



Pharmaceuticals & Biotechnology



Source: Eikon Thomson Reuters

Market data

EPIC/TKR	OXB
Price (p)	713
12m High (p)	1,064
12m Low (p)	511
Shares (m)	66.1
Mkt Cap (£m)	471.5
EV (£m)	480.4
Free Float*	63.1%
Market	LSE

Description

Oxford BioMedica (OXB) is a UK-based biopharmaceutical company specialising in cell and gene therapies developed using the LentiVector platform, technology for creation of gene-delivery vehicles based on viruses. In addition to vector development and manufacture, OXB has a pipeline of therapeutic candidates and undertakes innovative pre-clinical R&D in gene-medicine.

Company information

CEO	John Dawson
CFO	Stuart Paynter
Chairman	Lorenzo Tallarigo
	+44 1865 783 000
	www.oxfordbiomedica.co.uk

Key shareholders

Directors	0.3%
Vulpes	17.6%
M&G	17.6%
Canaccord Genuity	5.0%
Aviva	3.9%
Hargreaves Lansdown	3.7%

Diary

Analysts

Martin Hall	020 7194 7632	mh@hardmanandco.com
Dorothea Hill	020 7194 7626	dmh@hardmanandco.com
Grégoire Pavé	020 7194 7628	gp@hardmanandco.com

OXFORD BIOMEDICA

Deal-making drives first annual profit

OXB is a specialist, advanced therapy, viral-vector biopharmaceutical company. It offers vector manufacturing and development services, while developing proprietary drug candidates. OXB also receives royalties on commercial products developed with its LentiVector® platform. 2018 delivered significant growth in gross income, primarily through licensing income from new partnership deals with Axovant Sciences (AXON) and Bioverativ (BIVV). Licensing income was of a magnitude that delivered OXB's first full-year underlying operating profit, despite weaker-than-anticipated bioprocessing/commercial sales and investment to increase capacity.

- **Strategy:** OXB has four strategic objectives: (i) delivery of vector development services that embed its technology within partners' commercial products; (ii) bioprocessing and commercial manufacture of vector; (iii) out-licensing of proprietary candidates; and (iv) investment in R&D and the LentiVector platform.
- **2018 results:** Strong EBIT in fiscal 2018 of £9.2m (-£7.0m) was the result of successful deal-making, particularly in the first half. 'Other income' of £28.2m (£7.9m) at ca.100% margin included upfronts from BIVV and AXON, grants from Innovate UK, royalties from sales of Kymriah and other milestones.
- **Bioprocessing:** Sales of bioprocessing services and commercial development (CD) of vector (in the 'Platform' business segment) showed strong growth of 25.8% to £39.6m (£31.5m). This was £6.6m below forecasts, in part due to slower-than-anticipated demand for large clinical batches from OXB's partners.
- **Risks:** OXB's mid-term sales model and its ability to pay off debt are dependent on successful progress of partners' clinical trials and commercialisation of LentiVector-enabled products. OXB is investing heavily in infrastructure for manufacturing capacity and in personnel, which will affect the bottom line.
- **Investment summary:** OXB is an exciting company with market-leading technology. It has been extensively validated through large deals with leading (bio)pharmaceutical partners and through grants from the UK government. It is not yet out of the woods, however, being dependent on regular income from partners, themselves operating in an opportunity-rich but nascent sector.

Financial summary and valuation

Year-end Dec (£m)	2016	2017	2018	2019E	2020E	2021E
Gross income (as reported)	30.78	39.36	67.84	83.09	104.60	123.04
Group sales	27.78	31.49	39.63	54.13	78.70	89.80
EBITDA	-6.78	-2.63	13.54	14.26	18.53	30.40
Underlying EBIT	-10.45	-7.00	9.18	9.47	13.27	25.16
Statutory EBIT	-11.32	-7.97	7.93	8.12	11.82	23.62
Underlying PBT	-15.34	-16.38	4.57	5.39	9.22	21.25
Statutory PBT	-20.31	-11.76	5.01	4.04	7.77	19.70
Underlying EPS (p)	-21.00	-21.99	10.88	12.53	18.79	37.67
Statutory EPS (p)	-29.95	-14.56	11.57	10.49	16.61	35.33
Net (debt)/cash	-19.05	-22.54	-8.91	-9.12	-1.86	17.65
Capital increase	17.50	0.39	19.81	0.10	0.10	0.10
P/E (x)	-	-	-	-	37.94	18.93
EV/sales (x)	-	-	-	-	6.10	5.35

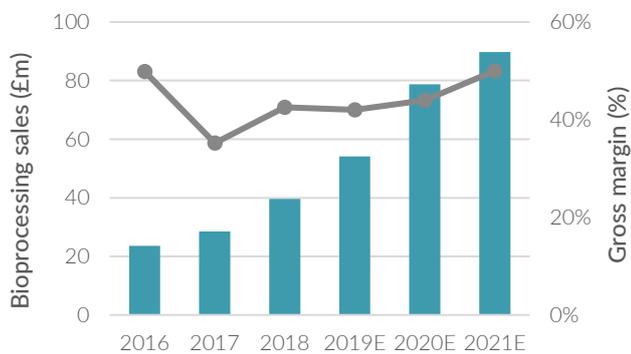
Source: Hardman & Co Life Sciences Research

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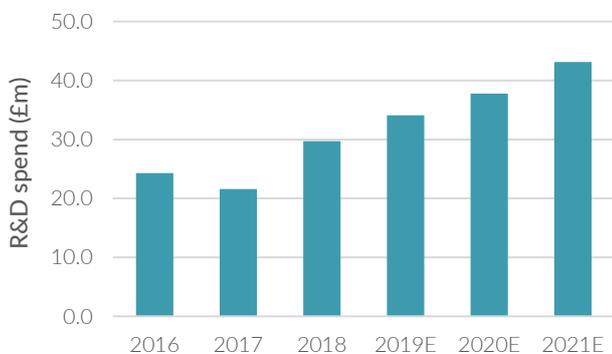
Oxford BioMedica

Sales and gross margin



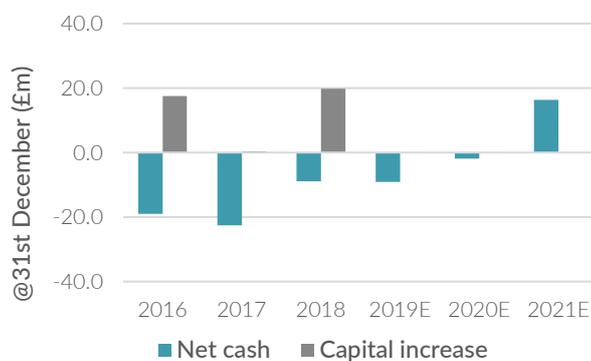
- ▶ Oxford BioMedica's sales are from bioprocessing (and commercial development) fees, plus additional income such as licensing upfronts and development milestones
- ▶ Royalties are receivable once partners' therapies reach the market, with royalties from Novartis being received already
- ▶ The gross margin has dipped through investment in infrastructure and bioprocessing technology, but is likely to trend higher towards 50%-60% when operating at full capacity

R&D investment



- ▶ Oxford BioMedica intends to out-license/spin-out proprietary candidates for clinical development
- ▶ Underlying R&D spend, mostly on increasing bioprocessing capacity, was -£30m in FY'18
- ▶ R&D spend will increase modestly to maintain the momentum of proprietary candidate development while partners are identified

Net cash/capital increases



- ▶ During 2016, the company raised new funds of ca.£17.5m in two share issues
- ▶ On 9 March 2018, the company raised new funds of £19.3m (net) through a Placing of shares at 11.75p for investment in manufacturing capacity
- ▶ At 31 December 2018, OXB had net debt of -£8.9m, compared to -£22.5m on 31 December 2017, composed of £32.2m cash and £41.2m debt

Free cashflow



- ▶ OXB is expected to turn cash-generative from an operational standpoint in FY'19
- ▶ Actual cash fluctuates, dependent on the timing of receipt of milestones and royalties
- ▶ Free cashflow will be affected by the investment being made to increase bioprocessing manufacturing capacity

Source: Company data; Hardman & Co Life Sciences Research

Full-year 2018 results

Key features

- ▶ **Gross income:** Excellent progress in signing strong partnership deals boosted gross income (group sales and other income) by 72% to £67.8m (£39.4m) in the 12 months to December 2018.
- ▶ **Group sales:** Growth of 26%, to £39.6m (£31.5m), in bioprocessing and CD revenue was strong, although it was £6.6m below forecasts, due in part to the time needed for OXB's partners to progress clinical development and/or full commercialisation.
- ▶ **Gross margin:** Evidence of economies of scale and/or introduction of next-generation manufacturing processes were apparent in the 7.4ppt gross margin improvement to 42.6% (35.2%).
- ▶ **Other income:** The company achieved impressive licensing fees, milestones, royalties and grants at near 100% margin of ca.£28.2m (£7.9m) in 2018, driven to a great extent by new deals signed with BIVV (now Sanofi) and AXON in 1H'18.
- ▶ **SG&A:** Tight control of costs kept administration expenses in line with the prior period at -£6.2m (-£6.3m). This was significantly below forecasts, which we had already reduced from -£15.3m to -£9.2m at the interim stage due to the stated intention to allocate increased personnel/manufacturing investment to R&D and COGS.
- ▶ **R&D:** As anticipated, ongoing investment in platform technology and R&D talent accelerated group R&D spend by 37% in the period to -£29.7m (-£21.6m). The AXON deal validated the strategy to invest in its own proprietary therapies.
- ▶ **Profitability:** The strong performance from 'other income', combined with careful control of costs, provided OXB with its first full-year profit of £9.2m (-£7.0m) at the underlying EBIT level. Underlying EBITDA was £13.5m (-£2.6m), or £12.3m as reported (includes share-based costs).
- ▶ **Cash position:** 'Other income' in the P&L drops straight through to cashflow, benefiting the period-end cash balance. Combined with the 2018 Placing (net £19.3m), the cash position was strong at 31 December 2018, at £32.2m.
- ▶ **Operating cashflow:** Increased £10m in the period, despite an unusually large increase in the working capital requirement to cover receivables of £14.6m (back-end weighted).
- ▶ **Net cash/(debt):** At 31 December 2018, OXB had net debt of -£8.9m. This is set to increase slightly in 2019 due to the capital investment programmes to increase manufacturing capacity, but it is dependent on closing further deals.

Oxford BioMedica – full-year analysis					
Full-year to Dec (£m)	FY'17 actual	FY'18 actual	Growth	FY'18 forecast	Delta Δ
Gross income (as reported)	39.4	67.8	72%	74.8	-7.0
Group sales	31.5	39.6	26%	46.2	-6.6
COGS	-18.4	-22.8	23%	-25.4	2.7
SG&A	-6.3	-6.2	-2%	-9.2	3.1
R&D	-21.6	-29.7	37%	-29.1	-0.6
Other income	7.9	28.2	258%	28.6	-0.4
EBITDA	-2.6	13.5	-616%	15.5	-1.9
Depreciation & amortisation	-4.4	-4.4	0%	-4.4	0.1
Underlying EBIT	-7.0	9.2	-231%	11.0	-1.8
Underlying EPS (p)	-22.0	10.9	-149%	15.7	-4.8
Net cash/(debt)	-22.5	-8.9	-60%	-2.3	-6.6

Source: Hardman & Co Life Sciences Research

First profitable year

OXB's strategy to deliver mid-to-long term sustainable value through providing bioprocessing and commercial development (formerly process development) services to partners, in order to support its proprietary research and development, is bearing fruit. Fiscal 2018 was the first 12-month period to deliver profitability. Underlying EBITDA was £13.5m and underlying EBIT was £9.2m (-£7.0m), driven primarily by licensing income from newly-signed licensing and collaboration deals. The company is investing heavily in manufacturing facilities to continue growing its 'core' bioprocessing/CD business, which should permit additional deals going forward. This appears to have been a uniquely positive 12 months due to the timing of large deal closures – which take 12-18 months to complete – just prior to the acceleration of manufacturing investment.

Gross income

Taken together, group revenue and 'other income' (gross income) accelerated 72% to £67.8m (£39.4m) in fiscal 2018. Readers should note that, for consistency among companies, Hardman & Co categorises income according to the following:

- ▶ **Group sales:** True sales from delivery of products or services – batch bioprocessing and CD services in the case of OXB.
- ▶ **Other income:** Licensing fees (upfront and milestone) payments, royalties and grant income – all ca.100% margin.

Until fiscal 2017, when OXB introduced a change to the segmental reporting of revenue and also disaggregated it into sales and licensing for the first time, we had categorised OXB's reported gross income based on our best estimate of individual items. In order to provide a direct comparison with the gross income reported by OXB, our gross income equals the sum of group sales and 'other income'.

Sales summary				
£m	2017	2018	Delta	Growth
Group sales	31.5	39.6	+8.1	26%
Other income	7.9	28.2	+20.3	N/M
Gross income	39.4	67.8	+28.5	72%

N/M: not meaningful

Source: Company reports; Hardman & Co Life Sciences Research

Underlying profit

Half-year sales and profit trends



Note: During 2017, disclosure of revenue segments altered
Source: Hardman & Co Life Sciences Research

The chart above demonstrates the reliance on 'other income' for delivery of profitability in 2018. In the first half, when £18.3m in upfront payments were received on signing deals with AXON and BIIV/SAN, underlying EBIT (which excludes share-based costs) was £9.8m. Full-year underlying EBIT, however, was £9.2m, despite the back-end weighted nature of bioprocessing/CD revenues (mainly for Novartis and Orchard Therapeutics), due to a relatively smaller contribution from 'other income' (Orchard milestone, Novartis royalties and Innovate grants) in 2H'18.

Other income

Licensing payments (upfronts and milestones) and grant income at near 100% margin resulted in transformational growth in other income in 2018 to a total of £28.2m (£7.9m). As far as we have visibility, this was composed of: the \$5m/£4.0m BIIV/SAN upfront payment, a licensing fee of £4.1m from AXON for the LentiVector platform, plus £10.2m/\$13.3m from AXON for access to AXO-LENTI-PD (the latter being part of the \$25m AXON upfront payment to be accrued over 2-3 years); accrual (est. 60%) of the 2018 Innovate UK grant income and the £2.0m milestone from Orchard Therapeutics (in the form of Ordinary shares); plus low single-digit royalties from Novartis' sales of Kymriah. We have adjusted our 1H'18 other income following updated information from OXB on its reallocation of NOVN capacity reservation payments into licensing income. Analysis of various statements has generated our best estimates, which are detailed in the following table.

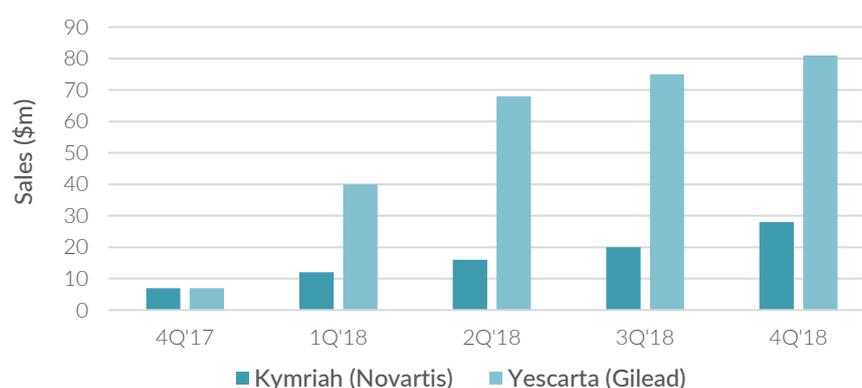
2018 'other income'			
£m	1H'18	2H'18	2018
BIIV/SAN upfront	4.0	-	4.0
AXON licensing fee	4.1	-	4.1
AXON upfront	10.2	-	10.2
NOVN upfront	1.4	1.4	2.8
Orchard milestone	0.8	1.2	2.0
Grant income	0.7	2.3	3.0
Other (incl. NOVN royalties)	1.2	0.9	2.1
Total other income	22.4	5.9	28.2

Note: may not add up exactly due to rounding

Source: Hardman & Co Life Sciences Research estimates

'Other income' for 2018 was in line with our forecast. This P&L line is impossible to forecast accurately due to timing of deals and lack of visibility on allocation of items. The rate and timing of royalty payments from Novartis have not been fully disclosed; however, payments to OXB in 2018 are estimated to have been between £0.3m and £1.2m, based on a low single-digit royalty and assuming that OXB is paid one quarter after Novartis has accrued Kymriah sales in its accounts/quarterly statements.

Quarterly sales of CAR-T therapies, Kymriah and Yescarta



Source: Hardman & Co Life Sciences Research

The rollout of Kymriah has been hampered by issues in manufacturing the therapy for diffuse large B-cell lymphoma (DLBCL), which represents a much larger market than does acute lymphocytic leukemia (ALL). The FDA and the EMA approved Kymriah for treatment of DLBCL in May 2018 and August 2018, respectively, meaning that Kymriah was second to market for DLBCL behind Gilead's Yescarta (approved by the FDA in October 2017, and by the EMA in August 2018), which has, to date, given it the edge in terms of reported sales, as shown in the graphic above.

Group sales

Bioprocessing and CD is carried out as a fee-for-service for licensing partners, ensuring that LentiVector platform technology is embedded in commercialised therapies. 2018 saw strong growth (26%) in group sales, which we estimate to total £39.6m (£31.5m). There was a contribution from CD work for BIVV/SAN and for Novartis' second CAR-T programme, and from the accrued £5m payment for pre-manufactured batches from AXON.

Despite good growth, particularly in the second half, group sales were £6.6m below forecasts. This was not affected by the slow growth in Kymriah sales (as shown in the chart) since batch bioprocessing for Novartis is protected by a minimum off-take agreement. It was perhaps constrained by capacity for other partners; according to management, manufacturing reservations 'utilised' near to 100% of existing capacity through the year.

The growth in our 2018 forecast was driven by an expectation that more CD work for BIVV/SAN would be undertaken in 2H'18 and that there would be an increase in bioprocessing for late-stage trials for Orchard. Recent announcements that Orchard will be submitting a BLA for its ADA-SCID gene-therapy candidate in 2020 suggest that bioprocessing for this partner will accelerate later than expected.

Strategy performing

Segment analysis

OXB reports gross income from two business segments:

- ▶ **Platform:** composed of our definitions of group sales and 'other income' derived from programmes based on partners' therapies; and
- ▶ **Product:** composed of our definitions of group sales and 'other income' derived from programmes based on OXB's proprietary therapeutic candidates.

Both Platform and Product segments were profitable at the EBITDA level in 2018, as reported by the company. It should be noted that, in company reports, revaluation of the shareholding in Orchard is included in the operating result (in the Platform segment), which, for consistency, we include as a non-operational item, as other financial income/loss. Currently, the 'Product' segment is composed of the AXON programme (Phase I/II) and six disclosed, pre-clinical, internal platforms.

Bioprocessing/CD: underlying trading performance

The strategy to secure additional partnering deals based on the LentiVector platform in the short-to-medium term, which will be used to support investment in proprietary R&D towards longer-term and greater value, is clearly delivering.

As summarised in the following table, 2018 bioprocessing/CD sales and the manufacturing and CD costs (including headcount) were essentially for the Platform segment. This will change in 2019 and beyond, as bioprocessing/CD for programmes related to the Product segment accelerates.

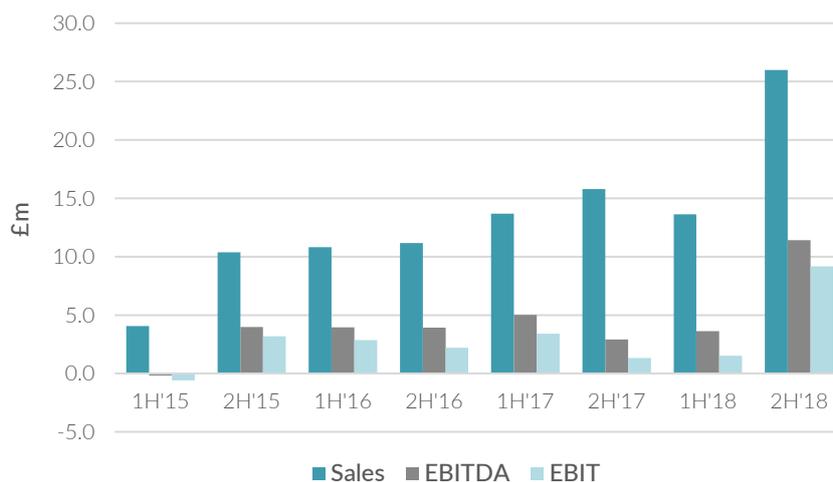
Although there will be some headcount and other overhead costs that are related to internal activities and Product in 2018, an illustration of the pre-R&D trading performance, based on Platform, demonstrates a positive trend.

Analysis of Platform segment

Year-end Dec (£m)	2015	2016	2017	2018
Sales	14.44	21.98	29.49	39.63
COGS	-5.84	-11.83	-18.45	-22.76
Gross profit	8.60	10.15	11.04	16.86
Gross margin	59.6%	46.2%	37.4%	42.6%
SG&A	-6.01	-5.09	-6.32	-6.19
EBIT	2.59	5.06	4.73	10.68
EBIT margin	17.9%	23.0%	16.0%	26.9%
D&A	1.20	2.80	3.20	4.36
EBITDA	3.79	7.86	7.93	15.03
EBITDA margin	26.2%	35.8%	26.9%	37.9%

Source: Company reports, Hardman & Co Life Sciences Research

Platform performance: sales excluding 'other income'



Source: Hardman & Co Life Sciences Research

Operational update

Manufacturing capacity

Group sales in 2018 were not limited by capacity constraints, according to management, although the company was operating close to existing capacity throughout the year due to capacity reservation agreements. The table below summarises the progress that OXB is making towards manufacturing efficiency and capacity expansion, both of which will support the anticipated rise in demand for lentiviral vector in coming years. In addition to the acquisition of new facilities in 2018 (including four GMP clean rooms and two fill/finish suites, and funded by the £20m Placing), OXB is continually developing its LentiVector platform. These developments include serum-free suspension processes that improve vector potency, purity and yield, and production efficiency, using large-volume bioreactors – referred to as 'Process B'.

In 2018, consistent with the process defined in its BLA submission, bioprocessing of the vector for Kymriah was via Process A only. In addition, OXB had one cleanroom running Process B manufacturing for all its other partners. Over the course of 2019, OXB will transfer one more cleanroom from Process A to B, which should support modest increases in existing partners' bioprocessing requirements, including that of Novartis. In 2020, the new cleanrooms will be validated and start to come on stream.

Investment in GMP manufacturing capacity and vector yields			
Fiscal year	'Process A' Number of cleanrooms	'Process B' Number of cleanrooms	Comment
2018	2	1	Improving efficiency, lowering costs
2019	1	2	Will allow small level of sales growth
2020	1	6	Will come on stream over course of the year

Process A: Cell factory bioprocessing technology; Process B: Bioreactor bioprocessing technology
Source: Hardman & Co Life Sciences Research

Microsoft partnership: post-period event

Post period, in March 2019, OXB announced an R&D collaboration with Microsoft to explore the use of machine learning approaches to develop cloud-based algorithms to further improve the efficiency and yield of industrial vector bioprocessing. The use of machine learning to model the optimal processes for large-scale manufacture overcomes the signal-to-noise ratios encountered by scientists designing next-generation processes. The resulting technological improvements should reduce costs and speed the time to supply, in addition to reducing variability in output.

Partner summary

The table below illustrates OXB's non-proprietary therapeutic product partnerships; we cover operational progress of OXB's partners in our upcoming corporate update.

OXB - partnerships summary		
Partner	Therapy/technology (Indications)	Phase
Novartis (NOVN)	Kymriah (ALL, DLBCL)	Approved
	Undisclosed (oncology)	Phase I/II
Orchard Therapeutics (ORTX)	OTL-101 (ADA-SCID)	Phase III
	OTL-201 (San Filippo syndrome)	Pre-clinical
Sanofi (SAN)	Undisclosed	Pre-clinical
	SAR422459 (Startgardt disease)	Phase II
Bioverativ (acquired by SAN)	Factor VIII (Haemophilia A)	Pre-clinical
	Factor VII (Haemophilia B)	Pre-clinical
Axovant (AXON)	AXO-LENTI-PD (Parkinson's disease)	Phase I
Boehringer Ingelheim, UK CFGTC, Imperial Innovations	CFTR gene therapy (cystic fibrosis)	Pre-clinical

Source: Oxford BioMedica, Hardman & Co Life Sciences Research

Financials and investment case

Profit & Loss

- ▶ **Gross income:** The sum of bioprocessing sales, CD fees, all licensing income (upfronts and milestones), royalties and grants, shows that our numbers, although presented differently, equate to those reported.
- ▶ **Group sales:** Composed of bioprocessing/CD, this will be the main growth driver over the next three years. 'Other income' is lumpy – forecasts do not include potential new deals, and the timing of future licensing income from existing deals is hard to forecast.
- ▶ **EBITDA:** 2018 was the first profitable year, with EBITDA at £13.5m (-£2.6m) due to an impressive performance in securing partnership deals.
- ▶ **Underlying EBIT:** Despite the significant investment in personnel and R&D, the overall outcome for the underlying EBIT in 2019 is forecast to be in line with fiscal 2018. Increases in R&D spend from fiscal 2020 are likely to be supported by growth in bioprocessing/commercial development sales, dependent on partners' progress.

Profit & Loss account						
Year-end Dec (£m)	2016	2017	2018	2019E	2020E	2021E
GBP:USD	1.354	1.289	1.312	1.312	1.312	1.312
Gross income (as reported)	30.78	39.36	67.84	83.09	104.60	123.04
Group sales	27.78	31.49	39.63	54.13	78.70	89.80
COGS	-11.84	-18.44	-22.76	-31.40	-44.07	-44.90
Gross profit	15.94	13.05	16.86	22.74	34.63	44.90
Gross margin	49.9%	35.2%	42.6%	42.0%	44.0%	50.0%
SG&A	-5.09	-6.31	-6.19	-8.12	-9.44	-9.88
R&D	-24.30	-21.61	-29.71	-34.10	-37.78	-43.10
EBITDA	-6.78	-2.63	13.54	14.26	18.53	30.40
Depreciation	-3.34	-4.11	-4.33	-4.77	-5.24	-5.24
Amortisation	-0.34	-0.26	-0.03	-0.03	-0.03	0.00
Other income	3.00	7.87	28.21	28.96	25.86	33.24
Underlying EBIT	-10.45	-7.00	9.18	9.47	13.27	25.16
EBIT margin	37.6%	-22.2%	23.2%	17.5%	16.9%	28.0%
Share-based costs	-0.87	-0.97	-1.25	-1.35	-1.45	-1.55
Exceptional items	0.00	0.00	0.00	0.00	0.00	0.00
Statutory EBIT	-11.32	-7.97	7.93	8.12	11.82	23.62
Net interest	-4.89	-9.38	-4.61	-4.08	-4.05	-3.92
Forex gain/loss	-4.11	5.58	-4.29	0.00	0.00	0.00
Revaluation of investments	0.00	2.30	5.98	0.00	0.00	0.00
Underlying pre-tax profit	-15.34	-16.38	4.57	5.39	9.22	21.25
Exceptional items	0.00	0.00	0.00	0.00	0.00	0.00
Statutory pre-tax profit	-20.31	-11.76	5.01	4.04	7.77	19.70
Tax payable/credit	3.67	2.74	2.53	2.90	3.21	3.67
Underlying net income	-11.67	-13.61	7.09	8.29	12.43	24.91
Statutory net income	-16.64	-9.02	7.54	6.94	10.98	23.37
Ordinary 50p shares:						
Period-end (m)	61.76	62.15	66.13	66.13	66.13	61.77
Weighted average (m)	55.56	61.91	65.19	66.13	66.13	66.13
Fully-diluted (m)	58.00	67.03	70.41	71.45	71.55	71.65
Underlying basic EPS (p)	-21.00	-21.99	10.88	12.53	18.79	37.67
Statutory basic EPS (p)	-29.95	-14.56	11.57	10.49	16.61	35.33
U/I fully-diluted EPS (p)	-20.12	-20.31	10.07	11.60	17.37	34.77
Stat. fully-diluted EPS (p)	-28.70	-13.45	10.71	9.71	15.35	32.61
DPS (p)	0.00	0.00	0.00	0.00	0.00	0.00

Source: Hardman & Co Life Sciences Research

Balance sheet

- ▶ **Trade debtors:** There was a noticeable ca.£10m increase in trade debtors at the year end to £15.4m (£5.7m), suggesting that several invoices were issued late in the year. This has an impact on the working capital requirement for the group.
- ▶ **Cash:** 'Other income' in the P&L mostly drops straight through the cashflow statement, benefiting the period-end cash balance. Following the 2018 Placing, the cash position is expected to remain strong throughout the forecast period, supporting the planned investment in manufacturing facilities and internal R&D programmes.
- ▶ **Loan facility:** The increase in the long-term debt in 2018 was mostly due to the accrued interest on the loan. The weakness of sterling over the reporting period resulted in a forex conversion loss of £4.3m. Given that this loan is now relatively expensive, the company is considering all options available to refinance it at lower rates of interest.
- ▶ **Net debt:** At 31 December 2018, the net debt was -£8.9m, and is likely to increase in 2019 in part due to the capex programme to increase manufacturing capacity and bioprocessing efficiency.

Balance sheet						
@31 Dec (£m)	2016	2017	2018	2019E	2020E	2021E
Shareholders' funds	12.62	6.70	34.74	41.78	52.86	76.33
Cumulated goodwill	0.00	0.00	0.00	0.00	0.00	0.00
Total equity	12.62	6.70	34.74	41.78	52.86	76.33
Share capital	30.88	31.08	33.03	33.06	33.06	33.06
Reserves	-18.26	-24.38	1.71	8.72	19.80	43.26
Provisions/liabilities	3.94	14.20	24.81	12.40	0.62	0.00
Deferred tax	0.00	0.00	0.28	0.28	0.28	0.28
Long-term loans	34.39	36.86	41.15	41.15	41.15	41.15
Short-term debt	0.00	0.00	0.00	0.00	0.00	0.00
less: Cash	15.34	14.33	32.24	32.04	39.30	58.80
less: Non-core investments	0.66	2.95	10.97	10.97	10.97	10.97
Invested capital	34.95	40.48	57.77	52.61	44.65	47.99
Fixed assets	27.51	25.37	31.79	42.23	43.45	43.74
Intangible assets	1.33	0.10	0.12	0.12	0.12	0.12
Inventories	2.20	3.33	4.25	5.81	8.44	9.63
Trade debtors	1.97	5.71	15.41	12.33	14.79	17.75
Other debtors	4.94	11.93	15.18	15.18	15.18	15.18
Tax liability/credit	3.00	2.78	2.45	2.53	2.90	3.21
Trade creditors	-1.58	-3.68	-3.75	-5.17	-7.25	-7.39
Other creditors	-4.43	-5.05	-7.68	-20.41	-32.97	-34.25
Debtors less creditors	3.90	11.68	21.61	4.46	-7.36	-5.50
Invested capital	34.95	40.48	57.77	52.61	44.65	47.99
Net cash/(debt)	-19.05	-22.54	-8.91	-9.12	-1.86	17.65

Source: Hardman & Co Life Sciences Research

Cashflow

- ▶ **Working capital:** In prior years, since much of OXB's work is on a fee-for-service basis, there was no major working capital requirement for the group. However, an increase in the number of partners, preparation for clinical trials and commercialisation of partners' products, has required a short-term increase in working capital requirements. There was a noticeable increase in trade debtors at the period-end, which has an impact on receivables, increasing to £14.6m in 2018. This pattern was very much weighted towards the second half of the financial year.
- ▶ **Free cashflow:** Counterbalancing the temporary increase in working capital, operating cashflow increased £10.0m, delivering FCF/share of 13.8p. A large, but planned, increase in capex as part of the capacity expansion, was also evident in 2H'18.

Cashflow						
Year-end Dec (£m)	2016	2017	2018	2019E	2020E	2021E
Underlying EBIT	-10.45	-7.00	9.18	9.47	13.27	25.16
Depreciation	3.34	4.11	4.33	4.77	5.24	5.24
Amortisation	0.34	0.26	0.03	0.03	0.03	0.00
Inventories	0.50	-1.13	-0.92	-1.56	-2.64	-1.19
Receivables	4.03	-10.73	-14.56	3.08	-2.47	-2.96
Payables	-3.28	2.73	2.73	1.42	2.09	0.14
Change in working capital	1.25	-9.13	-12.75	2.95	-3.02	-4.01
Exceptionals/provisions	-0.75	10.27	10.45	-0.75	-0.75	-0.75
Disposals	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.35	1.27	-1.27	0.00	0.00	0.00
Company op. cashflow	-5.93	-0.22	9.97	16.46	14.77	25.64
Net interest	-3.21	-10.76	-4.61	-4.08	-4.05	-3.92
Tax paid/received	4.08	3.51	3.65	2.53	2.90	3.21
Operational cashflow	-5.06	-7.47	9.01	14.90	13.62	24.94
Capital expenditure	-6.46	-1.97	-10.10	-15.21	-6.46	-5.53
Sale of fixed assets	0.00	0.00	0.00	0.00	0.00	0.00
Free cashflow	-11.52	-9.44	-1.09	-0.31	7.16	19.41
Dividends	0.00	0.00	0.00	0.00	0.00	0.00
Acquisitions	0.00	0.00	-0.05	0.00	0.00	0.00
Disposals	0.00	0.00	0.00	0.00	0.00	0.00
Other investments	0.00	0.00	-0.76	0.00	0.00	0.00
Cashflow after investments	-11.52	-9.44	-1.89	-0.31	7.16	19.41
Share repurchases	0.00	0.00	0.00	0.00	0.00	0.00
Share issues	17.50	0.39	19.81	0.10	0.10	0.10
Currency effect	-7.13	-2.79	-4.29	0.00	0.00	-1.35
Loans/cash acquired	0.00	8.36	0.00	0.00	0.00	0.00
Change in net debt	-1.15	-3.48	13.63	-0.21	7.26	18.16
Hardman FCF/share (p)	-9.11	-12.06	13.83	22.53	20.59	37.71
Opening net cash	-17.90	-19.05	-22.54	-8.91	-9.12	-1.86
Closing net cash	-19.05	-22.53	-8.91	-9.12	-1.86	16.30

Source: Hardman & Co Life Sciences Research

Changes to forecasts

Forecasts have been updated to reflect the lighter-than-expected bioprocessing/commercial development revenues in 2018. As at the interim stage, we have not included potential future deals in either the Platform or the Product segments, although likely in the latter part of 2019. However, we have raised our expectations for 'other income' in 2019 following recent announcements from existing deal partners:

- ▶ **Axovant:** In March, Axovant reported positive interim results from the first cohort of its SUNRISE-PD trial with AXO-LENTI-PD and announced that it expected to dose the first patient in the second cohort in 2Q'19. This latter event would trigger a milestone payment to OXB.
- ▶ **Orchard:** In its 20-F, Orchard indicated that further milestone payments to OXB will become due. These will be in the form of shares that will be priced to market on the date of payment.

Based on current information and together with careful control of costs, the company should remain EBITDA-positive even in the absence of any future licensing deals, due to bioprocessing/commercial development sales, royalties, and already known 'other income' from existing partners. What is more difficult to predict is the precise timing of events that would trigger the recognition and receipt of the milestones, which are dependent on clinical and development success.

Changes to forecasts						
Year-end Dec (£m)	2019E			2020E		
	Old	New	Change	Old	New	Change
Gross income	79.2	83.1	5%	106.0	104.6	-1%
Group sales	60.8	54.1	-11%	80.3	78.7	-2%
COGS	-32.8	-31.4	-4%	-41.0	-44.1	7%
SG&A	-9.7	-8.1	-16%	-9.6	-9.4	-2%
R&D	-25.5	-34.1	34%	-34.9	-37.8	8%
Other income	18.4	29.0	57%	25.7	25.9	1%
EBITDA	15.9	14.3	-10%	25.8	18.5	-28%
Operating profit	9.9	8.1	-18%	19.2	11.8	-38%
Underlying EPS	15.8	12.5	-21%	32.0	18.8	-41%
Net cash/(debt)	-1.3	-9.1	601%	12.2	-1.9	-115%

Source: Hardman & Co Life Sciences Research

Company matters

Registration

Incorporated in 1995 in the UK, company registration number: 03028927. Originally called Oxford Genetic Therapeutics Ltd, renamed Oxford BioMedica in 1996.

Headquarters:

Oxford BioMedica plc
 Windrush Court
 Transport Way
 Oxford
 OX4 6LT

Tel: +44 1865 783 000

www.oxfordbiomedica.co.uk

Board of Directors

Board of Directors				
Position	Name	Nominations	Remuneration	Audit
Chairman	Lorenzo Tallarigo	C		
Chief Executive Officer	John Dawson			
Chief Financial Officer	Stuart Paynter			
Non-executive director	Martin Diggle	M		
Deputy Chairman/NED	Andrew Heath	M	C	M
Non-executive director	Stuart Henderson			
Non-executive director	Heather Preston	M	M	C

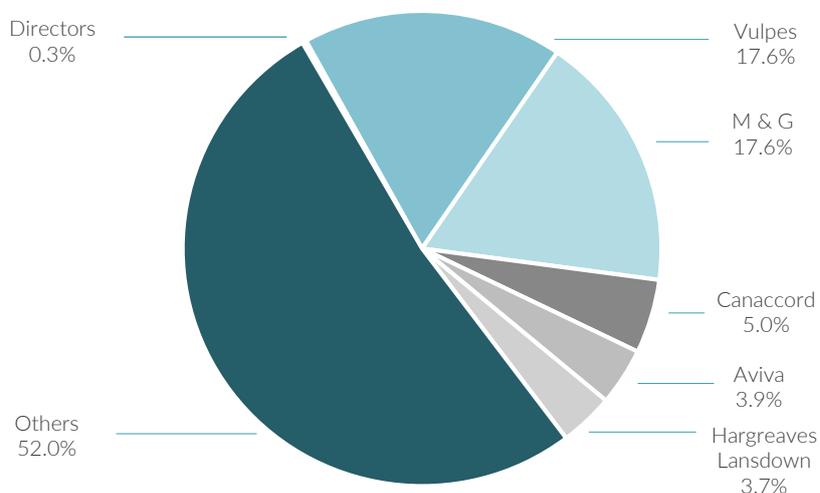
M = member; C = chair

Source: Company reports

Share capital

At 31 March 2019, OXB had 66,128,701 Ordinary shares of 50p in issue.

Shareholders



Source: Company reports, newswires, Hardman & Co Life Sciences Research

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