological molecules outside their normal biological context
“in vivo”	latin: ”within a living”, describes studies performed in a living organism
“IND”	Investigational New Drug
“isoenzyme”	enzymes which are different in structure but catalyze the same chemical reaction
“isoQC”	isoenzyme of glutaminy cyclase (Glutaminy-peptide cyclotransferase-like protein, EC=2.3.2.5) with similar activity but different cellular localization
“macrophage”	type of white blood cells that engulf and digest cellular debris, foreign substances, microbes, and cancer cells in a process called phagocytosis
“MCI”	Mild cognitive impairment
“MCP 1”	monocyte chemotactic protein-1, Synonyms: chemokine (C-C motif) ligand 2 (CCL2), small inducible cytokine A2,
“metabolism”	summarizes processes of chemical transformations within a cell or living organism
“metalloenzyme”	enzyme with one or more metal ions in the active side
“microglia”	a type of cells in the brain and spinal cord, responsible for active immune defense in the central nervous system
“microtubules”	component of the cytoskeleton
“MMSE”	Mini–mental state examination
“monocytes”	type of white blood cells, involved in innate immune response
“monotherapy”	treatment of a condition by means of a single drug
“MRI”	Magnetic resonance imaging
“myelination”	Process of formation of the myelin sheath of neuron axons.
“neuregulin”	structurally related proteins with diverse functions in the development of the nervous system and essential roles in vertebrate embryogenesis, including: cardiac development, Schwann cell and oligodendrocyte differentiation, some aspects of neuronal development, as well as the formation of neuromuscular synapses
“neuropathology”	the study of diseases of the nervous system tissue
“neuro-degeneration”	summarizes pathological processes of the nervous system which result in destruction of neuronal cells and tissues
“neuro-toxicity”	summarizes processes or compound properties which lead to neuronal death or neuro-degeneration

“ND diseases”	neurodegenerative diseases
“NMDA”	<i>N</i> -methyl-D-aspartate is an amino acid derivative that acts as a specific agonist at the NMDA receptor mimicking the action of glutamate, the neurotransmitter which normally acts at that receptor
“NMDA receptor antagonists”	chemical compound which binds to the NMDA receptor and inhibits the action of the natural ligand (glutamate)
“NTB”	Neuropsychological test battery
“N-terminal glutamate”	a glutamate residue at the N-terminus of a peptide
“N-terminus”	amino terminus of a protein or peptide
“oligomer”	Higher molecular weight structures which consist of a small number of molecules
“oxoproline”	synonym for pyroglutamate
“pharmacokinetics”	describes how the body affects a specific drug after administration through the mechanisms of absorption and distribution, as well as the chemical changes of the substance in the body (metabolism), and the effects and routes of excretion of the drug and its metabolites
“Phase 1”	clinical trials marking the first time a product candidate is administered to humans. Phase 1 trials focus on ensuring the therapy is safe to use in people rather than how effective it may be as a treatment for a given disease. During this phase escalating doses of the experimental therapy are given to a small number of study participants so that researchers can measure the body’s response, including how it is absorbed, its duration in the blood stream, and which dosage levels are safe and well tolerated
“Phase 2a”	Pilot clinical trials to evaluate efficacy (and safety) in selected populations of patients with the disease or condition to be treated, diagnosed, or prevented. Objectives may focus on dose-response, type of patient, frequency of dosing, or numerous other characteristics of safety and efficacy
“Phase 2b”	Well-controlled trials to evaluate efficacy (and safety) in patients with the disease or condition to be treated, diagnosed, or prevented. These clinical trials usually represent the most rigorous demonstration of the efficacy of a medicine. Sometimes referred to as pivotal trials.
“Phase 3”	Trials conducted after efficacy of a medicine is demonstrated but prior to regulatory submission of a New Drug Application (NDA) or other dossier. These clinical trials are conducted in patient populations for which the medicine is eventually intended. Phase 3a clinical trials generate additional data on both safety and efficacy in relatively large numbers of patients in both controlled and uncontrolled trials. Clinical trials are also conducted in special groups of patients (e.g. renal failure patients), or under special conditions dictated by the nature of the medicine and disease. These trials often provide much of

	the information needed for the package insert and labeling of the medicine.
“pathology”	refers to the predicted or actual progression of a particular diseases
“pathophysiology”	refers to functional changes that accompany a particular disease
“PCT”	Patent Cooperation Treaty
“peptide”	naturally occurring biological molecules formed of short chains of amino acids linked by peptide (amide) bonds
“peritonitis mouse model”	a mouse model where an inflammatory reaction is induced in the peritoneum
“PET”	Positron-emission-tomography
“pGlu-Abeta”	Pyroglutamate-Abeta is an Abeta molecule which contains a pyroglutamate residue at its N-terminus. This pyroglutamate residue is a post-translational modification, which is formed from the glutamate either at position 3 or 11 of truncated Abeta species by the action of glutaminyl cyclase. pGlu-Abeta formation changes unmodified Abeta into very amyloidogenic and neurotoxic Abeta.
“pGlu-Abeta-specific mAB”	Monoclonal antibody specifically binding to pGlu-Abeta.
“pGlu-CCL2”	CCL2 (C-C motif chemokine 2, monocyte chemoattractant protein 1 (MCP-1)) containing an N-terminal pyroglutamate
“phenotype ”	the composite of an organism's observable characteristics or traits, such as its morphology, development, biochemical or physiological properties, phenology, behavior, and products of behavior.
“phospo-tau”	see “p-tau”
“physiology”	Describes how organisms, organ systems, organs, cells, and bio-molecules carry out the chemical or physical functions that exist in a living system
“PI”	Principal investor
“placebo”	a simulated or otherwise medically ineffectual treatment (e.g. drug without active component) for a disease or other medical condition.
“plasma”	liquid component of the blood which is prepared by addition of coagulation inhibitors after blood collection and removal of blood cells usually by centrifugation
“plasma Abeta 1-40 assay”	method for determination of Abeta 1-40 in plasma
“preclinical development”	Evaluation of selected drug candidate according to guidance by competent authorities. Assessment of drug safety in sub-chronic and chronic toxicology studies in two animal species. Development of production process for a drug candidate according to specifications set by competent authorities.

“protofibrils”	Transient structures observed during <i>in vitro</i> formation of mature amyloid fibrils
“protein”	Macromolecule consisting of one or more chains of amino acids.
“pyroglutamate”	5-Oxopyrrolidine-2-carboxylic acid  
“p-tau”	phosphorylated tau protein. Increase of p-tau in the CSF characterizes AD. Phosphorylation of the tau protein is associated with a loss of its physiological function, i.e. a loss of its association with and stabilization of microtubules
“QC”	Glutaminyl cyclase (Glutaminyl-peptide cyclotransferase, EC=2.3.2.5) catalyzes the cyclization of N-terminal glutamine or glutamate residues of peptides to pyroglutamate
“QPCTL k.o. mice”	mouse strain with a knock out of the QPCTL gene coding for the isoQC enzyme
“registration”	Filing an application for registration with the country’s health regulatory authority is a step in bringing a potential new therapy to patients. In the U.S. a New Drug Application (NDA) is filed with the U.S. Food and Drug Administration (FDA). In Europe a Market Authorization Application (MAA) is filed with the European Agency for the Evaluation of Medicinal Products (EMA).
“RNAi”	RNA interference; a biological process in which RNA molecules inhibit gene expression, typically by causing the destruction of specific mRNA molecules.
“RNA”	Ribonucleic acids, group of large usually single stranded macromolecules composed of the nucleosides adenosine, guanosine, uridine and cytosine which are connected by phosphate groups
“rsfMRI”	rested state functional Magnetic resonance imaging
“Saphir Study”	Phase 2a study with PQ912.
“septic arthritis”	severe invasion of a joint by an infectious agent which produces a strong inflammatory reaction in the joint (arthritis)
“synaptic plasticity”	the ability of synapses to strengthen or weaken over time, in response to increases or decreases in their activity. Synaptic plasticity is one of the important neurochemical foundations of learning and memory.
“target occupancy”	degree of binding of a drug to its biochemical target
“tau”	Tau proteins are highly soluble microtubule-associated

	proteins mostly found in neurons that stabilize microtubules.
“upstream”	describes actions or processes which trigger continuing actions in a directed network or cascade
“water maze paradigm”	a behavioral procedure widely used in neuroscience to study spatial learning and memory.

## SOURCES

Akiyama, H., Barger, S., Barnum, S., Bradt, B., Bauer, J., Cole, G.M., Cooper, N.R., Eikelenboom, P., Emmerling, M., Fiebich, B.L., Finch, C.E., Frautschy, S., Griffin, W.S., Hampel, H., Hull, M., Landreth, G., Lue, L., Mrak, R., Mackenzie, I.R., McGeer, P.L., O'Banion, M.K., Pachter, J., Pasinetti, G., Plata-Salaman, C., Rogers, J., Rydel, R., Shen, Y., Streit, W., Strohmeyer, R., Tooyoma, I., Van Muiswinkel, F.L., Veerhuis, R., Walker, D., Webster, S., Wegrzyniak, B., Wenk, G. and Wyss-Coray, T. (2000) Inflammation and Alzheimer's disease. *Neurobiol. Aging* 21, 383-421.

Alexandru, A., Jagla, W., Graubner, S., Becker, A., Bauscher, C., Kohlmann, S., Sedlmeier, R., Raber, K.A., Cynis, H., Ronicke, R., Reymann, K.G., Petrasch-Parwez, E., Hartlage-Rubsamen, M., Waniak, A., Rossner, S., Schilling, S., Osmand, A.P., Demuth, H.U. and von Horsten, S. (2011) Selective hippocampal neurodegeneration in transgenic mice expressing small amounts of truncated Abeta is induced by pyroglutamate-Abeta formation. *J. Neurosci.* 31, 12790-12801.

Alzheimer's Association (2014): Alzheimer's Disease Facts and Figures

Alzheimer's Disease International (2014), Dementia statistics, <http://www.alz.co.uk/research/statistics> (status 2014-08-14)

Becker, A., Kohlmann, S., Alexandru, A., Jagla, W., Canneva, F., Bauscher, C., Cynis, H., Sedlmeier, R., Graubner, S., Schilling, S., Demuth, H.U. and von Horsten, S. (2013) Glutaminyl cyclase-mediated toxicity of pyroglutamate-beta amyloid induces striatal neurodegeneration. *BMC. Neurosci.* 14, 108.

Benilova, I., Karran, E. and De Strooper, B. (2012) The toxic Abeta oligomer and Alzheimer's disease: an emperor in need of clothes. *Nat. Neurosci.* 15, 349-357.

Black, R., Lues, I., Weber, F., Meyer, A., Hoffmann, T., Pokorny, R., Demuth, H.U. and Glund, K. (2013) Safety, pharmacokinetics and pharmacodynamics of PQ912, the first Glutaminyl Cyclase (QC) inhibitor to treat AD, in healthy elderly subjects, *Alzheimer's & Dementia: The Journal of the Alzheimer's Association*, Volume 9, Issue 4, Supplement, Page P280.

Buckholtz, N.S. (2011) Perspective: in search of biomarkers. *Nature* 475(7355), S8.

Buchholz, M., Heiser, U., Schilling, S., Niestroj, A.J., Zunkel, K. and Demuth, H.U. (2006) The first potent inhibitors for human glutaminyl cyclase: synthesis and structure-activity relationship. *J. Med. Chem.* 49, 664-677.

Buchholz, M., Hamann, A., Aust, S., Brandt, W., Böhme, L., Hoffmann, T., Schilling, S., Demuth, H.U., Heiser, U., (2009) Inhibitors for human glutaminyl cyclase by structure based design and bioisosteric replacement. *J Med Chem.*, 52 7069-80.

Caputo, A., Graf, A., Riviere, M.-E., Alva, G., Balaguer, E., Zacharias, A., Maguire, R.P., Sovago, J., Ryan, J.M. (2014) Active Aβ immunotherapy CAD106 Phase 2 dose-adjuvant finding study: Amyloid PET. Abstract P1-360, AAIC Copenhagen, July 2014

Citron, M. (2010) Alzheimer's disease: strategies for disease modification. *Nature Reviews Drug Discovery* 9, 387-398

Cummings, J., Cho, W., Ward, M., Friesenhahn, M., Brunstein, F., Honigberg, L., Clayton, D., Mortensen, D., Ho, C., Paul, R. (2014) A randomized, double-blind, placebo-controlled phase2 study to evaluate the efficacy and safety of crenezumab in patients with mild to moderate Alzheimer's disease. Abstract O4-11-06, AAIC Copenhagen, July 2014

Cummings, J., Morstorf, T., Zhong, K. (2014) Alzheimer's disease drug-development pipeline: few candidates, frequent failures. *Alzheimer's Research & Therapy* 2014, 6:37.

Cynis, H., Rahfeld J.U., Stephan, A., Kehlen, A., Koch, B., Wermann, M., Demuth, H-U., and Schilling, S., (2008) Isolation of an Isoenzyme of Human Glutaminyl Cyclase: Retention in the Golgi Complex Suggests Involvement in the Protein Maturation Machinery; *J. Mol. Biol.*, 379 966-980

Cynis, H., Hoffmann, T., Friedrich, D., Kehlen, A., Gans, K., Kleinschmidt, M., Rahfeld, J.U., Wolf, R., Wermann, M., Stephan, A., Haegele, M., Sedlmeier, R., Graubner, S., Jagla, W., Muller, A., Eichtopf, R., Heiser, U., Seifert, F., Quax, P.H., de Vries, M.R., Hesse, I., Trautwein, D., Wollert, U., Berg, S., Freyse, E.J., Schilling, S. and Demuth, H.U. (2011) The isoenzyme of glutaminyl cyclase is an important regulator of monocyte infiltration under inflammatory conditions. *EMBO Mol. Med.* 3, 545-558.

Cynis, H., Kehlen, A., Haegele, M., Hoffmann, T., Heiser, U., Fujii, M., Shibazaki, Y., Yoneyama, H., Schilling, S. and Demuth, H.U. (2013) Inhibition of Glutaminyl Cyclases alleviates CCL2-mediated inflammation of non-alcoholic fatty liver disease in mice. *Int. J. Exp. Pathol.* 94, 217-225.

Datamonitor Healthcare, Forecast Alzheimer Disease, 2014

De Kimpe, L., Bennis, A., Zwart, R., van Haastert, E.S., Hoozemans, J.J. and Scheper, W. (2012) Disturbed Ca<sup>2+</sup> homeostasis increases glutaminyl cyclase expression; connecting two early pathogenic events in Alzheimer's disease in vitro. *PLoS One.* 7, e44674.

Demattos, R.B., Lu, J., Tang, Y., Racke, M.M., DeLong, C.A., Tzaferis, J.A., Hole, J.T., Forster, B.M., McDonnell, P.C., Liu, F., Kinley, R.D., Jordan, W.H. and Hutton, M.L. (2012) A Plaque-Specific Antibody Clears Existing beta-amyloid Plaques in Alzheimer's Disease Mice. *Neuron* 76, 908-920.

DeMattos, R., May, P., Racke, R., Hole, J., Tzaferis, J., Liu, F., DeLong, C., Day, T., Yang, Z., Boggs, L., Monk, S., Mergott, D., Tang, Y., Lu, J., Hutton, M., Nordstedt, C., Anderson, W. and Inverson, P. (2014) Combination therapy with a plaque specific Abeta antibody and BACE inhibitor results in dramatic lowering in aged PDAPP mice. Abstract O1-10-03, AAIC Copenhagen, July 2014

Demuth, H.U., Rosche, F., Schmidt, J., Pauly, R.P., McIntosh, C.H.S. and Pederson, R.A.: Use of dipeptidylpeptidase IV inhibitors for lowering the blood glucose level in mammals. Patent: WO97/40832.

Demuth, H.U., Hoffmann, T., Niestroj, A.J., Schilling, S., and Heiser, U.; (2004) Use of effectors of glutaminyl and glutamate cyclases. Patent: WO2004/098625.

Deshpande, A., Mina, E., Glabe, C. and Busciglio, J. (2006) Different conformations of amyloid beta induce neurotoxicity by distinct mechanisms in human cortical neurons. *J Neurosci.* 26, 6011-6018.

Ding, J.D., Lin, J., Mace, B.E., Herrmann, R., Sullivan, P. and Bowes, R.C. (2008) Targeting age-related macular degeneration with Alzheimer's disease based immunotherapies: anti-amyloid-beta antibody attenuates pathologies in an age-related macular degeneration mouse model. *Vision Res.* 48, 339-345.

Ding, J.D., Johnson, L.V., Herrmann, R., Farsiu, S., Smith, S.G., Groelle, M., Mace, B.E., Sullivan, P., Jamison, J.A., Kelly, U., Harrabi, O., Bollini, S.S., Dilley, J., Kobayashi, D., Kuang, B., Li, W., Pons, J., Lin, J.C. and Bowes, R.C. (2011) Anti-amyloid therapy protects against retinal pigmented epithelium damage and vision loss in a model of age-related macular degeneration. *Proc. Natl. Acad. Sci. U. S. A* 108, E279-E287.

Doody, R.S., Aisen, P.S., Iwatsubo, T. (2013) Semagacestat for treatment of Alzheimer's disease. *N Engl J Med.* 369(17), 1661.

Doody, R.S., Thomas, R.G., Farlow, M., Iwatsubo, T., Vellas, B., Joffe, S., Kieburtz, K., Raman, R., Sun, X., Aisen, P.S., Siemers, E., Liu-Seifert, H., Mohs, R. Alzheimer's Disease Cooperative Study Steering Committee (2014) Solanezumab Study Group. Phase 3 studies of solanezumab for mild-to-moderate Alzheimer's disease. *N Engl J Med.* 370(4):311-321.

Extance, A., (2010) Alzheimer's failure raises questions about disease-modifying strategies. *Nat. Rev. Drug Discov.* 9, 749-751.

Fassbender, K., Walter, S., Kuhl, S., Landmann, R., Ishii, K., Bertsch, T., Stalder, A.K., Muehlhauser, F., Liu, Y., Ulmer, A.J., Rivest, S., Lentschat, A., Gulbins, E., Jucker, M., Staufenbiel, M., Brechtel, K., Walter, J., Multhaup, G., Penke, B., Adachi, Y., Hartmann, T. and Beyreuther, K. (2004) The LPS receptor (CD14) links innate immunity with Alzheimer's disease. *FASEB J* 18, 203-205.

Freir, D.B., Fedriani, R., Scully, D., Smith, I.M., Selkoe, D.J., Walsh, D.M. and Regan, C.M. (2011) Abeta oligomers inhibit synapse behavior necessary for memory consolidation. *Neurobiol. Aging* 32, 2211-2218.

Frost, J.L., Liu, B., Kleinschmidt, M., Schilling, S., Demuth, H.U. and Lemere, C.A. (2012) Passive immunization against pyroglutamate-3 amyloid-beta reduces plaque burden in Alzheimer-like transgenic mice: a pilot study. *Neurodegener. Dis.* 10, 265-270.

Frost, J.L., Le, K.X., Cynis, H., Ekpo, E., Kleinschmidt, M., Palmour, R.M., Ervin, F.R., Snigdha, S., Cotman, C.W., Saido, T.C., Vassar, R.J., St George-Hyslop, P., Ikezu, T., Schilling, S., Demuth, H.-U. and Lemere, C.A. (2013)

- Pyroglutamate-3 amyloid- $\beta$  deposition in the brains of humans, non-human primates, canines, and Alzheimer disease-like transgenic mouse models. *Am J Pathol.* 183(2), 369-81.
- Fuhrmann, M., Bittner, T., Jung, C.K., Burgold, S., Page, R.M., Mitteregger, G., Haass, C., LaFerla, F.M., Kretschmar, H. and Herms, J. (2010) Microglial Cx3cr1 knockout prevents neuron loss in a mouse model of Alzheimer's disease. *Nat. Neurosci.* 13, 411-413.
- Graf, A., Riviere, M.E., Caputo, A., Farlow, M.R., Marotta, G., Sanchez-Valle, R., Scheltens, R., Ryan, J.M., Vandenberghe, R.R., (2014) Active A $\beta$  immunotherapy CAD106 Phase 2 dose-adjuvant finding study: Safety and CNS biomarkers. Abstract O4-11-04, AAIC Copenhagen, July 2014
- Gravitz, L. (2011) Drugs: a tangled web of targets. *Nature* 475(7355), S9-11
- Güntert, A., Dobeli, H. and Bohrmann, B. (2006) High sensitivity analysis of amyloid-beta peptide composition in amyloid deposits from human and PS2APP mouse brain. *Neuroscience* 143, 461-475.
- Han, S.H. and Mook-Jung, I. (2014) Diverse Molecular Targets for Therapeutic Strategies in Alzheimer's Disease. *J Korean Med Sci.* 29(7), 893-902
- Hardy, J.A. and Higgins, G.A. (1992) Alzheimer's disease: the amyloid cascade hypothesis. *Science* 256, 184-185.
- Hardy, J. and Selkoe, D.J. (2002) The amyloid hypothesis of Alzheimer's disease: progress and problems on the road to therapeutics. *Science* 297, 353-356.
- Harigaya, Y., Saido, T.C., Eckman, C.B., Prada, C.-J., Shoji, M. and Younkin, S.G. (2000) Amyloid  $\beta$  protein starting pyroglutamate at position 3 is a major component of the amyloid deposits in the Alzheimer's disease brain. *Biochem Biophys Res Commun* 276, 422-427.
- Hartlage-Rübsamen, M., Morawski, M., Waniek, A., Jager, C., Zeitschel, U., Koch, B., Cynis, H., Schilling, S., Schliebs, R., Demuth, H.U. and Rossner, S. (2011) Glutaminyl cyclase contributes to the formation of focal and diffuse pyroglutamate (pGlu)-A $\beta$  deposits in hippocampus via distinct cellular mechanisms. *Acta Neuropathol.* 121, 705-719.
- Hellvard, A., Maresz, K., Schilling, S., Graubner, S., Heiser, U., Jonsson, R., Cynis, H., Demuth, H.U., Potempa, J. and Mydel, P. (2013) Glutaminyl cyclases as novel targets for the treatment of septic arthritis. *J. Infect. Dis.* 207, 768-777.
- Henley, D.B., Sundell, K.L., Sethuraman, G., Dowsett, S.A., May, P.C. (2014) Safety profile of semagacestat, a gamma-secretase inhibitor: IDENTITY trial findings. *Curr Med Res Opin.* 14, 1-12
- Hinke, S.A., Pospisilik, J.A., Demuth, H.-U., Manhart, S., Kühn-Wache, K., Hoffmann, T., Nishimura, E., Pederson, R.A. and McIntosh, C.H.S. (2000) Dipeptidyl peptidase IV (DPIV/CD26) characterization of glucagon degradation products and DPIV-resistant analogs. *J. Biol. Chem.* 275, 3827-3834
- Hook G, Yu J, Toneff T, Kindy M, Hook V. (2014) Brain pyroglutamate amyloid- $\beta$  is produced by cathepsin B and is reduced by the cysteine protease inhibitor E64d, representing a potential Alzheimer's disease therapeutic. *J Alzheimers Dis.* 41(1),129-149
- Hosoda, R., Saido, T.C., Otvos, L.J., Arai, T., Mann, D.M., Lee, V.M., Trojanowski, J.Q. and Iwatsubo, T. (1998) Quantification of modified amyloid beta peptides in Alzheimer disease and Down syndrome brains. *J Neuropathol Exp Neurol* 57, 1089-1095.
- Ittner, L.M. and Götz, J. (2011) Amyloid-beta and tau—a toxic pas de deux in Alzheimer's disease. *Nat. Rev. Neurosci.* 12, 65-72.
- Iwatsubo, T., Saido, T.C., Mann, D.M., Lee, V.M. and Trojanowski, J.Q. (1996) Full-length amyloid-beta (1-42(43)) and amino-terminally modified and truncated amyloid-beta 42(43) deposit in diffuse plaques. *Am. J. Pathol.* 149, 1823-1830.
- Jack, C.R., Jr., Knopman, D.S., Jagust, W.J., Shaw, L.M., Aisen, P.S., Weiner, M.W., Petersen, R.C. and Trojanowski, J.Q. (2010) Hypothetical model of dynamic biomarkers of the Alzheimer's pathological cascade. *Lancet Neurol.* 9, 119-128.
- Jackson, G.A. (2014) Drug treatments for Alzheimer's disease. *Nurs Times.* 110(9), 24-26.

- Jawhar, S., Wirths, O. and Bayer, T.A. (2011a) Pyroglutamate amyloid-beta (A $\beta$ ): A hatchet man in Alzheimer disease. *J Biol. Chem* 286, 38825-38832.
- Jawhar, S., Wirths, O., Schilling, S., Graubner, S., Demuth, H.U. and Bayer, T.A. (2011b) Overexpression of glutaminyl cyclase, the enzyme responsible for pyroglutamate A $\beta$  formation, induces behavioral deficits, and glutaminyl cyclase knock-out rescues the behavioral phenotype in 5XFAD mice. *J. Biol. Chem.* 286, 4454-4460.
- Lambert, M.P., Barlow, A.K., Chromy, B.A., Edwards, C., Freed, R., Liosatos, M., Morgan, T.E., Rozovsky, I., Trommer, B., Viola, K.L., Wals, P., Zhang, C., Finch, C.E., Krafft, G.A. and Klein, W.L. (1998) Diffusible, nonfibrillar ligands derived from A $\beta$ 1-42 are potent central nervous system neurotoxins. *Proc. Natl. Acad. Sci. U. S. A* 95, 6448-6453.
- Lesne, S.E., Sherman, M.A., Grant, M., Kuskowski, M., Schneider, J.A., Bennett, D.A. and Ashe, K.H. (2013) Brain amyloid-beta oligomers in ageing and Alzheimer's disease. *Brain* 136, 1383-1398
- Li, S., Jin, M., Koeglsperger, T., Shepardson, N.E., Shankar, G.M. and Selkoe, D.J. (2011) Soluble A $\beta$  oligomers inhibit long-term potentiation through a mechanism involving excessive activation of extrasynaptic NR2B-containing NMDA receptors. *J. Neurosci.* 31, 6627-6638.
- Mandler, M., Walker, L., Santic, R., Hanson, P., Upadhaya, A.R., Colloby, S.J., Morris, C.M., Thal, D.R., Thomas, A.J., Schneeberger, A. and Attems, J. (2014) Pyroglutamylated amyloid-beta is associated with hyperphosphorylated tau and severity of Alzheimer's disease. *Acta Neuropathol.* 128, 67-79.
- Morawski, M., Hartlage-Rubsamen, M., Jager, C., Waniek, A., Schilling, S., Schwab, C., McGeer, P.L., Arendt, T., Demuth, H.U. and Rossner, S. (2010) Distinct glutaminyl cyclase expression in Edinger-Westphal nucleus, locus coeruleus and nucleus basalis Meynert contributes to pGlu-A $\beta$  pathology in Alzheimer's disease. *Acta Neuropathol.* 120, 195-207.
- Morawski, M., Schilling, S., Kreuzberger, M., Waniek, A., Jager, C., Koch, B., Cynis, H., Kehlen, A., Arendt, T., Hartlage-Rubsamen, M., Demuth, H.U. and Rossner, S. (2014) Glutaminyl cyclase in human cortex: correlation with (pGlu)-amyloid-beta load and cognitive decline in Alzheimer's disease. *J. Alzheimers. Dis.* 39, 385-400.
- McGowan, E., Pickford, F., Kim, J., Onstead, L., Eriksen, J., Yu, C., Skipper, L., Murphy, M.P., Beard, J., Das, P., Jansen, K., Delucia, M., Lin, W.L., Dolios, G., Wang, R., Eckman, C.B., Dickson, D.W., Hutton, M., Hardy, J. and Golde, T. (2005) A $\beta$ 42 is essential for parenchymal and vascular amyloid deposition in mice. *Neuron* 47, 191-199.
- NeuroPerspectives, No 226, Sep 2014, ISSN 1537-6346
- Novakovic, D., Feligioni, M., Scaccianoce, S., Caruso, A., Piccinin, S., Schepisi, C., Errico, F., Mercuri, N.B., Nicoletti, F., Nisticò, R. (2013) Profile of gantenerumab and its potential in the treatment of Alzheimer's disease. *Drug Des Devel Ther.* 7, 1359-1364.
- Novartis press release, July 15<sup>th</sup>, 2014, Novartis announces collaboration with Banner Alzheimer's Institute on a pioneering prevention study for Alzheimer's Disease
- Nussbaum, J.M., Schilling, S., Cynis, H., Silva, A., Swanson, E., Wangsanut, T., Tayler, K., Wiltgen, B., Hatami, A., Ronicke, R., Reymann, K., Hutter-Paier, B., Alexandru, A., Jagla, W., Graubner, S., Glabe, C.G., Demuth, H.U. and Bloom, G.S. (2012) Prion-like behavior and tau-dependent cytotoxicity of pyroglutamylated amyloid-beta. *Nature* 485, 651-655.
- Piccini, A., Russo, C., Gliozzi, A., Relini, A., Vitali, A., Borghi, R., Giliberto, L., Armirotti, A., D'Arrigo, C., Bachi, A., Cattaneo, A., Canale, C., Torrassa, S., Saido, T.C., Markesbery, W., Gambetti, P. and Tabaton, M. (2005) {beta}-Amyloid Is Different in Normal Aging and in Alzheimer Disease. *J. Biol. Chem.* 280, 34186-34192.
- Puzzo, D. and Arancio, O. (2013) Amyloid-beta Peptide: Dr. Jekyll or Mr. Hyde? *J Alzheimers. Dis.*;33 Suppl 1:S111-20
- Querfurth, H.W. and LaFerla, F.M. (2010) Alzheimer's disease. *N. Engl. J Med.* 362, 329-344.
- Rijal Upadhaya, A., Kosterin, I., Kumar, S., von Arnim, C.A., Yamaguchi, H., Fandrich, M., Walter, J. and Thal, D.R. (2014) Biochemical stages of amyloid-beta peptide aggregation and accumulation in the human brain and their association with symptomatic and pathologically preclinical Alzheimer's disease. *Brain* 137, 887-903.

- Riviere, M.-E., Caputo, A., Laurent, N., Vostiar, I., Andreasen, N., Cohen, S., Kressig, R.W., Ryan, J.M., Graf, A. (2014) Active A $\beta$  immunotherapy CAD106 Phase 2 dose-adjuvant finding study: Immune response. Abstract P1-364, AAIC Copenhagen, July 2014
- Russo, C., Saido, T.C., DeBusk, L.M., Tabaton, M., Gambetti, P. and Teller, J.K. (1997) Heterogeneity of water-soluble amyloid beta-peptide in Alzheimer's disease and Down's syndrome brains. *FEBS Lett.* 409, 411-416.
- Russo, C., Schettini, G., Saido, T.C., Hulette, C., Lippa, C., Lannfelt, L., Ghetti, B., Gambetti, P., Tabaton, M. and Teller, J.K. (2000) Presenilin-1 mutations in Alzheimer's disease. *Nature* 405, 531-532.
- Russo, C., Violani, E., Salis, S., Venezia, V., Dolcini, V., Damonte, G., Benatti, U., Arrigo, C., Patrone, E., Carlo, P. and Schettini, G. (2002) Pyroglutamate-modified amyloid beta-peptides—A $\beta$ 42(pE)—strongly affect cultured neuron and astrocyte survival. *J. Neurochem.* 82, 1480-1489
- Saido, T.C., Iwatsubo, T., Mann, D.M., Shimada, H., Ihara, Y. and Kawashima, S. (1995) Dominant and differential deposition of distinct beta-amyloid peptide species, A $\beta$ 42(pE), in senile plaques. *Neuron* 14, 457-466.
- Salloway, S., Sperling, R., Fox, N.C., Blennow, K., Klunk, W., Raskind, M., Sabbagh, M., Honig, L.S., Porsteinsson, A.P., Ferris, S., Reichert, M., Ketter, N., Nejadnik, B., Guenzler, V., Miloslavsky, M., Wang, D., Lu, Y., Lull, J., Tudor, I.C., Liu, E., Grundman, M., Yuen, E., Black, R., Brashear, H.R., Bapineuzumab 301 and 302 Clinical Trial Investigators (2014) Two phase 3 studies of bapineuzumab in mild-to-moderate Alzheimer's disease. *N Engl J Med.* **370(4)**, 322-333.
- Schilling, S., Niestroj, A.J., Rahfeld, J.-U., Hoffmann, T., Wermann, M., Zunkel, K., Wasternack, D.C., Demuth, H.-U. (2003) Identification of Human Glutaminyl Cyclase as a Metalloenzyme: Potent Inhibition by Imidazole Derivatives and Heterocyclic Chelators. *J. Biol. Chem.* 278, 49773-49779
- Schilling, S., Hoffmann, T., Manhart, S., Hoffmann, M. and Demuth, H.U. (2004) Glutaminyl cyclases unfold glutamyl cyclase activity under mild acid conditions. *FEBS Lett.* 563, 191-196.
- Schilling, S., Lauber, T., Schaupp, M., Manhart, S., Scheel, E., Bohm, G. and Demuth, H.U. (2006) On the seeding and oligomerization of pGlu-amyloid peptides (in vitro). *Biochemistry* 45, 12393-12399.
- Schilling, S., Zeitschel, U., Hoffmann, T., Heiser, U., Francke, M., Kehlen, A., Holzer, M., Hutter-Paier, B., Prokesch, M., Windisch, M., Jagla, W., Schlenzig, D., Lindner, C., Rudolph, T., Reuter, G., Cynis, H., Montag, D., Demuth, H.U. and Rossner, S. (2008) Glutaminyl cyclase inhibition attenuates pyroglutamate A $\beta$  and Alzheimer's disease-like pathology. *Nat. Med.* 14, 1106-1111.
- Schilling, S., Kohlmann, S., Bauscher, C., Sedlmeier, R., Koch, B., Eichentopf, R., Becker, A., Cynis, H., Hoffmann, T., Berg, S., Freyse, E.J., von Horsten, S., Rossner, S., Graubner, S. and Demuth, H.U. (2011) Glutaminyl cyclase knock-out mice exhibit slight hypothyroidism but no hypogonadism: implications for enzyme function and drug development. *J. Biol. Chem.* 286, 14199-14208.
- Schlenzig, D., Manhart, S., Cinar, Y., Kleinschmidt, M., Hause, G., Willbold, D., Funke, S.A., Schilling, S. and Demuth, H.U. (2009) Pyroglutamate formation influences solubility and amyloidogenicity of amyloid peptides. *Biochemistry* 48, 7072-7078.
- Schlenzig, D., Ronicke, R., Cynis, H., Ludwig, H.H., Scheel, E., Reymann, K., Saido, T., Hause, G., Schilling, S. and Demuth, H.U. (2012) N-Terminal pyroglutamate formation of A $\beta$ 38 and A $\beta$ 40 enforces oligomer formation and potency to disrupt hippocampal long-term potentiation. *J Neurochem.* 121, 774-784.
- Selkoe, D.J. (2001) Alzheimer's disease: genes, proteins, and therapy. *Physiol Rev.* 81, 741-766.
- Selkoe, D.J. (2002) Alzheimer's disease is a synaptic failure. *Science* 298, 789-791.
- Selkoe, D.J. (2004) Alzheimer disease: mechanistic understanding predicts novel therapies. *Ann. Intern. Med.* 140, 627-638.
- Selkoe, D.J. (2008) Soluble oligomers of the amyloid beta-protein impair synaptic plasticity and behavior. *Behav. Brain Res.* 192, 106-113.
- Selkoe, D.J., (2011) Resolving controversies on the path to Alzheimer's therapeutics. *Nature Medicine*, 17, 1060ff

Shankar, G.M., Li, S., Mehta, T.H., Garcia-Munoz, A., Shepardson, N.E., Smith, I., Brett, F.M., Farrell, M.A., Rowan, M.J., Lemere, C.A., Regan, C.M., Walsh, D.M., Sabatini, B.L. and Selkoe, D.J. (2008) Amyloid-beta protein dimers isolated directly from Alzheimer's brains impair synaptic plasticity and memory. *Nat. Med.* 14, 837-842.

Shankar, G.M. and Walsh, D.M., (2009) Alzheimer's disease: synaptic dysfunction and A $\beta$ . *Molecular Neurodegeneration* 4, 48

Sheng, M., Sabatini, B. L., & Sudhof, T. C. (2012). Synapses and Alzheimer's Disease. *Cold Spring Harbor Perspectives in Biology* 4(5), 1-18

Sperling, R., (2013): [www.massgeneral.org/neurology/news/newsarticle.aspx?id=4486](http://www.massgeneral.org/neurology/news/newsarticle.aspx?id=4486)

Villemagne, V.L., Burnham, S., Bourgeat, P., Brown, B., Ellis, K.A., Salvado, O., Szoek, C., Macaulay, S.L., Martins, R., Maruff, P., Ames, D., Rowe, C.C. and Masters, C.L. (2013) Amyloid beta deposition, neurodegeneration, and cognitive decline in sporadic Alzheimer's disease: a prospective cohort study. *Lancet Neurol.* 12, 357-367.

Walsh, D.M. and Selkoe, D.J. (2004) Deciphering the molecular basis of memory failure in Alzheimer's disease. *Neuron* 44, 181-193.

Walsh, D.M. and Selkoe, D. J. (2007). A $\beta$  Oligomers ? a decade of discovery. *Journal of Neurochemistry* 101(5), 1172–1184.

Weber, F., Lues, I., Meyer, A., Hoffmann, T., Pokorny, R., Lopez, L., Demuth, H.U. and Glund, K. (2013) A Phase 1 study assessing safety, pharmacokinetics and pharmacodynamics of PQ912, the first Glutaminyl Cyclase (QC) inhibitor to treat AD, Abstract# 1453, AD/PD 2013, Florence, Italy.

Willem. M., Garratt, A.N., Novak, B., Citron, M., Kaufmann, S., Rittger, A., DeStrooper, B., Saftig, P., Birchmeier, C., Haass C. (2006) Control of peripheral nerve myelination by the beta-secretase BACE1. *Science* 314, 664-666.

Wirhth, O., Breyhan, H., Cynis, H., Schilling, S., Demuth, H.-U., Bayer, T.A.. (2009) Intraneuronal pyroglutamate-A $\beta$  3-42 triggers neurodegeneration and lethal neurological deficits in a transgenic mouse model. *Acta Neuropathol.* 118, 487-96.

World Alzheimer Report 2013, Journey of Caring, An Analysis of Long-Term Care for Dementia, Prince, M., Prina, M. and Guerchet, M., Alzheimer's Disease International: The International Federation of Alzheimer's Disease and Related Disorders Societies,

Wyss-Coray, T. (2006) Inflammation in Alzheimer disease: driving force, bystander or beneficial response? *Nat. Med.* 12, 1005-1015

Yan, R. and Vassar, R. (2014) Targeting the  $\beta$  secretase BACE1 for Alzheimer's disease therapy. *Lancet Neurol.* 13(3):319-329

Yang, C.N., Shiao, Y.J., Shie, F.S., Guo, B.S., Chen, P.H., Cho, C.Y., Chen, Y.J., Huang, F.L. and Tsay, H.J. (2011) Mechanism mediating oligomeric A $\beta$  clearance by naïve primary microglia. *Neurobiol. Dis.* 42, 221-230.

Yazi, D.K., Suchowerska, A.K., van der Hoven, J., De Silva, D.M., Wu, C.W., van Eersel, J., Ittner, A., Ittner, L.M. (2012) Lessons from tau-deficient mice. *Int J Alzheimers Dis.* 2012, 1-8.

## DEFINITIONS

“Additional New Shares”	221,311 new ordinary bearer shares of the Company with no par value with a notional value of EUR 1.00 each in connection with a possible volume increase option
“AFM”	Netherlands Authority for the Financial Markets ( <i>Autoriteit Financiële Markten</i> )
“Articles of Association”	the Company’s articles of association
“AU”	Australia
“BaFin”	German Financial Supervisory Authority ( <i>Bundesanstalt für Finanzdienstleistungsaufsicht</i> )
“BLA”	Biologics License Application to FDA in the U.S.
“BR”	Brasil
“CA”	Canada
“Capital Increase”	The capital increase to create the New Shares and the Additional New Shares
“CEO”	Chief Executive Officer
“CITA”	Dutch Corporate Income Tax Act 1969 ( <i>Wet op de vennootschapsbelasting, 1969</i> )
“CMOs”	Contract Manufacturing Organizations
“CN”	China
“Co-Bookrunner”	Petercam
“Company”	Probiodrug AG
“CROs”	Contract Research Organizations
“D&O”	directors and officers
“EA”	United Arab Emirates
“EEA”	the European Economic Area
“EMA”	European Medicines Agency
“EP”	European
“EPO”	the European Patents Office
“EU”	the European Union
“Euronext Amsterdam”	regulated market operated by Euronext Amsterdam N.V.
“Existing Shares”	5,241,693 existing ordinary bearer shares of the Company with no par value with a notional value of EUR 1.00 each

“FDA”	U.S. Food and Drug Administration
“GCP”	Good Clinical Practices
“German GAAP”	German Generally Accepted Accounting Principles
“German GAAP Financial Statements”	the Company’s audited unconsolidated financial statements as of and for the year ended 31 December 2013 in accordance with the German Commercial Code
“GMP”	Good Manufacturing Practices
“Greenshoe Capital Increase”	The utilization of the authorized capital of the Company to create the Greenshoe Shares to the extent Kempen & Co has subscribed for Greenshoe Shares
“Greenshoe Option”	Agreement by the Company to issue the same number of Over-allotment Shares which have been placed and not been purchased in the market by the stabilization manager within 30 calendar days after the first day of trading utilizing its authorized capital
“Greenshoe Shares”	issue by the Company of a number of new shares that equals the number of shares Kempen & Co has placed with investors in connection with the Over-allotment minus the number of shares Kempen & Co has acquired in the context of stabilization measures utilizing its authorized capital
“HK”	Hong Kong
“IASB”	International Accounting Standards Board
“IdW”	German Institute of Certified Public Accountants ( <i>Institut der Wirtschaftsprüfer</i> )
“IFRIC”	International Financial Reporting Interpretations Committee
“IFRS”	International Financial Reporting Standards, as adopted by the European Union
“IFRS Consolidated Financial Statements”	the Company’s audited consolidated financial statements as of and for the years ended 31 December 2013, 2012 and 2011 prepared in accordance with IFRS
“IL”	Israel
“IN”	India
“Ingenium”	Ingenium Pharmaceuticals GmbH
“IRB”	Institutional Review Board formally assigned by an institution to approve, monitor and review biomedical research involving humans
“IRS”	U.S. Internal Revenue Service
“JP”	Japan
“Kempen & Co”	Kempen & Co N.V.

“KR”	South Korea
“Lending Shareholders”	The Lending Shareholders are Bio Discovery III F.C.P.R., Biotech Growth N.V., HBM Healthcare Investments (Cayman) Ltd., Coöperatief LSP IV U.A., PlatzerInvest AG, Sycamore GmbH and Dr. Hendrik Liebers.
“Listing”	Admission of the Company’s shares for trading on the regulated market operated by Euronext Amsterdam N.V.
“MAA”	Marketing Authorization Application to EMA in the EU
“Maikowski & Ninnemann”	Maikowski & Ninnemann, Berlin and Leipzig, Germany
“maximum scenario“	Placement of the New Shares and the Additional Shares and execution of the Greenshoe Option in full, i.e. in an amount equal to 15% of the New Shares and the Additional New Shares
“minimum scenario“	Placement of New Shares (only)
“MX”	Mexico
“New Shares”	1,475,409 new ordinary bearer shares of the Company with no par value with a notional value of EUR 1.00 each from the capital increase against cash contribution
“NDA”	New Drug Application to the FDA
“NZ”	New Zealand
“Offer Shares”	Over-allotment Shares together with New Shares and Additional New Shares
“Offering”	a public offering in the Netherlands and a private placement to institutional investors outside the United States of America in certain member states of the European Union as well as in Switzerland under Regulation S of the Securities Act and to QIBs in the U.S. in reliance upon Rule 144A under the Securities Act.
“Offer Price”	Price at which each Offer Share is to be issued pursuant to the Offering
“Over-allotment”	In connection with possible stabilization measures, investors may, in addition to the New Shares and the Additional New Shares being offered, be allocated up to 221,311 Over-allotment Shares if the New Shares are sold and up to 254,508 Over-allotment Shares if both the New Shares and Additional New Shares are sold (provided that in no event may Over-allotment Shares be issued in an amount of more than 15% of the New Shares and Additional New Shares, if any, sold in the Offering) as part of the allocation of the Offer Shares.
“Over-allotment Shares”	254,508 existing ordinary bearer shares with no par value with a notional value of EUR 1.00 each from the holdings of the Lending Shareholders in connection with a possible over-allotment
“Petercam”	Petercam NV/SA

“PFIC”	Passive Foreign Investment Company
“Probiodrug”	The Company and its subsidiaries
“Prospectus”	The prospectus as approved by the BaFin as a prospectus prepared in accordance with the requirements of the German Securities Prospectus Act (Wertpapierprospektgesetz) and notified to the AFM in accordance with the passport mechanism set out in accordance with Section 18 (1) of the German Securities Prospectus Act and in the Prospectus Directive ( <i>Prospektrichtlinie</i> ) (No 2003/71/EC)
“QEF”	Qualified Electing Fund
“QIBs”	Qualified institutional buyers as defined in Rule 144A under the Securities Act
“R&D”	Research and Development
“Securities Act”	U.S. Securities Act of 1933, as amended
“Settlement Loan Shares”	The number of Existing Shares of the Settlement Loan Shareholders as corresponds to the number of New Shares and Additional New Shares granted to be lent to Kempen & Co, in its capacity as settlement agent, by the Lending Shareholders in connection with the Settlement
“Settlement Share Loan”	The Lending Shareholders have granted to Kempen & Co, in its capacity as settlement agent, a share loan for the purpose of facilitating the settlement of the Offering with Existing Shares in respect of the New Shares and the Additional New Shares, if any.
“SG”	Singapore
“Sole Global Coordinator”	Kempen & Co
“Stabilization Period”	the period of 30 calendar days from the first day of trading in the Offer Shares on Euronext Amsterdam
“Syndicate Banks”	Kempen & Co and Petercam
“Total New Shares”	New Shares, Additional New Shares and Greenshoe Shares
“Unaudited IFRS Consolidated Interim Financial Statements”	the Company’s unaudited consolidated interim financial statements as of and for the six-month period ended 30 June 2014 in accordance with International Financial Reporting Standards, as adopted by the European Union
“Underwriting Agreement”	The underwriting agreement entered into between the Company and Kempen & Co and Petercam described in “ <i>UNDERWRITING</i> ”
“U.S.”	United States of America
“USPTO”	The United States Patent and Trademark Office
“ZA”	South Africa

## FINANCIAL INFORMATION

### **Interim consolidated financial statements for the six-month period January 1, 2014 to June 30, 2014 of Probiodrug AG (IFRS) (unaudited)**

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### **Consolidated financial statements as of and for the period January 1, 2013 to December 31, 2013, as of and for the period January 1, 2012 to December 31, 2012 and as of and for the period January 1, 2011 to December 31, 2011 of Probiodrug AG (IFRS) (audited)**

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### **Annual financial statements as of and for the period January 1, 2013 to December 31, 2013 (German GAAP, HGB) (audited)**

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**Interim Consolidated Financial Statements for the six-month period January 1,  
2014 to June 30, 2014 of Probiodrug AG (IFRS) (unaudited)**

## Consolidated Statement of Comprehensive Income

in EUR k	1 January to 30 June	
	2014	2013
	(unaudited)	
<b>I. Profit or loss</b>		
<i>Continuing operations</i>		
Revenues.....	0	0
Cost of sales.....	0	0
<b>Gross profit</b> .....	<b>0</b>	<b>0</b>
Research and development expenses .....	-2,820	-3,720
General and administrative expenses.....	-961	-1,206
Other operating income .....	43	163
<b>Operating profit/loss</b> .....	<b>-3,738</b>	<b>-4,763</b>
Interest income .....	2	6
Interest expense .....	-58	-57
<b>Financial profit/loss</b> .....	<b>-56</b>	<b>-51</b>
<b>Loss before tax</b> .....	<b>-3,794</b>	<b>-4,814</b>
Income tax expense .....	0	0
<b>Loss from continuing operations</b> .....	<b>-3,794</b>	<b>-4,814</b>
<i>Discontinued operations</i>		
<b>Loss after tax of the discontinued operations</b> .....	-32	-181
<b>Net Loss for the period</b> .....	<b>-3,826</b>	<b>-4,995</b>
<b>II. Other comprehensive income (loss)</b>		
Items not to be reclassified subsequently to profit or loss		
Remeasurement of the net defined benefit pension liability .....	0	18
<b>Total other comprehensive income (loss)</b> .....	<b>0</b>	<b>18</b>
<b>III. Comprehensive income (loss)</b> .....	<b>-3,826</b>	<b>-4,977</b>

## Consolidated Statement of Financial Position

in EUR k	As of 30 June 2014	As of 31 December 2013
	(unaudited)	
<b>ASSETS</b>		
<b>A. Noncurrent assets</b>		
I Other intangible assets .....	86	101
II Plant and equipment.....	253	321
III Financial assets .....	3	3
<b>Total noncurrent assets</b> .....	<b>342</b>	<b>425</b>
<b>B. Current asset</b>		
I Other short-term financial assets .....	12	872
II Tax refunds .....	3	10
III Other assets.....	328	188
IV Cash and cash equivalents .....	5,919	4,879
<b>Total current assets</b> .....	<b>6,262</b>	<b>5,949</b>
<b>Total assets</b> .....	<b>6,604</b>	<b>6,374</b>
<b>LIABILITIES AND EQUITY</b>		
<b>A. Equity</b>		
I Share capital.....	25,529	25,529
II Legal reserve.....	228	228
III Additional paid-in capital .....	51,963	51,963
IV Reserves for remeasurement of pension liabilities.....	-199	-199
V Retained earnings.....	-85,571	-81,745
<b>Total equity</b> .....	<b>-8,050</b>	<b>-4,224</b>
<b>B. Noncurrent liabilities</b>		
I Investment grants .....	6	11
II Pensions .....	531	535
III Provisions .....	811	719
<b>Total noncurrent liabilities</b> .....	<b>1,348</b>	<b>1,265</b>
<b>C. Current liabilities</b>		
I Investment grants .....	12	13
II Tax liabilities .....	2,494	2,445
III Provisions .....	41	41
IV Convertible bonds .....	9,622	5,346
V Trade payables .....	981	1,327
VI Other current liabilities .....	156	161
<b>Total current liabilities</b> .....	<b>13,306</b>	<b>9,333</b>
<b>Total liabilities</b> .....	<b>14,654</b>	<b>10,598</b>
<b>Total equity and liabilities</b> .....	<b>6,604</b>	<b>6,374</b>

## Consolidated Cash Flow Statement

in EUR k	1 January to 30 June	
	2014	2013
	(unaudited)	
Net loss for the period .....	-3,826	-4,995
Income tax expense / income.....	0	0
Net interest expense.....	56	51
Depreciation and amortization.....	61	107
Gain on disposal of plant and equipment .....	-3	-9
Release of deferred investment grants.....	-6	-14
Other non-cash income /(expense) .....	0	10
Interest paid .....	0	0
Interest received.....	2	6
Income taxes paid .....	-1	-2
Income taxes received .....	6	10
<i>Changes in working capital</i>		
Changes in trade receivables .....	0	5
Changes in other assets .....	360	162
Changes in pension liabilities .....	-13	5
Changes in provisions.....	92	218
Changes in trade payables .....	-346	-64
Changes in other liabilities .....	-5	-147
<b>Cash flows from operating activities .....</b>	<b>-3,623</b>	<b>-4,657</b>
Proceeds from disposal of plant and equipment .....	25	31
Proceeds from disposal of intangible assets .....	362	0
Acquisition of plant and equipment.....	0	-1
Acquisition of intangible assets .....	0	-34
<b>Cash flows from investing activities .....</b>	<b>387</b>	<b>-4</b>
Proceeds from convertible bonds .....	4,276	0
<b>Cash flows from financing activities .....</b>	<b>4,276</b>	<b>0</b>
<b>Net increase in cash and cash equivalents .....</b>	<b>1,040</b>	<b>-4,661</b>
<b>Cash and cash equivalents at the beginning of period.....</b>	<b>4,879</b>	<b>7,726</b>
<b>Cash and cash equivalents at the end of period .....</b>	<b>5,919</b>	<b>3,065</b>

## Consolidated Statement of Changes in Equity

	Share capital	Legal reserve	Additional paid-in capital	Reserve for remeas- urement of pensions	Retained earning	Total equity
	EUR k	EUR k	EUR k	EUR k	EUR k	EUR k
<b>January 1, 2013</b>	25,529	228	51,658	-234	-71,816	5,365
Other comprehensive income	0	0	0	18	0	18
Net loss for the period	0	0	0	0	-4,995	-4,995
Comprehensive loss for the period	0	0	0	18	-4,995	-4,977
Stock option compensation	0	0	10	0	0	10
	0	0	10	18	-4,995	-4,967
<b>June 30, 2013</b>	25,529	228	51,668	-216	-76,811	398
<b>January 1, 2014</b>	25,529	228	51,963	-199	-81,745	-4,224
Income and expenses recognized directly in equity	0	0	0	0	0	0
Net loss for the period	0	0	0	0	-3,826	-3,826
Comprehensive loss for the period	0	0	0	0	-3,826	-3,826
	0	0	0	0	-3,826	-3,826
<b>June 30, 2014</b>	25,529	228	51,963	-199	-85,571	-8,050

## **1. Notes to the consolidated financial statements**

### **1.1 Condensed consolidated interim financial statements**

#### **1.1.1 Basis for preparation of the consolidated financial statements**

The interim report of Probiodrug AG and also the consolidated financial statements as of December 31, 2013, were prepared in accordance with the requirements of the International Accounting Standards (IFRS) as published by the International Accounting Standards Board (IASB) and adopted by the EU. The rules contained in IAS 34 “Interim Financial Reporting” were applied accordingly. All of the interim financial statements of the companies included within the consolidated financial statements of Probiodrug AG were prepared in accordance with standard accounting principles.

These condensed interim financial statements do not include all information relevant for the consolidated financial statements and is therefore to be read in conjunction with the consolidated financial statements as of December 31, 2013.

The condensed interim financial statements are presented in euros (EUR). To the extent not otherwise stated, all amounts are given in thousand euros (EURk). Discrepancies may occur in the presentation of the figures as of result of rounding.

The consolidated financial statements have been prepared under the assumption of a going concern.

When a comparison and analysis is made below with the previous year, the period January 1, 2014 to June 30, 2014 (6 M 2014) is compared with the period January 1, 2013 to June 30, 2013 (6 M 2013). The prior year comparative date for the consolidated balance sheets is December 31, 2013.

#### **1.1.2 Entities included in the consolidation, consolidation principles and foreign currency translation**

There were no changes in the entities included in the consolidation as of December 31, 2013. Incidentally the consolidation methods as well as the principles for foreign currency translation remain unchanged to those applied for the consolidated financial statements as of December 31, 2013.

#### **1.1.3 Accounting and valuation methods**

Given that the interim financial reports are based on the consolidated financial statements, reference is made to the detailed description of the accounting and consolidation policies contained in the notes to the consolidated financial statements as of December 31, 2013. The accounting and consolidation policies applied are essentially commensurate with those applied in the previous year.

Regarding the management’s assessment of the entity’s ability to continue as a going concern the company had a deficit not covered by equity amounting to EUR 8,050k. In the reporting period the convertible bonds were increased to the total amount of EUR 9,622k and in August 2014 all convertible bonds were converted in equity.

With this the Company was able to secure additional funding which provide for the Company’s further development at least into the third quarter of 2014. In order to continue the ongoing research and development projects additional funding will, at the latest, be required at this point. Management is currently pursuing an additional financing round for the fall of 2014. If this is not achieved, the Company’s further development will be endangered.

If extensive adjustments are made to the cost structures, the Company’s projections show that, without a successful financing round, the liquidity would be sufficient through the end of 2015. The aforementioned projections are based on the assumption that no cash outflows will be required in 2014 and 2015 with respect to the potential additional tax claims of the fiscal authorities for the year 2004. Probiodrug has filed a lawsuit at the Finanzgericht contesting the potential back taxes. A ruling has not yet been made. A stay of execution for the contested decisions has been granted.

This risk was provided for in the financial statements by recording an appropriate provision. Should significant payments be required in 2014 or 2015 for the back taxes being contested in the financial courts, the Company’s ability to continue as a going concern would be endangered.

The following applies in addition to the accounting and valuation methods described in the notes to the consolidated financial statements as of December 31, 2013:

Effective January 1, 2014 the following listed new and revised Standards and Interpretations were to be applied for the group:

- Amendments to IAS 32: Offsetting Financial Assets and Financial Liabilities
- Amendments to IAS 39: Novation of Derivatives and Continuation of Hedge Accounting
- Amendments to IAS 36: Recoverable Amount Disclosures for Non-Financial Assets
- Amendments to IFRS 10, IFRS 12 and IAS 27: Investment Entities
- IAS 28: Investments in Associates and Joint Ventures
- IFRS 10: Consolidated Financial Statements
- IFRS 11: Joint arrangements

The changes listed do not have a significant impact on the financial statements of Probiodrug.

## 1.2. Notes to individual line items within the consolidated statement of comprehensive income

### 1.2.1 Operating result

#### 1.2.1.1 General and administrative expenses

General and administrative expenses of EUR 961k (6 M 2013 EUR 1,206k) include the administrative expenses of Probiodrug AG. They relate mainly to management costs, consulting expenses, external services and general administrative expenses.

#### 1.2.1.2 Other operating income

Other operating income amounted to EUR 43k in the 6 M period 2014, following EUR 163k in the 6 M period 2013 and contain mainly research and other subsidies.

### 1.2.2 Discontinued operation

The net result from the discontinued operation is presented as follows:

EUR k	1/1.- 6/30/2014	1.1.-6/30/2013
Income .....	2	21
Expenses .....	-34	-220
Gain on sale .....	0	18
Operating result .....	-32	-181
Financial result .....	0	0
Result before tax .....	-32	-181
Income taxes .....	0	0
After tax result of the discontinued operations .....	-32	-181

The net cash flow of the discontinued operation is composed as follows:

EUR k	1/1- 6/30/2014	1/1- 6/30/2013
Operating activities .....	-101	-164
Investing activities .....	362	28
Financing activities .....	0	0
Net cash flow from discontinued operations .....	261	-136

### 1.2.3 Earnings per share

Earnings per share were calculated in accordance with IAS 33. For the calculation per share the earnings for the period attributable to shareholders of the parent company were divided by the weighted average number of shares outstanding. There is no dilutive effect.

Probiodrug AG has at June 30, 2014 25,528,929 no-par shares with a nominal value of EUR 1, which have in average been in circulation during the reporting period. The computational nominal amount per share is EUR 1.00. The Group result for the period January 1 to June 30, 2014 relating to the shareholders of Probiodrug AG amounts to EUR -3,826k (6 M 2013 EUR -4,995k). The result per share (basic and diluted) from continuing operations amounts to EUR -0.15 (6 M 2013 EUR -0.19).

The calculation of the result per share for the discontinued operation was based on the above stated number of average shares. The result for the period of the discontinued operation attributable to shareholders of Probiodrug AG for the calculation of the result per share was EUR -32k (6 M 2013 EUR -181k). Therefore the basic and the dilutive earnings per share from discontinued operation amounts to EUR 0.00 (6 M 2013 EUR – 0.01)

## **2. Notes to the individual line items in the consolidated balance sheet**

### **2.1 Noncurrent assets**

#### **2.1.2 Plant and equipment**

The value of plant and equipment decreased to EUR 253k (12/31/2013 EUR 321k) taking into account scheduled depreciations (EUR 46k), disposals of fixed assets (EUR 22k) and no investments in fixed assets.

### **2.2 Current assets**

#### **2.2.1 Other short-term financial assets**

The other short-term financial assets amount to EUR 12k (12/31/2013 EUR 872k). The previous year amount includes EUR 426k receivables from the sale of fixed assets and inventories.

#### **2.2.2 Other current assets**

Other current assets comprise the following:

EUR k	06/30/2014	12/31/2013
Subsidies receivable .....	0	26
Receivables from deferred items .....	89	96
Receivables from value added taxes .....	152	42
other .....	87	24
Total .....	328	188

#### **2.2.3 Cash and cash equivalents**

Cash and cash equivalents amount to EUR 5,919k (12/31/2013 EUR 4,879k). They are not restricted to use.

### **2.3 Noncurrent liabilities**

Regarding the pensions of EUR 531k (12/31/2013 EUR 535k) and the provisions for commitments associated with the phantom stock options in the amount of EUR 811k (12/31/2013 EUR 719k) reference is made to the notes to the consolidated financial statements as of December 31, 2013.

### **2.4 Current liabilities**

#### **2.4.1 Tax liabilities**

The tax liabilities of EUR 2,494k (12/31/2013 EUR 2,445k) comprise the Company's payment obligations for corporation and trade tax as a result of the tax audit for the period 2002 through 2005 including interest for late payment.

#### **2.4.2 Other provisions**

The provision includes the tax audit risk associated with a disputed source tax deduction on license fees. As a consequence of the Company's appeal, the tax audit has not yet been finalized.

#### **2.4.3 Convertible bonds**

In the reporting period new convertible bonds were issued to the amount of EUR 4,276k. The terms and conditions of the convertible bonds 2014 corresponded fully to those issued in 2013. The convertible bond 2014 is an extension to the convertible bonds 2013. Therefore regarding the terms of the convertible bonds to the total amount of EUR 9,622k reference is made to the notes to the consolidated financial statements as of December 31, 2013.

#### **2.4.4 Other current liabilities**

Other current liabilities include payroll and church taxes to be paid.

### **3. Other disclosures**

#### **3.1 Contingencies and other financial commitments**

As of the balance sheet date, there were no contingencies. The total other financial commitments amounted to EUR 297k (12/31/2013 EUR 183k).

#### **3.2 Significant events subsequent to the end of the reporting period**

In July all shares in Ingenium were sold at no cost to the company. In August 2014, all convertible Bonds were converted into shares of the company. In September 2014 all preference shares were converted into common shares and a reverse share split of 1:6 implemented.

In connection with the implementation of a new stock option program the Company created in September a conditional capital of EUR 410k. End of September Dr. Inge Lues was appointed as new member of the management board of the Company effective November 1st, 2014. Beginning of October the management agreements of Dr. Konrad Glund and Dr. Hendrik Liebers have been amended and a management agreement with Dr. Inge Lues implemented. Also beginning of October the Company secured a venture loan line in the amount of EUR 3 million.

#### **3.3 Related party disclosures**

For further information reference is made to the explanations of related party disclosures in the notes to the consolidated financial statements as of December 31, 2013. Significant changes have not occurred.

#### **3.4 Audit of the interim financial statements**

The interim financial statements were not subject to any form of audit or review by an auditor.

Halle/ S., October 9, 2014

Dr. Konrad Glund

Dr. Hendrik Liebers

**Consolidated Financial Statements as of and for the period January 1, 2013 to December 31, 2013, as of and for the period January 1, 2012 to December 31, 2012 and as of and for the period January 1, 2011 to December 31, 2011 of Probiodrug AG (IFRS) (audited)**

## Consolidated Statement of Comprehensive Income

in EUR k	NOTES	1 January to 31 December		
		2013	2012	2011
			(audited)	
<b>I. Profit or Loss</b>				
<i>Continuing operations</i>				
Revenues .....	5.1	0	6	21
Cost of sales.....	5.2	0	0	0
<b>Gross profit</b> .....		<b>0</b>	<b>6</b>	<b>21</b>
Research and development expenses.....	5.3	-8,004	-9,255	-13,229
General and administrative expenses.....	5.4	-2,394	-2,341	-3,084
Other operating income .....	5.6	747	1,032	2,023
<b>Operating profit/loss</b> .....		<b><u>-9,651</u></b>	<b><u>-10,558</u></b>	<b><u>-14,269</u></b>
Interest income .....		9	22	42
Interest expense .....		-115	-340	-71
Other financial income .....	10	0	4	37
<b>Financial profit/loss</b> .....		<b><u>-106</u></b>	<b><u>-314</u></b>	<b><u>8</u></b>
<b>Loss before tax</b> .....		<b><u>-9,757</u></b>	<b><u>-10,872</u></b>	<b><u>-14,261</u></b>
Income tax expense .....	5,7	0	-656	6
<b>Loss from continuing operations</b> .....		<b><u>-9,757</u></b>	<b><u>-11,528</u></b>	<b><u>-14,255</u></b>
<i>Discontinued operations</i>				
<b>Loss after tax of the discontinued operations</b> .....	5.8	-172	-7,192	-2,052
<b>Net loss for the period</b> .....		<b><u>-9,929</u></b>	<b><u>-18,720</u></b>	<b><u>-16,307</u></b>
<b>II. Other comprehensive income (loss)</b>				
items not to be reclassified subsequently to profit or loss				
Remeasurement of the net defined benefit pension liability.....		35	-203	-45
<b>Total other comprehensive income (loss)</b> .....		<b>35</b>	<b>-203</b>	<b>-45</b>
<b>III. Comprehensive income (loss)</b> .....		<b><u>-9,894</u></b>	<b><u>-18,923</u></b>	<b><u>-16,352</u></b>
<b>Result per share in EUR (basic and diluted)</b>	<b><u>6.9.5</u></b>	<b><u>-0,39</u></b>	<b><u>-0,77</u></b>	<b><u>-0,78</u></b>
<b>Result per share in EUR (basic and diluted) from continuing operations</b>	<b><u>6.9.5</u></b>	<b><u>-0,38</u></b>	<b><u>-0,47</u></b>	<b><u>-0,67</u></b>

## Consolidated Statement of financial position as of December 31, 2013

in EUR k	NOTES	As of 31 December			As of 1	
		2013	2012	2011	January	
		(audited)			2011	
<b>ASSETS</b>						
<b>A. Noncurrent assets</b>						
I.	Goodwill.....	3.3/3.6/6.1	0	0	1,996	1,996
II.	Development program.....	3.3/3.6/6.1	0	0	4,737	4,737
III.	Other intangible assets.....	3.4/6.1	101	67	61	91
IV.	Plant and equipment.....	3.5/6.2	321	926	1,264	1,549
V.	Financial assets.....	3.7	3	3	3	3
<b>Total noncurrent assets.....</b>			<b>425</b>	<b>996</b>	<b>8,061</b>	<b>8,376</b>
<b>B. Current assets</b>						
I.	Inventories.....	3.9/6.3	0	18	18	42
II.	Trade receivables.....		0	5	1	4
III.	Other short-term financial assets...	6.4	872	2	9	27
IV.	Tax refunds.....	6.5	10	18	46	84
V.	Other assets.....	6.6	188	483	644	1,372
VI.	Securities.....		0	0	1,019	0
VII.	Cash and cash equivalents.....	3.11/6.7	4,879	7,726	9,295	6,061
VIII.	Noncurrent assets held for sale.....	3.12	0	757	0	0
<b>Total current assets.....</b>			<b>5,949</b>	<b>9,009</b>	<b>11,032</b>	<b>7,590</b>
<b>Total assets.....</b>			<b>6,374</b>	<b>10,005</b>	<b>19,093</b>	<b>15,966</b>
<b>Liabilities and equity</b>						
<b>A. Equity</b>						
I.	Share capital.....	6.9	25,529	25,529	22,694	15,718
II.	Legal reserve.....	6.9.1	228	228	228	228
III.	Additional paid-in capital.....	6.9.2	51,963	51,658	45,150	33,068
IV.	Other reserves for remeasurement of the pensions.....	6.9.3	-199	-234	-31	14
V.	Retained earnings.....	6.9.4	-81,745	-71,816	-53,096	-36,789
<b>Total equity.....</b>			<b>-4,224</b>	<b>5,365</b>	<b>14,945</b>	<b>12,239</b>
<b>B. Noncurrent liabilities</b>						
I.	Investment grants.....	3.14/6.10.1	11	24	68	101
II.	Pensions.....	3.15/6.10.2	535	545	333	285
III.	Provisions.....	6.10.3	719	501	610	250
IV.	Other noncurrent liabilities.....		0	0	1	1
<b>Total noncurrent liabilities.....</b>			<b>1,265</b>	<b>1,070</b>	<b>1,012</b>	<b>637</b>
<b>C. Current liabilities</b>						
I.	Investment grants.....	3.14	13	43	33	53
II.	Tax liabilities.....	6.11.1	2,445	2,347	1,364	1,305
III.	Provisions.....	3.16/6.11.2	41	41	41	41
IV.	Convertible bonds.....		5,346	0	0	0
V.	Trade payables.....	6.11.3	1,327	731	1,215	938
VI.	Other current liabilities.....	6.11.5	161	408	483	753
<b>Total current liabilities.....</b>			<b>9,333</b>	<b>3,570</b>	<b>3,136</b>	<b>3,090</b>
<b>Total liabilities.....</b>			<b>10,598</b>	<b>4,640</b>	<b>4,148</b>	<b>3,727</b>
<b>Total equity and liabilities.....</b>			<b>6,374</b>	<b>10,005</b>	<b>19,093</b>	<b>15,966</b>

## Consolidated Cash Flow Statement

in EUR k	1 January to 31 December			NOTES
	2013	2012 (audited)	2011	
Net loss for the period .....	-9,929	-18,720	-16,307	
Income tax expense / income.....	0	656	-6	5.7
Net interest expense.....	106	318	32	3.20
Non-cash losses from impairment write-downs .....	25	5,983	0	
Depreciation and amortization.....	314	352	413	
Gain on disposal of plant and equipment .....	-21	-267	0	
Release of deferred investment grants .....	-43	-34	-54	6.10.1
Other non-cash expense.....	305	146	414	
Interest paid .....	0	0	-5	
Interest received.....	9	22	44	
Income taxes paid .....	-2	-7	-11	
Income taxes received .....	11	35	55	
<i>Change in working capital</i>				
Change in inventories .....	18	0	24	
Change in trade receivables .....	320	-4	3	
Change in other assets .....	-214	153	720	
Change in pension liabilities.....	8	-4	-10	
Change in provisions .....	218	-109	360	
Change in trade payables.....	596	-484	277	
Change in other liabilities.....	-247	-76	-270	
<b>Cash flows from operating activities.....</b>	<b>-8,526</b>	<b>-12,040</b>	<b>-14,321</b>	
Proceeds from investment grants.....	0	15	28	
Proceeds from the disposal of securities.....	0	1,019	0	
Proceeds from disposal of plant and equipment .....	36	359	0	
Proceeds from disposal of intangible assets .....	362	0	0	
Acquisition of plant and equipment.....	-5	-64	-84	
Acquisition of intangible assets .....	-60	-55	-14	
Investments in securities.....	0	0	-1,016	
<b>Cash flows from investing activities.....</b>	<b>333</b>	<b>1,274</b>	<b>-1,086</b>	
Proceeds from stock issue.....	0	9,213	18,765	6.8.1/6.8.6
Transaction costs of equity transaction.....	0	-16	-124	
Proceeds from convertible bonds issue.....	5,346	0	0	3.14/6.8.4
<b>Cash flows from financing activities .....</b>	<b>5,346</b>	<b>9,197</b>	<b>18,641</b>	
<b>Net increase in cash and cash equivalents .....</b>	<b>-2,847</b>	<b>-1,569</b>	<b>3,234</b>	
<b>Cash and cash equivalents at the beginning of period.....</b>	<b>7,726</b>	<b>9,295</b>	<b>6,061</b>	
<b>Cash and cash equivalents at the end of period.....</b>	<b>4,879</b>	<b>7,726</b>	<b>9,295</b>	

## Consolidated Statement of Changes in Equity

	Share capital EUR k	Legal reserve EUR k	Additional paid-in capital EUR k	Other reserves for the remeas- urement of pensions EUR k	Retained earnings EUR k	Total equity EUR k	<i>Notes</i>
<b>January 1, 2011</b>	15,718	228	33,068	14	-36,789	12,239	
Other comprehensive income	0	0	0	-45	0	-45	6.9.3
Net result for the period	0	0	0	0	-16,307	-16,307	
Comprehensive result for the period	0	0	0	-45	-16,307	-16,352	
Stock issue	6,976		11,789	0	0	18,765	
Stock option compensation	0	0	417	0	0	417	
Transaction costs of equity transaction	0	0	-124	0	0	-124	
	6,976	0	12,082	-45	-16,307	2,706	
<b>December 31, 2011</b>	22,694	228	45,150	-31	-53,096	14,945	
Income and expenses recognized directly in equity	0	0	0	-203	0	-203	6.9.3
Net result for the period	0	0	0	0	-18,720	-18,720	
Comprehensive result for the period	0	0	0	-203	-18,720	-18,923	
Stock issue	2,835	0	6,378	0	0	9,213	
Stock option compensation	0	0	146	0	0	146	
Transaction costs of equity transaction	0	0	-16	0	0	-16	
	2,835	0	6,508	-203	-18,720	-9,580	
<b>December 31, 2012</b>	25,529	228	51,658	-234	-71,816	5,365	
Income and expenses recognized directly in equity	0	0	0	35	0	35	6.9.3
Net result for the period	0	0	0	0	-9,929	-9,929	
Comprehensive result for the period	0	0	0	35	-9,929	-9,894	
Stock option compensation	0	0	305	0	0	305	
	0	0	305	35	-9,929	-9,589	
<b>December 31, 2013</b>	25,529	228	51,963	-199	-81,745	-4,224	

## **Probiodrug AG, Halle**

### **Notes to the consolidated IFRS financial statements for the financial year from January 1 to December 31, 2013**

#### **1. Company information**

The Probiodrug Group, which includes the parent company, Probiodrug AG, Halle (hereinafter also referred to as Probiodrug or the Company), and the subsidiary, Ingenium Pharmaceuticals GmbH, Munich (hereinafter also Ingenium), has activities in the areas of research and development, preclinical and clinical trials.

Probiodrug AG was formed by virtue of the articles of incorporation dated July 25, 1997 and is recorded in the commercial register of the district court of Stendal under commercial registry number 213719. The Company's legal seat is Weinbergweg 22, 06120 Halle.

The product pipeline currently includes a number of research and development programs with a focus on the primary program, the inhibition of the QC enzyme for the treatment of Alzheimer's disease and other inflammatory diseases.

#### **2. Consolidated financial statements**

##### **2.1. Basis of preparation of the consolidated financial statements**

The consolidated financial statements have been prepared voluntarily in accordance with the International Financial Reporting Standards (IFRS/IAS) of the International Accounting Standards Board as well as in accordance with the Interpretations of the International Financial Reporting Interpretations Committee/Standing Interpretations Committee (IFRIC/SIC), as endorsed by the European Union for mandatory application as of the balance sheet date. These are the initial consolidated financial statements prepared on the basis of IFRS. The consolidated financial statements are presented in euro (EUR).

Unless otherwise noted, all amounts are in thousands of euro (EUR k). Amounts have been rounded. As a result, rounding differences may occur.

These consolidated financial statements comprise the business activities of both group companies for the period from January 1 to December 31, 2013. The calendar year serves as the financial year for both entities included in the consolidated financial statements. The prior year comparative dates for the consolidated statements of financial position are December 31, 2012, December 31, 2011 as well as the initial IFRS balance sheet as of January 1, 2011. Comparative periods for the consolidated statement of comprehensive income, the consolidated cash flow statement and the consolidated statement of changes in equity are the periods from January 1 to December 31, 2012 as well as from January 1, 2011 to December 31, 2011.

In accordance with IAS 1, the consolidated statement of comprehensive income was prepared classifying the expenses by function; the balance sheet classification was based on due date.

With the exception of the securities included within the current assets which are measured based on their fair values, the consolidated financial statements were prepared on the basis of amortized acquisition and production costs respectively at net sales prices.

##### **2.2. Scope of consolidation**

In addition to Probiodrug, the Group parent company, Ingenium, with its legal seat in Munich, is included in the consolidated financial statements (fully consolidated). Probiodrug held 100% of the equity of Ingenium as of December 31, 2013 and the three years before.

##### **2.3. Principles of consolidation**

The financial statements included in the consolidated financial statements are prepared on the basis of uniform accounting policies and procedures. Business combinations are accounted for applying the acquisition method whereby the acquisition costs associated with the investment are allocated to the fair value of the acquired assets, liabilities and contingent liabilities. Income and expenses as well as receivables and payables between consolidated entities are eliminated. To the extent that these exist, results from intercompany activities are also eliminated.

## **2.4. Foreign currency translation**

The functional currency of all companies included in the consolidated financial statements is the euro which therefore is the reporting currency for the consolidated financial statements.

Foreign currency transactions are recorded in the financial statements of the entities included in the consolidation at the exchange rate in effect on the date of the transaction in the functional currency of that entity.

Monetary assets and liabilities in a foreign currency are initially recorded at the mean average exchange rate in effect on the date of the transaction and later at the rate in effect on the balance sheet date. Differences resulting from foreign currency translation are recorded in the statement of comprehensive income.

## **3. Summary of significant accounting policies**

### **3.1. Explanations on transition to IFRS accounting principles**

The transition of the recognition and measurement policies to IFRS regulations was retrospectively recorded in accordance with IFRS 1 (first-time adoption).

IFRS was applied in the preparation of the financial statements as of December 31, 2013, the prior year figures as of December 31, 2012 and 2011 as well as in preparing the opening IFRS balance sheet as of January 1, 2011 (date of transition).

### **3.2 Determination of fair values**

A number of the Group accounting policies and disclosures in the notes make it necessary to determine the fair value of financial and non-financial assets and liabilities. IFRS 13, „Fair Value Measurement“, establishes a uniform standard definition for measurement at fair value. Fair value is defined as the price at the measurement date that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants. Where appropriate, further information as to the assumptions made in the determination of the fair value are included within the specific disclosures for the respective line items of the balance sheet as well as the statement of comprehensive income.

### **3.3 Business combinations and goodwill**

Business combinations are recorded applying the acquisition method. The acquisition costs in a business combination comprise the sum of the consideration transferred measured at the fair value at the time of acquisition. Costs incurred as a result of a business combination are recorded as an expense. Goodwill arises as a result of an excess of the consideration transferred in a business combination over the amount of the assets, liabilities and contingent liabilities acquired. If the consideration is less than the fair value of the net assets of the entity acquired, the difference is recorded in profit or loss. Subsequent to the initial recording, goodwill is recorded at acquisition costs less any cumulative impairment losses. Goodwill is allocated to cash generating units and is reassessed for impairment at least once each year or when a significant triggering event occurs.

### **3.4 Intangible assets**

The development program includes the acquired development program CDK 9 of Ingenium.

The other intangible assets acquired by the Probiodrugs Group are recorded at acquisition cost less accumulated amortization as well as any impairment costs which may have been recorded.

The amortization is recorded on the straight-line basis over the expected useful life.

The expected useful life ranges from three to five years.

Costs incurred for research are recorded as an expense in the period in which they are incurred. In accordance with IAS 38 (Intangible assets), development costs are recorded as an asset if a number of conditions are satisfied. The conditions to be satisfied for the recognition of development costs as an asset in accordance with IAS 38.57 were not satisfied as the medical products are subject to approval and this approval is subject to the results of future studies which cannot be anticipated with reasonable certainty.

Intangible assets are assessed to identify any impairment in value if any facts or changes in circumstances provide an indication that the carrying amount of the asset may not be recoverable. As soon as the carrying amount of an asset exceeds the recoverable value, impairment is recognized in the statement of comprehensive income.

### **3.5 Plant and equipment**

Plant and equipment is recorded at acquisition costs less scheduled accumulated depreciation as well as any accumulated impairment costs which may have been recorded. Depreciation is recorded on the straight-line basis over the useful life.

The useful life for operating and office equipment ranges from three to ten years; for laboratory equipment from five to 14 years.

An assessment is made as to the need for an impairment of plant and equipment when circumstances arise or if there are changes in circumstances which indicate that the carrying amount of an asset may not be recoverable. As soon as the carrying amount of an asset exceeds the recoverable value, an impairment is recognized in profit or loss.

### **3.6 Impairment of noncurrent assets**

Goodwill attributable to Ingenium's research and development program and the development program CDK 9 included within intangible assets was assessed for impairment once each year until such time as Ingenium was classified within discontinued operations in December 2012 (impairment test in accordance with IAS 36). The last such test was completed in June 2012. Prior to the reclassification into discontinued operations, a further impairment test was completed.

The remaining intangible assets as well as plant and equipment are assessed for impairment when there is an indication of impairment of the asset in question.

An impairment expense is recognized when the carrying amount of an asset or a cash generating unit exceeds the recoverable value as of the balance sheet date. The recoverable value is the higher of the amount representing the fair value less costs of disposal and the value in use. The value in use is the present value of the future cash flows which are expected to be derived from the value of the asset respectively from the cash generating unit. The fair value thereby reflects the best possible estimate of the amount which an independent third party would pay as of the balance sheet date for the cash generating unit. In contrast, the value in use is the (risk adjusted) present value of the future cash flows which can realistically be expected to be generated from the continued use of the cash generating unit. For the purpose of the impairment test the goodwill was allocated to the cash generating unit and consisted solely of Ingenium's research and development program.

### **3.7 Financial assets**

The financial assets include shares of BIO Mitteldeutschland GmbH, Halle. The measurement of the shares is based on acquisition costs as there is no active market for the shares on the basis of which a price can be determined and a fair value cannot reliably be determined.

### **3.8 Taxes**

The consolidated statement of comprehensive income presents the actual tax income and expense which is expected along with deferred tax income and expense. Actual tax refund claims and taxes payable for the current period are measured at the amount of the refund which is expected from the fiscal authorities respectively at the payment amount which is expected to be made to the fiscal authorities. The calculation of the amount is based on the tax rates and tax legislation in effect as of the balance sheet date.

Deferred taxes are accounted for on the basis of the balance sheet oriented approach. Deferred taxes are recorded for temporary differences between the IFRS carrying amounts of assets and liabilities and the tax basis of assets and liabilities. In addition, deferred tax assets are recorded for tax loss carryforwards. The measurement of deferred taxes is on the basis of tax rates expected to be in effect when the temporary differences reverse respectively when the loss carryforwards are expected to be used. Deferred tax assets which cannot be offset against deferred tax liabilities are only recorded to the extent that it is probable that future taxable income will be available to allow for the realization of the deferred tax asset. As the generation of future profits cannot be projected with reasonable certainty, deferred tax assets were only recognized to the extent that deferred tax liabilities exist. Deferred tax assets and liabilities are offset if the right to offset tax assets and liabilities exist and relate to the same entity subject to income taxes and involve the same fiscal authority.

### **3.9 Inventories**

Inventories are measured at the lower of cost and net realizable value.

### **3.10 Financial assets**

A financial asset or a liability is recognized when the entity becomes a party to the contractual provisions of the instrument.

All financial assets or liabilities are measured at fair value when they are recognized initially.

Within the Probiodrug Group, non-derivative financial instruments are classified in the categories „loans and receivables“ as well as „fair value through profit or loss“.

Subsequent to their initial recording, financial assets included in the category „loans and receivables“ are measured at amortized cost less any valuation adjustments which may have been recorded. Concrete information as to their uncollectibility result in the write-off of the receivables and assets affected.

Objective evidence that financial assets are impaired includes:

- default or delinquency by a debtor;
- restructuring of an amount due to the Group on terms that the Group would not consider otherwise;
- indications that a debtor or issuer will enter bankruptcy;
- adverse changes in the payment status of borrowers or issuers;
- the disappearance of an active market for a security; or
- observable data indicating that there is measurable decrease in expected cash flows from a group of financial assets.

Due to their short-term nature, trade receivables are non-interest bearing and are measured at their nominal value less valuation adjustments due to expected uncollectibility. As such, the amounts recorded reflect the fair values.

### **3.11 Cash and cash equivalents**

Cash and cash equivalents comprise cash and bank balances which are recorded at their nominal values. Cash and cash equivalents comprise cash and bank balances with an initial term of three months or less.

### **3.12 Noncurrent assets held for sale and discontinued operations**

Noncurrent assets are classified as held for sale if the corresponding carrying amount will principally be recovered as a result of a sale transaction rather than by continuing use. This is only the case if the sale is highly probable and if the asset is saleable in its present condition. Management must be committed to the sale and recognition as a completed sale must be expected within one year from the date of classification.

Noncurrent assets held for sale are recorded at the lower of the carrying amount and the fair value less costs of disposal. Any potential impairment loss for a disposal group is initially recorded as a reduction of goodwill and then allocated proportionately to the remaining assets and liabilities. Impairment losses recognized in conjunction with the initial recognition as held for sale and subsequent gains and losses upon revaluation are recorded in the statement of comprehensive income. No amortization or depreciation is recorded for items classified within plant and equipment and intangible assets held for sale.

In the statement of comprehensive income gains or losses from discontinued operations are shown separately from gains or losses from continuing operations and are separately presented as the result after tax of the discontinued operations.

### **3.13 Stock option programs and phantom stock option programs**

In the financial years 2008, 2010 and 2013 the Probiodrug Group granted equity settled share based payments in the form of option rights to employees and other beneficiaries. The stock option programs allow the employees or the other beneficiaries to acquire shares in the Company. The share based payment transaction is recorded at fair value in accordance with IFRS 2. The fair value of the stock options granted is recorded as personnel expense or, if the options are granted to beneficiaries who are not considered employed persons, as other expenses with a corresponding increase in equity (additional paid-in capital). The fair value of the option rights granted is determined when the rights are granted. The resulting personnel expense is allocated over the vesting period of the underlying option rights. The personnel

expense recorded is adjusted to reflect the actual number of option rights earned. The fair value of equity-settled share-based payments to other beneficiaries are measured at the fair value of the goods or service received.

In addition, in the financial year 2008, phantom stock options were issued. In specific cases, after a lock-up period, the holders are entitled to a cash payment amounting to the difference between the market value of a preferred share of the Series A attained for a preferred share in conjunction with an IPO, a merger or the takeover of Probiodrug and the exercise price of a preferred share. Further phantom stock options were issued to members of the management board and the supervisory board in 2010. These provide for a cash payment amounting to the difference between the exercise price of a common share and the price which is attained for a common share in conjunction with an IPO, a merger or the takeover of Probiodrug AG or the sale of significant assets of Probiodrug AG (exit event). Additional phantom stock options were issued to an external advisor in 2013. The conditions correspond with those of the phantom stock options issued in 2010.

The fair value of the phantom stock options was determined at the respective balance sheet date. The changes in comparison with the prior year were recorded within profit or loss and reflected within the noncurrent provisions.

### **3.14 Project subsidies and investment grants**

Project subsidies and investment grants are government grants in accordance with IAS 20. Subsidies which directly relate to expenses already incurred in connection with research and development activities are recorded in the statement of comprehensive income within other operating income.

In accordance with the allowed alternative treatments set forth in IAS 20, asset related subsidies (Joint Agreement for the Improvement of Regional Economic Structures subsidies (GA-subsidies), and investment subsidies InvZulG) are presented as deferred income and are amortized to income over the average useful life of the subsidized asset.

Investment subsidies are recorded when the Company receives the funds or when there is sufficient probability that the conditions associated with the subsidies will be met and the subsidies are granted.

### **3.15 Pensions**

A company pension scheme can either be in the form of defined benefit plans or defined contribution plans. With respect to defined contribution plans the company does not have any obligations other than the payment of the contribution amount. The contributions are recorded within personnel expense when they are due. These plans include the employer portion of the statutory pension scheme. In the case of defined benefit plans, the company is obliged to make payments of the benefits due to both active and former employees under the plan.

The actuarial valuation of the pension commitments (defined benefit plans) is accounted for using the projected unit credit method in accordance with IAS 19. The measurement of the pension provision is based on actuarial calculations. The discount rate used represents the market yield at the end of the reporting period for high quality fixed rate corporate bonds.

The pension expense to be recorded is determined on the basis of the relevant data at the beginning of the financial year but has a value date at the end of the year. Actuarial gains and losses are immediately recorded in equity in other comprehensive income. The fair value of the plan assets (insurance amount) is deducted from the budgeted gross pension obligation (IAS 19.63). The corresponding plan assets (insurance amount) reduce the amount of the obligation as the income resulting from the insurance policy can only be used to make payments to the beneficiaries. As a result of their being pledged to the beneficiaries, even in the case of insolvency, they are not available to the company's creditors.

On the one hand the remeasurement comprises the actuarial gains and losses resulting from the measurement of the gross pension obligation of defined benefit plans while on the other hand it includes the difference between the realized return on plan assets and the expected return at the beginning of the period based on the discount rate of the corresponding gross defined benefit obligation. Actuarial gains and losses result from changes in actuarial assumptions respectively from deviations between previous actuarial assumptions and actual developments. All remeasurement effects are directly recorded in other comprehensive income without an impact on profit and loss.

The expense resulting from the funding of the pension provision is recorded within the costs of the functional area. The net interest expense associated with defined benefit plans is presented in the financial result.

### **3.16 Provisions**

Provisions are recorded for present obligations which result from past events for which the timing of the future payment is uncertain.

Provisions are only recorded if:

- a legal or factual obligation to a third party exists as a result of a past event,
- it is probable that an outflow of resources will be required to settle the obligation, and
- a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision is the best possible estimate of the expenditure required to settle the current obligation.

Provisions with a term in excess of one year are recorded at their discounted settlement amount giving consideration to expected cost increases. The discount rate used reflects current market interest rate and the risks specific to the liability.

### **3.17 Financial liabilities**

When they are initially recorded, financial liabilities as defined under IAS 39 are measured at their fair value. In case of financial liabilities not classified as financial liability through profit or loss the fair value is reduced by directly attributable transaction costs. The financial liabilities of the Probiodrug Group comprise, among others, trade payables and other liabilities, lines of credit, loans and convertible bonds. Subsequent to their initial recording, the financial liabilities are measured at amortized cost. The noncurrent financial liabilities are measured at amortized costs applying the effective interest method. Financial liabilities are closed out when the contractual obligation has been met, is waived or expired.

### **3.18 Convertible bonds**

In 2013 Probiodrug AG issued convertible bonds to a selected group of individuals/investors. In accordance with IAS 32.28, in the case of convertible bonds to the extent that the holders can elect either payment in cash or in shares it must be determined if a compound financial instrument which must be broken down into a component for the repayment of the bond and a separately recorded equity component (option right) exists. The issue terms stipulate that the convertible bonds do not have an equity component as in all cases conversion is mandatory and in some cases Probiodrug AG will be required to deliver a variable number of shares and in some cases fixed.

In accordance with IAS 32, there is a financial liability associated with contracts if, among others, the company could be required to deliver a variable number of equity instruments. Therefore, the convertible bonds are financial liabilities in accordance with IAS 32. They are classified as other liabilities and measured at amortised cost using the effective interest rate method in accordance with IAS 39. Since the conversion into variable number of shares can occur at any time according to the contractual terms, the instrument does not accrue any interest.

It is expected that the optional conversion event will take place in the fourth quarter of 2014. At that time all convertible bonds will be converted into Company shares at the prescribed exercise price. The fair value of the convertible bonds at the time of issuance was equal the transaction price.

### **3.19 Revenue and expense realization**

The Company recognizes revenues from the awarding of limited-term licenses as well as from the provision of other services.

Revenues from the awarding of limited-term licenses are recognized in the appropriate period based on the underlying stipulations of the contract if it is sufficiently probable that Probiodrug will collect the agreed upon consideration.

Revenues for the provision of research services for the benefit of third parties are realized in the period in which the Company provides the research services.

Other operating income from the sale of assets is recognized when the significant underlying risks and rewards are transferred and no further ownership rights exist and the collection of payment appears reasonably certain. In conjunction herewith, contractually agreed upon conditions precedent are taken into consideration.

Operating expenses are recorded in the period when the goods or services are received or when the expenses were incurred.

Interest income is recognized proportionately over time; interest expense incurred is recognized depending on the contractual obligations where relevant using the effective interest method or, where applicable, proportionally over time.

### **3.20 Financial profit/loss**

Interest income and financing expense are recognized in the appropriate period giving consideration to the effective interest method. In addition to interest income and interest expense, the financial result may include income from securities and gains and losses from financial instruments which are recorded in profit or loss. In addition, net interest expense associated with pension provisions is included.

### **3.21 Income tax**

The actual currently expected income tax revenue and expense relating to the annual results as well as the deferred income tax income and expense are recorded in the statement of comprehensive income.

Expected payments on taxable income are, in principle, determined on the basis of the tax rates in effect for corporation tax and trade tax.

### **3.22 Earnings per share**

The earnings per share were determined in accordance with IAS 33. In the calculation of the earnings per share, the results for the period attributable to the shareholders of the parent company are divided by the weighted average number of shares outstanding.

### **3.23 Published standards the application of which is not yet obligatory**

Prior to the date of publication of the consolidated financial statements, the IASB published additional IFRS and IFRIC which have not yet been fully endorsed by the EU and will only be required to be applied subsequent to the balance sheet date. The initial required application date for the new, changed and revised Standards/Interpretations presented below is in the future. Probiodrug AG intends to apply these Standards when their application becomes obligatory. The initial required date of application is financial years which begin on or after January 1, 2014 unless something to the contrary is noted.

- IAS 19 „Defined Benefits Plans: Employee Contributions” (Amendment) (July 1, 2014)
- IFRS 9 „Financial Instruments“ (January 1, 2018)
- IAS 16, 38 „Clarification of Acceptable Methods of Depreciation and Amortization“ (Amendments) (January 1, 2016)
- IAS 16, 41 „Agriculture: Bearer Plants“ (Amendments) (January 1, 2016)
- IAS 27 „Consolidated and Separate Financial Statements“ (Amendments)
- IAS 28 „Investments in Associates and Joint Ventures“
- IAS 32 “Offsetting Financial Assets and Financial Liabilities” (Amendments) -
- IAS 36 „Recoverable Amount - Disclosures for Non-Financial Assets“ (Amendments) – the amendments clarify and correct the disclosure requirements for recoverable amount under IFRS 13.
- IAS 39 „Novation of Derivatives and Continuation of Hedge Accounting“ (Amendments)
- IFRS 10 „Consolidated Financial Statements“
- IFRS 11 „Joint Arrangements“
- IFRS 12 „Disclosure of Interests in Other Entities“
- IFRS 14 „Regulatory Deferral Accounts“ (January 1, 2016)
- Improvements to IFRS 2011-2013 (July 1, 2014)
- IFRIC 21 „Levies“ (July 1, 2014)
- IFRS 10, 11, 12 Amendments: Transition Guidance
- Improvements to IFRS 2010-2012 (July 1, 2014)
- IFRS 10, 12, IAS 27 Amendments: Investment Entities
- IFRS 11 Amendment: Accounting for Acquisitions of Interests in Joint Operations (January 1, 2016)
- IFRS 15: Revenue from Contracts with Customers (January 1, 2017)

It is not expected that the initial application of the changes listed will have a significant impact on the financial statements. However, there may be changes in the scope of disclosures in the notes.

#### **4. Significant discretionary decisions, estimates and assumptions**

The preparation of the consolidated financial statements in accordance with IFRS makes it necessary for discretionary decisions to be made and estimates to be carried out which influence the measurement of assets and liabilities recognized, the disclosure of contingent liabilities and other commitments as of the balance sheet date as well as the presentation of income and expense.

##### ***Estimates and assumptions***

The estimates and assumptions primarily relate to estimates and assumptions in connection with the managements assessment of the entity's ability to continue as a going concern, the impairment test intangible assets, the determination of the economic useful lives of intangible assets and plant and equipment, allowances for doubtful receivables as well as estimates of expected uses of provisions. The estimates are based on past experience as well as other information relating to the transactions recorded.

The value of non-financial assets is reduced if the carrying amount of an asset or the asset's cash generating unit exceeds its recoverable value. The recoverable value of an asset or a cash generating unit is the higher of the fair value less costs of disposal and the value in use. The discounted cash flow method is used for the calculation. The basic assumptions for the determination of the recoverable value for the cash generating unit are presented in section 6.1 „Goodwill and other intangible assets“.

The measurement of the pension provision is based on actuarial assumptions with respect to demographic developments, pension increases as well as the determination of the discount rate.

The calculation of the fair value of the provision for phantom stock options issued gave consideration to the factors described in section 6.9.6.2 „Phantom stock option program“.

With respect to the determination of the fair value of financial instruments, we refer to section 10 „Disclosures with respect to financial instruments“.

Furthermore, the assumptions and estimates made are dependent on the realizability of future tax relief. Deferred tax assets for deductible temporary differences and tax loss carryforwards are only recorded to the extent that there are deferred tax liabilities which can be off-set respectively for which it is probable that future taxable income will result which can be used for the realization of the deferred tax relief.

The estimates may differ from the actual amounts recorded in subsequent periods. Changes in assumptions or estimates to be made are recognized in the statement of comprehensive income at the time that they become known. The circumstances in existence at the time of preparation of the consolidated financial statements are considered as well as the future development in the industry-related environment with respect to the expected future business development of Probiodrug.

##### **Management's Assessment of the Entity's Ability to Continue as a Going Concern**

As at 31 December 2013 the Company had a deficit not covered by equity amounting to EUR 4,224k. The creditors to whom the convertible bonds with a nominal amount of EUR 5,346k were issued in the financial year 2013 each issued letters of subordination. As such, overindebtedness from a legal perspective does not exist.

As a result of the resolution to issue convertible bonds in July 2013 as well as the increase in these convertible bonds as resolved in May 2014, the Company was able to secure additional funding which provide for the Company's further development at least into the third quarter of 2014. In order to continue the ongoing research and development projects additional funding will, at the latest, be required at this point. Management is currently pursuing an additional financing round for the fall of 2014. If this is not achieved, the Company's further development will be endangered.

If extensive adjustments are made to the cost structures, the Company's projections show that, without a successful financing round, the liquidity would be sufficient through the end of 2015. The aforementioned projections are based on the assumption that no cash outflows will be required in 2014 and 2015 with respect to the potential additional tax claims of the fiscal authorities for the year 2004. Probiodrug has filed a lawsuit at the Finanzgericht contesting the potential back taxes. A ruling has not yet been made. A stay of execution for the contested decisions has been granted.

This risk was provided for in the financial statements by recording an appropriate provision. Should significant payments be required in 2014 or 2015 for the back taxes being contested in the financial courts, the Company's ability to continue as a going concern would be endangered.

## 5. Explanations on individual line items within the consolidated statement of comprehensive income

### 5.1 Revenues

No revenues were realized in 2013 (2012 EUR 6k, 2011 EUR 21k). The revenues in the prior years primarily consisted of revenues realized for services provided.

### 5.2 Cost of sales

This line item includes personnel costs, costs of materials and purchased services including personnel costs for research and development services. No research and development services were sold in financial years 2011 to 2013.

### 5.3 Research and development expenses

In the financial year 2013 research and development expenses amounted to EUR 8,004k (2012: EUR 9,255k, 2011: EUR 13,229k).

### 5.4 General and administrative expenses

The general and administrative expenses of EUR 2,394k (2012: EUR 2,341k, 2011: EUR 3,084k) comprise personnel costs and costs of materials as well as amortization and depreciation attributable to the administrative area and other operating expenses.

### 5.5 Supplementary disclosures regarding the cost of sales method

The expenses during the financial year include scheduled amortization and depreciation of plant and equipment as well as intangible assets amounting to EUR 314k (2012: EUR 351k, 2011: EUR 414k) as well as personnel related expenses amounting to EUR 2,189k (2012: EUR 4,156k, 2011: EUR 4,897k). The decrease of the personnel expenses relates to the lower headcount.

### 5.6 Other operating income

The other operating income is broken down as follows:

<b>Other operating income</b>	<b>1/1 -12/31/2013 EUR k</b>	<b>1/1 -12/31/2012 EUR k</b>	<b>1/1 -12/31/2011 EUR k</b>
Income from the release of provisions .....	90	199	0
Release of the investment grants .....	44	33	54
Expenditure related research grants .....	453	722	1,919
Other .....	160	78	50
<b>Total</b> .....	<b>747</b>	<b>1,032</b>	<b>2,023</b>

### 5.7 Income taxes

The income tax relating to the current period includes both current and deferred taxes. Current income tax expense is based on the respective legal regulations. Deferred taxes are determined as explained in the following. Income taxes comprise:

	<b>1/1 -12/31/2013 EUR k</b>	<b>1/1 -12/31/2012 EUR k</b>	<b>1/1 -12/31/2011 EUR k</b>
Current tax expense/income .....	0	-656	6
Deferred tax income/expense .....	0	0	0
<b>Total</b> .....	<b>0</b>	<b>-656</b>	<b>6</b>

The current tax expense for 2012 is attributable to changes in the tax provision attributable to risks resulting from tax audits of prior years.

For the determination of domestic deferred taxes, a corporation tax rate of 15 % plus a solidarity surcharge of 5.5 % as well as the trade income tax multiplier rate of 450 % applicable for the legal seat of the Company was used for all reporting periods. Based on this, the effective tax rate as of December 31, 2013 used to determine the deferred tax assets and liabilities amounted to 31.58 % (December 31, 2012: 31.58 %, December 31, 2011: 31.58 %).

The significant differences between the expected and the actual income tax expense in the reporting period and the comparative years are explained below:

EUR k	1/1 -12/31/2013	1/1 -12/31/2012	1/1 -12/31/2011
Profit/Loss before income tax ..	-9,929	-18,720	-16,307
Income tax rate.....	31.58%	31.58%	31.58%
Expected tax income.....	3,136	5,912	5,149
Change in deferred tax assets not recorded .....	-3,029	-3,029	-4,405
Non-periodic effects.....	0	-656	0
Effects resulting from consolidation.....	-114	-1,431	- 428
Non-deductible expenses .....	-40	-32	-127
Impairment of goodwill .....	0	- 630	0
Tax effect attributable to discontinued operations.....	-70	-702	0
Other differences.....	117	-88	-183
<b>Reported income tax benefit/expense .....</b>	<b>0</b>	<b>-656</b>	<b>6</b>

The deferred tax assets and deferred tax liabilities are attributable to temporary differences between the carrying amount of the following assets and liabilities in the IFRS consolidated financial statements and the carrying amount for tax purposes:

In EUR k	Deferred tax assets				Deferred tax liabilities				Total			
	12/31/2013	12/31/2012	12/31/2011	1/1/2011	12/31/2013	12/31/2012	12/31/2011	1/1/2011	12/31/2013	12/31/2012	12/31/2011	1/1/2011
Intangible assets.....	0	0	0	0	0	197	1,247	1,247	0	-197	-1,247	-1,247
Plant and equipment .....	0	0	0	0	0	0	3	7	0	0	-3	-7
Pension liabilities.....	4	114	50	35	0	0	0	0	0	114	50	35
Other provisions .....	0	0	0	0	4	4	4	4	0	-4	-4	-4
Loss carryforwards .....	0	87	1,204	1,223	0	0	0	0	0	87	1,204	1,223
<b>Total .....</b>	<b>4</b>	<b>201</b>	<b>1,254</b>	<b>1,258</b>	<b>4</b>	<b>201</b>	<b>1,254</b>	<b>1,258</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Net amount .....	-4	-201	-1,254	-1,258	-4	-201	-1,254	-1,258	0	0	0	0
<b>Total deferred taxes.....</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

As of December 31, 2013, deferred tax assets attributable to tax loss carryforwards and differences in measurement amounted to EUR 24,063k (12/31/2012: EUR 21,034k; 12/31/2011: EUR 18,005k), of which EUR 0k (12/31/2012: EUR 87k; 12/31/2011: EUR 1,204k) was offset against the deferred tax liabilities. The remaining deferred tax assets were not recorded as their use is not sufficiently probable.

As of December 31, 2013, Probiodrug AG had corporate income tax loss carryforwards of EUR 75,825k and trade tax loss carryforwards of EUR 75,802k. The tax losses can be carried forward for an unlimited time.

Changes in the deferred tax assets and liabilities presented in the consolidated balance sheet consist of the following:

EUR k	1/1/2013	Change with an impact on the profit or loss	Change without an impact on the profit or loss	12/31/2013
Intangible assets.....	-197	197	0	0
Pension liabilities.....	114	-110	0	4
Other provisions.....	-4	0	0	-4
Loss carryforwards.....	87	-87	0	0
<b>Total .....</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

EUR k	1/1/ 2012	Change with an impact on the profit or loss	Change without an impact on the profit or loss	12/31/ 2012
Intangible assets .....	-1,247	1,050	0	-197
Plant and equipment.....	-3	3	0	0
Pension liabilities.....	50	64	0	114
Other provisions.....	-4	0	0	-4
Loss carryforwards.....	1,204	-1,117	0	87
<b>Total .....</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

EUR k	1/1/ 2011	Change with an impact on the profit or loss	Change without an impact on the profit or loss	12/31/ 2011
Intangible assets .....	-1,247	0	0	-1,247
Plant and equipment.....	-7	4	0	-3
Pension liabilities.....	35	15	0	50
Other provisions.....	-4	0	0	-4
Loss carryforwards.....	1,223	-19	0	1,204
<b>Total .....</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## 5.8 Discontinued operations

At the end of 2012 Probiodrug Group's management board decided that Ingenium's business activities would not be further pursued and that the development program CDK 9 would be sold. Prior to that point, the intention was to grant licenses for medicinal products on the basis of CDK 9.

The sale was expected to be completed within one year. As such, as of December 31, 2012, the noncurrent assets of Ingenium were classified as „held for sale“ and pooled within one group for sale.

Due to the intended discontinuation of the economic activities, Ingenium's business activities were classified as discontinued operations in the statement of comprehensive income and the prior year figures were adjusted.

The actual sale of the development program and the noncurrent assets associated herewith was completed in 2013.

The profit or loss of the discontinued business activities of Ingenium were as follows:

EUR k	2013	2012	2011
Income .....	43	411	103
Expenses .....	-206	-1,620	-2,152
Loss as a result of measurement at fair value and Loss on sale.....	-9	-5,983	0
<b>Operating loss.....</b>	<b>-172</b>	<b>-7,192</b>	<b>-2,049</b>
Financial profit/loss .....	0	0	-3
<b>Loss before tax .....</b>	<b>-172</b>	<b>-7,192</b>	<b>-2,052</b>
Income taxes .....	0	0	0
<b>After tax loss of the discontinued operations .....</b>	<b>-172</b>	<b>-7,192</b>	<b>-2,052</b>

With respect to the valuation adjustments included in the results of discontinued operations, we refer to our explanations in section 6.8 „assets held for sale“.

## 6 Explanations on individual line items in the consolidated balance sheet

### 6.1 Goodwill and intangible assets

The intangible assets developed as follows:

	Goodwill EUR k	Development program EUR k	Other intangible assets EUR k	Total EUR k
Acquisition costs as of January 1, 2013 .....	0	0	347	347
Additions.....	0	0	61	61
Disposals.....	0	0	-152	-152
<b>Acquisition costs of December 31, 2011.....</b>	<b>0</b>	<b>0</b>	<b>256</b>	<b>256</b>
Amortization of January 1, 2011.....	0	0	280	280
Additions.....	0	0	26	26
Disposals.....	0	0	-151	-151
<b>Amortization as of December 31, 2011.....</b>	<b>0</b>	<b>0</b>	<b>155</b>	<b>155</b>
Carrying values of January 1, 2011.....	0	0	67	67
<b>Carrying value as of December 31, 2011.....</b>	<b>0</b>	<b>0</b>	<b>101</b>	<b>101</b>

	Goodwill EUR k	Development program EUR k	Other intangible assets EUR k	Total EUR k
Acquisition costs as of January 1, 2012 .....	1,996	4,737	712	7,445
Additions.....	0	0	55	55
Disposals.....	0	0	-30	-30
Reclassification to assets held for sale .....	-1,996	-4,737	-390	-7,123
<b>Acquisition costs as of December 31, 2012....</b>	<b>0</b>	<b>0</b>	<b>347</b>	<b>347</b>
Amortization and Impairments as of				
January 1, 2012 .....	0	0	651	61
Additions.....	0	0	37	37
Impairments.....	1,996	3,987	0	5,983
Disposals.....	0	0	-19	-19
Reclassification to assets held for sale .....	-1,996	-3,987	-389	-6,372
<b>Amortization and Impairments as of December 31, 2012 .....</b>	<b>0</b>	<b>0</b>	<b>280</b>	<b>280</b>
<b>Carrying value as of January 1, 2012.....</b>	<b>1,996</b>	<b>4,737</b>	<b>61</b>	<b>6,794</b>
<b>Carrying value as of December 31, 2012.....</b>	<b>0</b>	<b>0</b>	<b>67</b>	<b>67</b>

	Goodwill EUR k	Development- program EUR k	Other intangible assets EUR k	Total EUR k
Acquisition costs as of January 1, 2011 .....	1,996	4,737	722	7,455
Additions.....	0	0	14	14
Disposals.....	0	0	-24	-24
<b>Acquisition costs of December 31, 2011.....</b>	<b>1,996</b>	<b>4,737</b>	<b>712</b>	<b>7,445</b>
Amortization of January 1, 2011.....	0	0	631	631
Additions.....	0	0	44	44
Disposals.....	0	0	-24	-24
<b>Amortization as of December 31, 2011.....</b>	<b>0</b>	<b>0</b>	<b>651</b>	<b>651</b>
Carrying values of January 1, 2011.....	1,996	4,737	91	6,824
<b>Carrying value as of December 31, 2011.....</b>	<b>1,996</b>	<b>4,737</b>	<b>61</b>	<b>6,794</b>

Amortization is included in the statement of comprehensive income within research and development expenses and general and administrative expenses.

The carrying amount of the goodwill through December 31, 2012 related solely to the research and development activities of Ingenium classified within intangible assets. Until such time as Ingenium was classified within discontinued operations in December 2012, goodwill was tested once per year to determine if there was a need to record an impairment (impairment test in accordance with IAS 36). The recoverable amount was measured on the basis of the value in use of the cash generating unit comprising Ingenium's research and development program.

To assess the carrying amount of the goodwill associated with Ingenium, an impairment test was carried out as of June 30, 2012. The smallest cash generating unit was identified to be Ingenium's research and development program. The recoverable value of the cash generating unit was determined on the basis of the calculation of the value in use applying the cash flow forecast based on a multi-year financial plan approved by the management board.

A valuation program for the research and development program developed by Stewart, Allison und Johnson (published in Nature Biotechnology, 2001) which reflects the standard for the pharmaceutical industry and is commonly used for such programs was utilized. The input variables were determined on the basis of relevant publications in professional journals and were supported/underpinned by the experience of Probiodrug's management. These were as follows:

- Discount rate: 15% p.a.
- Probability of market entry: 10%
- Expected market share: 15% at peak
- Expected growth rate in the number of patients: 3% p.a.

On the other hand, the fair value less costs of disposal of the cash generating unit was considered on the basis of reference transactions. License and acquisition transactions of companies in which the stage of development respectively the focus of the indication was comparable were given consideration. With respect to these transactions the direct payments were given consideration.

The impairment test did not lead to the need for an impairment charge against the goodwill recorded.

The determination of the recoverable value for Ingenium's development program could, simultaneously, be used for the impairment test of the development program recorded within intangible assets. This did not lead to the need to record an impairment loss.

Prior to the reclassification of Ingenium into discontinued operations, a further impairment test was completed in December 2012. As a result of the decision to sell as well as the decision to discontinued operations in the area of Ingenium's business activities the recoverable amount was now solely based on the fair value less costs of disposal. This led to the result that the goodwill was no longer recoverable and that an impairment loss had to be recorded for the full amount.

The CDK 9 development program was impaired on the basis of a sales price of EUR 750k. Selling costs were not expected.

The measurement at fair value was allocated to level 3 of the fair value hierarchy.

## 6.2 Plant and equipment

As a result of the restructuring of the Company in 2013 which led to downsizing of the space occupied and the discontinuation of research activities, there were more substantial disposals of plant and equipment.

Plant and equipment developed as follows:

	Leaseholdimprovements EUR k	Other equipment, factory and office equipment EUR k	Total EUR k
Acquisition costs as of January 1, 2013 .....	280	4,032	4,312
Additions.....	0	5	5
Disposals .....	-99	-1,907	-2,006
<b>Acquisition costs as of December 31, 2013 .....</b>	<b>181</b>	<b>2,130</b>	<b>2,311</b>
Depreciation as of January 1, 2013 .....	236	3,150	3,386
Additions.....	8	280	288
Disposals .....	-99	-1,585	-1,684
<b>Depreciation as of December 31, 2013 .....</b>	<b>145</b>	<b>1,845</b>	<b>1,990</b>
Carrying value as of January 1, 2013 .....	44	882	926
<b>Carrying value as of December 31, 2013 .....</b>	<b>36</b>	<b>285</b>	<b>321</b>

	Leasehold improvements EUR k	Other equipment, factory and office equipment EUR k	Total EUR k
Acquisition costs as of January 1, 2012.....	280	7,357	7,637
Additions .....	0	64	64
Disposals .....	0	-1,753	-1,753
Reclassification to assets held for sale.....	0	-1,636	-1,636
<b>Acquisition costs as of December 31, 2012.....</b>	<b>280</b>	<b>4,032</b>	<b>4,312</b>
Depreciation as of January 1, 2012.....	224	6,149	6,373
Additions .....	12	302	314
Disposals .....	0	-1,672	-1,672
Reclassification to assets held for sale.....	0	-1,629	-1,629
<b>Depreciation as of January 1, 2012 .....</b>	<b>236</b>	<b>3,150</b>	<b>3,386</b>
Carrying value as of January 1, 2012 .....	56	1,208	1,264
<b>Carrying value as of December 31, 2012 .....</b>	<b>44</b>	<b>882</b>	<b>926</b>

	Leasehold improvements EUR k	Other equipment, factory and office equipment EUR k	Total EUR k
Acquisition costs as of January 1, 2011.....	280	7,976	8,256
Additions .....	0	85	85
Disposals .....	0	-704	-704
<b>Acquisition costs as of December 31, 2011.....</b>	<b>280</b>	<b>7,357</b>	<b>7,637</b>
Depreciation as of January 1, 2011.....	209	6,498	6,707
Additions .....	15	355	370
Disposals .....	0	-704	-704
<b>Depreciation as of December 31, 2011 .....</b>	<b>224</b>	<b>6,149</b>	<b>6,373</b>
Carrying value as of January 1, 2011 .....	71	1,478	1,549
<b>Carrying value as of December 31, 2011 .....</b>	<b>56</b>	<b>1,208</b>	<b>1,264</b>

### 6.3 Inventories

At year-end, inventories amounted to EUR 0k (12/31/2012: EUR 18k; 12/31/2011: EUR 18k; 1/1/2011: EUR 42k). In prior years, inventories consisted solely of supplies. As a result of the discontinuation of laboratory activities, these are no longer necessary. The use of the prior year inventory of EUR 18k is included within research and development expenses in 2013.

### 6.4 Other short-term financial assets

As of December 31, 2013 the other short-term financial assets amounted to EUR 872k and include EUR 677k in receivables from the sale of fixed assets and of the development program CDK 9. The prior year amounts were EUR 2k as of December 31, 2012, EUR 9k as of December 31, 2011 and EUR 27k as of January 1, 2011.

### 6.5 Tax refunds

The presented claims to income tax refunds amounting to EUR 10k (12/31/2012: EUR 18k; 12/31/2011: EUR 46k; 1/1/2011: EUR 84k) comprise claims to corporate income tax refunds as well as the solidarity surcharge.

### 6.6 Other current assets

The other current assets are presented in the subsequent table:

In EUR k	12/31/2013	12/31/2012	12/31/2011	1/1/2011
Subsidies receivable .....	26	80	295	713
Receivables from.....				
prepayments .....	96	120	195	268
value added taxes .....	42	200	114	281
other .....	24	83	40	110
<b>Total.....</b>	<b>188</b>	<b>483</b>	<b>644</b>	<b>1,372</b>

## 6.7 Cash and cash equivalents

The cash and cash equivalents comprise:

In EUR k	12/31/2013	12/31/2012	12/31/2011	1/1/2011
Cash-on-hand and bank balances.....	4,879	7,726	9,295	6,061
<b>Total.....</b>	<b>4,879</b>	<b>7,726</b>	<b>9,295</b>	<b>6,061</b>

The cash and cash equivalents as presented in the statement of cash flows are equivalent to the cash and cash equivalents as recorded on the balance sheet. The cash and cash equivalents are not restricted as to use.

## 6.8 Assets held for sale

In December 2012 the decision was made to sell the business activities of Ingenium (refer to section 5.8.). As such, as of December 31, 2012, the balance sheet line item „Assets held for sale“ with a total of EUR 757k consisted of the development program with a value of EUR 750k as well as plant and equipment valued at EUR 7k. The actual sale took place in 2013.

Prior to the reclassification of the assets to „assets held for sale“ a further impairment test was completed (refer to sections 3.6 and 6.1). In this process the carrying amounts were compared to the fair values less costs of disposal. The impairment expense of EUR 5,983k recorded in 2012 consisted of the following:

	EUR k
Impairment of goodwill.....	1,996
Impairment of development program.....	3,987
	<b>5,983</b>

The impairment expense was presented in the profit or loss of discontinued operations.

No cumulative income or expense in conjunction with the sale was included in the other comprehensive income.

## 6.9 Equity

The development of Probiodrug AG's equity in the financial years from 2011 to 2013 is presented in the statement of changes in equity.

	Common shares	Preferred shares A	Preferred shares B
In issue at 1 January 2011	3,414,375	3,095,837	9,208,113
Issued for cash	-	-	6,975,837
<b>In issue at 31 December 2011</b>	<b>3,414,375</b>	<b>3,095,837</b>	<b>16,183,950</b>
Issued for cash	-	-	2,834,767
<b>In issue at 31 December 2012</b>	<b>3,414,375</b>	<b>3,095,837</b>	<b>19,018,717</b>
Issued for cash	-	-	-
<b>In issue at 31 December 2013</b>	<b>3,414,375</b>	<b>3,095,837</b>	<b>19,018,717</b>

As of December 31, 2013 Probiodrug AG's share capital is broken down into 3,414,375 registered no par common shares, 3,095,837 Series A registered preferred shares with voting rights as well as 19,018,717 Series B registered preferred shares with voting rights. The capital has been fully contributed. The computational nominal amount per share is EUR 1.00.

On October 23, 2009 the annual general shareholders' meeting authorized a EUR 4,897,768 increase in share capital to EUR 20,616,093. This was implemented in 2011. By resolution of the supervisory board on January 24, 2011, section 4 (share capital) of the articles of incorporation was changed. The corresponding entry was made in the commercial register on February 24, 2011.

On September 20, 2011 the annual shareholders' meeting resolved a EUR 2,078,069 increase in share capital to EUR 22,694,162 as well as the creation of authorized capital 2011/I and 2011/II and a change to section 4 (share capital) of the articles of incorporation. The corresponding entry was made in the commercial register on November 11, 2011.

On December 30, 2011 the annual general shareholders' meeting resolved a further cash capital increase excluding subscription rights. As such, the share capital increased by 557,385 registered no par value preferred shares of the Series B. The new shares participate in earnings beginning on January 1, 2011. The entry was made in the commercial register on January 27, 2012.

By virtue of a resolution dated June 7, 2012, Probiodrug AG's management board – with the approval of the supervisory board dated June 7, 2012 – resolved to increase the share capital from EUR 23,251,547.00 by EUR 2,277,382.00 to EUR 25,528,929.00 by using the authorized capital 2011/I. 2,277,382 registered no par value preferred shares of the Series (B) were issued at an issue price of EUR 1.00 per share. The new shares participate in earnings beginning on January 1, 2012. The entry was made in the commercial register on August 22, 2012.

### **Contingent capital**

#### **Contingent capital I/2008**

As of December 31, 2013 the contingent capital I/2008 is unchanged and amounted to EUR 67,800. Of this amount, EUR 67,120 (12/31/2012 EUR 67,120; 12/31/2011 EUR 67,120; 1/1/2011 EUR 67,800) is reserved as a result of the issuance of option rights.

The contingent capital I/2008 serves to secure the option rights which were distributed in conjunction with Stock Option Program 2007. A new issuance of options on the basis of this program is no longer possible.

The contingent capital increase will only be carried out to the extent that the beneficiaries of the stock options make use of their buying option. The new shares resulting from the exercise of the stock options will participate in earnings from the beginning of the financial year in which the rights are exercised. In addition to employees of the Company and affiliated companies for whom as per Section 194 (3) of the AktG (German Stock Corporation Act) no disclosures are required, the following members of the management board are permitted to acquire the following number of shares:

Dr. Konrad Glund, Halle, up to 5,472 common shares,

Prof. Dr. Hans-Ulrich Demuth, Halle, up to 5,472 common shares,

Dr. Hendrik Liebers, Leipzig, up to 12,768 common shares.

#### **Contingent capital II/2008**

As of December 31, 2013, the contingent capital II/2008 is unchanged and amounts to EUR 101,700. Of this amount EUR 100,815 (12/31/2012 EUR 100,815; 12/31/2011 EUR 100,815; 1/1/2011 EUR 100,815) was reserved as a result of the distribution of 100,815 option rights.

The contingent capital II/2008 serves to secure the option rights distributed in conjunction with Stock Option Program 2007. A new distribution of options as part of this program is no longer possible.

The contingent capital increase will only be carried out to the extent that the beneficiaries of these stock options make use of their buying options. The new shares resulting from the exercise of the stock options will participate in earnings from the beginning of the financial year in which the rights are exercised. In addition to employees of the Company and affiliated companies for whom, as per Section 194 (3) of the AktG no disclosures are required, the following members of the management board are permitted to acquire the following number of shares:

Dr. Konrad Glund, Halle, up to 8,208 preferred shares of the Series A,

Prof. Dr. Hans-Ulrich Demuth, Halle, up to 8,208 preferred shares of the Series A,

Dr. Hendrik Liebers, Leipzig, up to 19,152 preferred shares of the Series A.

#### **Contingent capital 2010/I**

As of December 31, 2013, the contingent capital 2010/I was unchanged at EUR 1,236,967. Of this amount, EUR 515,403 (12/31/2012 EUR 515,403; 12/31/2011 EUR 515,403; 1/1/2011 EUR 515,403) are reserved as a result of the issuance of options.

The contingent capital 2010/I was established by virtue of the resolution of the annual general meeting of the shareholders on May 18, 2010. The Company's share capital was contingently increased by a nominal value of up to EUR 1,236,967 by the issuance of up to 1,236,967 registered common shares subject to transfer restrictions. The contingent capital increase provides for the redemption of stock options in accordance with Section 192 (2) No. 3 of the AktG which were issued in conjunction with Stock Option Program 2010 (in the version of the resolutions of the annual general meeting of the shareholders on May 18, 2010). The authorization of the management board to issue new options

was, by resolution of the annual general meeting of the shareholders on October 31, 2012, limited through October 31, 2013. A new issuance of options under this program is no longer possible.

The contingent capital increase will only be carried out to the extent that the beneficiaries of the stock options make use of their buying rights. The new shares resulting from the exercise of the stock options will participate in earnings from the beginning of the financial year in which the rights are exercised. In addition to employees of the Company and affiliated companies for whom, as per Section 194 (3) of the AktG no disclosures are required, the following members of the management board are permitted to acquire the following number of shares:

Dr. Konrad Glund, Halle, up to 171,801 common shares,

Prof. Dr. Hans-Ulrich Demuth, Halle, up to 171,801 common shares and

Dr. Hendrik Liebers, Leipzig, up to 171,801 common shares.

### **Contingent capital 2013/I**

By resolution of the annual general meeting of the shareholders on July 22, 2013, the Company's share capital was contingently increased (contingent capital 2013/I) by EUR 4,307,692 to secure the conversion rights respectively conversion obligations associated with the convertible bonds which were issued on the basis of a resolution of the annual general meeting of the shareholders on the same day. In principle, the convertible bonds are due on December 31, 2014; an extension to December 31, 2015 is possible. The supervisory board's approval for the issuance of convertible bonds was granted on July 22, 2013.

### **Authorized capital**

#### **Authorized capital 2011/I**

By resolution of the annual general meeting of the shareholders on September 20, 2011, the authorized capital 2011/II was established. Probiodrug's management board is authorized, with the approval of the supervisory board, to increase the Company's share capital by issuing up to an additional 2,078,065 new registered no-par value preferred shares of the Series (B) in one or a number of steps in consideration for cash of up to EUR 2,078,065 in the period through December 31, 2013.

By resolution of the annual general meeting of the shareholders on December 30, 2011, the authorized capital 2011/I was increased. Probiodrug's management board is authorized, with the approval of the supervisory board, to increase the Company's share capital in one or more tranches by issuing up to an additional 199,317 new registered no par value preferred shares of the series (B) in exchange for cash of EUR 199,317 until December 31, 2013.

On the basis of a resolution dated June 7, 2012, Probiodrug AG's management board – with the approval of the supervisory board on June 7, 2012 – resolved to increase the share capital from EUR 25,251,547 by EUR 25,528.929 by utilizing the authorized capital 2011/I (section 5 (6) of the articles of incorporation). This was recorded in the commercial register on August 22, 2012.

As such, the authorized capital 2011/I has been utilized in its entirety.

#### **Authorized capital 2011/II**

The authorized capital 2011/II was established by resolution of the annual general meeting of the shareholders on September 20, 2011. Probiodrug's management board is authorized, with the approval of the supervisory board, to increase the Company's share capital by issuing up to an additional 207,807 new registered no-par value preferred shares of the Series (B) in one or a number of steps in consideration for cash of up to EUR 207,807 in the period through December 31, 2013. A subscription right of the shareholders for the authorized capital 2011/II is prohibited. The management board is authorized to establish the further details with respect to the implementation of the increase in capital from the authorized capital 2011/II. No increase in capital was carried out using authorized capital 2011/II.

### **6.9.1 Legal reserve**

The legal reserve in accordance with section 150 (1) and (2) of the AktG amounts to EUR 228k.

## 6.9.2 Additional paid-in-capital

As of December 31, 2013 the additional paid-in-capital amounted to EUR 51,963k (12/31/2012: EUR 51,658k; 12/31/2011: EUR 45,150k; 1/1/2011: EUR 33,068k).

As a result of a stock issuance in exchange for cash in 2011, in accordance with section 272 (2) number 4 of the HGB, the additional paid-in-capital increased by EUR 11,789k less transaction costs of EUR 124k as a result of cash payments made into the additional paid-in-capital. Furthermore, the additional paid-in-capital increased as a result of the allocation over the vesting period of the fair value of the equity instruments resulting from the option rights issued to Stock Option Program 2007 amounting to EUR 48k and those to Stock Option Program 2010 amounting to EUR 369k issued.

In 2012, in conjunction with the cash increase in capital, payments of EUR 6,378k were made into the additional paid-in-capital. Transaction costs reduced the additional paid-in-capital by EUR 16k. In addition, the additional paid-in-capital increased by the allocation over the vesting period of the fair value of the equity instruments granted for the issuance of options rights in conjunction with stock option program 2007 amounting to EUR 6k and for Stock Option Program 2010 in the amount of EUR 140k.

In 2013 the additional paid-in-capital increased by allocation over the vesting period of the fair value of the equity instruments granted for the issuance of options rights in conjunction with Stock Option Program 2007 amounting to EUR 10k and for the Stock Option Program 2010 in the amount of EUR 305k.

## 6.9.3 Other reserves for the remeasurement of pensions

The line item „Other reserves for the remeasurement of pensions“ with a balance of EUR -199k (12/31/2012: EUR -234k; 12/31/2011: EUR -31k, 1/1/2011: EUR 14k) comprises the remeasurement of the gross defined benefit pension obligations as well as the return on the plan assets which exceeds or falls short of the interest on the plan assets which is directly recorded in other comprehensive income without an impact on the profit and loss (refer to sections 3.15 and 6.10.2).

There was no need to take account of income tax effects.

## 6.9.4 Retained earnings

The retained earnings include the cumulative results which amount to EUR -81,745k (12/31/2012 EUR -71,816k; 12/31/2011 EUR -53,096k; 1/1/2011 EUR -36,789k).

## 6.9.5 Earnings per share

As of December 31, 2013, Probiodrug AG's share capital consisted of 25,528,929 shares (12/31/2012: 25,528,929; 12/31/2011: 22,694,162) broken down into 3,414,375 registered no par value common shares, 3,095,837 registered preferred shares with voting rights of the Series A as well as 19,018,717 registered preferred shares with voting rights of the series B. The calculated nominal amount per share is EUR 1.00.

The consolidated net loss attributable to Probiodrug AG's shareholders amounted to EUR -9,929k in financial year 2013 (2012: EUR -18,720k; 2011: EUR -16,307k).

The earnings per share were calculated as follows:

	2013	2012	2011
Number of shares in circulation as of 1/1 .....	25,528,929	22,694,162	15,718,325
Average number of shares in circulation as of 12/31 .....	25,528,929	24,310,478	20,866,817
<b>Results for the period in EUR k .....</b>	<b>-9,929</b>	<b>-18,720</b>	<b>-16,307</b>
<b>Earnings per share EUR (basic/diluted).....</b>	<b>-0.39</b>	<b>-0.77</b>	<b>-0.78</b>

There were no dilution effects on the earnings per share. The basic earnings per share from continuing operations amounted to EUR -0.38 (2012: EUR -0.47; 2011: EUR -0.67). The diluted earnings per share from continuing operations are equivalent to the basic earnings per share from continuing operations. The convertible bond could potentially dilute basic earnings per share in the future.

The weighted average number of common shares presented above served as the basis for the calculation of the earnings per share for the discontinued operations. The results of discontinued operations attributable to Probiodrug AG's shareholders used to calculate the earnings per share amounted to EUR -172k (2012: EUR -7,192k; 2011: EUR -2,052k).

As such, the basic as well as the diluted earnings per share attributable to discontinued operations amounted to EUR -0.01 (2012: EUR -0.30; 2011: EUR -0.11).

## 6.9.6 Stock options

### 6.9.6.1 Stock option programs

#### Stock option program ESOP 2007

At the end of 2007, the ESOP 2007 was launched. Options were issued in 2008. In total, 201,420 options were issued of which 120,852 options were for preferred shares and 80,568 options were for common shares. Through January 1, 2011 34,255 options had forfeited.

No additional options were issued in financial years 2011 to 2013. 3,590 options forfeited. As of December 31, 2013, 163,575 options were outstanding.

A stock option gives the holder the right to acquire a no-par value, registered common share respectively preferred share of the Company (option right). The exercise price for the acquisition of a new preferred share amounts to EUR 7.03 while the exercise price for a new common share amounts to EUR 3.96/share. The vesting period began on the issuance dates February 27, August 1 and December 1, 2008 and comprises two years for 50 %, three years for an additional 25 % and four years for the remaining 25 % of the option rights granted. During the vesting period, the legal minimum lock-up period of two years applies. The transfer of option rights is prohibited.

The subsequent table provides an overview of the development of Probiodrug's stock options as well as the exercise prices:

Stock option program 2007 Preferred shares	12/31/2013		12/31/2012		12/31/2011	
	Weighted average exercise price per share EUR	Number of acquirable shares Shares	Weighted average exercise price per share EUR	Number of acquirable shares Shares	Weighted average exercise price per share EUR	Number of acquirable shares Shares
Options outstanding for preferred shares at the beginning of the reporting period	7.03	98,145	7.03	100,299	7.03	100,299
Options issued for preferred shares in the reporting period	0.00	0	0.00	0	0.00	0
Options exercised in the reporting period	0.00	0	0.00	0	0.00	0
Forfeited options for preferred shares in the reporting period	0.00	0	7.03	2,154	0.00	0
Options outstanding for preferred shares at the end of the reporting period	7.03	98,145	7.03	98,145	7.03	100,299
Exercisable options at the end of the reporting period	0.00	0	0.00	0	0.00	0

Stock option program 2007 Common shares	12/31/2013		12/31/2012		12/31/2011	
	Weighted average exercise price per share EUR	Number of acquirable shares Shares	Weighted average exercise price per share EUR	Number of acquirable shares Shares	Weighted average exercise price per share EUR	Number of acquirable shares Shares
Options outstanding for common shares at the beginning of the reporting period	3.96	65,430	3.96	66,866	3.96	66,866
Options issued for common shares in the reporting period	0.00	0	0.00	0	0.00	0
Options exercised in the reporting period	0.00	0	0.00	0	0.00	0
Forfeited options for common shares in the reporting period	0.00	0	3.96	1,436	0.00	0
Options outstanding for common shares at the end of the reporting period	3.96	65,430	3.96	65,430	3.96	66,866
Exercisable options at the end of the reporting period	0.00	0	0.00	0	0.00	0

The accounting for the stock options is at fair value in accordance with IFRS 2. The fair value is determined at the measurement date and is allocated over the vesting period. The fair value is determined on the basis of the binomial model. The granting of the individual stock options took place at different dates and therefore led to different measurement dates for the vesting periods so that different fair values of the options result for the options issued. The base price is fixed at the measurement date of the respective options.

The following factors were considered for the calculation of the fair value:

1. In financial year 2008, on the grant dates February 1, August 1 and December 1, 2008, 120,852 options for preferred shares and 80,568 options for common shares with an original exercise price of EUR 7.03 respectively EUR 3.96 were issued.
2. The volatility expected at the grant date was determined to be 45% for the issue dates February 27, and August 1, 2008 and 50% for the issue date December 1, 2008.
3. Irrespective of the vesting period, the expected term of the options for the option rights dated February 27, 2008 amounts to 5.33 years while for the option rights dated August 1, 2008 it amounts to 4.92 years and for the option rights from December 1, 2008 to 4.58 years.
4. The potential non-exercise of the stock options issued due to fluctuations in personnel and the return of options for other reasons was not taken into consideration in the measurement.
5. The estimated value of a Probiobdrug share at the grant date amounted to EUR 7.03 for preferred shares and EUR 3.96 for common shares.
6. The risk free interest rate for the term of the options on the grant date February 27, 2008 amounted to 3.51 % while that as of August 1, 2008 amounted to 4.36 % and that as of December 1, 2008 to 2.56 %.
7. The expected dividend was assumed to be EUR 0.00.

The total expenses associated with the stock options allocated for the last time in 2012 amounted to EUR 6k (2011: EUR 48k). These were added to the additional paid-in capital.

### **Stock option program 2010/2013**

In mid-2010 a stock option program was launched on the basis of which the three members of the management board were granted 515,403 shares. On the basis of this program, an additional 255,289 stock options were issued to an employee. By December 31, 2013, 127,644 options forfeited such that, as of December 31, 2013, 643,048 options were outstanding.

One stock option gives the holder the right to acquire a common share (option right). The exercise price for the acquisition of a new common share amounts to EUR 1.00. The option rights granted within the framework of the stock option plan have a term of six (2010 issuance) and four (2013 issuance) years. The lock-up period amounts to four years. The vesting period began on the date of issuance (June 30, 2010 for the options issued in 2010 and June 24, 2013 for the options issued in 2013). Subsequent to the expiration of the vesting period, the option rights granted become non-forfeitable (even upon exit). 1/3 of the options become non-forfeitable after seven months, 1/3 of the options after 19 months and 1/3 of the options after 31 months. The lock-up period is not affected by this stipulation.

The subsequent overview shows the development of Probiodrug's stock options and the issue prices: <b>Stock option program 2010 Common shares</b>	12/31/2013		12/31/2012		12/31/2011	
	Weighted average exercise price per share EUR	Number of acquirable shares Shares	Weighted average exercise price per share EUR	Number of acquirable shares Shares	Weighted average exercise price per share EUR	Number of acquirable shares Shares
Options outstanding for common shares at the beginning of the reporting period	1.00	515,403	1.00	515,403	1.00	515,403
Options issued for common shares in the reporting period	1.00	255,289	0.00	0	0.00	0
Options exercised in the reporting period	0.00	0	0.00	0	0.00	0
Forfeited options for common shares in the reporting period	1.00	127,644	0.00	0	0.00	0
Options outstanding for common shares at the end of the reporting period	1.00	643,048	1.00	515,403	1.00	515,403
Exercisable options at the end of the reporting period	0.00	0	0.00	0	0.00	0

The accounting for the stock options is at fair value in accordance with IFRS 2. The fair value is determined at the measurement date and is allocated over the vesting period. The fair value is determined on the basis of the binomial model.

The following factors were considered for the calculation of the fair value:

1. In the financial year 2010, on the grant date June 30, 2010, 515,403 options for common shares with an original exercise price of EUR 1.00 were issued while on the grant date June 24, 2013, 255,289 options for common shares with an original exercise price of EUR 1.00 were issued.
2. The volatility expected on the grant date June 30, 2010 was determined to be 50% while 40% was expected for the grant date June 24, 2013.
3. The expected term of the options for those issued in 2010 as well as for those issued in 2013 amounted to 4.0 years. It was assumed that the options will be exercised immediately upon expiration of the lock-up period of four years.
4. The non-exercise of the stock options issued due to fluctuations in personnel and the return of options for other reasons was not taken into consideration in the measurement.
5. The estimated value of a Probiodrug common share at the grant date amounted to EUR 2.69 for options issued in 2010 and EUR 3.25 for the options issued in 2013.
6. The risk free interest rate for the term of the options issued in 2010 amounted to 1.19 % while that for the options granted in 2013 amounted to 0.53%.
7. The expected dividend was assumed to be EUR 0.00.

The total expenses associated with the stock options allocated to 2013 amounted to EUR 305k (2012: EUR 140k, 2011: EUR 369k). These were added to the additional paid-in capital.

## 6.9.6.2 Phantom stock option program

### Phantom stock option program 2007

Simultaneously with the issuance of 201,420 Probiodrug AG stock options within the framework of the ESOP 2007, 201,420 phantom stock options for preferred shares were issued on the issue dates February 27, August 1 and December 1, 2008. The exercise price amounts to EUR 7.03. In addition, on July 2, 2008, a phantom stock option program open only to members of the supervisory board was introduced with 13,500 phantom stock options for preferred shares at an exercise price of EUR 7.03 and 9,000 phantom stock options for common shares with an exercise price of EUR 3.96.

Through January 1, 2011, 37,145 phantom stock options forfeited. In financial years 2011 through 2013 no additional options were issued and 4,450 options forfeited. As of December 31, 2013 there were 182,325 options outstanding.

A phantom stock option entitles the holder to the payment of a cash bonus which amounts to the difference between the price of a preferred respectively common share and the price which is attained for a preferred or common share in conjunction with an IPO, a merger or the takeover of Probiodrug (exit event).

The subsequent overview shows the development of the portfolio of phantom stock options as well as the exercise prices:

Phantom Stock Option Program 2007	12/31/2013		12/31/2012		12/31/2011	
	Weighted average exercise price per share EUR	Number of acquirable shares Shares	Weighted average exercise price per share EUR	Number of acquirable shares Shares	Weighted average exercise price per share EUR	Number of acquirable shares Shares
Outstanding phantom stock options at the beginning of the reporting period						
for preferred shares	7.03	174,825	7.03	178,415	7.03	179,275
for common shares	3.96	7,500	3.96	7,500	3.96	7,500
Phantom stock options issued in the reporting period						
for preferred shares	0.00	0	0.00	0	0.00	0
for common shares	0.00	0	0.00	0	0.00	0
Options exercised in the reporting period						
for preferred shares	0.00	0	0.00	0	0.00	0
for common shares	0.00	0	0.00	0	0.00	0
Forfeited options in the reporting period						
for preferred shares	0.00	0	7.03	3,590	7.03	860
for common shares	0.00	0	0.00	0	0.00	0
Outstanding options at the end of the reporting period						
for preferred shares	7.03	174,825	7.03	174,825	7.03	178,415
for common shares	3.96	7,500	3.96	7,500	3.96	7,500
Exercisable options at the end of the reporting period	0.00	0	0.00	0	0.00	0

At the time of issuance of the phantom stock options, the fair value of the phantom stock options for preferred shares amounted to EUR 3.16 (issue date February 27, 2008), EUR 3.18 (issue date July 2, 2008), EUR 3.11 (issue date August 1, 2008) and EUR 3.08 (issue date December 1, 2008) as well as EUR 1.79 for phantom stock options for common shares.

As of the balance sheet date December 31, 2013, the newly determined fair value for phantom stock preferred shares was EUR 0.12 (12/31/2012: EUR 0.22; 12/31/2011: EUR 0.14; 1/1/2011: EUR 0.12) and EUR 0.51 (12/31/2012: EUR 0.67; 12/31/2011: EUR 0.53; 1/1/2011 EUR 0.41) for phantom stock options for common shares.

The following factors were considered in determining the fair value as of December 31, 2013:

1. In financial year 2008 214,920 phantom stock options were issued for preferred shares on February 27, July 2, 2008, August 1 and December 1, 2008 at an exercise price of EUR 7.03 and 9,000 phantom stock options were issued for common shares with an exercise price of EUR 3.96.
2. The expected volatility amounts to 40%. For the determination of the expected volatility an average value rounded to 5 percentage points of the historic volatility of comparable businesses in the prior three years was used.
3. The expected remaining term of the phantom stock options amounts to 2.25 years. In the determination of the remaining term of the option rights it was assumed that an exit event in the form of a sale of the Company would take place in the first quarter of 2016 (prior to the expiration of the first phantom stock options) and that all options would be exercised at that time. This would be compensated with cash. The expected term of the phantom stock options was aligned to the expected term of the stock options. Payment is not only dependent on the occurrence of an exit event but also on the additional condition that, at the time of exercise of the phantom stock options, at least 50% of the stock options must have been exercised.
4. It was estimated that the value of a Probiodrug share at the measurement date December 31, 2013 amounted to EUR 3.25 for a preferred share and EUR 3.25 for a common share.
5. The exercise price for a common share amounts to EUR 3.96 while that of a preferred share is EUR 7.03.
6. The risk free interest rate at the measurement date December 31, 2013 was 0.29%.
7. The expected dividend payment was assumed to be EUR 0.00.

The total cumulative expenses associated with the phantom stock options incurred through December 31, 2013 which were allocated on the basis of the fair value as of December 31, 2013 amounted to EUR 25k (12/31/2012: EUR 44k; 12/31/2011: EUR 29k; 1/1/2011: EUR 24k) and were recorded within noncurrent provisions. As such, in financial year 2013, income from the release of provisions amounting to EUR 19k resulted.

#### **Phantom stock option program 2010/2013**

In 2010, on the issue dates June 9, June 30 and September 1, 2010, an additional 350,474 phantom stock options were issued to the Chairman of the supervisory board, the three members of the management board and an additional individual. In 2013 255,289 additional phantom stock options were issued to a consultant at the same conditions. The exercise price amounts to EUR 1.00.

In 2012 144,313 phantom stock options forfeited while in 2013 an additional 36,078 phantom stock options forfeited as a result of members of the supervisory board leaving their positions as well as employees leaving the Company. As a result, as of December 31, 2013, 425,372 phantom stock options were outstanding.

A phantom stock option entitles the holder to receive a cash payment determined as the difference between the exercise price of a common share and the value of a common share attained as a result of an IPO, merger or takeover of Probiodrug AG (exit event). The cash bonus is only paid in case of an exit event. The lock-up period amounts to 3.5 years. The phantom stock options expire in stages within 31 months of issuance subsequent to an exit from the Company. The maximum term of the phantom stock options is six years.

In addition an „exit event threshold“ of EUR 200 million was established. Within a period of 24 months subsequent to an exit event, the beneficiary is entitled to an additional 10,308 phantom stock options for each EUR 25 million in net revenues generated as a result of an exit event subsequent to the deduction of all transaction costs in excess of the exit event threshold. The maximum number of phantom stock options thereby amounts to 989,568 for the three members of the management board and 783,409 for the other two beneficiaries.

The overview below shows the development of the phantom stock options and the exercise prices:

Phantom stock option program 2010/2013	12/31/2013		12/31/2012		12/31/2011	
	Exercise price	Number of phantom stock options	Exercise price	Number of phantom stock options	Exercise price	Number of phantom stock options
	EUR	Shares	EUR	Shares	EUR	Shares
Phantom stock options outstanding at the beginning of the reporting period	1.00	206,161	1.00	350,474	1.00	350,474
Phantom stock options granted during the reporting period	1.00	255,289	0.00	0	0.00	0
Phantom stock options exercised during the reporting period	0.00	0	0.00	0	0.00	0
Phantom stock options which forfeited during the reporting period	1.00	36,078	1.00	144,313	0.00	0
Phantom stock options outstanding at the end of the reporting period	1.00	425,372	1.00	206,161	1.00	350,474
Exercisable phantom stock options at the end of the reporting period	0.00	0	0.00	0	0.00	0

The following factors were considered in determining the fair value as of December 31, 2013:

1. In financial year 2010 350,474 phantom stock options were issued on the issue dates June 9, June 30 and September 1 while in 2013 255,289 phantom stock options were issued with an exercise price of EUR 1.00.
2. The expected volatility amounts to 40 %. For the determination of the expected volatility an average value rounded to 5 percentage points of the historical volatility of comparable businesses in the prior three years was used.
3. In the determination of the expected remaining term of the phantom stock options it was assumed that an exit event in the form of a sale of the Company would take place in the first quarter of 2016 (prior to the expiration of the first phantom stock options) and that all options would be exercised by the end of the first quarter of 2016. This would be compensated with cash. The expected term of the phantom stock options was aligned to the expected term of the stock options. As such, the expected remaining term is 2.25 years. Payment is not only dependent on the occurrence of an exit event but also on the additional condition that, at the time of exercise of the phantom stock options, at least 50% of the stock options must have been exercised.
4. It was estimated that the value of a Probiodrug share at the measurement date December 31, 2013 amounted to EUR 3.25 for a Probiodrug common or a preferred share.
5. The risk free interest rate at the measurement date December 31, 2013 was 0.29 %.
6. The expected dividend payment was assumed to be EUR 0.00.

The total cumulative expenses associated with the phantom stock options incurred through December 31, 2013 which were allocated on the basis of the fair value as of December 31, 2013 amounted to EUR 694k (12/31/2012: EUR 457k; 12/31/2011: EUR 581k; 1/1/2011: EUR 226k) and were recorded within noncurrent provisions. As such, in financial year 2013, expenses from the additions to provisions amounted to EUR 237k. These are presented within the general and administrative expenses respectively within research and development expenses.

## 6.10 Noncurrent liabilities

### 6.10.1 Investment grants

The deferred subsidies (government grants) for fixed assets include investment subsidies from the public sector as well as investment grants from the Investitionsbank Sachsen-Anhalt (formerly Landesförderinstitut Sachsen-Anhalt) (Investment bank of Saxony-Anhalt).

As of the balance sheet date in 2013, they amounted to EUR 24k and are released to income over the average economic useful life of the underlying assets.

The development of the line item is as follows:

	<b>2013</b> EUR k	<b>2012</b> EUR k	<b>2011</b> EUR k
Balance carried forward as of January 1	67	101	154
Additions during the financial year	0	0	0
Release during the financial year	-43	-34	-53
<b>Balance as of December 31</b>	<b>24</b>	<b>67</b>	<b>101</b>
Of which noncurrent	11	24	68
Of which current	13	43	33

### 6.10.2 Pension liabilities

Probiobdrug has two defined benefit pension plans. The pension commitments include entitlements to disability and retirement pensions in amounts specifically determined by individual. The specified annual retirement pension is paid once the retirement age is reached. In addition, a pension commitment for a survivor's pension in a predetermined amount per entitled individual was committed to for survivors.

Plan assets consist solely of pension liability insurance contracts which have been concluded. The asset values of the insurance contracts were off-set against the pension obligations as the insurance contracts are qualifying insurance policies in accordance with IAS 19.

The amount of the defined benefit obligation (actuarial present value of the accrued pension entitlements) is determined on the basis of actuarial methodologies which require the use of estimates. The calculation was based on the Heubeck 2005 G mortality tables.

The measurement of the pension benefits is based on the following actuarial assumptions:

	<b>2013</b>	<b>2012</b>	<b>2011</b>
Discount rate	3.43 %	3.22 %	4.45 %

The discount rate was determined based on industrial bonds with an AA rating and a comparable term.

In addition, an annual salary increase of 0 % and an increase in the pension of 1.5 % was assumed.

As of December 31, 2013, the present value of the pension commitments (defined benefit obligations) amounted to EUR 1,109k (12/31/2012: EUR 1,062k; 12/31/2011: EUR 795k; 1/1/2011: EUR 693k). The remeasurements included within other comprehensive income amounted to EUR -199k as of the balance sheet date (12/31/2012: EUR -234k; 12/31/2011: EUR -31k, 1/1/2011: EUR 14k).

In financial year 2013 pension expense amounting to EUR 106k (2012: EUR 91k; 2011: EUR 86k) was recorded, of which EUR 71k (2012: EUR 58k; 2011: EUR 53k) consisted of service costs and EUR 34k (2012: EUR 35k; 2011: EUR 33k) of interest expense. 50.0% of the service cost was recorded in general and administrative expenses and 50.0% was recorded in research and development expense.

The plan assets offset comprise the insurance pledged to the beneficiaries which may only be used to make pension payments to the beneficiaries and is, thereby, not available to other creditors of the Company. The present value of the plan assets as of December 31, 2013 amounted to EUR 574k (12/31/2012: EUR 517k; 12/31/2011: EUR 462k; 1/1/2011: EUR 409k); interest income earned on plan assets which is presented within the interest expense amounted to EUR 18k (2012: EUR 22k; 2011: EUR 21k).

As such, the net commitment (defined benefit liability) as of the balance sheet date amounted to EUR 535k (12/31/2012: EUR 545k; 12/31/2011: EUR 333k; 1/1/2011: EUR 285k).

The subsequent sensitivity analysis shows how the present value of the defined benefit pension obligation changes if the interest rate changes holding other assumptions constant:

Interest rate – 0.5%: Δ DBO EUR 91k

Interest rate + 0.5%: Δ DBO EUR -81k

## Reconciliation of defined benefit obligation and plan assets

In EUR k	Defined benefit obligation	Plan assets	Pension provision (DBL)
<b>Balance as of 1/1/2011</b> .....	<b>694</b>	<b>-409</b>	<b>285</b>
Current service cost .....	53	-	53
Interest expense (+)/ interest income (-) .....	33	-21	12
Remeasurement .....	<b>15</b>	<b>30</b>	<b>45</b>
Income (-)/ expenses (+) from plan assets (without amounts included in interest expense) .....	-	30	30
Actuarial gains (-)/ losses (+) .....	<b>15</b>	-	<b>15</b>
Effects from changes in financial assumptions .....	37	-	37
Effects from changes in demographic assumptions .....	0	-	0
Effects from changes based on experience .....	-22	-	-22
Employer's contributions .....	-	-62	-62
Pension benefits paid .....	0	0	0
<b>Balance as of 12/31/2011</b> .....	<b>795</b>	<b>-462</b>	<b>333</b>
Current service cost .....	58	-	58
Interest expense (+) /interest income (-) .....	35	-22	13
Remeasurement .....	<b>174</b>	<b>29</b>	<b>203</b>
Income (-)/ expenses (+) from plan assets (without amounts included in interest expense) .....	-	29	29
Actuarial gains (-)/ losses (+) .....	174	-	174
Effects from changes in financial assumptions .....	188	-	188
Effects from changes in demographic assumptions .....	0	-	0
Effects from changes based on experience .....	-14	-	-14
Employer's contributions .....	-	-62	-62
Pension benefits paid .....	0	0	0
<b>Balance as of 12/31/2012</b> .....	<b>1,062</b>	<b>-517</b>	<b>545</b>
Current service cost .....	71	-	71
Interest expense (+) /interest income (-) .....	34	-18	16
Remeasurement .....	<b>-58</b>	<b>23</b>	<b>-35</b>
Income (-)/ expenses (+) from plan assets (without amounts included in interest expense) .....	-	23	23
Actuarial gains (-)/ losses (+) .....	<b>-58</b>	-	<b>-58</b>
Effects from changes in financial assumptions .....	-37	-	-37
Effects from changes in demographic assumptions .....	0	-	0
Effects from changes based on experience .....	-21	-	-21
Employer's contributions .....	-	-62	-62
Pension benefits paid .....	0	0	0
<b>Balance as of 12/31/2013</b> .....	<b>1,109</b>	<b>-574</b>	<b>535</b>

In the reporting period, the following items associated with defined contribution obligations were recorded in the statement of comprehensive income:

in EUR k	2013	2012	2011
Current service cost .....	71	58	53
Net interest expense (+)/ income(-) .....	<b>16</b>	<b>13</b>	<b>12</b>
Interest expense associated with DBO .....	34	35	33
Interest income on plan assets .....	-18	-22	-21
<b>Total net pension expense</b> .....	<b>87</b>	<b>71</b>	<b>65</b>

The total expenses associated with defined contribution plans include employer's contributions to the statutory pension scheme amounting to EUR 78k (2012: EUR 208k, 2011: EUR 297k).

For 2014, plan contributions amounting to EUR 56k are expected. The weighted average duration of the pension commitments is 16 years (12/31/2012: 16.5 years, 12/31/2011: 16.8 years). The pension payments for the two beneficiaries are probably due in four respective five years.

### 6.10.3 Noncurrent provisions

The noncurrent provisions include the cumulative total expenses recorded through the balance sheet date for commitments associated with the phantom stock options in the amount of EUR 719k (12/31/2012: EUR 501k; 12/31/2011: EUR 610k; 1/1/2011: EUR 250k). For further explanations please refer to section 6.9.6.2.

The development of the line item is as follows:

	2013 EUR k	2012 EUR k	2011 EUR k
Balance as of January 1	501	610	250
Additions during the financial year	308	90	360
Release during the financial year	-90	-199	0
<b>Balance as of December 31</b>	<b>719</b>	<b>501</b>	<b>610</b>

### 6.11 Current liabilities

#### 6.11.1 Tax liabilities

The tax liabilities of EUR 2,445k comprise the Company's payment obligations as a result of the tax audit for the period 2002 through 2005 including interest for late payment. EUR 1,209k relates to corporate income tax and EUR 1,155k to trade tax.

#### 6.11.2 Provisions

The provision includes the tax audit risk associated with a disputed source tax deduction on license fees. As a consequence of the Company's appeal, the tax audit has not yet been finalized.

#### 6.11.3 Trade payables

As of the balance sheet date, trade payables amounted to EUR 1,327k (12/31/2012: EUR 731k; 12/31/2011: EUR 1,215k; 1/1/2011: EUR 938k). They have a remaining term of up to one year.

#### 6.11.4 Convertible bonds

At the shareholders' meeting held on July 22, 2013 it was resolved that registered convertible bonds with a total nominal value of at least EUR 5,000k and up to a maximum of EUR 7,000k with a term through December 31, 2014, at the longest until December 31, 2015, broken down into partial convertible bonds be issued to existing shareholders of Probiobdrug AG or to affiliated companies of existing shareholders of Probiobdrug AG. To the extent that the aforementioned entitled parties do not make use of their subscription rights, the convertible bonds may be issued to selected employees or Company advisors.

The convertible bonds are non-interest bearing and provide conversion rights for new, registered no par value preferred shares of the Series B2 proportionally representing EUR 1.00 of the share capital. The convertible bonds were issued on August 16, 2013 with a nominal value of EUR 5,346k.

#### 6.11.5 Other current liabilities

	12/31/2013 EUR k	12/31/2012 EUR k	12/31/2011 EUR k	1/1/2011 EUR k
Salaries and wages	113	335	250	194
Prepaid expenses	0	0	2	0
EU grants	0	8	69	107
Payroll and church taxes	23	38	61	61
Workers' compensation board	1	4	19	21
Value added tax	0	0	0	224
Other	24	23	82	146
<b>Total</b>	<b>161</b>	<b>40</b>	<b>483</b>	<b>753</b>

## 7 Explanations on the cash flow statement

The cash and cash equivalents consist solely of the cash and cash equivalents presented on the balance sheet.

The cash outflows from operating activities of EUR 8,526k (2012: EUR 12,040k; 2011: EUR 14,321k) were primarily attributable to the loss of EUR 9,929k recorded in the financial year (2012 EUR 18,720k; 2011 EUR 16,307k).

The positive cash flows from investing activities in the amount of EUR 333k (2012: EUR 1,274k; 2011: EUR -1,086k) were primarily attributable to cash receipts which resulted from the sale of fixed assets in the amount of EUR 386k. The sale of fixed assets included EUR 314k in plant and equipment and EUR 363k with respect to the sale of the development program which was not yet paid in 2013.

The cash flows from financing activities totaling EUR 5,346k (2012: EUR 9,197k; 2011: EUR 18,641k) were impacted by the inflows attributable to the issuance of convertible bonds in the amount of EUR 5,346k.

The net cash flows attributable to discontinued operations were as follows:

	2013	2012	2011
Operating activities.....	-98	-655	-632
Investing activities.....	386	316	-10
Financing activities.....	0	0	0
<b>Net cash flows attributable to discontinued operations.....</b>	<b>288</b>	<b>-339</b>	<b>-642</b>

## 8 Segment reporting

The Probiodrug Group only has operations in one business segment and in one regional segment. Other than the insignificant revenues which resulted from the provision of services, revenues were not realized in the reporting periods presented.

All assets included within the noncurrent assets are located in Germany.

## 9 Disclosures with respect to financial instruments

### 9.1 General disclosures

A financial instrument is a contract which simultaneously gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. Financial instruments are broken down into non-derivative and derivative financial instruments.

On the asset side, the non-derivative financial instruments primarily include other financial assets as well as cash and cash equivalents.

On the liability and equity side, the non-derivative financial instruments primarily consist of financial liabilities, convertible bonds, trade payables as well as other current financial liabilities.

There were no derivative financial instruments as of December 31, 2013 or in the comparative periods.

The categories „measured at fair value through profit and loss“, „financial instruments held-to-maturity“ and „financial instruments available for sale“ were not relevant with respect to the financial assets and financial liabilities recorded as of December 31, 2013.

As of December 31, 2011 the Probiodrug Group held securities for trading purposes. These were classified as „held-for-trading“.

### 9.2 Categories of financial assets and financial liabilities

The subsequent table shows the fair values and the carrying amounts for the classes of financial instruments established in accordance with IFRS 7. All fair values presented are classified in level 1 of the fair value hierarchy. There were no fair values of hierarchy levels 2 or 3 in the financial year 2013 or in the comparative periods. In addition, in the financial years presented, there were no reclassifications between the three levels of the fair value hierarchy.

Assets	In EUR k Valuation category	At amortized cost		At fair value		Total	
		Loans and receivables		Held-for-trading		Carrying amount	Fair value
		Carrying amount	Fair value	Carrying amount	Fair value		
EUR k	EUR k	EUR k	EUR k	EUR k	EUR k	EUR k	EUR k
<b>12/31/2013</b>							
Trade receivables		0	0	0	0	0	0
Current and noncurrent other financial assets		872	872	0	0	872	872
Cash and cash equivalents		4,879	4,879	0	0	4,879	4,879
<b>Total 2013</b>		<b>5,751</b>	<b>5,751</b>	<b>0</b>	<b>0</b>	<b>5,751</b>	<b>5,751</b>
<b>12/31/2012</b>							
Trade receivables		5	5	0	0	5	5
Current and noncurrent other financial assets		2	2	0	0	2	2
Cash and cash equivalents		7,726	7,726	0	0	7,726	7,726
<b>Total 2012</b>		<b>7,733</b>	<b>7,733</b>	<b>0</b>	<b>0</b>	<b>7,733</b>	<b>7,733</b>
<b>12/31/2011</b>							
Trade receivables		1	1	0	0	1	1
Current and noncurrent other financial assets		9	9	0	0	9	9
Cash and cash equivalents		9,295	9,295	0	0	9,295	9,295
Securities		0	0	1,019	1,019	1,019	1,019
<b>Total 2011</b>		<b>9,305</b>	<b>9,305</b>	<b>1,019</b>	<b>1,019</b>	<b>10,324</b>	<b>10,324</b>
<b>1/1/2011</b>							
Trade receivables		4	4	0	0	4	4
Current and noncurrent financial assets		27	27	0	0	27	27
Cash and cash equivalents		6,061	6,061	0	0	6,061	6,061
Securities		0	0	0	0	0	0
<b>Total 1/1/2011</b>		<b>6,092</b>	<b>6,092</b>	<b>0</b>	<b>0</b>	<b>6,092</b>	<b>6,092</b>
<b>Liabilities and equity</b>							
	In EUR k Valuation category	At amortized cost		At fair value		Total	
		Loans and receivables		Financial liabilities recognized at fair value through profit and loss		Carrying amount	Fair value
		Carrying amount	Fair value	Carrying amount	Fair value		
EUR k	EUR k	EUR k	EUR k	EUR k	EUR k	EUR k	EUR k
<b>12/31/2013</b>							
Trade payables		1,327	1,327	0	0	1,327	1,327
Convertible bonds		5,346	5,346	0	0	5,346	5,346
Current and noncurrent financial liabilities		123	123	0	0	123	123
<b>Total 2013</b>		<b>6,796</b>	<b>6,796</b>	<b>0</b>	<b>0</b>	<b>6,796</b>	<b>6,796</b>
<b>12/31/2012</b>							
Trade payables		731	731	0	0	731	731
Current and noncurrent financial liabilities		350	350	0	0	350	350
<b>Total 2012</b>		<b>1,081</b>	<b>1,081</b>	<b>0</b>	<b>0</b>	<b>1,081</b>	<b>1,081</b>
<b>12/31/2011</b>							
Trade payables		1,215	1,215	0	0	1,215	1,215
Current and noncurrent financial liabilities		302	302	0	0	302	302
<b>Total 2011</b>		<b>1,517</b>	<b>1,517</b>	<b>0</b>	<b>0</b>	<b>1,517</b>	<b>1,517</b>
<b>1/1/2011</b>							
Trade payables		938	938	0	0	938	938
Current and noncurrent financial liabilities		305	305	0	0	305	305
<b>Total 1/1/2011</b>		<b>1,243</b>	<b>1,243</b>	<b>0</b>	<b>0</b>	<b>1,243</b>	<b>1,243</b>

Refer to the following supplementary explanations on the financial instruments presented in the table above:

### Valuation within the individual valuation categories

- a.) The fair values of the „loans and receivables“ recorded at amortized cost as well as the “financial liabilities recorded at amortized cost” are broken down as follows:
- aa.) with respect to the financial assets, trade receivables and other current and noncurrent financial assets, the fair value corresponds with the nominal value less any valuation charges which were necessary; non-interest bearing loans and receivables or loans and receivables with low interest rates with a remaining term in excess of one year were not to be considered.
- ab.) The fair value of all financial liabilities was the respective settlement amount; non-interest bearing liabilities or low interest bearing liabilities with a remaining term in excess of one year were not to be considered.
- ac.) The fair value of the convertible bonds equals the nominal value because the conversion can occur at any time.
- b.) The securities were included in the valuation category „held for trading“. On the basis of this classification, they are recorded at fair value through profit and loss. The fair value was determined on the basis of the quotation on the balance sheet date.

### Reconciliation to balance sheet line items

The classes of financial instruments established in accordance with IFRS 7 correspond with the line items of the consolidated balance sheet.

## 9.3 Other disclosures in accordance with IFRS 7

### Disclosures with respect to income and expense

The subsequent overview presents the net results of financial assets and financial liabilities on the basis of valuation categories:

2013 In EUR k	Interest result		Subsequent measurement		Total In EUR
	Interest income	Interest expense	Valuation adjustments (Other operating expenses)	Write-offs (Other operating expenses)	
Cash and cash equivalents	9	0	0	0	9
<b>Total</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>

2012 In EUR k	Financial result		Subsequent measurement		Total In EUR
	Interest income/ other financial result	Interest expense	Valuation adjustments (Other operating expenses)	Write-offs (Other operating expenses)	
Cash and cash equivalents	22	0	0	0	22
Financial assets measured at fair value through profit and loss: Securities	4	0	0	0	4
<b>Total</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>

2011 In EUR k	Financial result		Subsequent measurement		Total In EUR
	Interest income/ other financial result	Interest expense	Valuation adjustments (Other operating expenses)	Write-offs (Other operating expenses)	
Cash and cash equivalents	42	0	0	0	42
Financial assets measured at fair value through profit and loss:					
Securities	37	0	0	0	37
Liabilities measured at amortized cost:					
Other current and noncurrent liabilities	0	-5	0	0	-5
<b>Total</b>	<b>79</b>	<b>-5</b>	<b>0</b>	<b>0</b>	<b>74</b>

As of the balance sheet date, the Probiodrug Group only had receivables which were not overdue and for which there was no indication of an impairment.

## **9.4 Financial risks and risk management**

### **9.4.1 Organization**

#### **Risk management system, goals and methods**

In addition to operating business risks, the Probiodrug Group is subject to the following risks as a result of the use of financial instruments: credit risks, liquidity risks and market risks. The Company has established a clear functional organization to monitor and control risks. To make risks controllable from the perspective of risk prevention, a risk management system has been implemented and is continuously being further developed to address the different risk areas. Predefined specific individual risks are continuously monitored using early warning signals.

The goal with respect to risk management is to define different risk management processes which make a timely identification of risks relating to quantity, probability of occurrence and damage amounts possible and which provide appropriate counter measures for those who have been named responsible for the processes.

Accordingly, in connection with a risk-oriented and forward-looking management approach, Probiodrug has developed and implemented a risk management system for the Group. The implementation of a functional risk management system is considered part of the overall leadership responsibility of management.

Responsibilities are clearly assigned to the individual organizational units which are involved in the risk management process:

#### **Management board:**

The risk management process begins with the management board which, in the course of overall management, on the basis of the risk bearing potential, provides a clear definition of the strategy, the business types, as well as the acceptable and unacceptable risks as well as the total justifiable risk.

#### **Risk management:**

Risk management is responsible for the active monitoring and controlling of the respective risk groups. Risk is reduced through risk minimization measures undertaken and is monitored by the compliance with limits.

#### **Supervisory board:**

The supervisory board has a control function with respect to all measures for risk limitation and risk management in the Company.

### **9.4.2 Risk groups**

In connection with its business operations, Probiodrug is subject not only to operating business risks but also to a multitude of financial risks including credit risks, liquidity risks and market risks as explained below:

#### **9.4.2.1 Credit risks**

Credit risks exist with respect to the deterioration of the economic conditions of the Company's customers or other contracting parties. This could lead to the partial or complete risk of default with respect to contractually agreed to payments or services as well as to impairment of financial instruments.

Probiodrug currently only has straightforward regular sales. As such, credit risks are not considered to be significant to the Company.

Default risks exist with respect to substantially all financial instruments recorded as assets. The amount of the financial assets defines the maximum default risk. To the extent that risks are identified for individual financial instruments, these are taken into account by recording valuation adjustments.

Probiodrug's capital investments are only made with financial institutions with first class credit ratings which are subject to the depositor's guarantee fund of German banks. Investments are made in financial assets which do not have any inherent risk of loss and which are subject to either no or only a low level of change in terms of value.

#### **Maximum risk of default**

The maximum default risk for financial assets without considering possible security held or other credit improvements (e.g. right to offset) is as follows:

#### **Carrying amount as an equivalent for the maximum risk of default**

<b>EUR k</b>	<b>12/31/2013</b>	<b>12/31/2012</b>	<b>12/31/2011</b>	<b>1/1/2011</b>
Loans and receivables	872	7	10	31
of which trade receivables	0	5	1	4
of which other financial assets	872	2	9	27
Securities (held for sale)	0	0	1,019	0
Cash and cash equivalents	4,879	7,726	9,295	6,061
	<b>5,751</b>	<b>7,733</b>	<b>10,324</b>	<b>6,092</b>

As of the balance sheet dates December 31, 2013, December 31, 2012, December 31, 2011 and January 1, 2011, the financial assets were neither impaired nor overdue.

#### **9.4.2.2 Liquidity risk**

Liquidity risks in the narrow sense exist when the Company does not have adequate funds to settle its ongoing payment obligations. The payment obligations result primarily from the ongoing cost of business operations and investing activities against which there are only minor cash receipts.

In order to manage the liquidity situation during the year, the Company utilizes appropriate financial planning instruments. Matching maturities of the interim capital needs and availability is thereby assured. As of December 31, 2013, cash and cash equivalents amounted to EUR 4.9 million. As a result of the EUR 4.3 million increase in convertible bonds resolved and subscribed to in May 2014, financing is, based on the current financial plan, sufficient into the third quarter of 2014. In order to continue the ongoing research and development projects additional funding will, at the latest, be required at this point. Management is currently pursuing an additional financing round for the fall of 2014. If this is not achieved, the Company's further development will be endangered.

If extensive adjustments are made to the cost structures, the Company's projections show that, without a successful financing round, the liquidity would be sufficient through the end of 2015. The aforementioned projections are based on the assumption that no cash outflows will be required in 2014 and 2015 with respect to the potential additional tax claims of the fiscal authorities for the year 2004. Probiodrug has filed a lawsuit at the Finanzgericht contesting the potential back taxes. A ruling has not yet been made. A stay of execution for the contested decisions has been granted.

This risk was provided for in the financial statements by recording an appropriate provision. Should significant payments be required in 2014 or 2015 for the back taxes being contested in the financial courts, the Company's ability to continue as a going concern would be endangered.

### Analysis of maturities

The subsequent table presents an analysis of the remaining terms of all contractually agreed financial liabilities as of December 31, 2013, December 31, 2012, December 31, 2011 and January 1, 2011:

#### Contractual remaining terms of financial liabilities

EUR k	Carry- ing amount	Up to 30 days	1 to 3 months	3 months to 1 year	1 to 5 years	More than 5 years
<b>12/31/2013</b>						
<b>Non-derivative financial liabilities</b>						
Trade payables.....	1,327	1,327	0	0	0	0
Convertible bonds.....	5,346	0	0	5,346	0	0
Other financial liabilities .....	123	123	0	0	0	0
<b>Total</b>	<b>6,796</b>	<b>1,450</b>	<b>0</b>	<b>5,346</b>	<b>0</b>	<b>0</b>
<b>12/31/2012</b>						
<b>Non-derivative financial liabilities</b>						
Trade payables.....	731	731	0	0	0	0
Other financial liabilities .....	350	350	0	0	0	0
<b>Total.....</b>	<b>1,081</b>	<b>1,081</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>12/31/2011</b>						
<b>Non-derivative financial liabilities</b>						
Trade payables.....	1,215	1,215	0	0	0	0
Other financial liabilities .....	303	302	0	0	1	0
<b>Total.....</b>	<b>1,518</b>	<b>1,517</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>
<b>1/1/2011</b>						
<b>Non-derivative financial liabilities</b>						
Trade payables.....	938	938	0	0	0	0
Other financial liabilities .....	306	305	0	0	1	0
<b>Total.....</b>	<b>1,244</b>	<b>1,243</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>

#### **9.4.2.3 Market risks**

Market risks develop from a possible change in risk factors which lead to a negative change in market value of the financial assets and liabilities which are subject to this risk factor. General risk factors such as currency risks, risks attributable to changes in interest rates and price risks can be of relevance to Probiodrug.

#### Exchange rate risks

Currently the Probiodrug Group is not exposed to any exchange rate risks. Exchange rate risks could develop if a portion of the future sales are realized in US dollars or in another foreign currency.

#### Risk of changes in interest rates

Probiodrug does not have any interest bearing assets or liabilities to a third party. As such, there is no risk with respect to changes in interest rates.

#### Price risks

At present, no other price risks have been identified.

#### **9.4.2.4 Risks in conjunction with public subsidies granted**

The Company receives subsidies from the public sector in connection with its research and development activities. The disbursement of the funds is always subject to the condition that the institutions which make these subsidies available (EU, federal government, State of Saxony-Anhalt) have funds available and that these have been included in their

budgets (federal government, State of Saxony-Anhalt). As a result of this condition, there is a risk of delayed payment or non-payment of the balance outstanding.

Furthermore, the granting of these subsidies is generally subject to the adherence to specific requirements and conditions which, in some cases, extend over several years and into the future. In case of non-compliance, Probiodrug could be required to repay the subsidy received in part or in its entirety. This would have a negative effect on the economic position of the Company.

The investment subsidies were granted on the condition that the subsidized assets remain in the business of an entity in the development area for at least three years subsequent to their acquisition or construction and that not more than 10% of the asset be used privately. Depending on the date of acquisition or production, this period has expired for all assets.

#### 9.4.2.5 Other risks

The Probiodrug Group is insured against typical risks.

### 10 Capital management

Probiodrug's primary focus is the long-term increase in the Company's value in the interest of the shareholders, employees and collaboration partners.

The goal is to sustainably increase the potential increase in value of Probiodrug by continuing to generate positive data from studies, efficient processes in research and development, a forward-looking and value-oriented portfolio management as well as continuously increasing the level of awareness of Probiodrug and the approaches it applies in the pharmaceutical industry and, in the mid-term, the transfer of central assets of Probiodrug into industrial collaborations. To achieve this, the business and financial risks along with financial flexibility are in management's focus.

An authorization of the general shareholders' meeting to repurchase own shares did not exist as of the balance sheet date, December 31, 2013.

Probiodrug currently has two active stock option programs from the years 2007 and 2010.

Probiodrug is not subject to any capital requirements stemming from the articles of incorporation.

As of December 31, 2013, Probiodrug's equity amounted to EUR -4,224k (12/31/2012: EUR 5,365k, 12/31/2011: EUR 14,945k, 1/1/2011: EUR 12,239k), which equates to a negative equity ratio (12/31/2012: 53.6 %, 12/31/2011: 78.3 %, 1/1/2011: 76.7 %). The third party capital amounts to EUR 10,598k (12/31/2012: EUR 4,640k, 12/31/2011: EUR 4,148k, 1/1/2011: EUR 3,727k).

### 11 Other

#### 11.1 Contingencies and other financial commitments

As of the balance sheet date, there were no contingencies. The total other financial commitments relating mainly to agreement for rental and research services and license agreements amounted to EUR 183k (12/31/2012: EUR 143k, 12/31/2011: EUR 1,326k, 1/1/2011: EUR 1,698k).

#### 11.2 Related party relationships

The following individuals and entities were considered related parties of Probiodrug AG during the reporting period:

- a) Shareholders of Probiodrug AG with a controlling or significant influence on Probiodrug AG
- b) Members of the key management personnel of the Company or a parent of the Company
- c) Enterprises which can be controlled by individuals within a) or b)

The remuneration of the management board was broken down as follows:

In EUR k	2013	2012	2011
Short-term employee benefits .....	513	757	748
Post-employment benefits .....	48	86	65
Share-based payment .....	8	170	449
<b>Total.....</b>	<b>569</b>	<b>1,013</b>	<b>1,263</b>

On February 27, 2008, within the scope of the 2007 option program 23,712 options for common shares, 35,568 options for preferred shares as well as 59,280 phantom stock options were issued to the members of the management board. Within the scope of the 2010 option program, 515,403 options for common shares, as well as 61,848 phantom stock options were issued. More detailed information is provided in item 6.9.6.

The pension commitments described in item 6.10.2 relate to Prof. Dr. Demuth and Dr. Glund. The development of the pension provision is also presented there.

The remuneration of the supervisory board was broken down as follows:

<b>In EUR k</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
Short-term employee benefits	24	78	83
Share-based payment	0	54	137
<b>Total</b>	<b>24</b>	<b>132</b>	<b>220</b>

On July 2, 2008, 7,500 phantom stock options were issued to both Dr. Turner and Prof. Frank and on June 9, 2010 144,303 phantom stock options were issued to Dr. Braestrup. Further details are presented in item 6.9.9.

Furthermore the convertible bond 2013 were issued to the shareholders of the company.

Other than this, there were no transactions or business activities with related parties.

### **11.3 Events subsequent to the balance sheet date**

On May 16, 2014 the annual general shareholders meeting resolved to increase the convertible bonds. EUR 4.3 million was subscribed to and paid in. In August 2014, all convertible Bonds were converted into shares of the company.

### **11.4 Approval and release**

On August 29, 2014 Probiodrug AG's management board approved these IFRS consolidated financial statements for release to the supervisory board.

Halle, August 29, 2014

Dr. Konrad Glund

Dr. Hendrik Liebers

## Auditor's Opinion on the Consolidated IFRS Financial Statements

To Probiodrug AG, Halle:

We have audited the accompanying consolidated financial statements of Probiodrug AG, Halle, and its subsidiaries, which comprise the Consolidated Statement of Financial Position, Consolidated Statement of Comprehensive Income, Consolidated Cash Flow Statement, Consolidated Statement of Changes in Equity and Notes to the consolidated IFRS financial statements for the financial years from 1 January to 31 December 2013, 2012 and 2011.

### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with IFRSs, as adopted by the EU and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the parent company's preparation of consolidated financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Probiodrug AG, Halle, and its subsidiaries, as at December 31, 2013, 2012 and 2011, and of its financial performance and its cash flows for the years then ended in accordance with the IFRSs, as adopted by the EU.

Without qualifying this opinion we refer to the explanation in the notes. In the section "4 Significant discretionary decisions, estimates and assumptions" it is explained that the ability of the entity to continue as a going concern is endangered if significant payments are required with respect to the lawsuit pending with the fiscal courts with respect to the back payments for taxes.

Leipzig, 1 September 2014

KPMG AG

Wirtschaftsprüfungsgesellschaft

(original Version signed by)

Dr. Flascha

Daut

Wirtschaftsprüfer (German Public Auditor)

Wirtschaftsprüfer (German Public Auditor)

**Annual financial statements as of and for the period January 1, 2013 to December 31, 2013 (German GAAP, *HGB*) (audited)**

## Income Statement for the period from 1 January to 31 December 2013

	2013		2012	
	EUR	EUR	EUR	EUR
1. Sales.....		0,00		6.045,11
2. Other operating income .....		703.723,60		1.175.654,73
3. Cost of materials				
a) Costs of supplies and purchased merchandise.....	-53.778,66		-312.818,98	
b) Costs of purchased services.....	-4.251.669,10	-4.305.447,76	-4.119.930,04	-4.432.749,02
4. Personnel expenses				
a) Wages and salaries .....	-1.547.782,49		-2.833.014,27	
b) Social security and post employment costs.....	-234.454,68	-1.782.237,17	-413.015,13	-3.246.029,40
–of which in respect of retirement provisions EUR 64,117.56 (in the prior year EUR 65,718.64)–				
5. Amortisation of intangible fixed assets and depreciation of tangible fixed assets ..		-313.722,16		-270.044,44
6. Other operating expenses.....		-4.545.131,19		-8.042.691,05
7. Other interest and similar income.....		869.278,27		863.250,61
–of which from affiliated companies EUR 860,000.64 (in the prior year EUR 839,667.33)–				
8. Write-downs of long-term financial assets		-50.000,00		-5.380.433,48
9. Interest and similar expenses .....		-672.480,20		-354.569,55
10. Results of ordinary operations .....		-10.096.016,61		-19.681.566,49
11. Taxes on income .....		0,00		-656.018,40
12. Net loss .....		-10.096.016,61		-20.337.584,89
13. Loss carryforward.....		-71.205.643,21		-50.868.058,32
14. Net accumulated losses.....		-81.301.659,82		-71.205.643,21

## Balance Sheet as at 31 December 2013

Assets		31.12.2013		31.12.2012	
		EUR	EUR	EUR	EUR
<b>A.</b>	<b>Fixed assets</b>				
	<b>I. Intangible fixed assets</b>				
	Similar rights acquired for consideration, licenses and software		100.868,06		66.917,18
	<b>II. Tangible fixed assets</b>				
	1. Buildings on third-party land	34.556,02		42.391,17	
	2. Other equipment, operating and office equipment	285.987,09	320.543,11	883.202,57	925.593,74
	<b>III. Long-term financial assets</b>				
	1. Shares in affiliated companies	1,00		1,00	
	2. Participations	3.450,00	3.451,00	3.450,00	3.451,00
			424.862,17		995.961,92
<b>B.</b>	<b>Current assets</b>				
	<b>I. Inventories</b>				
	Supplies		0,00		17.423,21
	<b>II. Receivables and other assets</b>				
	1. Trade receivables	0,00		4.867,10	
	2. Receivables from affiliated companies	728.063,01		730.236,01	
	3. Other assets	610.474,74	1.338.537,75	259.728,37	994.831,48
	<b>III. Cash-in-hand and bank balances</b>		4.421.392,00		7.556.027,84
			5.759.929,75		8.568.282,53
<b>C.</b>	<b>Prepaid expenses</b>		96.155,97		119.523,34
<b>D.</b>	<b>Deficit not covered by equity</b>		4.077.534,09		0,00
	Net accumulated loss of which deficit not covered by equity				
	EUR 4,077,534.09 (in the prior year EUR 0.00)				
			10.358.481,98		9.683.767,79
<b>Equity and liabilities</b>					
			<b>31.12.2013</b>		<b>31.12.2012</b>
			<b>EUR</b>		<b>EUR</b>
<b>A.</b>	<b>Equity</b>				
	<b>I. Share capital</b>		25.528.929,00		25.528.929,00
	Contingent capital: EUR 5,714,159.00 (in the prior year EUR 1,406,467.00)				
	<b>II. Capital reserves</b>		51.467.571,73		50.930.754,73
	<b>III. Revenue reserves</b>				
	Legal reserves		227.625,00		227.625,00
	<b>IV. Net accumulated losses</b>		-77.224.125,73		-71.205.643,21
	–Net accumulated losses EUR 81,301,659.82 (in the prior year EUR 71,205,643.21)–				
	–of which deficit not covered by equity EUR 4,077,534.09 (in the prior year EUR 0.00)–				
	refer to D. Assets				
			0,00		5.481.665,52
<b>B.</b>	<b>Provisions</b>				
	1. Pension provision		321.037,41		281.818,57
	2. Tax provision		2.444.990,75		2.346.710,75
	3. Other provisions		1.375.691,99		1.179.278,86
			4.141.720,15		3.807.808,18
<b>C.</b>	<b>Liabilities</b>				
	1. Bonds		5.346.000,00		0,00
	–of which convertible EUR 5,346,000.00–				
	2. Trade payables		837.668,04		304.976,81
	3. Payables to affiliated companies		0,00		31.972,86
	4. Other liabilities		33.093,79		57.344,42
	–of which taxes EUR 22,713.95 (in the prior year EUR 34,653.05)–				
			6.216.761,83		394.294,09
			10.358.481,98		9.683.767,79

## NOTES to the Financial Statements for the Financial Year from 1 January to 31 December 2013

### I. General information

The annual financial statements of Probiodrug AG were prepared using the accounting policies and measurement methods prescribed by the Handelsgesetzbuch ((German) Commercial Code or „HGB“) applying the Accounting Law Modernisation Act (Bilanzrechtsmodernisierungsgesetzes) (BilMoG) as well as the complementary regulations of the (German) Stock Corporation Act.

In accordance with Section 267 HGB, Probiodrug AG is a small capital corporation. In preparing the notes to the 2013 financial statements, use was made of the size related exemptions allowed in accordance with Section 274a and Section 288 (1) HGB.

There were no changes to the form of presentation when compared with the prior year.

#### Going concern principle

As at 31 December 2013 the Company had a deficit not covered by equity amounting to EUR 4,078k. The creditors to whom the convertible bonds with a nominal amount of EUR 5,346k were issued in the financial year just ended each issued qualified letters of subordination. As such, overindebtedness from a legal perspective does not exist.

As a result of the resolution to issue convertible bonds in July 2013 as well as the increase in these convertible bonds as resolved in May 2014, the Company was able to secure additional funding which provide for the Company's further development at least into the third quarter of 2014. In order to continue the ongoing research and development projects additional funding will, at the latest, be required at this point. Management is currently pursuing an additional financing round for the fall of 2014. If this is not achieved, the Company's further development will be endangered.

If extensive adjustments are made to the cost structures, the Company's projections show that, without a successful financing round, the liquidity would be sufficient through the end of 2015. The afore mentioned projections are based on the assumption that no cash outflows will be required with respect to the potential additional tax claims of the fiscal authorities for the year 2004. Probiodrug has filed a lawsuit at the Finanzgericht contesting the potential back taxes. A ruling has not yet been made. A stay of execution for the contested decisions has been granted.

This risk was provided for in the financial statements by recording an appropriate provision. Should significant payments be required for the back taxes being contested in the financial courts, the Company's ability to continue as a going concern would be endangered.

### II. Accounting policies and measurement methods

#### Fixed assets

Tangible and intangible fixed assets were measured at their acquisition costs reduced by scheduled depreciation and amortisation.

The scheduled depreciation and amortisation was calculated on the straight-line basis considering the expected useful life of the underlying asset within the entity on the bases of the official depreciation tables in accordance with tax regulations.

A cumulative item was recorded in accordance with Section 6 (2a) EStG (German Income Tax Act) for moveable fixed assets acquired during the fiscal year with acquisition costs between EUR 150.00 and EUR 1,000.00. This item is depreciated on the straight-line basis in the year of acquisition as well as over the four subsequent years. The disposal of the low value fixed assets is recorded after five years. In total, the cumulative item is of minor importance.

If the acquisition cost for an individual item did not exceed EUR 150.00, this item was immediately recorded as an expense.

Due to the permanent impairment of tangible and intangible fixed assets extraordinary amortisation and depreciation amounting to EUR 86k (in the prior year EUR 0k) was recorded.

Extraordinary write-offs of additions to long-term financial assets, amounting to EUR 50k were recorded. As was the case in the prior year, the shares in affiliated companies were recorded with a notional memo value of EUR 1.00.

## **Current assets**

The supplies recorded in the prior year were measured at their acquisition costs.

Receivables and other assets were measured at their nominal value less necessary valuation adjustments giving consideration to all identifiable risks. No foreign currency receivables existed at the balance sheet date.

The cash-in-hand and bank balances were measured at their nominal values.

The valuation of accounts denominated in a foreign currency was on the basis of the mean average exchange rate at the balance sheet date.

Prepaid expenses comprise payments made prior to the balance sheet date, which represent expenses for a specific period after the balance sheet date.

## **Equity**

The Company's equity is recorded at its nominal value.

## **Provisions**

Provisions are recorded at the settlement amounts deemed necessary when applying prudent business judgement. Future price and cost increases were given consideration.

Long-term provisions with a term of more than 12 months are discounted in accordance with Section 253 (2) sentence 1 HGB.

The measurement of the pension provisions is based on the „projected unit credit" - method (PUC method). Probiodrug made use of the allowed alternative treatment whereby the average market interest rate of the previous seven business years as published by the Deutsche Bundesbank (German Federal Reserve), which results from an assumed remaining term of 15 years, was applied as the discount rate. The biometric calculation used was provided by the 2005 G mortality tables of Prof. Dr. Klaus Heubeck („Richttafeln 2005 G" von Klaus Heubeck). The parameters applied in the calculation are presented in the explanations on the balance sheet.

## **Liabilities**

Liabilities are recorded at their settlement amounts. Liabilities in a foreign currency are recorded at the mean average exchange rate in effect on the balance sheet date.

The existing liabilities are not secured.

## **Income statement**

In accordance with Section 275 (2) HGB, the Company again elected the total cost method of presentation.

### **III. Explanations on the balance sheet**

#### **Long-term financial assets and receivables from affiliated companies**

The shares in affiliated companies relate to Ingenium Pharmaceuticals GmbH, Munich ("Ingenium").

The shareholding amounts to 100 %. In the most recent financial statements available, as at 31 December 2012, Ingenium shows a deficit not covered by equity amounting to EUR 10,445k as well as a net loss of EUR 2,224k.

Of the receivables from affiliated companies (EUR 728k; in the prior year EUR 730k), EUR 725k (in the prior year EUR 725k) comprise loans receivable from Ingenium including accrued interest thereon as well as EUR 3k of receivables from the granting of phantom stocks. All of these receivables have a remaining term of less than one year.

As a result of the deficit not covered by equity at year end as well as the continued dependence of Ingenium on the financing of Probiodrug due to Ingenium's insufficient own sales, the valuation of the shares held in Ingenium (acquisition costs of EUR 5,430k) as well as the receivables from Ingenium GmbH (EUR 10,981k) were assessed at year-end.

After considering all valuation relevant factors, an additional impairment expense of EUR 360k had to be recorded in financial year 2013. This led to a total reduction in the presented value of the receivables from affiliated companies on the balance sheet amounting to EUR 10,253k. In addition, Probiodrug waived its claim to interest receivable of EUR 500k for the year 2013. Extraordinary write-downs amounting to EUR 50k were recorded against the additions to long-term receivables during the financial year. Due to their value being permanently impaired, the shares of Ingenium were written down to a notional memo value of EUR 1.00 in financial year 2013.

### **Other assets**

Without exception, the other assets all have a remaining term of up to one year. They primarily consist of receivables from the sale of tangible fixed assets (EUR 507k; in the prior year EUR 0k), receivables from the fiscal authorities (EUR 50k; in the prior year EUR 202k) as well as subsidies receivable (EUR 26k; in the prior year EUR 31k).

### **Share capital**

As at 31 December 2013, the subscribed capital amounted to EUR 25,528,929.00 and is unchanged in comparison with the prior year. It is broken down into 3,414,375 registered no par value common shares (bearer shares), 3,095,837 registered voting preference shares of the Series A as well as 19,018,717 registered voting preference shares of the Series B.

The mathematical par value per share amounts to EUR 1.00.

### **Convertible bonds**

At the shareholders' meeting held on 22 July 2013 it was resolved that registered convertible bonds with a total nominal value of at least EUR 5,000k and up to a maximum of EUR 7,000k with a term through 31 December 2014, at the longest until 31 December 2015, broken down into convertible bonds be issued to existing shareholders of Probiodrug AG or to affiliated companies of existing shareholders of Probiodrug AG. To the extent that the afore mentioned entitled parties do not make use of their subscription rights, the convertible bonds may be issued to selected employees or Company advisors.

The convertible bonds are non-interest bearing and provide conversion rights for new, registered no par value preferred shares of the series B2 proportionally representing EUR 1.00 of the share capital. The issuance of the convertible bonds was realised on 16 August 2013 with a nominal value of EUR 5,346k.

The convertible bonds issued are mandatorily convertible bonds which are presented in the financial statements as at 31 December 2013 at their settlement value of EUR 5,346k on the line item „Bonds“. From an economic perspective, the compensation for the right to acquire shares, which is included in the issuance amount, is the non-interest bearing nature of the bonds. On the basis of an interest rate appropriate for the term, compensation amounting to EUR 537k was estimated and recorded in the capital reserves in accordance with Section 272 (2) Nr 2 HGB. No use was made of the option to capitalise in accordance with Section 250 (3) sentence 1 HGB for the disagio resulting from difference between the issue price of the bonds (without compensation for the conversion right) of EUR 4,809k and the settlement value of the bonds. Accordingly, costs corresponding with the fees are included on the line item „Interest and similar expenses“.

### **Contingent capital I/2008**

As at 31 December 2013, the contingent capital I/2008 is unchanged amounting to EUR 67,800.00. EUR 67,120.00 (in the prior year EUR 67,120.00) are reserved as a result of the distribution of option rights.

The contingent capital I/2008 secures the option rights which were distributed in conjunction with the Stock Option Program 2007. A new distribution of options on the basis of this program is no longer possible.

The contingent capital increase will only be carried out to the extent that the beneficiaries of the stock options make use of their buying option. The new shares resulting from the exercise of the stock options will participate in earnings from the beginning of the financial year in which the rights are exercised. In addition to employees of the Company and affiliated companies for whom, as per Section 194 (3) AktG no disclosures are required, the following members of the management board are permitted to acquire the following number of shares:

Dr. Konrad Glund, Halle, up to 5,472 common shares,

Prof. Dr. Hans-Ulrich Demuth, Halle, up to 5,472 common shares,

Dr. Hendrik Liebers, Leipzig, up to 12,768 common shares

#### **Contingent capital II/2008**

As at 31 December 2013, the contingent capital II/2008 is unchanged at EUR 101,700.00. Of this amount, EUR 100,815.00 (in the prior year EUR 100,815.00) are reserved as a result of the issuance of options.

The contingent capital II/2008 serves to secure the option rights distributed in conjunction with the Stock Option Program 2007. A new issuance of options under this program is no longer possible.

The contingent capital increase will only be carried out to the extent that the beneficiaries make use of their buying options. The new shares resulting from the exercise of the stock options will participate in earnings from the beginning of the financial year in which the rights are exercised. In addition to employees of the Company and affiliated companies for whom, as per Section 194 (3) AktG no disclosures are required, the following members of the management board are permitted to acquire the following number of shares:

Dr. Konrad Glund, Halle, up to 8,208 preferred shares of the Series A,

Prof. Dr. Hans-Ulrich Demuth, Halle, up to 8,208 preferred shares of the Series A,

Dr. Hendrik Liebers, Leipzig, up to 19,152 preferred shares of the Series A

#### **Contingent capital 2010/I**

The contingent capital 2010/I as at 31 December 2013 was unchanged at EUR 1,236,967.00. Of this amount, EUR 515,403.00 (in the prior year EUR 515,403.00) are reserved as a result of the issuance of options.

The contingent capital 2010/I was established by virtue of the resolution of the Annual General Meeting of the shareholders on 18 May 2010. The Company's share capital was contingently increased by a nominal value of up to EUR 1,236,967 by the issuance of up to 1,236,967 registered common shares subject to transfer restrictions. The contingent capital increase provides for the redemption of stock options in accordance with Section 192 (2) No. 3 AktG which were issued in conjunction with the Stock Option Program 2010 (in the version of the resolutions of the Annual General Meeting of the shareholders on 18 May 2010). The empowerment of the management board to issue new options was, by resolution of the Annual General Meeting of the shareholders on 31 October 2012, limited in time through 31 October 2013. A new issuance of options under this program is no longer possible.

The contingent capital increase will only be carried out to the extent that the beneficiaries of the stock options make use of their buying rights. The new shares resulting from the exercise of the stock options will participate in the earnings from the beginning of the financial year in which the rights are exercised. In addition to employees of the Company and affiliated companies for whom, as per Section 194 (3) AktG no disclosures are required, the following members of the management board are permitted to acquire the following number of shares:

Dr. Konrad Glund, Halle, up to 171,801 common shares,

Prof. Dr. Hans-Ulrich Demuth, Halle, up to 171,801 common shares and

Dr. Hendrik Liebers, Leipzig, up to 171,801 common shares

#### **Contingent capital 2013/I**

By resolution of the Annual General Meeting of the shareholders on 22 July 2013, the Company's share capital was contingently increased (contingent capital 2013/I) by EUR 4,307,692.00 to secure the conversion rights respectively conversion obligations associated with the convertible bonds which were issued on the basis of a resolution of the Annual General Meeting of the shareholders on the same day. In principle, the convertible bonds are due on 31 December 2014; an extension to 31 December 2015 is possible. The supervisory board's approval for the issuance of convertible bonds was granted on 22 July 2013.

#### **Contingent capital 2014**

By resolution of the Annual General Meeting of the shareholders on 16 May 2014 the Company's share capital was contingently increased by EUR 3,692,300.00 to grant conversion rights respectively obligations for convertible bonds issued on the basis of a resolution of the Annual General Meeting of the shareholders on the same date (contingent

capital 2014). The convertible bonds are, at the latest, due on 31 December 2015. The approval of the supervisory board for the issuance of the partially convertible bonds was given on 30 April 2014.

### **Authorised capital 2011/II**

By resolution of the Annual General Meeting of the shareholders on 20 September 2011, the authorised capital 2011/II was established. Probiodrug's management board is empowered, with the approval of the supervisory board, to increase the Company's share capital by issuing up to an additional 207,807 new registered no-par value preference shares of the Series (B) in one or a number of steps in consideration for cash of up to EUR 207,807.00 in the period through 31 December 2013. A subscription right of the shareholders for the authorised capital 2011/II is prohibited. The management board is empowered to establish the further details with respect to the implementation of the increase in capital from the authorised capital 2011/II.

No capital increase was carried out utilising the authorised capital 2011/II.

### **Capital reserves**

As at 31 December 2013 the capital reserves amount to EUR 51,467,571.73 (in the prior year EUR 50,930,754.73). With respect to the change in the capital reserves during the financial year refer to the explanations regarding the convertible bonds.

### **Revenue reserves**

The amount of EUR 227,625.00 is included in the legal reserves in accordance with Section 150 (2) AktG and is unchanged in comparison with the prior year.

### **Net accumulated losses**

The retained loss as at 31 December 2013 includes the loss carryforward of EUR 71,205,643.21.

### **Provision for taxes**

As per the audit report of the tax office Halle/Saale dated 25 June 2009 on the tax audit carried out in 2008, the 2004 operating income was retroactively increased by approximately EUR 10,010k.

On 5 October 2009, the Company filed an appeal against the changed assessments for 2004 corporate income tax and the solidarity tax contribution. In 2008 the Company already recorded the risk resulting from the assessments within the tax provision in accordance with the prudence principle. In a ruling with respect to the appeal issued by the fiscal authorities in September 2013, the assessment notice with respect to corporate income tax and the solidarity surcharge for 2004 was changed and the tax obligation was reduced slightly. Other than that, the appeal was denied. In addition, in October 2013 an amended municipal tax assessment notice for the assessment period 2004 was issued.

The afore mentioned risks including the accrued interest thereon were given consideration by increasing the tax provision by EUR 98k as at 31 December 2013 to EUR 2,445k.

A lawsuit was filed against the changed assessment notices. A ruling has not yet been issued. A stay of execution was granted for the assessment notices in dispute.

### **Provision for pensions**

The calculation of the pension provision was carried out using the so called "projected unit credit" method (PUC method) which, from an economic perspective, provides for the appropriate presentation of the pension commitment. Probiodrug made use of the allowed alternative treatment whereby the average market interest rate of the previous seven business years, which results from an assumed remaining term of 15 years, as published by the Deutsche Bundesbank (German Federal Reserve), was used as the discount rate. As at 31 December 2013 this amounted to 4.88 %. A further parameter applied in the calculation was a pension progression rate of 1.5 %.

During the financial year personnel expenses in conjunction with the pension obligations amounting to EUR 64k (in the prior year EUR 66k) as well as interest expense of EUR 42k (in the prior year EUR 38k) were recorded. Interest expense includes income on the assets used to fund the obligation in the amount of EUR 5k (in the prior year EUR 10k) which is presented as a net amount.

As at 31 December 2013, the cash surrender value of the covering assets corresponds with the pledged entitlement to the life insurance amounting to EUR 574k (in the prior year EUR 517k). In accordance with Section 246 (2) HGB, this amount was off-set with the settlement amount of the pension provision which amounted to EUR 895k (in the prior year EUR 799k). The recorded pension provision amounted to EUR 321k (in the prior year EUR 282k).

#### **Liabilities**

As was the case in the prior year, the liabilities as at the balance sheet date all have a remaining term of up to one year.

#### **IV. Explanations on the income statement**

##### **Other operating income**

The other operating income includes income attributable to other periods amounting to EUR 248k (in the prior year EUR 439k).

The other operating income includes income from exchange rate differences amounting to EUR 3k (in the prior year EUR 6k).

##### **Other operating expenses**

The other operating expenses include expenses attributable to other periods amounting to EUR 79k (in the prior year EUR 103k).

The other operating expenses include expenses from exchange rate differences amounting to EUR 13k (in the prior year EUR 9k).

#### **V. Other disclosures**

##### Subsidies

Probiodrug AG received public subsidies for projects up to and including financial year 2013. In addition, subsidies were granted by the Investitionsbank Saxony-Anhalt as well as the (German) Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung). Some of the subsidies carry the condition of the right to review.

##### Recommendation for disposition of results

The management board recommends that the results be handled as follows:

The net accumulated losses amount to EUR 81,301,659.82. This amount will be carried forward.

##### **Disclosures with respect to executive bodies**

###### Management Board

During the financial year just ended, the Company's business was directed by the members of the management board:

Dr. Konrad Glund (Dipl. Biochemiker (degreed biochemist)) - Spokesperson

Prof. Dr. Hans-Ulrich Demuth (Dipl.-Biologe (degreed biologist)) (until 31 January 2013)

Dr. Hendrik Liebers (Dipl.-Biologe (degreed biologist), Dipl. Kaufmann (degreed businessman)).

All of the above have the authority to represent the Company on their own. Furthermore, Prof. Dr. Demuth was released from the constraints of Section 181 BGB (Bürgerliches Gesetzbuch; German Civil Code).

###### Supervisory Board

The following members of the supervisory board were appointed:

Dr. Claus Braestrup (biochemist)– until 21 January 2013

Chairman (until 28 February 2013)

Dr. Dinnies v. der Osten (Kaufmann (degreed businessman)) – Deputy Chairman

Dr. Erich Platzter (medical doctor)- Chairman from 22 January 2013

Dr. Axel Polack (medical doctor) (until 7 July 2013)

Prof. Dr. Georg Frank (chemist)

Dr. Jonathan Turner (biologist) (until 1 April 2013)

Dr. Oliver Litzka (biologist)

Dallas Webb (analyst) (until 12 September 2013)

Dr. Jörg Neermann (biotechnologist)

Halle, 15 July 2014

Dr. Konrad Glund

Dr. Hendrik Liebers

## **Auditor's Report on the Annual financial statements as of and for the period January 1, 2013 to December 31, 2013 (German GAAP, HGB)**

The following auditor's report in accordance with section 322 German Commercial Code (*Handelsgesetzbuch, HGB*) refers to the annual financial statements, comprising the balance sheet, the income statement, the notes to the financial statements, and the management report of Probiodrug AG, Halle /Saale for the financial year 2013 from 1 January to 31 December 2013. With the exception of the excerpt of the management report presented in this Prospectus, the management report of Probiodrug AG, Halle /Saale for the financial year 2013 is not included in this prospectus. The above-mentioned auditor's report and financial statements are both translations of the respective German-language originals.

To Probiodrug AG, Halle

We have audited the annual financial statements, comprising the balance sheet, the income statement and the notes to the financial statements, together with the bookkeeping system, and the management report of Probiodrug AG, Halle for the financial year from 1 January to 31 December 2013. The maintenance of the books and records and the preparation of the annual financial statements and management report in accordance with German commercial law and supplementary provisions of the Company's articles of incorporation are the responsibility of the Company's Management Board. Our responsibility is to express an opinion on the annual financial statements, together with the bookkeeping system, and the management report based on our audit.

We conducted our audit of the annual financial statements in accordance with Section 317 of the HGB and the generally accepted standards for the audit of financial statements promulgated by the German Institute of Public Auditors (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the annual financial statements in accordance with German principles of proper accounting and in the management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Company and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the books and records, the annual financial statements and the management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the accounting principles used and significant estimates made by the Management Board, as well as evaluating the overall presentation of the annual financial statements and management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the annual financial statements comply with the legal requirements and the provisions of the Company's articles of incorporation and give a true and fair view of the net assets, financial position and results of operations of the Company in accordance with German principles of proper accounting. The management report is consistent with the annual financial statements and, as a whole, provides a suitable view of the Company's position and suitably presents the opportunities and risks of future development.

Without qualifying this opinion we refer to the explanation in the management report. In the section "Risks" it is explained that the ability of the entity to continue as a going concern is endangered if significant payments are required with respect to the lawsuit pending with the fiscal courts with respect to the back payments for taxes.

Leipzig, 15 July 2014

KPMG AG

Wirtschaftsprüfungsgesellschaft

(original German version signed by:)

Dr. Flascha

Daut

Wirtschaftsprüfer (German Public Auditor)

Wirtschaftsprüfer (German Public Auditor)

## **Excerpt from the Management Report in connection with the audited German GAAP Financial Statements 2013**

The following is a translation into English of the relevant text of the German language Management Report to which the auditor's opinion on the audited German GAAP Financial Statements makes reference:

“The Company's projections indicate that by substantially adjusting the cost structures the liquidity can be provided for without the successful completion of a financing round through the end of 2015. The aforementioned projections are based on the assumption that no cash outflows will result with respect to the potential back payment claims of the fiscal authorities for taxes for the year 2004. Probiodrug has filed a lawsuit with the fiscal court (Finanzgericht) against the potential tax back payments. A ruling has not yet been made. A stay of execution with respect to the disputed assessment notices has been granted. The risk was provided for in the financial statements by recording appropriate provisions. Should significant payments be made with respect to the back taxes in dispute, the ability of the Company to continue as a going concern would be endangered.”

Halle/Saale, Amsterdam and Brussels in October 2014

**Probiodrug AG**

signed  
Dr. Konrad Glund  
Chairman of the Management Board

signed  
Dr. Hendrik Liebers  
Member of the Management Board

**Kempen & Co N.V.**

signed  
Joof Verhees  
Member of the Management Board

signed  
Kathrin Erfurth  
Executive Director

**Petercam NV/SA**

signed  
Marc Janssens  
Partner, Member of the Management Board

signed  
Erik Verkest  
Partner, Head of Corporate Finance