

# Probiodrug

## Focusing on further PQ912 development strategy

Operating costs in H117 were largely in line with our expectations, while a one-off payment was a welcome resolution of Probiodrug's long-outstanding potential tax liability. Following the overall positive [Phase IIa data](#) with PQ912 for Alzheimer's disease (AD) released in June 2017, Probiodrug reiterated in its H117 report that all strategic options for further development are on the table. Depending on available funding, the company could initiate the next study looking at the long-term treatment of AD patients (the Phase IIa SAPHIR treatment period was three months) or, if a suitable partner emerges, a deal could alleviate the late stage PQ912 development. Our valuation has increased slightly to €496m or €61/share.

| Year end | Revenue (€m) | PBT* (€m) | EPS* (€) | DPS (€) | P/E (x) | Yield (%) |
|----------|--------------|-----------|----------|---------|---------|-----------|
| 12/15    | 0.0          | (13.5)    | (1.96)   | 0.0     | N/A     | N/A       |
| 12/16    | 0.0          | (13.8)    | (1.81)   | 0.0     | N/A     | N/A       |
| 12/17e   | 0.0          | (9.6)     | (1.04)   | 0.0     | N/A     | N/A       |
| 12/18e   | 0.0          | (8.7)     | (1.06)   | 0.0     | N/A     | N/A       |

Note: \*PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

## All options on table for further PQ912 development

Probiodrug reported R&D and G&A costs of €4.9m and €1.3m respectively in H117 compared to €4.7m and €1.3m in H116. These results are largely in line with our expectations; our FY17 R&D estimate stands at €7.7m implying H217 should be less costly, as the results from the Phase IIa SAPHIR trial (main cost driver) were announced in June 2017. Probiodrug reported cash of €14.4m (no debt) versus €21.9m at end FY16. Cash reach and additional funding requirements for the near term depend on the PQ912 development strategy. Probiodrug has indicated that it is open to exploring all options from running the next proof-of-concept trial on its own to establishing a partnership. Input from the full analysis of the SAPHIR trial will be important for the design of the next trial and is due in several months.

## Long-outstanding potential tax liability issue solved

In its H117 report Probiodrug revealed that it has resolved the potential tax liability of €2.7m (end-2016) which has been outstanding since 2008 when the tax authorities retrospectively increased taxable profits for 2004. Probiodrug contested and ultimately settled to pay €775k. As a result, the company released the remaining provision of €2.0m, which was reflected as €856k in financial income and €1.1m in gains from income taxes in H117 – the main deviation from our estimates.

## Valuation: A slight increase to €496m or €61/share

We value Probiodrug at €496m or €61/share, up from €487m or €60/share due to rolling our model forward, which offsets the lower cash position of €14.4m at the end of Q217 (no debt). Our R&D assumption is unchanged and we look ahead to how Probiodrug might shape the further development of PQ912.

## H117 company results

### Pharma & biotech

18 September 2017

**Price** €13.7

**Market cap** €111m

Net cash (€m) at end Q217 14.4

Shares in issue 8.2m

Free float 50%

Code PBD

Primary exchange Euronext Amsterdam

Secondary exchange N/A

### Share price performance



% 1m 3m 12m

Abs (6.8) (20.8) (29.3)

Rel (local) (8.3) (22.0) (41.1)

52-week high/low €23.8 €13.2

### Business description

Probiodrug is a German biopharmaceutical company developing its clinical pipeline for the treatment of Alzheimer's disease. Lead product candidate PQ912 has just completed a Phase IIa study with encouraging results. PQ912 is a small molecule inhibitor of glutamyl cyclase (QC), which is essential for the formation of pGlu-Aβeta. Two further products are in preclinical stages.

### Next events

Q217 results 30 November 2017

Full Phase IIa SAPHIR results H217/H118

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## Valuation

We value Probiodrug at €496m or €61/share, up from €487m or €60/share previously due to rolling our model forward, which offsets the lower cash position of €14.4m at the end of Q217. We note that our valuation includes a [licensing deal in 2017](#). We include €35m in income from the partner in our risk-adjusted NPV, but do not show it in our financial summary table as the deal has yet to be completed. The timing of the partnering is also uncertain (normally it takes 9-12 months in order to establish a partnership) and Probiodrug could initiate the next study on its own, depending on available funding. The breakdown of our rNPV valuation, which uses a discount rate of 12.5%, is shown in Exhibit 1. Our valuation only includes PQ912, with no value assigned to the preclinical pipeline given its earlier stage of development. Full details are discussed in our last [outlook report](#).

**Exhibit 1: Probiodrug rNPV valuation**

| Product          | Indication          | Launch | Peak sales (€m) | Value (€m)     | Probability | rNPV (€m)    | NPV/share (€/share) |
|------------------|---------------------|--------|-----------------|----------------|-------------|--------------|---------------------|
| PQ912            | Alzheimer's disease | 2022   | 6,200           | 1,325.8        | 35%         | 481.5        | 58.8                |
| Net cash         |                     |        |                 | 14.4           | 100%        | 14.4         | 1.8                 |
| <b>Valuation</b> |                     |        |                 | <b>1,340.2</b> |             | <b>495.9</b> | <b>60.6</b>         |

Source: Edison Investment Research. Note: Peak sales are rounded to the nearest €100m.

**Exhibit 2: Financial summary**

|  | €'000s | 2012     | 2013    | 2014     | 2015     | 2016     | 2017e    | 2018e   |
|--|--------|----------|---------|----------|----------|----------|----------|---------|
| December                                     |        | IFRS     | IFRS    | IFRS     | IFRS     | IFRS     | IFRS     | IFRS    |
| <b>PROFIT &amp; LOSS</b>                     |        |          |         |          |          |          |          |         |
| Revenue                                      |        | 6        | 0       | 0        | 0        | 0        | 0        | 0       |
| Cost of Sales                                |        | 0        | 0       | 0        | 0        | 0        | 0        | 0       |
| Gross Profit                                 |        | 6        | 0       | 0        | 0        | 0        | 0        | 0       |
| Research and development                     |        | (9,255)  | (8,004) | (8,008)  | (10,158) | (10,951) | (7,669)  | (5,669) |
| EBITDA                                       |        | (10,206) | (9,387) | (11,173) | (13,337) | (13,680) | (10,508) | (8,632) |
| Operating Profit (before amort. and except.) |        | (10,521) | (9,675) | (11,241) | (13,363) | (13,700) | (10,534) | (8,658) |
| Intangible Amortisation                      |        | (37)     | (26)    | (26)     | (30)     | (77)     | (106)    | (134)   |
| Exceptionals                                 |        | 0        | 0       | 0        | 0        | 0        | 0        | 0       |
| Other  |        | 0        | 0       | 0        | 0        | 0        | 0        | 0       |
| Operating Profit                             |        | (10,558) | (9,701) | (11,267) | (13,393) | (13,777) | (10,640) | (8,793) |
| Net Interest                                 |        | (314)    | (106)   | (170)    | (112)    | (114)    | 900      | 0       |
| Profit Before Tax (norm)                     |        | (10,835) | (9,781) | (11,411) | (13,475) | (13,814) | (9,634)  | (8,658) |
| Profit Before Tax (FRS 3)                    |        | (10,872) | (9,807) | (11,437) | (13,505) | (13,891) | (9,740)  | (8,793) |
| Tax  |        | (656)    | 0       | 0        | 0        | 0        | 1,100    | 0       |
| Profit After Tax (norm)                      |        | (11,491) | (9,781) | (11,411) | (13,475) | (13,814) | (8,534)  | (8,658) |
| Profit After Tax (FRS 3)                     |        | (11,528) | (9,807) | (11,437) | (13,505) | (13,891) | (8,640)  | (8,793) |
| Average Number of Shares Outstanding (m)     |        | 4.1      | 4.3     | 4.9      | 6.9      | 7.6      | 8.2      | 8.2     |
| EPS - normalised (EUR)                       |        | (2.84)   | (2.30)  | (2.35)   | (1.96)   | (1.81)   | (1.04)   | (1.06)  |
| EPS - normalised and fully diluted (EUR)     |        | (2.84)   | (2.30)  | (2.35)   | (1.96)   | (1.81)   | (1.04)   | (1.06)  |
| EPS - (IFRS) (EUR)                           |        | (2.85)   | (2.30)  | (2.35)   | (1.97)   | (1.82)   | (1.06)   | (1.07)  |
| Dividend per share (EUR)                     |        | 0.0      | 0.0     | 0.0      | 0.0      | 0.0      | 0.0      | 0.0     |
| Gross Margin (%)                             |        | 100.0    | n/a     | n/a      | n/a      | n/a      | n/a      | n/a     |
| EBITDA Margin (%)                            |        | n/a      | n/a     | n/a      | n/a      | n/a      | n/a      | n/a     |
| Operating Margin (before GW and except.) (%) |        | n/a      | n/a     | n/a      | n/a      | n/a      | n/a      | n/a     |
| <b>BALANCE SHEET</b>                         |        |          |         |          |          |          |          |         |
| Fixed Assets                                 |        | 996      | 425     | 186      | 140      | 167      | 152      | 109     |
| Intangible Assets                            |        | 67       | 101     | 82       | 56       | 96       | 107      | 90      |
| Tangible Assets                              |        | 926      | 321     | 101      | 81       | 68       | 42       | 16      |
| Investments                                  |        | 3        | 3       | 3        | 3        | 3        | 3        | 3       |
| Current Assets                               |        | 9,009    | 5,856   | 21,294   | 21,726   | 22,199   | 9,932    | 1,528   |
| Stocks                                       |        | 18       | 0       | 0        | 0        | 0        | 0        | 0       |
| Debtors                                      |        | 5        | 0       | 0        | 0        | 0        | 0        | 0       |
| Cash   |        | 7,726    | 4,421   | 20,920   | 21,361   | 21,897   | 9,630    | 1,226   |
| Other  |        | 1,260    | 1,435   | 374      | 365      | 302      | 302      | 302     |
| Current Liabilities                          |        | (3,570)  | (9,320) | (4,580)  | (4,911)  | (5,140)  | (1,249)  | (1,344) |
| Creditors                                    |        | (3,570)  | (3,974) | (4,580)  | (4,911)  | (5,140)  | (1,249)  | (1,344) |
| Short term borrowings                        |        | 0        | (5,346) | 0        | 0        | 0        | 0        | 0       |
| Long Term Liabilities                        |        | (1,070)  | (1,265) | (929)    | (822)    | (850)    | (850)    | (850)   |
| Long term borrowings                         |        | 0        | 0       | 0        | 0        | 0        | 0        | 0       |
| Other long term liabilities                  |        | (1,070)  | (1,265) | (929)    | (822)    | (850)    | (850)    | (850)   |
| Net Assets                                   |        | 5,365    | (4,304) | 15,971   | 16,133   | 16,376   | 7,986    | (557)   |
| <b>CASH FLOW</b>                             |        |          |         |          |          |          |          |         |
| Operating Cash Flow                          |        | (12,090) | (8,477) | (10,540) | (12,149) | (13,255) | (13,875) | (8,562) |
| Net Interest                                 |        | 22       | 9       | (54)     | 0        | 0        | 900      | 0       |
| Tax  |        | 28       | 9       | 5        | 2        | 0        | 825      | 275     |
| Capex  |        | (64)     | (4)     | (2)      | (6)      | (7)      | 0        | 0       |
| Acquisitions/disposals                       |        | 0        | 0       | 0        | 0        | 0        | 0        | 0       |
| Financing                                    |        | 9,516    | (188)   | 32,436   | 12,594   | 13,798   | (117)    | (117)   |
| Dividends                                    |        | 0        | 0       | 0        | 0        | 0        | 0        | 0       |
| Net Cash Flow                                |        | (2,588)  | (8,651) | 21,845   | 441      | 536      | (12,267) | (8,404) |
| Opening net debt/(cash)                      |        | (10,314) | (7,726) | 925      | (20,920) | (21,361) | (21,897) | (9,630) |
| HP finance leases initiated                  |        | 0        | 0       | 0        | 0        | 0        | 0        | 0       |
| Other  |        | 0        | 0       | 0        | (0)      | 0        | 0        | 0       |
| Closing net debt/(cash)                      |        | (7,726)  | 925     | (20,920) | (21,361) | (21,897) | (9,630)  | (1,226) |

Source: Probiodrug's accounts, Edison Investment Research

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