

Gene therapy is now

Annual report and accounts 2017



Oxford BioMedica in brief

Oxford BioMedica is a pioneer of gene and cell therapy with a leading position in lentiviral vector and cell therapy research, development and bioprocessing. Gene and cell therapy is the treatment of disease by the delivery of therapeutic DNA into a patient's cells. This can be achieved either *in vivo* (referred to as gene therapy) or *ex vivo* (referred to as cell therapy), the latter being where the patient's cells are genetically modified outside the body before being re-infused.

Oxford BioMedica is focused on developing life changing treatments for serious diseases. Oxford BioMedica and its subsidiaries (the "Group") have built a sector leading lentiviral vector delivery platform (LentiVector®), which the Group leverages to develop *in vivo* and *ex vivo* products both in-house and with partners. The Group has created a valuable proprietary portfolio of gene and cell therapy product candidates in the areas of oncology, ophthalmology and CNS disorders.

The Group has also entered into a number of partnerships, including with Novartis, Sanofi, GlaxoSmithKline, Bioverativ, Orchard Therapeutics, GC LabCell and Immune Design, through which it has long-term economic interests in other potential gene and cell therapy products. Oxford BioMedica is based across several locations in Oxfordshire, UK and employs more than 300 people.

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At the front and centre

Oxford BioMedica is a leading gene and cell therapy company and our work is now beginning to deliver life changing treatments.

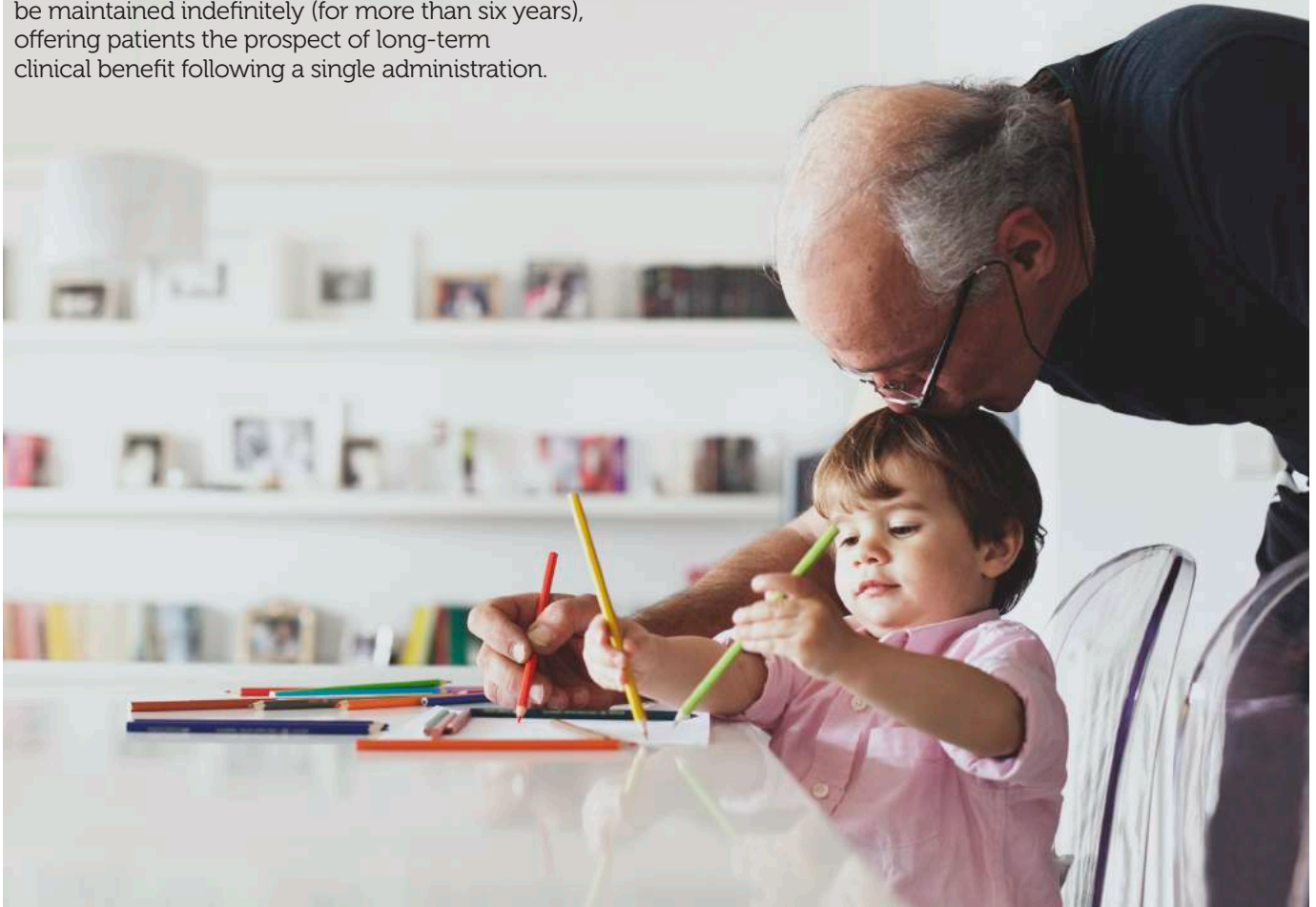
It's an exciting time for science, our partners, shareholders, and most of all the patients who are now benefiting from marketed products – giving people suffering from some of the world's most serious diseases far more than hope.

We are at the front and centre of gene and cell therapy and experiencing strong demand for our world-leading proprietary LentiVector-Enabled™ technology.



Enabling 'one shot' treatments

LentiVector® studies suggest gene expression may be maintained indefinitely (for more than six years), offering patients the prospect of long-term clinical benefit following a single administration.



Valuable research tool

The LentiVector® platform is also used as a valuable research tool.



Multi-billion \$ market sector

The use of DNA to treat diseases is expected to grow into a multi-billion \$ sector over the next few years with several products already approved in the US and Europe. The large growth in lentiviral vector based clinical trials shows ex vivo treatments are leading the way.



[Read more about the gene and cell therapy sector on page 10.](#)

Targeting unmet needs

Oxford BioMedica's pipeline focuses on a diverse range of cancers, Parkinson's, central nervous system disorders, and ocular conditions. However, our LentiVector® delivery system could be used for many more diseases for which there are currently unmet needs.

Our LentiVector® delivery platform is used in all of our own gene and cell therapy products in development.



[See our LentiVector® based product pipeline on page 13 for more information.](#)

>20 years

Gene and cell therapy expertise

The LentiVector® delivery system, built on more than 20 years of experience, has the potential to be used for many unmet conditions and disease areas.

140 sites

Clinical trials

There are currently over 140 sites worldwide carrying out clinical trials with lentiviral vectors.

Enabling new treatments

LentiVector® is a key component of Novartis' Kymriah™ cell therapy treatment for blood cancer and the first lentiviral enabled product to be approved in the USA.

We are the sole lentiviral vector manufacturer for this product which was launched in the USA in September 2017.



[Find out more about our commercial supply agreement with Novartis and our new collaboration and licence agreement with Bioverativ in the Chief Executive's statement on page 24 and the 2017 performance review on page 26.](#)

Sharing in success

In addition, we have partnerships and collaborations with Bioverativ, Orchard Therapeutics, GC LabCell and Immune Design where we retain a potentially royalty generating financial interest in their products in return for expertise and bioprocessing work.

Oxford BioMedica also has products and IP licensed to Sanofi and GSK.

1st approved

FDA approved advanced therapy

The Novartis Kymriah™ treatment for leukaemia that uses Oxford BioMedica's LentiVector® technology is the first FDA approved advanced therapy.





First-in-class therapy

Novartis' Kymriah™ (CTL019) is a novel treatment approach for paediatric and young adult patients with B-cell acute lymphoblastic leukaemia. Trials showed an 83% overall remission rate in this patient population which has limited treatment options and historically poor outcomes.



Progressing our own pipeline

We are progressing towards approval to start Phase I/II clinical trials of OXB-102 for Parkinson's disease.

OXB-102 genetically modifies cells to produce dopamine, replacing that which is lost during the course of the disease. Unlike current drug treatment options, which loses efficacy with long-term use, OXB-102 is designed to provide patient benefit for a number of years following a single administration.



[Read more about OXB-102 and our other product candidates in the 2017 performance review on page 28.](#)

7 products

Oxford BioMedica pipeline

Our own product development programmes have had seven regulatory approvals for clinical studies in the USA and Europe in ocular indications and Parkinson's disease.



Developing our partners' products

We help partners by providing unrivalled lentiviral IP and technical know-how such as our state-of-the-art laboratories and GMP clean room suites.

The US FDA completed a pre-licence inspection of our facilities as part of the Biologics License Application (BLA) review process for Novartis' Kymriah™. The UK MHRA granted Oxford BioMedica a manufacturer/importer licence for commercial production and supply of lentiviral vectors following a successful inspection of our facilities.



Download our latest 'Discover the facts' brochure on lentiviral vector development, scale-up, analytics and GMP bioprocessing from the Oxford BioMedica website: www.oxfordbiomedica.co.uk

200

Patients treated

With our own and partners products using our LentiVector-Enabled™ delivery based therapy.

8 Journey to profitability

Oxford BioMedica is now a business with rapidly growing revenues from process development, bioprocessing and royalty generating partnerships. Continued positive revenue growth is driving us closer to profitability.



[Understand more about our financial position and how we are getting closer to our goal of becoming a sustainable business in the financial review on page 32.](#)

Ideally placed

Our financial interest in a diverse range of products is growing and we will continue to invest in technology and proprietary gene and cell therapy concepts.

Gene therapy is now coming of age and we are ideally placed to benefit from the growth in this valuable sector over the coming years.

+\$100m

Licence to supply LentiVector® to Novartis

In July 2017 we signed an agreement to supply lentiviral vectors for CTL019 and other undisclosed CAR-T products from Novartis, and could potentially receive in excess of \$100 million.

-2%

Debt restructuring

The new \$55 million loan facility with Oaktree is on much better terms than our previous Oberland agreement. The cost of the loan including all related fees will be around 13%, a significant reduction from the 15% cost of the Oberland facility.



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Great potential

Gene and cell therapy has the potential to transform medicine, providing long term and potentially curative treatment options for a wide range of diseases. Indeed, several therapies, especially *ex vivo* cell therapies such as GlaxoSmithKline's Strimvelis™ (for immunodeficiency); Novartis' Kymriah™ (for r/r paediatric ALL); Kite/Gilead's Yescarta™ (for r/r B cell lymphoma), as well as Spark's Luxturna™ (inherited retinal disease) have been recently launched. We expect further products to be launched over the next few years as several gene and cell therapy products are in late stage development.

The sector holds significant promise, with the first commercial products now launched and others rapidly approaching the market. The gene and cell therapy market has the potential to grow into a multi-billion dollar sector and Oxford BioMedica has the expertise with lentiviral vectors to benefit from this opportunity.

Gene and cell therapies use viral vectors to deliver genetic payloads into patients' cells. Cells can be treated both *in vivo* and *ex vivo*. The two most commonly used viral vector families are lentiviral vectors and adeno-associated viruses (AAV). Lentiviral vectors have several important advantages over other vector systems:

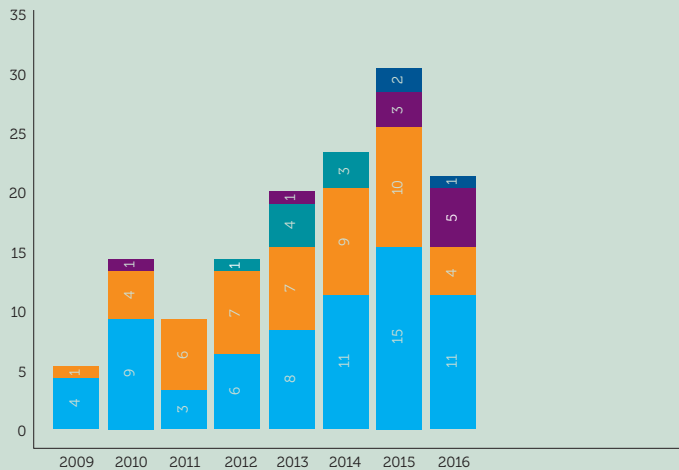
- Lentiviral vectors integrate into the DNA of target cells so that the genetic payload will replicate as cells divide. This is important for *ex vivo* therapies
- Lentiviral vectors can carry much larger genetic payloads (up to 9 kb) so they can treat a wider range of diseases and genetic disorders
- There is no pre-existing immunity for lentiviral vectors

Most of the clinical trials for gene and cell therapies are for monogenic disorders (such as diabetes), ocular disorders, neurological diseases and cancers. The cancer field is especially busy with *ex vivo* CAR-T therapies. *Ex vivo* therapies require integrating vectors and lentiviral vectors are the preferred choice for much of the current product development in the sector. There are 149 *ex vivo* lentiviral vector clinical studies underway as described in the Journal of Gene Medicine.

The first gene therapy approved in Europe back in 2012 was Glybera™ an *in vivo* treatment for lipoprotein lipase deficiency (LPLD), a rare inherited disorder which can cause severe pancreatitis. In 2016, Strimvelis™ was also approved in Europe, the first *ex vivo* stem cell gene therapy to treat patients with a very rare disease called ADA-SCID (Severe Combined Immunodeficiency due to Adenosine Deaminase deficiency). It wasn't until August 2017 that the US FDA approved the first gene therapy product in the United States, a CAR-T therapy for the treatment of blood cancers, Kymriah™ from Novartis. This was the world's first lentiviral enabled approved product. In November 2017, Kite/Gilead's Yescarta™ (a CAR-T therapy) and in December 2017, Spark's Luxturna™ (an *in vivo* treatment of inherited retinal disease) were approved by the US FDA.



Further information on the sector can be found on the Group's website at www.oxfordbiomedica.co.uk



Initiated lentiviral vector clinical trials by year and phase

Phase
 Phase I (light blue), Phase I/II (orange), Phase II (purple), Phase II/III (teal), Phase III (dark blue)

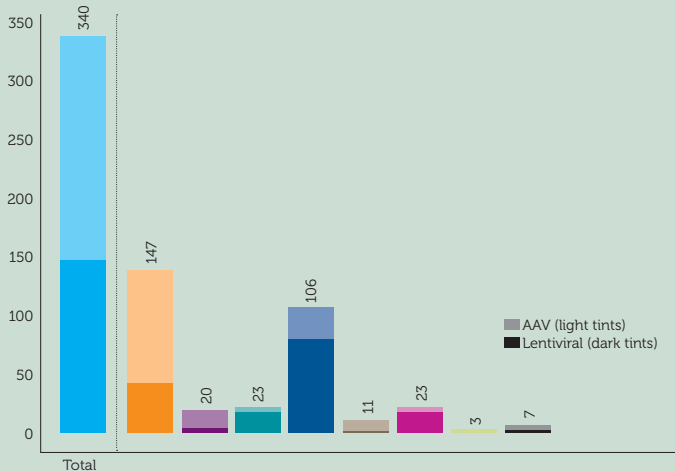
Source: Journal of Gene Medicine, April 2017



83% success

FDA approved

The trial for Novartis' Kymriah™ treated 63 children and young adults. 83% had their cancers go into remission within three months.



Gene therapy clinical trials with AAV or lentiviral vectors

Total number of clinical trials
 Monogenic (AAV 102, Lenti 45), Ocular (AAV 16, Lenti 4), Neurological (AAV 18, Lenti 5), Cancer (AAV 23, Lenti 83), Cardiovascular (AAV 10, Lenti 1), Infectious (AAV 4, Lenti 19), Inflammatory (AAV 3, Lenti 0), Others (AAV 6, Lenti 1), **Total (AAV 182, Lenti 158)**

Source: Journal of Gene Medicine, April 2017

\$10bn

Gene and cell therapy market potential

The gene and cell therapy market has the potential to grow into a multi-billion dollar sector.

Source: Clive Glover, GE Healthcare "Sales of cell and gene therapy will reach \$10 billion by 2021", October 2015

World-leading LentiVector® gene delivery platform

During 2017 Oxford BioMedica continued to make good operational progress in developing and exploiting its integrated LentiVector® gene delivery platform. The platform is the product of over 20 years’ research and development, and brings together a unique combination of patents and know-how, world-class bioprocessing facilities and an expert workforce. Indeed, in 2017 our platform became the world’s first lentiviral vector enabled product (Novartis’ Kymriah™), to be approved by the US FDA.

This world-leading position provides a foundation for both Oxford BioMedica and its partners to discover and develop novel gene and cell therapies, targeting conditions without current treatments, or with a significant unmet clinical need.

The Group’s LentiVector® platform provides a number of important advantages over other gene delivery systems. Notably, lentiviral vectors have a large payload capacity and integrate into the nucleus of target cells, allowing maintenance of the beneficial genetic payload when the target cells divide. As a result, the rapidly expanding cell therapy sector is increasingly recognising the strengths of the LentiVector® platform, and the Group has already established several partnerships with leading companies in the field. These generate significant revenues by providing collaborators access to Oxford BioMedica’s intellectual property, process development expertise and bioprocessing facilities. In addition, the Group has used its LentiVector® platform to discover and advance a number of pipeline products.

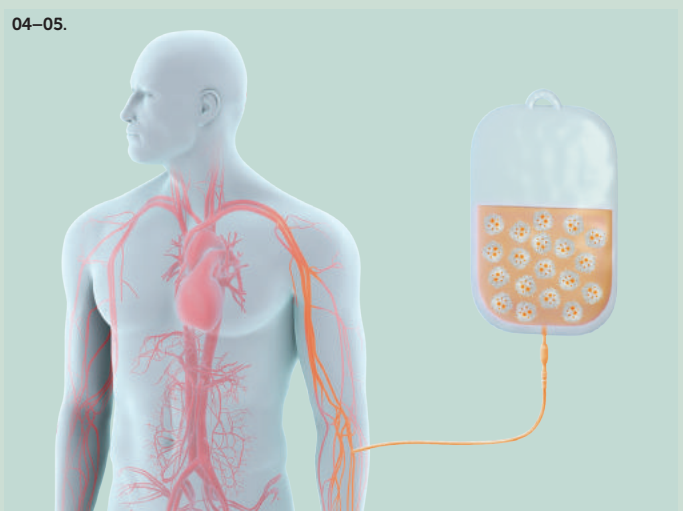
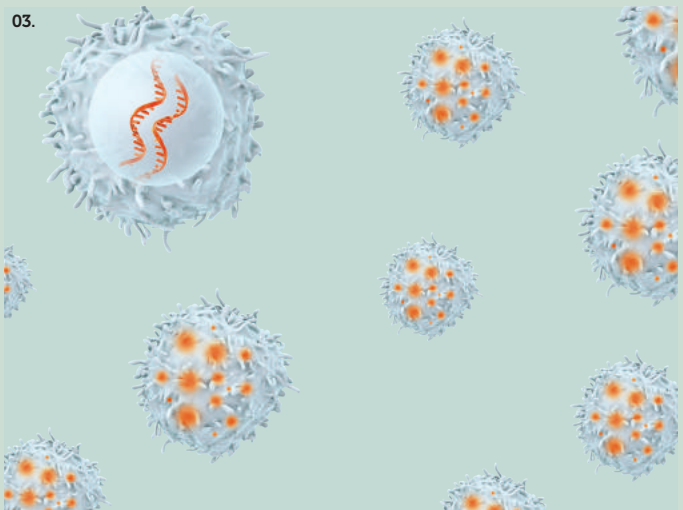
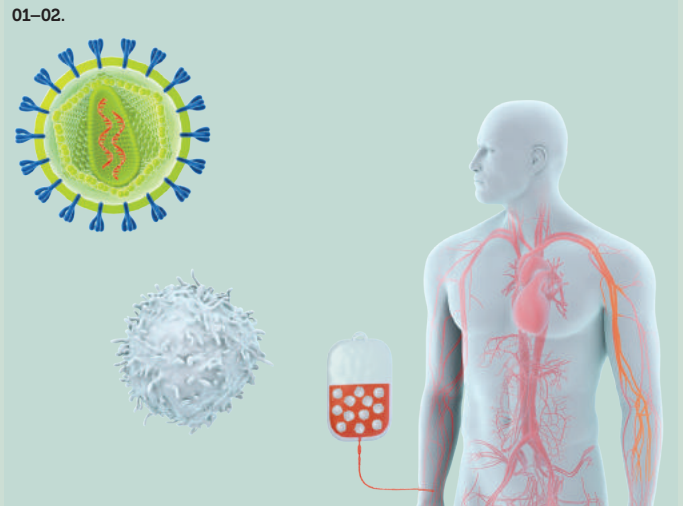
Example of in vivo gene therapy

CAR T-cell therapy for cancer (a Novartis product)

- 01. Oxford BioMedica produces GMP lentiviral vector encoding CAR targeting CD19 which is expressed on B-cell cancers**
- 02. T-cells isolated from patients**
- 03. Lentiviral vector encoding CAR targeting CD19 used to transduce expanded T-cells**
 T-cells harvested from a patient are transduced with the lentiviral vector encoding the anti-CD19 chimeric antigen receptor. The resulting CTL019 modified T-cells are expanded ex vivo prior to infusion into the patient
- 04. The modified T-cells are infused back into the patient**
- 05. Once inside the patient, the CTL019 cells multiply and target ‘hunt’ cancer cells and destroy them**
 The CTL019 cells destroy tumour cells expressing CD19 and persist in the body to guard against residual or recurring disease



To see other examples of how our LentiVector® delivery system works see our website:
www.oxfordbiomedica.co.uk/lentivector



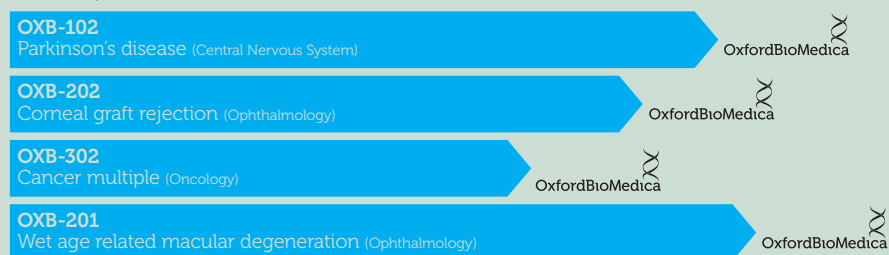
Product pipeline

We are working on several internal product candidates and have interests in an expanding range of partner programmes.

Product/programme	Research/ pre-clinical	Phase I	Phase I/II	Phase II	Phase III	Approved
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Oxford BioMedica proprietary products

To be spun-out or out-licensed



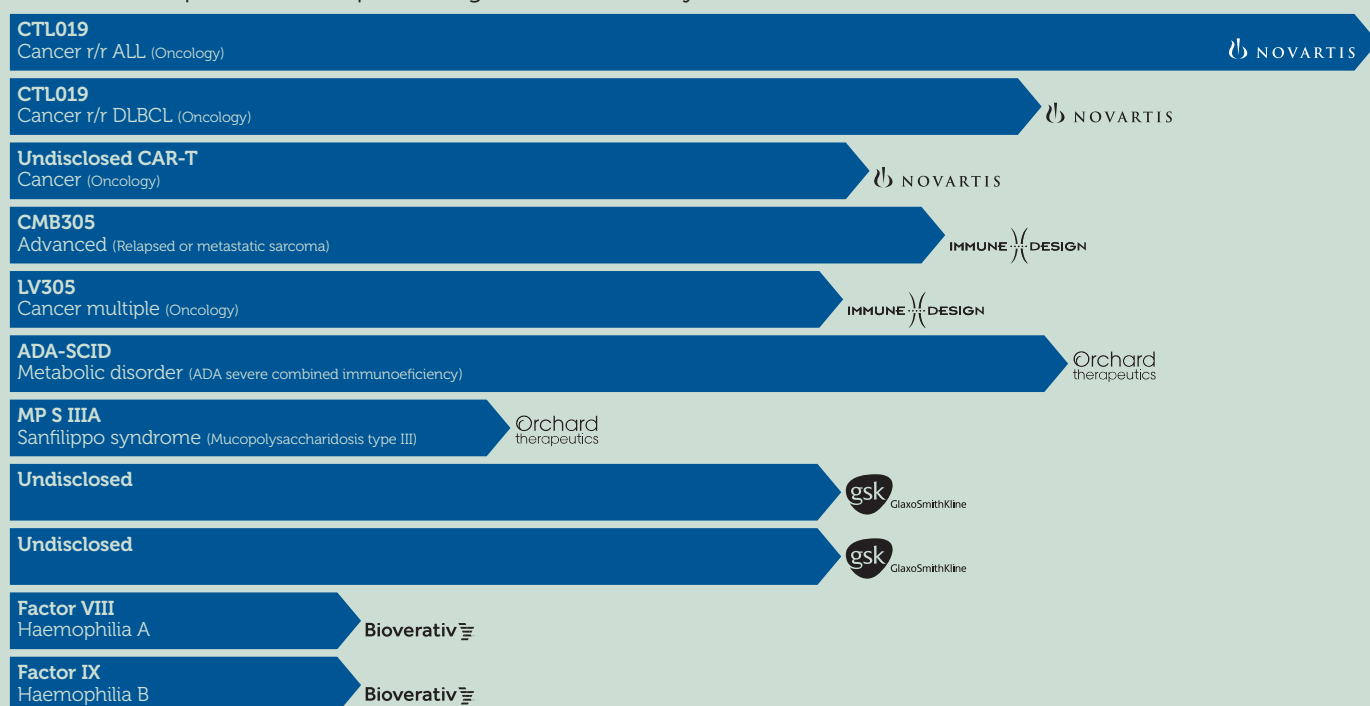
Oxford BioMedica partnered products

Development milestones and royalties



Partners' products

Process development and bioprocessing revenues, and royalties



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Partners' programmes

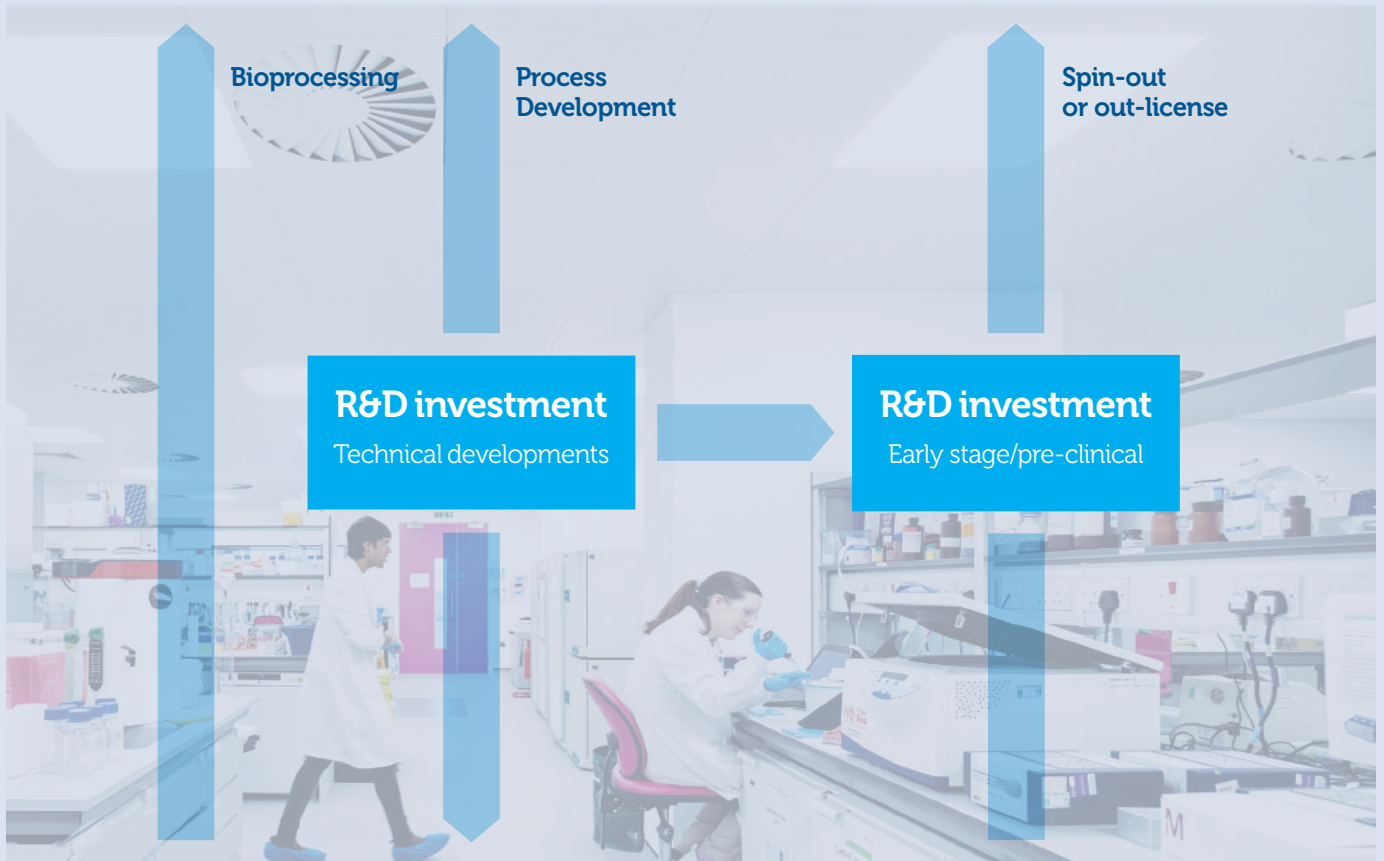
Multiple income streams

Process development fees | process development incentives | bioprocessing revenues | royalties

Oxford BioMedica products

Via spin-out or out-license

Development milestones | royalties | bioprocessing revenues



LentiVector® platform

Patents and know-how | facilities | expertise | quality systems

Our business model and strategy

Our business model, built on our world-leading LentiVector® gene delivery platform is the result of over 20 years of pioneering science and process development using lentiviral vectors, initially for *in vivo* therapies. Oxford BioMedica was the first organisation globally to use lentiviral vectors in an *in vivo* setting and therefore we had to design and develop vectors and manufacturing processes which would be both safe and effective. This work was the foundation of our unique combination of skills, patents and know-how which, together with our GMP clean room and laboratory facilities, combine to form our LentiVector® gene delivery platform.

Lentiviral vectors are key components of many promising new gene and cell therapies, and so our LentiVector-Enabled™ platform provides us with opportunities to generate short- and longer-term value through:

In-house development

We have our own portfolio of LentiVector-Enabled™ platform gene and cell therapy product candidates. We decided that clinical studies of these candidates will be developed with third party finance, using either out-licensing or by spinning out the programmes into one or more special purpose vehicles (SPVs). This will significantly reduce the cost and risk associated with clinical development, while providing us with potential equity stakes in the SPVs, and/or potential upfront, milestone and royalty payments, as well as bioprocessing and process development revenues. We will however continue to invest in early stage product concept development and pre-clinical studies, with a view to building a pipeline of candidates ready for clinical studies.

Partnering

We can provide our bioprocessing and process development expertise and facilities to third parties who want to accelerate the development of their own lentiviral vector programmes. In return for which, we receive short and medium term revenues, and longer term royalties based on licences to our extensive know-how and patents.

Freedom-to-operate licensing

We can provide other organisations with licences to use our important patents relating to lentiviral vector safety features and manufacturing efficiencies.

The graphic opposite illustrates our business model. The foundation is our world-leading LentiVector® platform, and our goal is to exploit this by gaining interests in a diverse range of gene and cell therapy products which can be both internally generated and as a result of our relationship with partners and collaborators.

The platform technology is still some way from being fully mature so we are continuing to invest R&D funds in improving the technology to retain our leading position, as this is what attracts other companies to work with us.

Principal risks facing the business

The principal risks facing the business, including how they are managed and mitigated, are set out in detail on pages 44 to 51. The main risks are:

- Risks associated with pharmaceutical product development including product safety issues, lack of efficacy, and failure to obtain regulatory approval
- Risks to our bioprocessing revenue from failure to manufacture lentiviral vector to the required standard
- Exposure to one or more of our partners ceasing to develop their products and thereby no longer requiring our services
- Failure to comply with the terms of the Oaktree loan facility
- Failure to out-licence or spin-out the Group's priority product development candidates so that development stops
- Inability to attract and/or retain highly skilled employees

Operational highlights

Leading LentiVector® delivery platform for gene and cell therapy partnerships

- Major commercial supply agreement signed with Novartis for the lentiviral vector to produce CTL019 and additional CAR-T products; over \$100 million revenue potential over three years
- \$105 million collaboration and licence agreement completed with Bioverativ post year-end to access Oxford BioMedica's LentiVector® platform and manufacturing technologies for haemophilia gene therapies
- Lentiviral vector demand is increasing and the Group is in several discussions regarding a range of additional collaborations

Novartis' Kymriah™ (tisagenlecleucel) (CTL019); the path to royalties

- First ever LentiVector-Enabled™ product approval for Novartis' Kymriah™ (tisagenlecleucel) in children and young adults with r/r B-cell acute lymphoblastic leukaemia (ALL) in the US
- Tisagenlecleucel (CTL019) sBLA submitted in the US by Novartis in r/r diffuse large B-cell lymphoma (DLBCL) in adults; product undergoing expedited review under breakthrough designation
- CTL019 European Marketing Authorisation (EMA) application filed by Novartis for r/r B-cell ALL in children and young adults and for r/r DLBCL in adults
- Primary analysis of results from the pivotal JULIET trial demonstrating that Kymriah™ (tisagenlecleucel) sustained complete responses at six months in adults with r/r DLBCL, a difficult-to-treat cancer

Progress with proprietary product development

- Partnering discussions ongoing for Oxford BioMedica's in-house priority development programmes, with a planned spin-out legal structure ready to be put in place for our ocular products
- The Group continued to invest modestly in programmes to maintain momentum and to continue to enhance their value
- Phase I/II clinical study to be initiated shortly for lead in-house programme OXB-102 in Parkinson's disease to further enhance product value

Preparing to service the expected lentiviral vector demand

- Successful facilities inspections completed by US and UK regulators; FDA and MHRA approval granted for lentiviral vector commercial manufacture and supply
- Additional premises identified in Oxford for new bioprocessing facility comprising four GMP manufacturing suites, fill/finish facilities and warehousing
- £2 million Innovate UK collaboration established to further enhance LentiVector® suspension technology
- £3 million grant awarded by Innovate UK to support the UK's efforts to produce viral vectors and ensure adequate supply to meet future demand

+28%

Gross income¹

Gross income increased by 28% to £39.4 million (2016: £30.8 million).

£2.0m

Capital expenditure

Capital expenditure £2.0 million (2016: £6.5 million).

-12%

Operating expenses²

Operating expenses excluding depreciation and amortisation and share based payments decreased by 12% to £22.9 million (2016: £26.1 million).

\$55m

Debt refinanced

Debt refinanced on significantly improved terms with \$55 million Oaktree Capital facility.

£1.9m

EBITDA³ loss (year)

EBITDA loss reduced to £1.9 million (2016: £7.1 million).

£14.3m

Cash

Cash of £14.3 million (31 December 2016: £15.3 million).

£5.7m

Operating loss

Operating loss for the year reduced 50% to £5.7 million (2016: £11.3 million).

£20.5m

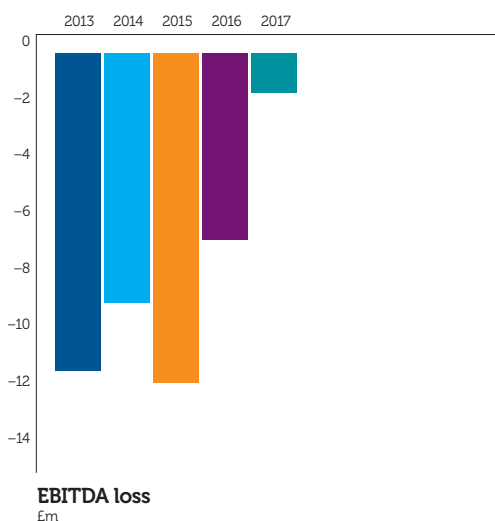
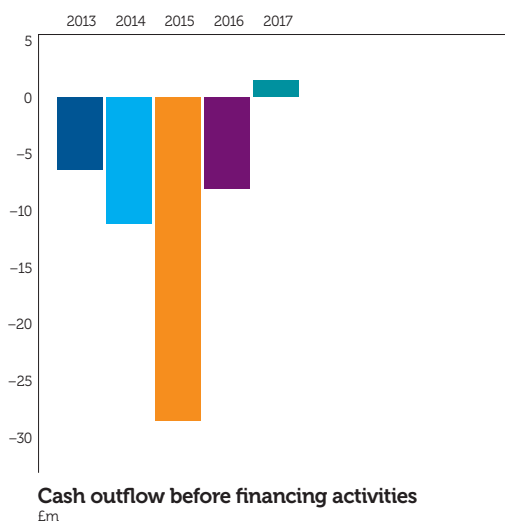
Equity placing in March 2018

Successful £20.5 million equity placing to fund further expansion of bioprocessing capacity.

£1.0m

Cash inflow

Cash outflow before financing activities reduced from an outflow of £8.3 million in 2016 to an inflow of £1.0 million.



Key financial indicator definitions (non-GAAP Alternative Performance Measures)

- 1 Gross Income is the aggregate of revenue (£376 million) and other operating income (£1.8 million) (2016: £278 million and £3.0 million respectively) (p34)
- 2 Operating expenses is Research, Development and Bioprocessing costs plus Administrative costs less Depreciation, Amortisation and share based payments (p34)
- 3 EBITDA is Earnings Before Interest, Tax, Depreciation, Amortisation, revaluation of investments and share based payment (p34)



"The gene and cell therapy market is rapidly transforming into a multi-billion dollar opportunity and the Group's strategy is delivering significant shareholder value – we expect this to continue."

Dr. Lorenzo Tallarigo
 Chairman

Strategic progress

During 2017 Oxford BioMedica made impressive progress, and this momentum is continuing in the current year. With the gene and cell therapy market rapidly transforming into a multi-billion dollar opportunity, the Group's refined strategy that I laid out in last year's Annual report is delivering significant shareholder value and we expect this to continue.

Oxford BioMedica's world-class LentiVector® platform enables the development of revolutionary gene and cell therapy products, both for partners and as the foundations of the Group's in-house priority programmes. Providing partners with access to Oxford BioMedica's world-class technologies, intellectual property and know-how generates upfront licensing fees, complemented by long-term economic interests, including royalties on sales of partners' products.

This strategic approach balances the risks and rewards associated with bringing next generation therapies to market, while allowing the Group to invest in its platform, and develop new product concepts for future clinical development. In addition, providing partners with access to the Group's state-of-the-art bioprocessing facilities generates significant ongoing income from process development and lentiviral vector production. Following the approval of Novartis' potential blockbuster CAR-T product, Kymriah™ (tisagenlecleucel; formerly CTL019), the Group now generates revenues as the sole commercial manufacturer of the lentiviral vector that encodes the product, as well as receiving sales-based royalties.

The approval of Novartis' Kymriah™ represents a strategic milestone for the Group, with its LentiVector® platform being used commercially in order to treat patients. The widely acknowledged success of this first LentiVector-Enabled™ product has facilitated additional partnering opportunities, with the Group in discussion with several potential partners. Capitalising on this momentum Oxford BioMedica recently established a major strategic collaboration with Bioverativ in haemophilia gene therapy, and has attracted a number of additional potential partners for its in-house development programmes.

Operational delivery

Underpinning the Group's strategic progress is the day-to-day operational delivery of the Oxford BioMedica team. The team made important contributions to Novartis' tisagenlecleucel regulatory filings, preparing Chemistry, Manufacturing and Control elements of the dossiers and successfully navigating inspections from the UK MHRA and the US FDA. In parallel, the team continued to make good progress in its work with the Group's other partners, including Orchard Therapeutics, Immune Design and GC LabCell.



1. World-class platform

The LentiVector® platform enables the development of revolutionary gene and cell therapy products, both for partners and as the foundations of the Group's in-house priority programmes.

\$105m

Bioverativ partnership

Our recently signed partnership with Bioverativ has the potential to generate in excess of \$105 million across two haemophilia programmes, in addition to royalties on product sales.

The Group's operational progress extends to its in-house priority development programmes, OXB-102 (for Parkinson's disease), OXB-202 (for corneal graft rejection) and OXB-302 (for cancer). The Group is in final preparations for the OXB-102 programme to move into clinical studies. Additionally, it is poised to establish a legal structure to facilitate the spin-out of its ocular products while retaining a financial interest in their potential upside. The Group has continued to invest modestly in programmes to maintain momentum and to continue to enhance their value. The lead priority programme, OXB-102, has the greatest potential value to the Group as indicated by expressions of interest in this asset, and therefore the Board has authorised the initiation of the product's first-in-human clinical study. This decision reflects Oxford BioMedica's increasing financial strength and the potential upside value created by future clinical progress.

Facilities development

The Group completed a major facilities expansion programme in 2016, providing additional state-of-the-art production suites and laboratories. These have enabled Oxford BioMedica to meet the needs of its partners, while also providing capacity to further develop the LentiVector® platform, as evidenced by the Innovate UK collaboration that is working to enhance the Group's proprietary suspension technology. With recognition of Oxford BioMedica's leading position in the design, development and production of lentiviral vectors continuing to grow, the Board recently authorised a further expansion of the Group's capacity. This is designed to accommodate additional partners and support ongoing technology development. The new expansion is advancing at pace, with additional premises close to being secured nearby to the Group's Oxford headquarters, and facilities design underway, together with catalytic grant funding from Innovate UK.

Financial progress

Oxford BioMedica is building a strong commercial business and is in good financial health. With the ongoing success of the collaboration with Novartis, and the Group's wider portfolio of strategic partnerships, the Board is able to maximise shareholder value by targeting our investment across the Group – the platform, our facilities, and modestly in our products. Following the launch of Kymriah™ in September 2017, the Group will now be adding sales-based royalty payments to its revenue streams. These are complemented by commercial production revenue under a new Novartis commercial supply agreement, which has the potential to deliver over \$100 million in the coming three years, excluding sales-related royalties due to the Group.

In February 2018 the Group continued building on this progress, adding a further major agreement to its portfolio. This new partnership with Bioverativ also has the potential to generate in excess of \$105 million across two haemophilia programmes, in addition to royalties on product sales.

With its business strengthening significantly throughout 2017, the Group took measures to leverage its increasing financial strength. In June, the Group refinanced its debt facility on greatly improved terms. Recently, it completed a £20.5 million equity placing with leading financial institutions to fund further facilities expansion in order to cater for the rapidly growing demand for Oxford BioMedica's unique capabilities involving lentiviral vector development, scale-up, analytics, access to intellectual property and commercial GMP bioprocessing capabilities.

Organisation and Board

I am pleased to welcome Dr. Heather Preston to the Group's Board as a non-executive director. Heather is a highly experienced advisor, investor and board member at many life science companies, both in the US and Europe. She is currently a partner and Managing Director of TPG Biotech and has previously worked at JP Morgan Partners. Prior to that she led the pharmaceutical and medical products consulting practice at McKinsey & Co. in New York.

Peter Nolan is retiring from his role as Chief Business Officer having worked with the Group since 1996. Peter will step down from the Board, which he joined in 2002, after the Group's Annual General Meeting in 2018. I would like to thank Peter for his services to Oxford BioMedica since 1996, and I am pleased to say that he will continue to be a consultant to the Group.

Finally, I would like to thank Tim Watts, who retired as Chief Financial Officer in September having made a significant contribution to the business over the past five years. At the same time we warmly welcome his successor, Stuart Paynter, who brings extensive experience of the biotechnology and pharmaceutical industry, most recently from his time at Shire Pharmaceuticals.

The past year has been a period of intense activity for the Group, and I wish to thank the whole team for their dedication and hard work. The recent transition to commercial supply under the new Novartis agreement, and the addition of further partners, has led to significant growth in the quality and production teams, and a further increase in headcount is anticipated as part of the ongoing facilities expansion programme. To support the increased activities of the Group, the Senior Management Team has been augmented with the appointment of Lisa Giles as Chief Project & Development Officer, Helen Stephenson-Ellis as Chief People Officer and Nick Page as Chief Operations Officer. All the new personnel will be in place by 3 April. I would also like to take the opportunity to welcome the new apprentices who joined Oxford BioMedica in January 2018. This apprenticeship programme is part of the Group's collaboration with the Government and other life science organisations to help develop the sector's next generation of workers.

Outlook

2017 has been a period of significant progress for Oxford BioMedica. The Group's strategy is delivering significant shareholder value and the Board has confidence in the coming year. With further approvals anticipated for Novartis' tisagenlecleucel, and the roll out of the product in Europe and the US, Oxford BioMedica is well positioned to drive revenue growth from its sole supply of the product's lentiviral vector in addition to sales-based royalties. Additionally, I expect continued progress in the Group's wider portfolio of collaborations, including with new partner Bioverativ, and I look forward to the spin-out or out-licensing of in-house priority programmes. I believe 2018 will be another important year for Oxford BioMedica, as the Group continues to strengthen its position as one of the world's leading gene and cell therapy companies.

Dr. Lorenzo Tallarigo
Chairman



Full biographies for the Board of Directors can be found on pages 54 to 55.

1. John Dawson

Chief Executive Officer

John Dawson joined Oxford BioMedica's Board as non-executive director in August 2008 and he was appointed Chief Executive Officer in October 2008. Previously, he held senior management positions in the European operations of Cephalon Inc., including Chief Financial Officer and Head of Business Development Europe. While at Cephalon he led many deals building the European business to over 1,000 people, and to a turnover of several hundred million US dollars and in 2005 led the \$360 million acquisition of Zeneus by Cephalon. Prior to this time at Cephalon he was Director of Finance and Administration of Serono Laboratories (UK) Limited. He is currently a non-executive director of Paion AG.

2. Stuart Paynter

Chief Financial Officer

Stuart Paynter joined Oxford BioMedica and the Board in August 2017. He has 16 years' experience in the pharmaceutical and healthcare sectors. He qualified as a chartered accountant with Haines Watts before moving to EDS. He subsequently joined Steris, and worked in a variety of roles within the healthcare and life sciences divisions prior to becoming the European Finance Director. He then moved to Shire Pharmaceuticals where he became the senior director of finance business partnering for all business outside of the US. He then moved to a corporate finance role before becoming the global head of internal audit. Prior to joining Oxford BioMedica he was head of finance business partnering at De La Rue plc. He is a member of the Institute of Chartered Accountants in England and Wales.

3. Peter Nolan

Chief Business Officer

Peter Nolan was appointed to Oxford BioMedica's Board in May 2002 having been a senior leader at the Company since it was founded in 1996. Prior to joining Oxford BioMedica he served as Head of the Biotechnology Unit at the UK Department of Trade and Industry for eight years, where he was responsible for collaborative research programmes between industry and the research councils. Previously he held senior positions in the Laboratory of the Government Chemist and also the Metropolitan Police Laboratory where he was a senior forensic scientist. He has held a number of senior posts in industry organisations, including director of the UK BioIndustry Association and Chairman of the Oxfordshire Bioscience Network.

4. Kyriacos Mitrophanous

Chief Scientific Officer

Dr. Mitrophanous joined Oxford BioMedica in 1997. He has over 20 years of lentiviral vector experience covering a range of technical disciplines, including the development of gene and cell therapies, delivery platform technologies, bioprocessing and analytics. He is a recognised world-class expert in the field, a named inventor on numerous lentiviral vector patents and an author of a number of key papers, which have been published in *The Lancet* and *Human Gene Therapy*. In his current role he is responsible for the development of Oxford BioMedica's new product candidates and LentiVector® platform. He holds a PhD in Molecular Biology from University College London and has conducted post-doctoral research at the University of Oxford. He is a director of the UK BioIndustry Association.

5. James Miskin

Chief Technical Officer

Dr. Miskin joined Oxford BioMedica in 2000. He has 15 years of experience in GxP assay development, analytical testing, lentiviral based vector bioprocessing development and cGMP production. In his current role, he has overall responsibility for Oxford BioMedica's biomanufacturing and supply activities, as well as its process development work. He is also a named inventor on several patents in the field. He holds a Bachelor of Science degree and PhD in Molecular Biology from the University of Leeds and subsequently conducted post-doctoral research at The Pirbright Institute for a number of years. He is a member of the UK BioIndustry Association Manufacturing Advisory Committee.



"The Group has played a crucial role in enabling revolutionary gene and cell therapies to become a reality. As a world leader in this space, Oxford BioMedica is now in a strong position to deliver value to both patients and shareholders."

John Dawson
 Chief Executive Officer

Delivering on our promise

Oxford BioMedica has been resolutely focused on developing revolutionary gene and cell therapies to benefit patients around the world. Pioneering a new field of medicine is challenging, but the promise of life-changing treatments for serious diseases, potentially from a single administration, has sustained Oxford BioMedica and given birth to a highly-innovative new sector of the life sciences industry. The Group has played a crucial role in enabling this new generation of therapies to become a reality. As a world leader in this space, it is now in a strong position to deliver value to both patients and shareholders.

Oxford BioMedica was the first organisation ever to administer an *in vivo* lentiviral vector into patients. In September 2017 the first ever product featuring our LentiVector-Enabled™ technology was launched following the FDA's approval of our partner Novartis' Kymriah™ (tisagenlecleucel). With a series of subsequent filings in an additional oncology indication in the US, and for both indications in Europe, this breakthrough product is demonstrating the potential of this new class of therapies. This ongoing success is highlighting the value of Oxford BioMedica's world-leading LentiVector® technology, and its role in enabling these revolutionary products.

Building a successful gene and cell therapy business

With gene and cell therapies built on vectors specifically designed to encode and deliver their therapeutic payload, Oxford BioMedica's lentiviral vector technology is becoming increasingly recognised as the industry leader. As we outlined in our 2016 Annual report, our business is built on three strategic pillars, each leveraging our LentiVector® platform:

- *Partnering*: by providing strategic partners access to our unique lentiviral vector design, development and production capabilities we generate immediate and ongoing revenues, as well as longer-term royalties on future product sales.
- *In-house development*: we are progressing an in-house portfolio of LentiVector-Enabled™ gene and cell therapy candidates prior to out-licensing or spin-out. This enables us to reduce the risk and cost associated with later stage clinical development, while retaining significant economic interest in the products and the potential to generate process development and production revenues.
- *Technology licensing*: by providing partners access to our proprietary lentiviral vector technologies, such as patented safety features and manufacturing efficiency processes, we generate licensing fees and royalties on future product sales.

A year of progress

During the last year we made good progress in each area of our business. Our work with partner Novartis has continued to drive strong revenue growth, both from our substantial contributions to Kymriah™'s regulatory filings and from our commercial-scale bioprocessing for the product's launch. During 2017, the FDA and MHRA undertook inspections of our facilities, and we subsequently received formal approval for lentiviral vector commercial supply, underpinning our role as sole supplier of the vector encoding for Kymriah™, and supporting our work with other partners.

With our state-of-the-art laboratories and bioprocessing suites fully operational throughout 2017, and at near capacity for much of the year, our gross income increased significantly to £39.4 million, growing 28% compared with 2016, itself a record year. This high level of utilisation reflects the increasing level of activity from our growing roster of partners, as well as our ongoing technology development work to retain our lead in the gene and cell therapy field. During the year both areas achieved notable successes. On 14 February 2018 we completed a major partnership agreement with Bioverativ to advance lentiviral vector-based haemophilia gene therapies. In addition to an upfront technology access payment of \$5 million, the partnership has the potential to generate over \$100 million in milestone payments, as well as process development and bioprocessing revenues and a royalty on net sales of products. In August we established a £2 million two-year collaboration co-funded by the UK government's innovation agency, Innovate UK. The partnership will apply novel technologies to further enhance our bioreactor suspension production process. In addition, on 23 January 2018, we received a £3 million grant from Innovate UK to help address the current and predicted shortfall in the UK to produce viral vectors.

Our in-house programmes also progressed during the year. We completed preparations for OXB-102 to move into the clinic, and are in active discussions with a number of third-parties to out-license or spin-out the products. This will allow us to focus on developing new candidates for partnering while reducing the risk and cost of later-stage development. As part of this strategy we have taken the step to move our lead programme, OXB-102 for Parkinson's disease, into initial clinical development. This relatively modest investment leverages the growing financial strength of the business, while adding significant additional value to the product as it progresses towards the clinic.

As a result of the industry's growing recognition of our lentiviral vector design, development and production expertise, we are rapidly filling the capacity in our current facilities. Consequently, we are progressing to lease a large vacant facility near our Windrush Court headquarters to allow further expansion. Over the coming 18 months we intend to fit out four GMP 200 litre production suites, a fill/finish facility and warehouse, effectively doubling our existing facilities. To fund this expansion plan that will service the rapidly growing global demand for lentiviral vectors, we recently raised £20.5 million (gross) through an equity placing with a number of leading institutional investors.

An exciting future

The past year has been a period of great transformation for Oxford BioMedica. The first LentiVector-Enabled™ product came to market, our revenues are growing strongly and the business is transitioning towards profitability. With the success of our Novartis partnership and the signing of the Bioverativ agreement validating our technology and wider capabilities, 2018 promises to be another exciting year of progress. We look forward to further approvals and launches of Novartis' tisagenlecleucel, as well as initiating work under our new Bioverativ partnership and advancing our ongoing collaborations with Orchard Therapeutics, GC LabCell and Immune Design. With demand growing for our proprietary lentiviral vector technology, we plan to further expand our portfolio of strategic collaborations, and conclude discussions with potential partners for our in-house development programmes. Our position in the sector is now firmly established, and we look forward to expanding our role as a world-leading gene and cell therapy business, both for patients and our shareholders.

John Dawson
Chief Executive Officer

Novartis partnership

In August 2017 Oxford BioMedica's lead partnership achieved a major milestone when Novartis' chimeric antigen receptor T cell (CAR-T) therapy Kymriah™ (tisagenlecleucel; formerly CTL-019) received the first ever approval for a LentiVector-Enabled™ product. Analysts believe the breakthrough cell therapy has blockbuster potential, with predicted peak sales of at least \$1.4 billion per annum (source: Global Data Consensus Forecast Jan 2018).

Regulatory progress

In early 2017 Novartis filed a Biologics License Application (BLA) for tisagenlecleucel with the United States Food and Drug Administration (FDA) for the treatment of paediatric and young adult patients with relapsed or refractory (r/r) B-cell acute lymphoblastic leukaemia (ALL). At the end of August and earlier than expected, the FDA approved the product following a unanimous positive vote by its Oncologic Drugs Advisory Committee.

Tisagenlecleucel has continued to make rapid progress, and at the end of October Novartis filed a supplemental BLA for the treatment of adults with relapsed or refractory diffuse large B-cell lymphoma (DLBCL) who are ineligible for autologous stem cell transplant (ASCT). The filing was based on positive results achieved in the global, multi-centre Phase II JULIET trial, and in December the study investigators presented follow-up data showing complete responses were sustained six months after treatment in this difficult to treat cancer. Earlier in the year, Kymriah™ received breakthrough designation which will expedite the FDA review process. As a result, approval of the product's second indication is anticipated in the coming weeks.

Novartis plans to roll out the product beyond the United States, and a week after its second filing with the FDA, it submitted a Marketing Authorisation Application to the European Medicines Agency. The application covers the treatment of both r/r B-cell ALL in children and young adults, and r/r DLBCL in adults ineligible for ASCT. In January 2018, Novartis received US FDA Priority Review for Kymriah™ for adults with r/r DLBCL and also received from the EMA accelerated assessment for children, young adults with r/r B-cell ALL and adult patients with r/r DLBCL. Novartis plans further regulatory filings in a number of additional countries in 2018.

As the sole manufacturer of the lentiviral vector that encodes tisagenlecleucel, Oxford BioMedica played a key role in the US and European filings. Oxford BioMedica made significant contributions to the Chemistry, Manufacturing and Controls (CMC) components of the regulatory dossiers, in addition to manufacturing the validation batches required for regulatory approval.

Commercial supply agreement

Under the 2014 collaboration and licensing agreement with Novartis, Oxford BioMedica successfully supplied the investigational lentiviral vector encoding tisagenlecleucel during the product's development. In anticipation of approval and launch, the companies established a major commercial supply agreement in July 2017. Under the terms of the three-year agreement, which is extendable for a further two years, Oxford BioMedica has the potential to receive over \$100 million. This includes a \$10 million upfront payment, and revenues for development services and the supply of lentiviral vectors used to generate tisagenlecleucel and a second CAR-T product currently in development. In addition, Oxford BioMedica will receive royalty payments on commercial sales of all CAR-T related products in the Novartis pipeline.

Bioverativ partnership

The ongoing success of our partnership with Novartis, culminating in the first ever approval of a CAR-T therapy, has significantly raised the profile of Oxford BioMedica's LentiVector® platform. Building on this momentum, we completed a collaboration and licence agreement with haemophilia specialist, Bioverativ in February 2018. The agreement provides Bioverativ with access to Oxford BioMedica's lentiviral vector technology and covers the development and manufacturing of lentiviral vectors for use in the treatment of haemophilia A and B. Under the terms of the agreement Oxford BioMedica has the potential to receive over \$100 million, including a \$5 million upfront payment and royalties on future product sales.

Partnership portfolio

During the year we also made progress in our wider portfolio of partnerships:

- Orchard Therapeutics: we established our collaboration with Orchard Therapeutics in November 2016, focusing on the development of autologous ex vivo lentiviral gene therapies for primary immune deficiencies and inherited metabolic disorders. Orchard Therapeutics is responsible for the clinical development and commercialisation of the products. During 2017 we advanced the development of lentiviral vectors designed to encode the gene therapies for ADA-SCID (OTL-101) and MPS-III A (OTL-201). It is anticipated that Orchard will file a BLA for OTL-101 during the second half of 2018.
- Immune Design: we continue to progress our expanded collaboration with Immune Design, which is focused on the use of lentiviral vector-based gene therapies for the treatment and prevention of cancer. The lead programme targeting soft tissue sarcoma and other NY-ESO-1 expressing tumours is currently progressing towards Phase III clinical testing.
- GC LabCell: our collaboration brings together Oxford BioMedica's proven LentiVector® platform with GC LabCell's natural killer (NK) cell technology as part of our strategy to develop a pipeline of next generation product candidates. The 50:50 partnership is focused on the discovery and early-stage development of gene modified NK cell-based therapies targeting life-threatening diseases, such as cancer, and during the year we advanced a number of product concepts.

In-house product development

Following the Group's refined product development strategy laid out in its 2016 Annual report, we initiated discussions with a number of third-parties to advance our priority in-house product candidates into clinical development. By out-licensing or spinning-out the products into special purpose vehicles, Oxford BioMedica has the potential to benefit from upfront fees or equity stakes, vector development and bioprocessing revenues, milestone payments and sales-based royalties, while reducing the risk and cost of in-house clinical development.



1. Raised profile

The ongoing success of our partnership with Novartis, culminating in the first ever approval of a CAR-T therapy, has significantly raised the profile of Oxford BioMedica's LentiVector® platform.

2. In-house clinical development

During the year we initiated discussions with a number of third-parties to advance our priority in-house product candidates into clinical development.

We modestly invested in our most advanced in-house programme by progressing OXB-102 for Parkinson's disease towards the clinic. During 2017 we completed manufacture of clinical trial materials for the study, and started working on preparing trial centres in Cambridge and London. The first patient is likely to receive the novel gene therapy in the first half of 2018 and we anticipate data from the first cohort of the study within one year. The modest investment required to conduct this Phase I/II study leverages the significant preparations already in place, and Oxford BioMedica's growing financial strength. Following earlier encouraging proof-of-concept results, we anticipate that clinical progress will add significantly to the programme's value.

To facilitate the spin-out of our in-house ocular assets, we are looking to establish a dedicated legal structure in the first half of 2018. This will encompass our priority programme OXB-202, which targets corneal graft rejection, as well as OXB-201 for wet age-related macular degeneration. We are currently in discussions to launch the spin-out, and are exploring a number of sources of potential financing including venture capital funding.

The Group will continue to invest in the identification and early stage development of novel gene and cell therapy products based on the LentiVector® gene delivery platform. This approach is designed to provide an ongoing pipeline of next generation product candidates while also building new intellectual property to maintain Oxford BioMedica's leadership position in the gene and cell therapy field. Where appropriate the Group would also consider in-licensing suitable targets and technologies.

LentiVector® platform development

Oxford BioMedica's business is underpinned by its world-leading lentiviral vector technology, development expertise, manufacturing capabilities and intellectual property. Together, these comprise the LentiVector® platform. During the year we continued to refine and enhance the platform as part of the continuous development programme designed to retain our leading position in the field of LentiVector-Enabled™ gene and cell therapy:

- Regulatory approvals: during the first half of 2017 the FDA completed a pre-licence inspection of our facilities and systems as part of the BLA review process for Novartis' Kymriah™. In the second half of the year, the UK regulatory authority, the MHRA, granted Oxford BioMedica a Manufacturer / Importer Licence for the commercial production and supply of lentiviral vectors following a successful inspection of our facilities.
- Next generation bioprocessing: we recently began the transition from manual, labour-intensive cell factory bioprocessing to our next generation single-use bioreactor system at 200L scale for lentiviral vector supply. This represents a production step change, providing major increases in capacity and efficiency and significantly reducing cost of goods. In parallel we introduced the use of our proprietary TRiP system, which significantly enhances production yields for a range of vectors, including those based on lentiviruses. These novel systems are now established at development scale for use in partners' and internal programmes. Additionally, our TRiP system has significant licensing potential as the gene and cell therapy field continues to expand.
- Innovate UK collaboration: in August 2017 we established a £2 million collaboration with a number of partners, partly funded by the UK government innovation agency, Innovate UK. The two-year collaboration will apply novel control and operating technologies to Oxford BioMedica's industrial-scale bioreactor production system to further enhance productivity. In January 2018 we received a grant award of £3 million from Innovate UK to support the UK's efforts to produce viral vectors and ensure adequate supply to meet future demand.
- Facilities expansion: with the ongoing success of our collaboration with Novartis, our expanding portfolio of partnerships and our in-house platform development activities, the facilities expansion we completed in 2016 is now running close to full capacity. As global demand for lentiviral vectors, and for our expertise, continues to increase, we recently took the decision to initiate a programme of further expansion to ensure sufficient future capacity. We are planning to lease an 80,000ft² (7,400m²) site on the Oxford Business Park close to our Windrush Court headquarters. Initially, we plan to fit out and bring 25,000ft² (2,300m²) on line by the second half of 2019, with the option to further develop the site. This first stage of expansion will include two GMP suites each containing a 200 litre bioreactor (upgradable to larger bioreactors when required), complemented by a fill / finish facility and warehousing. In addition to meeting future capacity requirements, the new site will eliminate the need for external warehousing.



1. Next generation bioprocessing

We recently began the transition from manual, labour-intensive cell factory bioprocessing to our next generation single-use bioreactor system at 200L scale for lentiviral vector supply.

2. Leveraging LentiVector®

The sector is increasingly recognising our LentiVector® platform as the world leader and we intend to leverage this position to further develop our business.

Organisational development

During 2017, Oxford BioMedica continued to develop its organisation in line with its expanding partnership activities and in-house development work. As part of the transition to commercial lentiviral vector production and supply, and significant contributions to Novartis' tisagenlecleucel regulatory filings, the organisation maintained a strong focus on its quality processes, and expanded both its quality and regulatory teams.

During the year we also introduced a new apprentice scheme. Working with Government and other life sciences organisations, the scheme is designed to train and develop the next generation of workers, further expanding the sector's skills base. Our first apprentices joined the Group in January 2018, and we anticipate expanding the programme in the coming years.

Promising outlook

The past year has been a period of major accomplishments for Oxford BioMedica and we look forward to continuing this progress in 2018. The launch of tisagenlecleucel anticipated in Europe, and in a further indication in the US, we look forward to delivering under our commercial supply agreement with Novartis, growing our production revenues, and generating sales-based royalties. As the sector increasingly recognises our LentiVector® platform as the world leader, we intend to leverage this position to further develop our business. With discussions ongoing with a number of organisations, we hope to add to our strategic collaborations and to progress our in-house ocular and cancer programmes into the clinic with third-party funding. We also look forward to adding value to our in-house Parkinson's disease therapy as we move towards a Phase I/II study.

Our business is truly LentiVector-Enabled™. Our unique platform of lentiviral vector technologies, expertise, intellectual property and facilities, is enabling the development of revolutionary therapies for patients with devastating diseases. With our strategic partnerships underpinning our business, and our in-house development work enhancing our capabilities, Oxford BioMedica is poised to leverage its position as a patient-focused, world-class gene and cell therapy business.

2017 objectives

Performance against priorities

Objective 1

Developing the LentiVector® platform

The LentiVector® platform is the fundamental base of our business and we therefore plan to continue to develop it to maintain the leadership position it gives us. Targets for 2017 include the use of our new 200 litre bioreactor process to manufacture viral vector for our partners, to secure regulatory approval, to manufacture viral vector for commercial use, and several confidential process improvement targets.

These goals have been met. We successfully validated the use of our new 200 litre bioreactor process to manufacture viral vector for our partners, and also secured regulatory approval from both the FDA and MHRA to manufacture viral vector for commercial use for Novartis' Kymriah™ product. In addition, we also successfully achieved several confidential process improvement targets.

Objective 2

Product development

Although the LentiVector® platform is the fundamental base of our business, ultimately the most value is derived from products. As we have previously announced, our intention is to reduce the financial risk of clinical stage product development while retaining significant financial interest in our priority programmes by out-licensing or spinning them out into SPVs funded by third parties. Our goal is to achieve this during 2017 for OXB-102, OXB-202 and OXB-302.

In 2017, although we were close to spinning out the ocular programmes into a SPV and were in detailed discussions regarding partnering OXB-102 (Parkinson's disease), these transactions were not completed by the year-end.

Objective 3

Business development

In 2016 we increased our product partners from one (Novartis) to three, with new and extended relationships with Orchard Therapeutics and Immune Design. We also established a R&D collaboration with Green Cross LabCell. In 2017 we intend to secure further revenue and royalty generating partnership relationships, and build further on those we already have.

During 2017 and early in 2018 we increased our product partners from three to four with a new collaboration and licence agreement with Bioverativ. In June 2017 we also secured a \$100 million commercial and clinical supply agreement with Novartis. During 2018 we intend to secure further revenue and royalty generating partnership relationships, and build further on those we already have.

Objective 4

Corporate and organisational

The Board has set the management team certain confidential targets relating to the Group's financial performance and further organisational improvement objectives.

Re-financing of the debt on significantly improved terms with Oaktree in June 2017 has helped to improve the financial position of the Group. In addition, we have been able to reduce the cash burn of the Group which along with increased revenues, have put the Group on firmer financial footing.

Objectives set for 2018

Objective 1

Support partner portfolio advancement

Targets for 2018 include supporting our partners in order to gain approval and launch key products in both the US and EU, support the progress of programmes into the clinic, and also deliver on our commitments to partners.



Objective 2

Progress action on implementing strategy for products

Our goals for 2018 include achieving the successful progression of key programmes against plan, to deliver new pre-clinical products to the Group, and also, as previously announced, to reduce the financial risk of clinical stage product development (while retaining significant financial interest) by partnering or spin-out of OXB-102 and the ocular programmes.



Objective 3

Business development

In 2018 we intend to secure further revenue and royalty generating partnership relationships, and to build further on those we already have.



Objective 4

Corporate and organisational

The Board has set management certain confidential targets relating to the Group's financial performance, as well as further organisational improvement objectives.





"The Group expects that gross income and EBITDA will continue to grow strongly in 2018."

Stuart Paynter
 Chief Financial Officer

Financial transformation

2017 has continued the financial transformation of the Group discussed in the 2015 & 2016 financial reviews. Selected highlights are as follows:

- Gross income increased by 28% over 2016 and has now increased by 168% since 2014
- The journey towards profitability continued with EBITDA losses pared back from £7.1 million in 2016 to £1.9 million in 2017
- "EBIDA" losses (EBITDA adjusted by the R&D tax credit) were reduced from £3.4 million to a profit of £0.8 million in 2017
- The Platform segment made an EBITDA profit of £2.9 million and an operating profit of £0.2 million

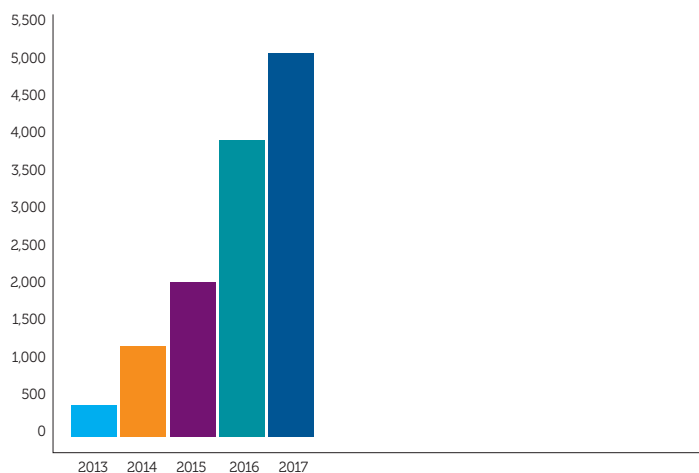
The growth in gross income was driven by increased bioprocessing clinical batch orders for Novartis and Orchard Therapeutics. Our new bioprocessing and laboratory facilities came online during 2016, driving volume and revenue growth. This growth continued during 2017 with two out of the three bioprocessing facilities running continuously during the year and the third increasing production over 2016. The chart opposite shows the growth in output since 2013.

Whilst gross income grew by 28%, our operating costs, including Cost of Sales, grew by only 12% and by only 9% when depreciation, amortisation and share option payments are excluded. Manpower, materials and subcontracted costs have increased to meet increasing demand and future plans for growth. Headcount rose from 256 at December 2016 to 321 at the end of 2017.

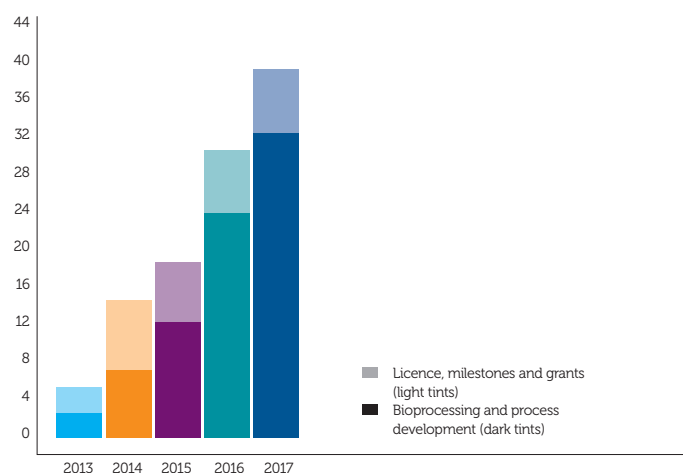
Revenue growth to date has been largely driven by our relationship with Novartis. The 2018 deal with Bioerativ, as well as the continued growth of business with new and existing customers (such as Orchard Therapeutics), is expected to be the key growth driver for the Group in the short to medium term.

We are continuing our stated strategy of developing our proprietary products whilst minimising our expenditure and risk by seeking partnerships for later stage clinical studies. We will continue to assess the financial risk/reward profile of these projects and will seek to provide maximal returns to shareholders accordingly.

In June the Group was able to re-finance its existing Oberland loan facility with a new \$55 million facility with Oaktree Capital Management. The new facility provides for increased funding together with a lower financing cost. \$50 million of the facility was drawn down in June and the remaining \$5 million was drawn down in July 2017.



Bioprocessing volumes

Gross income¹
£m

Key Financial Indicators

£m	2017	2016	2015	2014
Gross income¹				
Bioprocessing/commercial development	32.6	24.0	12.4	7.2
Licences, incentives, grants	6.8	6.8	6.4	7.5
	39.4	30.8	18.8	14.7
Operations				
EBITDA ²	(1.9)	(7.1)	(12.1)	(9.3)
EBIDA ³	0.8	(3.4)	(8.1)	(7.2)
Operating loss	(5.7)	(11.3)	(14.1)	(10.6)
Cash flow				
Cash used in operations	1.5	5.9	14.9	7.4
Capex	2.0	6.5	16.7	5.6
Cash burn	9.8	11.5	29.8	11.6
Normalised cash burn ⁴	3.0	11.5	29.8	11.6
Financing				
Cash	14.3	15.3	9.4	14.2
Loan	36.9	34.4	27.3	1.0
Headcount				
Year-end	321	256	231	134
Average	295	247	196	113

- 1 Gross income is the aggregate of revenue and other operating income.
- 2 EBITDA (Earnings Before Interest, Tax, Depreciation, Amortisation, revaluation of investments and Share Based Payments) is a non-GAAP measure often used as a surrogate for operational cash flow as it excludes from operating profit or loss all non-cash items, including the charge for share options.
- 3 EBIDA is an internal measure used by the Group, defined as EBITDA with the R&D tax credit included. The Board refers to EBIDA periodically as the R&D tax credit is, in essence, a subsidy or grant which offsets the Group's R&D expenditure.
- 4 Cash burn after excluding accrued interest and early repayment charges paid due to extinguishment of Oberland facility.

The Group evaluates its performance by making use of a number of alternative performance measures as part of its Key Financial Indicators (refer table above). These are non-GAAP measures which the Group believes provide the most accurate reflection of the Group's performance over time.

Gross income

Gross income increased to £39.4 million providing 28% growth as compared to 2016 (£30.8 million). Revenues generated from bioprocessing/commercial development increased by 36% to £32.6 million (from £24 million in 2016), and is up 353% since 2014. The main contributor to growth has been the revenues generated from increased bioprocessing clinical batch orders for Novartis and Orchard Therapeutics.

The £6.8 million income generated from licence upfront payments, performance incentives and grants has remained broadly constant over the past four years (2016 £6.8 million) despite comprising individual items which are lumpy by nature.

The chart on page 33 shows the revenue evolution over the past five years.

Although a substantial portion of our gross income continues to be derived from our relationship with Novartis, revenue generated from partnerships with Orchard Therapeutics as well as other customers, are growing substantially as a portion of the overall total.

£m	2017	2016	2015	2014
Revenue	37.6	27.8	15.9	13.6
Other operating income	1.8	3.0	2.9	1.1
Gross income	39.4	30.8	18.8	14.7

EBITDA/EBIDA

£m	2017	2016	2015	2014
Gross income	39.4	30.8	18.8	14.7
Cost of sales	(18.4)	(11.8)	(5.8)	(4.4)
Operating expenses ¹	(22.9)	(26.1)	(25.1)	(19.6)
Total expenses	(41.3)	(37.9)	(30.9)	(24.0)
EBITDA ²	(1.9)	(7.1)	(12.1)	(9.3)
Depreciation, amortisation, share option charge and gain on revaluation of investments	(3.8)	(4.2)	(2.0)	(1.3)
Operating loss	(5.7)	(11.3)	(14.1)	(10.6)

- 1 Research, development, bioprocessing and administrative expenses excluding depreciation, amortisation and share option charge.
- 2 EBITDA (Earnings Before Interest, Tax, Depreciation, Amortisation, revaluation of investments and Share Based Payments) is a non-GAAP measure often used as a surrogate for operational cash flow as it excludes from operating profit or loss all non-cash items, including the charge for share options.

The 36% increase in income generated from bioprocessing/commercial development was only partly offset by a 9% growth in our cost base from £37.9 million in 2016 to £41.3 million in 2017. These two factors led to great progress being made in reducing the EBITDA loss from £7.1 million in 2016 to £1.9 million in 2017.

£m	2017	2016	2015
Raw materials, consumables and other external bioprocessing costs	13.2	9.3	6.1
Manpower-related	19.3	17.4	13.6
External R&D expenditure	1.7	2.8	3.0
Other costs	7.1	8.4	8.2
Total expenses	41.3	37.9	30.9

- Raw materials, consumables and other external bioprocessing costs have increased as a result of the increase in bioprocessing and commercial development revenues,
- The increase in manpower-related costs is due to the increase in the average headcount from 247 in 2016 to 295 in 2017. Again, this is as a result of the increased bioprocessing and commercial development activities. The chart opposite shows the growth in year-end headcount numbers,
- External R&D expenditure decreased with the strategy of only developing our proprietary products and minimising our expenditure on clinical stage projects,
- Other costs decreased as we exited the Medawar laboratories at the end of October 2016 with the costs of running that facility not incurred in 2017.

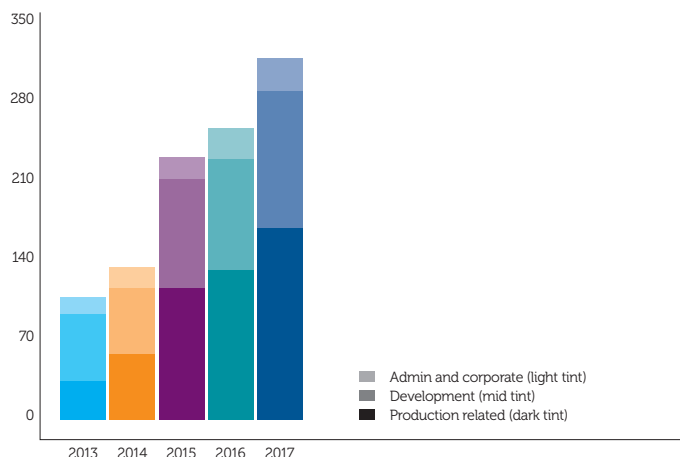
	2017	2016	2015	2014
EBITDA	(1.9)	(7.1)	(12.1)	(9.3)
R&D tax credit	2.7	3.7	4.0	2.1
EBIDA ³	0.8	(3.4)	(8.1)	(7.2)

- 3 EBIDA is an internal measure used by the Group, defined as EBITDA with the R&D tax credit included. The Board refers to EBIDA periodically as the R&D tax credit is, in essence, a subsidy or grant which offsets the Group's R&D expenditure.

Due to the reduction in EBITDA losses, EBIDA has improved from a loss of £3.4 million in 2016 to profit of £0.8 million in 2017.

Operating loss and net loss

£m	2017	2016	2015	2014
EBITDA	(1.9)	(7.1)	(12.1)	(9.3)
Depreciation, amortisation and share option charge	(6.1)	(4.2)	(2.0)	(1.3)
Revaluation of investments	2.3	–	–	–
Operating loss	(5.7)	(11.3)	(14.1)	(10.6)
Interest	(9.3)	(4.9)	(1.9)	(0.2)
R&D tax credit	2.7	3.7	4.0	2.1
Foreign exchange revaluation (non-cash)	3.3	(4.1)	(1.0)	–
Net loss	(9.0)	(16.6)	(13.0)	(8.7)



Year-end headcount

The operating loss in 2017 was £5.7 million, compared with £11.3 million in 2016. 2017 saw a higher charge for depreciation, amortisation and share option charge (£6.1 million in 2017 compared with £4.2 million in 2016). During 2016 the new facilities entered operation thereby triggering the start of the depreciation charge on much of the £26 million capacity expansion programme that took place between October 2014 and June 2016. In 2017 we saw the full year impact of this depreciation.

The £2.3 million gain on revaluation of investments has arisen from the revaluation of the equity investment in Orchard Therapeutics which was acquired as an upfront receipt at the time the license agreement was signed in 2016.

Amortisation in 2017 includes a £1.0 million impairment charge to account for the write down of the Prime Boost technology and poxvirus patent intangible asset after Bavarian Nordic's Prostavac product failed its phase III study.

The interest charge on our \$ loan facility was significantly higher at £9.3 million in 2017 compared with £4.9 million in 2016 due to a combination of the cost of termination of the Oberland facility, and the higher interest charge on the increased value of the new Oaktree facility.

The R&D tax credit in 2017 was lower than 2016 due to a lower level of qualifying R&D expenditure. The tax credit results from a UK Government scheme which supports R&D expenditure in the UK.

The net loss in 2017 benefitted from the revaluation in sterling of the \$ denominated Oaktree loan caused by the improvement in sterling against the \$ across the year. This is in contrast to the losses suffered in 2016 as a result of Brexit. To some extent the Group expects to have a currency hedge against this liability as a significant portion of its anticipated future revenues are likely to be \$ denominated, such as the royalty stream arising from Novartis' sales to Kymriah™ patients.

Segmental analysis

During 2017 a change was made to the business segments disclosed in the 2017 Annual report to better reflect the way the business is being managed by the Senior Executive Team. Internal technology projects to develop new potentially saleable technology, improve our current processes and bring development and manufacturing costs down is now included within the newly named 'Platform' segment (previously 'Partnering') along with the revenue generating bioprocessing and process development activities for third parties. The other segment, "Product" (previously R&D), includes the costs of researching and developing new product candidates. Prior year figures have been adjusted to reflect the change.

	Platform £m	Product £m	Total £m
2017			
Gross income	38.6	0.8	39.4
EBITDA	2.9	(4.8)	(1.9)
Operating profit/(loss)	0.2	(5.9)	(5.7)
2016			
Gross income	29.8	1.0	30.8
EBITDA	(2.4)	(4.7)	(7.1)
Operating loss	(6.2)	(5.1)	(11.3)

The Platform segment in 2017 saw an increase in gross income of 30% from £29.8 million to £38.6 million due to the increase in bioprocessing revenues. The additional volumes and revenues have enabled this segment to advance from EBITDA losses in 2016 to an EBITDA profit of £2.9 million this year, an improvement of £5.3 million. The segment also generated an operating profit of £0.2 million in 2017. As bioprocessing volumes and royalty payments from partners continue to grow this segment will increase its profitability.

The Product segment has seen grant income come down slightly as the OXB-202 grant ended during the first quarter of 2017. Costs and therefore EBITDA have remained broadly the same with the operating loss increasing due to the increase in depreciation and share option charges.

Cash flow

The Group held £14.3 million cash at 31 December 2017, having begun the year with £15.3 million. Significant movements across the year are explained below.

- The operating loss improved by £5.6 million as a result of the higher revenues from increased batch manufacturing volumes
- This improvement flowed through to EBITDA which at a loss of £1.9 million, is significantly better than the £7.1 million loss in 2016
- A slightly favourable working capital movement of £0.4 million in 2017 resulted in the cash used in operations being in line with the EBITDA loss at £1.9 million
- Net cash generated from operations during 2017 at £3.0 million was helped by a £4.5 million R&D tax receipt, up £0.4 million from the prior year

- Interest paid during the year was £10.8 million, up £7.5 million from the prior year due to the cost of repayment of the Oberland loan facility as well as the accrued interest covering the period since initial drawdown of the loan
- Purchases of property, plant and equipment decreased from £6.5 million to £2.0 million as our three year major capacity expansion programme concluded in the first half of 2016 with subsequent spend dropping back down to normal ongoing levels in 2017
- Cash burn, the aggregate of these items, was therefore reduced from £11.5 million in 2016 to £9.8 million in 2017, and drops down even further to £3.0 million if we exclude the accrued interest and early repayment charges of extinguishing the Oberland facility
- The net proceeds from financing during 2017 were £8.8 million, consisting almost entirely of additional funds received from the refinancing of the Oberland facility with the enlarged Oaktree facility. In 2016, £17.5 million net of fees was received as a result of share issues during the year
- The result of the above movements is a net decrease in cash of £1 million from £15.3 million to £14.3 million

Cash flow movements	2017	2016	2015
Operating loss	(5.7)	(11.3)	(14.1)
Non-cash items included in operating loss	3.8	4.2	2.0
EBITDA loss	(1.9)	(7.1)	(12.1)
Working capital movement	0.4	1.2	(2.8)
Cash used in operations	(1.5)	(5.9)	(14.9)
R&D tax credit received	4.5	4.1	3.2
Net cash generated from/(used in) operations	3.0	(1.8)	(11.7)
Interest paid, less received	(10.8)	(3.3)	(1.5)
Capex	(2.0)	(6.4)	(16.6)
Cash burn	(9.8)	(11.5)	(29.8)
Net proceeds from financing	8.8	17.5	25.0
Movement in year	(1.0)	6.0	(4.8)

Loans

On 29 June 2017 the Group was able to re-finance its existing \$50 million loan facility with Oberland Capital Healthcare with a new \$55 million facility with Oaktree Capital Management. The new facility provides for increased funding together with a lower interest rate of 9.0% plus US\$ three month LIBOR. Under the agreement the Company has issued 134,351,226 warrants to Oaktree. The loan is secured over the assets of the Group and the terms also include covenants covering revenue targets and a requirement to hold a minimum of \$5 million cash.

Balance sheet review

The most notable items on the balance sheet, including changes from 31 December 2016, are as follows:

- Intangible assets decreased from £1.3 million to £0.1 million as a result of amortisation and a £1.0 million impairment charge as a result of the write down of the Prime Boost technology and poxvirus patent intangible asset after Bavarian Nordic's Prostavac product failed its phase III study
- Investments increased by £2.3 million from a gain arising from the revaluation of the equity investment in Orchard Therapeutics which was acquired as an upfront receipt at the time the license agreement was signed in 2016
- Property, plant and equipment has decreased by £2.1 million to £25.4 million as the depreciation of £4.1 million was only partially offset by additions of £2.0 million
- Inventories have increased from £2.2 million to £3.3 million due to work in progress balances increasing as a result of ongoing bioprocessing commitments across 2017 and into 2018
- Trade and other receivables increased from £6.9 million to £17.1 million, due predominantly to the timing of process development milestones achieved and manufacturing orders placed at year-end
- Trade and other payables increased from £6.0 million to £8.7 million, due to increased operational activities as compared to the end of 2016
- Deferred income increased from £3.3 million at the end of 2016 to £13.1 million at the end of 2017 due to income received in advance in relation to manufacturing orders placed and manufacturing slots reserved
- The loan balance has increased from £34.4 million to £36.9 million as a result of the refinancing of the Oberland facility with the enlarged Oaktree facility net of expenses incurred in the refinancing

Financial outlook

The Group expects its financial performance to continue to improve in 2018. Our relationship with Novartis continues to go from strength to strength as evidenced by the new supply agreement signed in July and the commercial launch of Kymriah™ in August. Orchard therapeutics continues to move its pipeline forward, increasing its activities, and growing as a percentage of our gross income. Lastly, we have recently signed a \$105 million contract with BioVerativ which diversifies our customer base and strengthens our revenue forecasts and future prospects. We are confident in our ability to continue to establish new commercial relationships in 2018 to further diversify our customer base and continue our journey towards profitability.

Our stated plan, to continue the development of our proprietary products and pre-clinical pipeline whilst seeking to spinout or out-license those candidates at an appropriate time prior to large clinical expenditures, will mean that the cost of the proprietary programmes of OXB-102, OXB-201, OXB-202 and OXB-302 will be low. We will continue to invest in early stage concepts and pre-clinical studies, and also in our key LentiVector® technology platform. We will continue to monitor our cost base carefully and adjust spend to meet our financial targets.

Going concern

The Group held £14.3 million of cash at the end of 2017 and £16.4 million at 28 February 2018. In March 2018, the Company completed a £19.3 million (net) equity placing in order to fund further facilities expansion. During 2017 the cash burn was significantly reduced as a result of improved cash flow from operations and reduced capital expenditure and the Directors expect further progress in 2018. Taking this into account, in conjunction with currently known and probable cash flows, the Directors consider that the Group has sufficient cash resources and cash inflows to continue its activities for not less than twelve months from the date of these financial statements and have therefore prepared the financial statements on a going concern basis.

Stuart Paynter
Chief Financial Officer

Oxford BioMedica is committed to its role as a responsible business and we have a range of policies in place to ensure we meet this objective. We focus our corporate responsibility efforts on a number of main areas:

People

We are resolutely focused on the health, safety and the welfare of our employees, their engagement and job satisfaction, and ensuring equality of opportunity and respect for diversity. We are equally focused on the safety of patients in our clinical studies, and of our neighbours in the wider community.

It is group policy to give full and fair consideration to job applications from disabled people, to provide opportunities for their training, career development and promotion, and to continue wherever possible to employ staff who become disabled.

Community

We focus on the wellbeing of the community around our facilities, conducting our business in a responsible manner. We comply with local laws and regulations and control our emissions and waste.

Environment

We monitor our facilities' carbon emissions, use of water, electricity and gas as well as waste production and disposal.

Integrity and Ethics

The Group is committed to the highest standards of ethical conduct and integrity in its business activities in the UK and overseas.

Values

Our commitment to corporate responsibility is governed by our Group values which include "Have Integrity", "Be Inspiring" and "Deliver Innovation". Consequently, we aim to treat others as we would expect to be treated ourselves, acting with integrity in every area of our business. We respect the rights of all whose lives we touch and celebrate the diversity and differences that bring us new perspectives.

People

Safety

The health, safety and welfare of our employees, visitors and contractors at our business is our first priority. The safety of all employees is important, and those working in our bioprocessing, engineering and laboratory facilities face additional risks which we endeavor to manage through maintaining our facilities and equipment to the highest standards and through specific and detailed training. Our Health and Safety Management System covers all work activities, such as working with biological and chemical materials and the operation of laboratory equipment. The Health and Safety Management System is reviewed and updated to ensure continuous improvement, and to adapt to variations in scientific work and reflect changes in legislation. Oxford BioMedica continues to have a first-class safety record. Health and Safety issues are a standing item on the Board's agenda and the Group is committed to meet both the letter and spirit of all health and safety regulation and best practice.

Diversity

The Board and senior management are fully committed to providing equal opportunities to all employees, irrespective of race, gender, religion, national origin, disability or any other personal characteristics, and we embrace diversity in all forms.

The table below shows the gender split across our organisation as at 31 December 2017:

	Male	Female	Total	% Male	% Female
Board including non-executive directors	7	0	7	100%	0%
Senior managers	15	7	22	68%	32%
All other employees	124	169	293	42%	58%
Total	146	176	322	45%	55%



1. Integrity

We aim to treat others as we would expect to be treated ourselves, acting with integrity in every area of our business.

2. Training

Bioprocessing, laboratory and clinical processes are complex and highly regulated and our training helps us to achieve the outcomes, compliance and productivity we need to succeed as a business.

Remuneration

With the continued growth in employee numbers to 321 at year-end, we have invested in strong internal procedures to ensure that we are well placed to attract and retain high quality employees. As a result, we have a well-established and structured management system and provide the appropriate levels of financial and non-financial remuneration for each level within our structure. We have modern share option plans to allow all employees to participate, and we provide medical insurance for all staff, along with a pension facility to enable employees to take a more flexible and personalised approach to pension planning.

Training

Firstly training is essential for the safety and wellbeing of our employees and others we interact with, as discussed above. Secondly, our bioprocessing, laboratory and clinical processes are complex and highly regulated and our training helps us to achieve the outcomes, compliance and productivity we need to succeed as a business. Finally, we provide training to our line managers to ensure that they are well prepared to manage, develop, support and motivate their teams.

Communication

We acknowledge the importance of communication and consultation across our business. Group-wide briefings, R&D seminars and informal all-staff meetings are held to keep employees informed of general business issues and other matters of interest, and to ensure the views of employees can be taken into account in making decisions that are likely to affect their interests. The circulation of press announcements, internal newsletters and access to work-related social media keep employees informed of business and employee activities, and enhance understanding of the financial and economic factors affecting the Group's performance.

Community

We recognise the value of being a good local citizen in the Oxford community. We endeavour to achieve this by delivering positive benefits for the community, such as creating new high quality jobs, establishing an apprenticeship scheme and by establishing links with schools and other local educational establishments. We seek to behave as a responsible neighbour, complying with national and local laws and regulations, particularly with regard to emissions and waste, property planning and the traffic impact caused by our employees. We have a well-established Cycle-To-Work scheme and interest-free season ticket loans to help minimise our traffic impact on the local area.

Environment

Environmental policies & initiatives

We fully recognise our responsibility to protect the environment and we have a strong environmental policy, objectives and guidelines in place which we review and update regularly. The Group complies with all regulations covering the processing and disposal of laboratory waste, and uses qualified licensed contractors for the collection and disposal of chemical waste and decontaminated biological materials. No laboratory waste goes to landfill sites. We make every effort to keep our neighbours in the local community safe from any potential harm caused by our activities by closely managing our emissions and waste.

Greenhouse gas emissions report

The tables below show our usage in 2017 and 2016 of energy and water at our sites in Oxford, UK. We have also estimated our total CO₂ emissions and have indicated our "environmental intensity" on a per employee basis, an important indicator of our activity.

2017	Unit	Usage	Usage per employee	CO ₂ emission (tonnes)
Electricity	MW hours	4,124	14.7	1,450
Gas	MW hours	3,108	11.1	573
Water supply	Cubic metres	4,947	176	2
Other activities (estimated) including waste disposal and travel				447 ¹
Total				2,472

2016	Unit	Usage	Usage per employee	CO ₂ emission (tonnes)
Electricity	MW hours	3,139	12.7	1,295
Gas	MW hours	2,517	10.2	463
Water supply	Cubic metres	5,628	22.9	2
Other activities (estimated) including waste disposal and travel				1,055
Total				2,815

1 Reduction due to large waste reduction and slight reduction in travel



1. Biological materials

The Group complies with all regulations covering the processing and disposal of laboratory waste, and uses qualified licensed contractors for the collection and disposal of chemical waste and decontaminated biological materials.

2. Patient safety

Our clinical studies are designed with patient safety as a paramount concern.

Energy efficiency

We are committed to energy efficiency and have a number of policies to decrease energy usage where possible. For instance, when existing lighting needs replacing we switch to LED lights which are significantly more energy efficient than traditional lighting systems. In our refurbished Windrush laboratories we have passive infrared light sensors in all areas to ensure lighting is extinguished in areas that are not currently in use.

Waste management

We continue to review our waste management systems to manage waste more effectively. This includes:

- Recycling all paper and cardboard waste, aluminum cans, glass, plastics and printer toner/cartridges
- Use of different waste streams to increase processing efficiency

Integrity and Ethics

The Group is committed to the highest standards of ethical conduct and integrity in its business activities in the UK and overseas.

Anti-bribery

Oxford BioMedica's policy on preventing and prohibiting bribery is in full accordance with the UK Bribery Act 2010 as well as other relevant overseas legislation. The Group does not tolerate any form of bribery by, or of, its employees, agents or consultants or any person or body acting on its behalf. Senior management is committed to implementing effective measures to prevent, monitor and eliminate bribery.

Whistleblowing

Oxford BioMedica's compliance activities include the prevention and detection of misconduct through policy implementation, training and monitoring. As part of this effort, the Group's employees are encouraged to report suspected cases of misconduct in confidence and without fear of retaliation. Concerns and allegations are thoroughly investigated with disciplinary action taken where necessary, up to and including dismissal and reporting to relevant authorities.

Clinical trials

We instil transparency, safety and ethics in all aspects of our business, including the design and conduct of our clinical trials. Our clinical studies are designed with patient safety as a paramount concern and the protocols are agreed with the relevant national regulatory authorities, as well as local ethics committees and institutional review boards at clinical trial sites, before any patients are treated. We also have standard operating procedures in place under a controlled Quality Management System to ensure compliance with appropriate guidelines and legislation. We are also committed to transparency, and our website (www.oxfordbiomedica.co.uk) provides information on ongoing clinical trials. Relevant trials in the EU and EEA are automatically posted on the EU Clinical Trials Register (www.clinicaltrialsregister.eu) and we also disclose our trials on a US government-sponsored website (www.clinicaltrials.gov).

Human rights and anti-slavery

The Group fully respects human rights and we conduct our business in accordance with the letter and spirit of UK Human Rights legislation and the UK Modern Slavery Act 2015. Oxford BioMedica's Board of Directors has approved a Modern Slavery Transparency Statement in compliance with section 54 of the Act which can be found on our website. Our facilities are all located in the UK, where our policies accord with human rights regulations and our supply chain operates in territories with strong commitments to human rights safeguarding.

Animal testing

It is a regulatory requirement that all new therapeutic products must be appropriately tested for safety before they are administered to patients, and there is currently no alternative to using animal models as part of this process. We are committed to following the principles of the three "Rs" in safety testing: replacement, refinement and reduction of animal testing. These principles ensure that animal testing is only employed when necessary and where there are no alternatives. The Group minimises the use of animal models by cross-referring LentiVector® platform data packages for regulatory authorities.

The Strategic report on pages 16 to 41 was approved by the Board of Directors on 15 March 2018 and was signed on its behalf by:

John Dawson
Chief Executive Officer



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Oxford BioMedica operates in the gene and cell therapy biotechnology sector which, by its nature, is relatively high risk compared with other industry sectors. Very few gene and cell therapy products have yet been approved for commercial use so there are significant financial and development risks in the sector, and the regulatory authorities have shown caution in their regulation of such products. Risk assessment and evaluation is therefore an integral and well-established part of Oxford BioMedica's management processes. The Group is exposed to a range of risks. Some of them are specific to Oxford BioMedica's current operations, others are common to all development-stage biopharmaceutical companies. The directors have carried out a robust assessment of the risks facing the Group, including those which could threaten its business model and future performance.

Risk management framework

The Group's risk management framework is as follows:

- Board of Directors – the Board has overall responsibility for risk management, determining the Group's risk tolerance and for ensuring the maintenance of a sound system of internal control. The Board reviews key risks within the Group at each of its formal meetings, of which there are at least six annually. The risk management processes are the responsibility of the Senior Executive Team, but the Audit Committee monitors the processes and their implementation, as well as reviewing the Group's internal financial controls and the internal control systems. The Audit Committee also monitors the integrity of the financial statements of Oxford BioMedica and any formal announcements relating to the Group's financial performance, reviewing significant financial reporting judgements contained in them.
- Senior Executive Team – the SET generally meets twice monthly to discuss current business issues and considers relevant risks on each occasion. At least twice a year the SET meets with representatives from the Risk Management Group to consider the operational risk management processes and risks identified.
- Key management committees – the Group has four key management sub-committees which meet monthly and through which much of the day-to-day business is managed. These are the Quality and Manufacturing Operations Committee, the Product Development Committee, the Business Development Committee and the Technical Development Committee. SET members attend these meetings and risk management is a key feature of each sub-committee.
- Risk Management Group – Oxford BioMedica has established a Risk Management Group comprising senior managers from each area of the business and chaired by the Director of Corporate Activities & Strategy. This group meets quarterly with a remit to identify and assess risks in the business, and to consider mitigation and risk management steps that can be taken. The risk register is regularly reviewed by SET and key risks are highlighted to the Board at each formal meeting.
- Standard Operating Procedures – all areas of the business have well established Standard Operating Procedures (SOPs) which are required to be followed in order to minimise the risks inherent in the business operations. Where these are required for GMP, GCP and GLP any deviations from the SOPs must be identified and investigated. Compliance with such SOPs are routinely subject to audit by the relevant regulators and customers. Other SOPs, such as financial processes, are also subject to audits.

Key risks specific to Oxford BioMedica's current operations

Pharmaceutical product development risks

To develop a pharmaceutical product it is necessary to conduct pre-clinical studies and human clinical trials for product candidates to demonstrate safety and efficacy. The number of pre-clinical studies and clinical trials that will be required varies depending on the product candidate, the indication being evaluated, the trial results and the regulations applicable to the particular product candidate. In addition, the Group or its partners will need to obtain regulatory approvals to conduct clinical trials and bioprocess drugs before they can be marketed. This development process takes many years. The Group may fail to develop successfully a product candidate for many reasons, including:

- failure to demonstrate long-term safety;
- failure to demonstrate efficacy;
- failure to develop technical solutions to achieve necessary dosing levels or acceptable delivery mechanisms;
- failure to establish robust bioprocessing processes;
- failure to obtain regulatory approvals to conduct clinical studies or, ultimately, to market the product; and
- failure to recruit sufficient patients into clinical studies.

The failure of the Group to develop successfully a product candidate could adversely affect the future profitability of the Group. There is a risk that the failure of any one product candidate could have a significant and sustained adverse impact on the Group's share price. There is also the risk that the failure of one product candidate in clinical development could have an adverse effect on the development of other product candidates, or on the Group's ability to enter into collaborations in respect of product candidates.

(i) Safety risks

Safety issues may arise at any stage of the drug development process. An independent drug safety monitoring board (DSMB), the relevant regulatory authorities or the Group itself may suspend or terminate clinical trials at any time. There can be no assurances that any of the Group's product candidates will ultimately prove to be safe for human use. Adverse or inconclusive results from pre-clinical testing or clinical trials may substantially delay, or halt, the development of product candidates, consequently affecting the Group's timeline for profitability. The continuation of a particular study after review by the DSMB or review body does not necessarily indicate that all clinical trials will ultimately be successfully completed.

(ii) Efficacy risks

Human clinical studies are required to demonstrate efficacy in humans when compared against placebo and/or existing alternative therapies. The results of pre-clinical studies and initial clinical trials of the Group's product candidates do not necessarily predict the results of later stage clinical trials. Unapproved product candidates in later stages of clinical trials may fail to show the desired efficacy despite having progressed through initial clinical trials. There can be no assurance that the efficacy data collected from the pre-clinical studies and clinical trials of the Group's product candidates will be sufficient to satisfy the relevant regulatory authorities that the product should be given a marketing authorisation.

(iii) Technical risks

During the course of a product's development, further technical development may be required to improve the product candidates characteristics such as the delivery mechanism or the bioprocessing process. There is no certainty that such technical improvements or solutions can be identified.

(iv) Bioprocessing process risk

There can be no assurance that the Group's product candidates will be capable of being produced in commercial quantities at acceptable cost. The Group's LentiVector® platform product candidates use specialised bioprocessing processes for which there are only a few suitable bioprocessors including the Group itself. There can be no assurance that the Group will be able to bioprocess the Group's product candidates at economic cost or that contractors who are currently able to bioprocess the Group's product candidates will continue to make capacity available at economic prices, or that suitable new contractors will enter the market. Bioprocessing processes that are effective and practical at the small scale required by the early stages of clinical development may not be appropriate at the larger scale required for later stages of clinical development or for commercial supply. There can be no assurance that the Group will be able to adapt current processes or develop new processes suitable for the scale required by later stages of clinical development or commercial supply in a timely or cost-effective manner, nor that contract bioprocessors will be able to provide sufficient bioprocessing capacity when required.

(v) Regulatory risk

The clinical development and marketing approval of the Group's product candidates, and the Group's bioprocessing facility, are regulated by healthcare regulatory agencies, such as the FDA (USA), EMA (Europe), and MHRA (UK). During the development stage, regulatory reviews of clinical trial applications or amendments can prolong development timelines. Similarly, there can be no assurance of gaining the necessary marketing approvals to commercialise products in development. Regulatory authorities may impose restrictions on a product candidates use or may require additional data before granting approval. If regulatory approval is obtained, the product candidate and bioprocessor will be subject to continual review and there can be no assurance that such an approval will not be withdrawn or restricted. The Group's laboratories, bioprocessing facility and conduct of clinical studies are also subject to regular audits by the MHRA to ensure that they comply with GMP, GCP and GLP standards. Failure to meet such standards could result in the laboratories or the bioprocessing site being closed or the clinical studies suspended until corrective actions have been implemented and accepted by the regulator.

(vi) Failure to recruit sufficient patients into clinical studies

Clinical trials are established under specific protocols which specify how the trials should be conducted. Protocols specify the number of patients to be recruited into the study and the characteristics of patients who can and cannot be accepted into the study. The risk exists that it proves difficult in practice to recruit the number of patients with the specified characteristics, potentially causing delays or even abandonment of the clinical study. This could be caused by a variety of reasons, such as the specified characteristics being too tightly defined, resulting in a very small population of suitable patients, or the emergence of a competing drug, either one that is approved or another drug in the clinical stage of development.

The threats from the above product development risks are inherent in the pharmaceutical industry and have not changed fundamentally over the last year. The Group aims to mitigate these risks by employing experienced staff and other external parties, such as Contract Research Organisations to plan, implement and monitor its product development activities and to review progress regularly in the Group's Product Development Committee.

Bioprocessing revenue risk

The Group receives significant revenues from bioprocessing lentiviral vectors for third parties, and in particular for Novartis. Bioprocessing of lentiviral vectors is complex and bioprocessing batches may fail to meet the required specification due to contamination or inadequate yield. Failure to deliver batches to the required specification may lead to loss of revenues. Furthermore, the Group relies on third parties, in some cases sole suppliers, for the supply of raw materials and certain out-sourced services. If such suppliers perform in an unsatisfactory manner it could harm the Group's business. The Group's bioprocessing and analytical facilities are subject to regular inspection and approval by regulators and customers. Failure to comply with the standards required could result in production operations being suspended until the issues are rectified, with the potential for loss of revenue.

As the Group's revenues from bioprocessing are growing the risk to the Group has increased in the last twelve months. The Group mitigates the risk of failing to meet required specifications by investing in high quality facilities, equipment and employees and, in particular, in quality management processes. The Group is also endeavouring to mitigate the risk of being overly reliant on Novartis by seeking bioprocessing contracts with other parties.

Collaborator and partner risk

The Group has entered into several collaborations and partnerships involving the development of product candidates by partners in which the Group has a financial interest through IP licences. Failure of the partners to continue to develop the relevant product candidates for any reason could result in the Group losing potential revenues.

Financial position

The Group has incurred significant losses since incorporation and continues to incur significant costs as it builds an integrated platform gene delivery company and develops its portfolio of development products. The Directors have considered the cash position in the context of going concern and their conclusions are set out in the Financial review (page 37), the Directors' report (page 86) and in Note 1 to the consolidated financial statements (page 102).

Loan facility

The Group has a \$55 million loan facility provided by Oaktree Capital Management, secured on the Group's assets. Failure to comply with the terms of the loan agreement could potentially place the Group in default, which could adversely affect the Group's business operations, financial position and prospects.

Business development

The Group is seeking to out-licence or spin out into externally funded vehicles its in-house product development programmes, and may seek to develop strategic partnerships for developing certain of the Group's other product candidates. The Group may not be successful in its efforts to build these third party relationships which may cause the development of the products to be delayed or curtailed.

The Group is building a revenue generating business by providing its LentiVector® platform to third parties in return for revenues derived from process development, bioprocessing and future royalties. The Group may be unsuccessful in building this business for reasons including a) failing to maintain a leadership position in lentiviral vector technology, b) becoming uncompetitive from a pricing perspective, c) failure to provide an adequate service to business partners and collaborators. The Group is continuing to invest in LentiVector® technology in order to reduce this risk, and it also takes extremely seriously customer relationship management to ensure that customers and partners receive the service they expect.

Recruitment and retention

The Group depends on recruiting and retaining highly skilled employees to deliver its objectives and meet its customers' needs. The market for such employees is becoming increasingly competitive and failure to recruit or to retain staff with the required skills and experience could adversely affect the Group's performance. The Group mitigates this risk by creating an attractive working environment and ensuring that the remuneration package offered to employees is comparable with competing employers.

Broader business risks which are applicable to Oxford BioMedica**Gene and cell therapy risk**

The Group's commercial success, both from its own product development and from supporting other companies in the sector, will depend on the acceptance of gene and cell therapy by the wider medical community and the public for the prevention and/or treatment of diseases. To date only a limited number of gene therapy products have been approved in Europe, and only three in the USA. Furthermore, specific regulatory requirements, over and above those imposed on other products, apply to gene and cell therapies and there can be no assurance that additional requirements will not be imposed in the future. This may increase the cost and time required for successful development of gene and cell therapy products.

Rapid technical change

The gene and cell therapy sector is characterised by rapidly changing technologies and significant competition. Advances in other technologies in the sector could undermine the Group's commercial prospects.

Longer-term commercialisation risks

In the longer term, the success of the Group's product candidates and those of its partners will depend on the regulatory and commercial environment several years into the future. Future commercialisation risks include:

- The emergence of new and/or unexpected competitor products or technologies. The biotechnology and pharmaceutical industries are subject to rapid technological change which could affect the success of the Group's product candidates or make them obsolete;
- Regulatory authorities becoming increasingly demanding regarding efficacy standards or risk averse regarding safety;
- Governments or other payers being unwilling to pay for/reimburse gene therapy products at a level which would justify the investment. Based on clinical studies to date, the Group's LentiVector® platform product candidates have the unique potential to provide permanent therapeutic benefit from a single administration. The pricing of these therapies will depend on assessments of their cost-benefit and cost effectiveness; and
- The willingness of physicians and/or healthcare systems to adopt new treatment regimes.

Any or all of these risks could result in the Group's future profitability being adversely affected as future royalties and milestones from commercial partners could be reduced.

Intellectual property and patent protection risk

The Group's success depends, amongst other things, on maintaining proprietary rights to its products and technologies and the Board gives high priority to the strategic management of the Group's intellectual property portfolio. However, there can be no guarantee that the Group's product candidates and technologies are adequately protected by intellectual property. Furthermore, if the Group's patents are challenged, the defence of such rights could involve substantial costs and an uncertain outcome.

Third party patents may emerge containing claims that impact the Group's freedom to operate. There can be no assurance that the Group will be able to obtain licences to these patents at reasonable cost, if at all, or be able to develop or obtain alternative technology. Where copyright, design right and/or "know how" protect the Group's product candidates or technology, there can be no assurance that a competitor or potential competitor will not independently develop the same or similar product candidates or technology.

Rights of ownership over, and rights to licence and use, intellectual property depend on a number of factors, including the circumstances under which the intellectual property was created and the provisions of any agreements covering such intellectual property. There can be no assurance that changes to the terms within licence agreements will not affect the entitlement of the Group to the relevant intellectual property or to license the relevant intellectual property from others.

Financial risks(a) Product liability and insurance risk

In carrying out its activities the Group potentially faces contractual and statutory claims, or other types of claim from customers, suppliers and/or investors. In addition, the Group is exposed to potential product liability risks that are inherent in the research, pre-clinical and clinical evaluation, bioprocessing, marketing and use of pharmaceutical products. While the Group is currently able to obtain insurance cover, there can be no assurance that any future necessary insurance cover will be available to the Group at an acceptable cost, if at all, or that, in the event of any claim, the level of insurance carried by the Group now or in the future will be adequate, or that a product liability or other claim would not have a material and adverse effect on the Group's future profitability and financial condition.

(b) Foreign currency exposure

The Group records its transactions and prepares its financial statements in pounds sterling. Some of the Group's income from collaborative agreements and patent licences is received in US dollars, and the Group incurs a proportion of its expenditure in US dollars and the Euro. The Group's cash balances are predominantly held in pounds sterling although the Group's Treasury Policy permits cash balances to be held in other currencies in order to hedge foreseen foreign currency expenses. The Group also has a US dollar loan facility provided by Oaktree Capital Management. Under that facility the Group is required to maintain \$5 million in a ring fenced bank account. To the extent that the Group's foreign currency assets and liabilities in the longer term are not matched, fluctuations in exchange rates between pounds sterling, the US dollar and the Euro may result in realised and unrealised gains and losses on translation of the underlying currency into pounds sterling. This may increase or decrease the Group's results of operations and may adversely affect the Group's financial condition, each stated in pounds sterling. In addition, if the currencies in which the Group earns its revenues and/or holds its cash balances weaken against the currencies in which it incurs its expenses, this could adversely affect the Group's future profitability.

(c) Interest rate exposure

The Group is exposed to interest rate movements, primarily arising on the Oaktree loan facility. The interest rate is 9.0% plus US\$ three month LIBOR, subject to a minimum of 1%. As three month LIBOR rises, the Group's interest payments will increase.

UK departure from European Union ("Brexit")

The impact of the UK's decision to leave the European Union is not yet clear but it may significantly affect the fiscal, monetary and regulatory landscape in the UK, and could have a material impact on its economy and the future growth of its industries, including the pharmaceutical and biotechnology industries. Depending on the exit terms negotiated between EU Member States and the UK following Brexit, the UK could lose access to the single European Union market and to the global trade deals negotiated by the European Union on behalf of its members. Although it is not possible at this point in time to predict fully the effects of an exit of the UK from the European Union, it could have a material adverse effect on the Group's business, financial condition and results of operations. In addition, it may impact the Group's ability to comply with the extensive government regulation to which it is subject, and impact the regulatory approval processes for its product candidates.



Left to right:
Peter Nolan, Lorenzo Tallarigo, Stuart Henderson, Martin Diggle,
Andrew Heath, John Dawson, Stuart Paynter



Dr. Lorenzo Tallarigo (67)

Chairman

Dr. Lorenzo Tallarigo was appointed as non-executive Chairman of Oxford BioMedica in February 2016. He was previously Chairman of Intercept Pharmaceuticals where he led the company's successful IPO. He was also Chief Executive Officer and remains a Board member of Genextra, a holding company focused on identifying life science research to create successful businesses that develop novel treatments and technologies. Previously, he worked at Eli Lilly, where he held various positions of increasing seniority in a number of areas including clinical research, product management, marketing and general management, and ultimately as President of International Operations. He has a Doctor of Medicine degree from the University of Pisa (Italy) and a PMD from Harvard Business School.

Appointment:

– Appointed as non-executive director and Chairman in February 2016

Committee membership:

– Nomination Committee

Dr. Andrew Heath (69)

Deputy Chairman and Senior Independent Director

Dr. Andrew Heath was appointed to Oxford BioMedica's Board in January 2010 and became Deputy Chairman and Senior Independent Director in May 2011. Previously he was Chief Executive Officer of Protherics plc where he managed the company's significant growth and eventual acquisition by BTG for £220 million. Previously, he held senior positions at Astra AB and Astra USA, including Vice President Marketing & Sales, and at Glaxo Sweden as Associate Medical Director. He is currently Chairman of Shield Therapeutics plc, and a non-executive director of Novacyt SA and IHT Partners, LLC. He was previously a director of the UK BioIndustry Association.

Appointment:

– Appointed a director in January 2010 and became Deputy Chairman and Senior Independent Director in May 2011

Committee membership:

– Audit Committee
– Remuneration Committee
– Nomination Committee

John Dawson (58)

Chief Executive Officer

John Dawson joined Oxford BioMedica's Board as a non-executive director in August 2008, and was appointed Chief Executive Officer in October 2008. Previously he held senior management positions in the European operations of Cephalon Inc., including Chief Financial Officer and Head of Business Development Europe. While at Cephalon he led many deals building the European business to over 1,000 people, and to a turnover of several hundred million US dollars and in 2005 led the \$360 million acquisition of Zeneus by Cephalon. Prior to his time at Cephalon he was director of Finance and Administration of Serono Laboratories (UK) Limited. He is currently a non-executive director of Paion AG.

Appointment:

– Appointed a director in August 2008 and became Chief Executive Officer in October 2008

Committee membership:

– None

Stuart Paynter (45)

Chief Financial Officer

Stuart Paynter joined Oxford BioMedica and the Board in August 2017. He has 16 years' experience in the pharmaceutical and healthcare sectors. He qualified as a chartered accountant with Haines Watts before moving to EDS. He subsequently joined Steris, and worked in a variety of roles within the healthcare and life sciences divisions prior to becoming the European Finance Director. He then moved to Shire Pharmaceuticals where he became the senior director of finance business partnering for all business outside of the US. He then moved to a corporate finance role before becoming the global head of internal audit. Prior to joining Oxford BioMedica he was head of finance business partnering at De La Rue plc. He is a member of the Institute of Chartered Accountants in England and Wales.

Appointment:

– Appointed a director and Chief Financial Officer in August 2017

Committee membership:

– None

Martin Diggle (55)**Non-executive director**

Martin Diggle was appointed to Oxford BioMedica's Board in October 2012. He is a founder of Vulpes Investment Management which manages a number of funds, including the Vulpes Life Sciences Fund, Oxford BioMedica's largest shareholder. He has over 30 years' experience in investment banking and fund management, and has been an investor in life sciences and biotech for nearly 20 years. He is also an expert in emerging markets and Russia, in particular, where he was previously a partner and director of UBS Brunswick. He holds a Master's Degree in Philosophy, Politics and Economics from University of Oxford.

Appointment:

– Appointed a director in October 2012

Committee membership:

– None

Stuart Henderson (59)**Independent non-executive director**

Stuart Henderson was appointed a non-executive director and Chair of the Audit Committee in June 2016. Previously, he was a partner at Deloitte, where he was Head of European Healthcare and Life Sciences. Prior to this he was a partner at Arthur Andersen, where he was Head of Emerging Biotechnology. He has extensive audit and transaction experience and has worked with life sciences businesses ranging from start-ups to multinationals, as well as acting as reporting accountant on numerous IPO and Class 1 transactions. As Audit Partner, he has reported to the audit committees of publicly quoted companies for over 20 years. He is a former director of the Babraham Institute and currently sits as a non-executive director on the Boards of OneNucleus (the Life Sciences trade body for Cambridge and London) and the Cell Therapy Catapult Limited.

Appointment:

– Appointed a director in June 2016

Committee membership:

– Audit Committee
– Remuneration Committee
– Nomination Committee

Peter Nolan (65)**Chief Business Officer**

Peter Nolan was appointed to Oxford BioMedica's Board in May 2002 having been a senior leader at the Company since it was founded in 1996. Prior to joining Oxford BioMedica he served as Head of the Biotechnology Unit at the UK Department of Trade and Industry for eight years, where he was responsible for collaborative research programmes between industry and the research councils. Previously he held senior positions in the Laboratory of the Government Chemist and also the Metropolitan Police Laboratory where he was a senior forensic scientist. He has held a number of senior posts in industry organisations, including as a director of the UK BioIndustry Association, and Chairman of the Oxfordshire Bioscience Network.

Appointment:

– Appointed a director in May 2002

Committee membership:

– None

Dear Shareholder

I am pleased to present Oxford BioMedica's Corporate Governance Report for 2017.

Good governance is essential for the long term success of the business and this is ultimately the responsibility of the Board and its committees. The Board comprises both non-executive and executive directors and provides the forum for external and independent review and challenge to the management of the business.

There have been two changes to the Board during 2017. In August Stuart Paynter joined the Group as Chief Financial Officer, and the Board as an executive director. Tim Watts retired as a Board member executive director at the end of September. I wish to thank Tim for all his hard work for the Group over five years as Chief Financial Officer. He leaves the Group in a great position for the future.

The Group continued to make impressive progress in 2017, with the momentum continuing into 2018. With gene and cell therapy rapidly transforming into a multi-billion dollar opportunity, the Group's strategy is delivering significant shareholder value and we expect this to continue. With our state-of-the art laboratories and bioprocessing suites fully operational throughout the year, our bioprocessing activities during 2017 increased substantially compared to 2016. Our work with partner Novartis has continued to drive this revenue growth, both from our contributions to Kymriah's regulatory filing and subsequent approval, and bioprocessing for the products' commercial launch. We have also been carrying out feasibility studies for other potential partners and were able to recently announce a partnership with Bioverativ. With this amount of change and activity the Board has paid particular attention to ensuring that the Group's strategy remains appropriate and that management is focused on delivering the Group's key priorities and managing the key risks facing the Group.

I am in the process of conducting a review of the board's performance during 2017. The review process will comprise the completion of a questionnaire covering the various aspects of board activities and private discussions with each director individually. The key areas to improve were then be discussed at the forthcoming 2018 board meeting.

The following pages set out in more detail the activities and major matters considered by the Board in 2017.

Lorenzo Tallarigo

Chairman



Lorenzo Tallarigo was appointed as non-executive director and Chairman in February 2016

Compliance with the UK Corporate Governance Code (UKCGC)

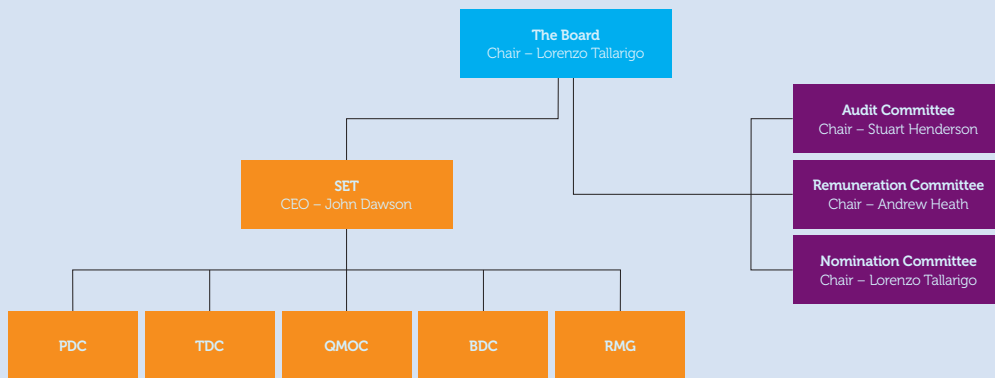
The table below sets out how the Group has applied the main principles in the UKCGC.

UKCGC reference	Main Principle	Application
A.1	Every company should be headed by an effective board which is collectively responsible for the long-term success of the Company.	The Company's board comprises both non-executive directors and executive directors. The board met eight times during 2017 for regular board meetings as well as several other times for specific ad hoc matters.
A.2	There should be a clear division of responsibilities at the head of the Company between the running of the board and the executive responsibility for the running of the Company's business. No one individual should have unfettered powers of decision.	There is a clear division of responsibilities between the Chairman and Chief Executive Officer.
A.3	The chairman is responsible for leadership of the board and ensuring its effectiveness on all aspects of its role.	The Chairman provides leadership to the Board and is responsible for setting the agenda for its meetings and for ensuring there is adequate time allowed for discussion.
A.4	As part of their role as members of a unitary board, non-executive directors should constructively challenge and help develop proposals on strategy.	All of the non-executive directors participate at all Board meetings and also are involved in periodic strategic reviews.
B.1	The board and its committees should have the appropriate balance of skills, experience, independence and knowledge of the Company to enable them to discharge their respective duties and responsibilities effectively.	The current board members have a broad mix of experience including the Pharmaceutical industry, financing and investment, and UK corporate governance. The Audit and Remuneration Committees are comprised solely of independent non-executive directors.
B.2	There should be a formal, rigorous and transparent procedure for the appointment of new directors to the board.	The process to appoint Stuart Paynter was led by the Chairman. A search firm was employed to help identify potential candidates. Short-listed candidates met most of the directors as part of the selection process. The final selection decision was made by the non-executive directors in consultation with the Chief Executive Officer.
B.3	All directors should be able to allocate sufficient time to the Company to discharge their responsibilities effectively.	All directors have been able to participate at the majority of meetings held in 2017.
B.4	All directors should receive induction on joining the board and should regularly update and refresh their skills and knowledge.	Stuart Paynter received induction during the year including meetings with investors, the Company's auditors, lawyers, financial and other advisers and senior managers in the business.
B.5	The board should be supplied in a timely manner with information in a form and of a quality appropriate to enable it to discharge its duties.	The board meets formally at least six times per annum. The Chairman sets the agenda in consultation with the Chief Executive Officer and Company Secretary. Relevant papers are circulated to all board members several days prior to each meeting.
B.6	The board should undertake a formal and rigorous annual evaluation of its own performance and that of its committees and individual directors.	The board conducts a performance evaluation annually. The most recent completed evaluation took place during December 2016/January 2017. 2017/2018 Board performance review currently ongoing.
B.7	All directors should be submitted for re-election at regular intervals, subject to continued satisfactory performance.	All new directors are required by the Company's Articles of Association to submit themselves for election at the first Annual General Meeting after their appointment. The Articles also require that one-third of the directors submit themselves for re-election by rotation each year.
C.1	The board should present a fair, balanced and understandable assessment of the Company's position and prospects.	The directors formally review the Annual report each year and make a statement in the report confirming that they consider the report to be fair, balanced and understandable.
C.2	The board is responsible for determining the nature and extent of the principal risks it is willing to take in achieving its strategic objectives. The board should maintain sound risk management and internal control systems.	The board's remit includes risk management which is an agenda item at every formal meeting. A system of risk management has been established in the Company and this is monitored by the Audit Committee. The Audit Committee also reviews the internal control systems.
C.3	The board should establish formal and transparent arrangements for considering how they should apply the corporate reporting risk management, internal control principles, and for maintaining an appropriate relationship with the Company's auditor.	Corporate reporting, internal controls and relations with the Company's auditors are the responsibility of the Audit Committee which provides feedback to the full board following Audit Committee meetings.
D.1	Executive directors' remuneration should be designed to promote the long-term success of the Company. Performance-related elements should be transparent, stretching and rigorously applied.	Executive directors' remuneration is set in accordance with the remuneration policy which was approved by shareholders at the 2015 AGM.
D.2	There should be a formal and transparent procedure for developing policy on executive remuneration and for fixing the remuneration packages of individual directors. No director should be involved in deciding his or her own remuneration.	The remuneration policy was designed by the Remuneration Committee with advice from the compensation and benefits practice of Deloitte LLP. The current recommended policy was approved by shareholders at the 2015 Annual General Meeting. A new policy will be put to shareholders at the 2018 AGM to approve. No director is involved with setting his own remuneration.
E.1	There should be a dialogue with shareholders based on the mutual understanding of objectives. The board as a whole has responsibility for ensuring that a satisfactory dialogue with shareholders takes place.	Vulpes Life Sciences Fund, the Company's largest shareholder is represented on the board by Martin Diggle which provides a clear line of communication. The Chairman, Chief Executive Officer and Chief Financial Officer meet periodically with the Company's other large shareholders.
E.2	The board should use the general meetings to communicate with investors and to encourage their participation.	All board members endeavour to attend the Annual General Meeting in person and sufficient time is allowed for questioning by shareholders who attend the meeting.

The Board considers that it has complied throughout the year with the UK Corporate Governance Code (the "Code" or "UKCGC").

Corporate Governance Framework

Oxford BioMedica's governance framework comprises the Board, the Senior Executive Team and their respective sub-committees:



SET – Senior Executive Team
 PDC – Product Development Committee
 TDC – Technical Development Committee
 QMOC – Quality and Manufacturing Operations Committee
 BDC – Business Development Committee
 RMG – Risk Management Group

The Board

The Board is collectively responsible for promoting the success of the Group by directing and supervising the Group's activities to create shareholder value. In doing so it ensures that there are robust corporate governance and risk management processes in place. Following the changes in the second half of 2017 the Board comprises four non-executive directors and three executive directors. The Chairman and Martin Diggle are considered not to be independent.

The Board's powers and responsibilities are set out in the Company's articles of association and it has a formal schedule of matters reserved for the Board's approval which include:

- The Group's strategy
- The financial statements and accounting policies
- Acquisitions, disposals and capital expenditure
- Financing and capital structure
- Corporate governance
- Internal control and risk management
- Board membership and remuneration
- Appointment and remuneration of auditors

The Board takes a close interest in Quality, Health, Safety & Environment and Risk Management and has these as standing items on its meeting agendas.

The Chairman sets the agenda for the board meeting in consultation with the Chief Executive Officer and the Company Secretary. Board papers covering the agenda items are circulated several days ahead of each meeting. Regular board papers cover Product and Technical Development, Production, Business Development, Finance, Investor Relations, HR, Quality, Health, Safety & Environment and Risk Management.

There is a clear division of responsibilities between the Chairman and Chief Executive Officer.

Certain responsibilities are delegated to three board committees – the Audit, Nomination and Remuneration Committees. These Committees operate under clearly defined terms of reference which are disclosed on the Group's website. Reports from the Audit and Nomination Committees are included in this section and the Directors' remuneration report is on pages 63 to 83 incorporating the Remuneration Committee report.

The current Board members are set out on pages 52 to 55.

- Lorenzo Tallarigo is the non-executive chairman. Dr. Tallarigo met the independence criteria recommended by the UKCGC at the time of his appointment.
- Andrew Heath, the Senior Independent Director, is considered to be independent.
- Stuart Henderson is the chairman of the Audit Committee. He is considered to be independent.
- Martin Diggle is a founder of Vulpes Investment Management which, through its Vulpes Life Sciences Fund, is the Group's largest investor and as such he is not considered independent under the Code.
- The Group therefore has been in compliance with provision B.1.2 of the Code which recommends that a small company, defined as one which is not in the FTSE350, should have at least two independent non-executive directors excluding the Chairman.

Each director is provided with an appropriate induction on appointment.

All Directors, and the Board and its committees have access to the advice and services of the Company Secretary, and also to external professional advisers as required. The appointment and removal of the Company Secretary is a matter for the Board as a whole to consider.

Board meetings

The Board meets regularly, with meeting dates agreed for each year in advance. During 2017 there were eight regular Board meetings. The attendance of individual directors at Board and Committee meetings was as follows:

	Regular Board		Audit Committee		Remuneration Committee		Nominations Committee	
	Possible	Attended	Possible	Attended	Possible	Attended	Possible	Attended
John Dawson	8	8						
Martin Diggle	8	8						
Andrew Heath	8	8	5	4	6	6	1	1
Stuart Henderson	8	8	5	5	6	6	1	1
Peter Nolan	8	8						
Stuart Paynter	2	2						
Lorenzo Tallarigo	8	8					1	1
Tim Watts	7	7						

In addition to the above regular meetings, the Board (or an appointed sub-committee of the Board) met on a number of other occasions to consider specific ad hoc matters including the approval of the 2016 financial statements and the interim 2017 financial results.

The Chairman holds meetings from time to time with non-executive directors without the executive directors in attendance.

Board activity during 2017

Board matters during 2017 included:

- Routinely recurring items such as the approvals of the 2017 financial budget and objectives, the 2016 preliminary results and Annual report, and the 2017 interim results announcement
- A review of the Group’s strategy, conducted during the first few months of the year
- Monitoring the progress of the Group’s priority product development programmes
- Reviewing business development opportunities including partnering and collaboration transactions
- The appointment of Stuart Paynter as a director
- Ongoing reviews of the Group’s risk management processes and key risks

Review of performance

Lorenzo Tallarigo is in the process of conducting a review of the board’s performance during 2017. The review process will comprise the completion by each director of a comprehensive questionnaire covering all aspects of the Board’s performance. The completed questionnaires will be sent to Dr. Tallarigo for his confidential review which he will then summarise for discussion at a 2018 board meeting.

Retirement of directors

In accordance with the articles of association, at each annual meeting any director who was appointed after the last annual general meeting or has served for three years, and one third of the other directors (or if their number is not a multiple of three the number nearest to but not exceeding one third) retire from office by rotation.

At the 2018 annual general meeting Stuart Paynter, Heather Preston, Stuart Henderson and John Dawson will retire from the Board and stand for re-election in accordance with Articles 33 and 38 of the Company’s Articles of Association.

Communication with shareholders

The Board recognises the importance of effective communication with shareholders and potential investors. The primary points of contact are the Chief Executive Officer and Chief Financial Officer, but the Chairman and Senior Independent Director are also available for meetings with investors if required. Vulpes Life Sciences Fund (“VLSF”), the Company’s largest investor, is represented on the Board by Martin Diggle ensuring a clear channel of communication with VLSF.

The Group has engaged with shareholders and potential investors through the various channels below:

2017 Annual General Meeting	The 2017 AGM was held in London on 23 May 2017. Shareholders were invited to attend this meeting which lasted for about 2 hours and which, as well as the formal business, included a presentation by the Chief Executive Officer followed by a Q&A session and a chance to meet directors after the meeting closed.
Meetings with potential investors	The CEO and CFO regularly make presentations and meet potential investors on a one-to-one basis at investor conferences in Europe and the USA. The Company also conducts investor roadshows periodically which provide further opportunities to meet potential investors.
Results announcements and presentations	The Group announced its 2016 full year performance and financial results in March 2017, and its 2017 half year interim results in August 2017 through RNS announcements accompanied by analyst conference calls which are accessible to all shareholders, and recordings of which are made available on the Group’s website.
2016 Annual report	The Group published its 2016 Annual report in April 2017.
Website	The Group’s website www.oxfordbiomedica.co.uk contains details of the Group’s activities as well as copies of regulatory announcements and press releases, copies of the Group’s financial statements, and terms of reference for the Board Committees. Investors and others can subscribe to an e-mail alert service which provides notifications of announcements.
Investor relations	The Group also endeavours to respond to all enquiries from shareholders and potential investors received through its enquiry inbox: enquiries@oxfordbiomedica.co.uk
Social media	The Group also uses Twitter to alert followers to sector news which is relevant to the Group.

The Senior Executive Team (SET) and its committees

Operational management is conducted by the executive directors who, together with Kyriacos Mitrophanous and James Miskin, form the Senior Executive Team (SET). The Chief Executive Officer is John Dawson. The SET meets approximately every two weeks and its agenda covers the full range of activities of the Group, including financial performance, organisational and employment matters, risk management and Health, Safety & Environment.

There are three SET sub-committees covering the major business operational areas. These committees meet monthly and are attended by SET members and other relevant senior managers from the business.

These sub-committees are:

- Product Development Committee (PDC) – covering the development of new gene and cell therapy products from initial concept through to clinical development
- Technical Development Committee (TDC) – covering the development of new and improved assays and production and other processes, including cell and vector engineering
- Quality and Manufacturing Operations Committee (QMOC) – covering the Group's bioprocessing activities

Within their area of responsibility these committees cover objective and target setting, monitoring performance against targets, ensuring compliance with GxP and other relevant requirements, monitoring expenditure against budget, and risk management.

There are two other important committees:

- Business Development Committee (BDC) – which covers the external opportunities to out-licence and in-licence technology or product candidates, and also to generate partnership opportunities for bioprocessing and product development
- Risk Management Group (RMG) – this group comprises senior managers from all parts of the business. The Group meets at least quarterly to identify and assess risks facing the business, and to propose risk mitigation and management actions

Important matters from all of these committees are referred to the SET.

Risk management

The Board is responsible for determining the nature and extent of the risks it is willing to take in achieving the objectives of the Group and it reviews current key risks at every Board meeting. The Audit Committee monitors the conduct of the risk management processes within the Group whilst the SET is accountable for those processes, identifying the risks facing the Group and formulating risk mitigation plans. The active involvement of the executive directors in the management sub-committees allows them to monitor and assess significant business, operational, financial, compliance and other risks.

Board committee reports

Audit Committee report

The Audit Committee comprises Stuart Henderson and Andrew Heath.

Mr. Henderson and Dr. Heath both have relevant experience which qualifies them for membership of the Audit Committee and, in Mr. Henderson's case, to be Chair of the Committee. Their experience is set out in their brief biographies on pages 54 and 55.

The primary duties of the Audit Committee, as set out in its written terms of reference which is available on the Group's website, are to:

- Keep under review the Group's reporting and internal control policies and procedures
- Oversee the relationship with the external auditors including their appointment, subject to approval by shareholders at the AGM, remuneration, independence, and the provision of non-audit services
- Review and recommend to the Board the financial statements and associated announcements

Provision C.3.5 of the Code states that the Audit Committee should review the effectiveness of the Group's internal audit function. The Audit Committee considers that, given the size of the Group, it is unnecessary for it to have an internal audit function. However, the Committee annually reviews this at its meetings with the external auditors.

The Audit Committee met five times in 2017:

- 9 March 2017 – to review the audit process at that time. No major concerns had arisen in respect of the key audit risks identified. Revenues from the Novartis contract had been recognised consistently with the methodology previously agreed. The auditors concurred with the accounting for the Oberland loan facility and the depreciation rates appointed for asset lives. The auditors had also reviewed the going concern statement and disclosure in the Annual report. No significant audit adjustments had been identified by the auditors, and there were no material observations regarding the financial internal control procedures
- 21 July 2017 – to review the specified procedures undertaken by PwC on the six months' financial results to 30 June 2017. The main items which were discussed related to the accounting treatment of the Oaktree loan and warrants and the revaluation of the Orchard Therapeutics investment
- 3 August 2017 – to review progress to date for the six months' financial results to 30 June 2017 and identify any issues that require further attention. Recognition of Novartis revenues, and Orchard milestone payments were discussed, along with the valuation of the Oaktree loan and warrants
- 16 August 2017 – to approve the six months' financial results to 30 June 2017. The Audit Committee approved the interim results for 2017, and the related RNS announcement
- 13 December 2017 – to review the 2017 audit strategy and audit fees, discuss auditor rotation and the audit tender process and recommendation for 2018 audit. The Committee accepted the 2017 audit strategy proposed by PwC. The audit fees for 2017 were approved. The current PwC partner is due to rotate off the Oxford BioMedica audit after the 2017 audit completes. Noted that new auditor independence rules came into effect in 2017. The 2018 audit will now be conducted by new auditors. Oxford BioMedica completed an audit tender process in late 2017. Merits and detractors of all the audit tender candidates were discussed and KPMG was selected as the audit candidate to replace PwC as our auditors going forward. This will be put to the shareholders at the 2018 AGM

The effectiveness of the Audit Committee is being considered as part of the Board performance review carried out during December 2017 and January 2018, and will be discussed at the forthcoming Board meeting.

Internal control

The Directors are responsible for Oxford BioMedica's system of internal control, and for reviewing its effectiveness. The system is designed to manage, rather than eliminate, the risk of failure to achieve business objectives, and can only provide reasonable, and not absolute, assurance against material misstatement or loss. The Audit Committee annually reviews the effectiveness of all significant aspects of internal control, including financial, operational and compliance controls and risk management. The review for 2017 was prepared by the Chief Financial Officer and the Group Financial Controller, and was reviewed at the March 2018 Audit Committee meeting.

The main features of the internal control and risk management processes which apply to the Group's financial reporting processes include clear separation of duties within the financial processes such as approval of purchase orders, payroll and disbursements, and an organisation of the finance function such that monthly management results and externally reported financial statements are subject to thorough review by the Group Financial Controller and Chief Financial Officer. The financial results are also reviewed by the Senior Executive Team and the Board.

Nomination Committee report

The Nomination Committee leads the process for making appointments to the Board, and comprises the non-executive directors.

The Nomination Committee met several times in 2017 on an ad hoc basis to consider the recruitment process and ultimately, the appointment of Stuart Paynter as a Chief Financial Officer and member of the Board.

Share capital

The information about the share capital required by the Takeover Directive is in the Directors' report on page 85.

Corporate governance

Directors' remuneration report

for the year ended 31 December 2017

Introduction

This report is on the activities of the Remuneration Committee. It is prepared in accordance with Schedule 8 to the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended). The report contains:

- The annual statement from the Remuneration Committee chair
- The annual report on remuneration showing payments and awards made to the directors and explaining the link between company performance and remuneration for the 2017 financial year
- The Directors' remuneration policy (the "policy"), setting out the policy which is subject to shareholder approval at the 2018 Annual General Meeting (AGM), and shall take binding effect from the close of that meeting

The annual statement and the annual report on remuneration are subject to an advisory vote at the Company's 2018 AGM.

The Companies Act 2006 requires the auditors to report to the shareholders on certain parts of the Directors' remuneration report and to state whether, in their opinion, those parts of the report have been properly prepared in accordance with the relevant regulations. The parts of the report that are subject to audit are indicated. The statement from the chair of the Remuneration Committee and the policy report are not subject to audit.

Annual statement from the Remuneration Committee chair

(not subject to audit)

Dear Shareholder

I am pleased to introduce our remuneration report for the 2017 financial year. The report is divided into two sections: the Directors' remuneration policy, followed by the annual report on remuneration.

The policy sets out our forward looking policy for Directors' remuneration and is a replacement for the policy approved in 2015. The annual report on remuneration provides details of the amounts earned in respect of the 2017 financial year, and the impact of the new policy which will be implemented in 2018, subject to its approval by shareholders.

Approach to the new policy

During 2017, the Committee reviewed the policy approved by shareholders at the 2015 AGM in connection with the requirement to seek shareholder approval for the new policy at the 2018 AGM. The Committee's conclusion was that the policy remained appropriate, and effectively supported the Group's strategic aims. Accordingly, the new policy is broadly the same as the old policy, but with changes to aid its administration and operation, including that a company car or car allowance may be provided to executive directors, reflecting the intention to introduce such a benefit more widely within the Group. Further, that appropriate benefits may be provided to non-executive directors, reflecting that HMRC may view some benefits commonly provided in connection with the performance of duties as being taxable.

The only change to quantum in the policy is with regards to the maximum award which can be made under the LTIP for the CEO. This is explained on page 65.

2017 business performance and incentive impact

In February 2018 the Committee met to consider the achievement of 2017 objectives and the annual bonus award for 2017.

The performance of the business in 2017 is set out in detail in the Strategic report from pages 26 to 30 and the performance against corporate objectives is set out on page 69 of this Remuneration report. Taking all of these factors into account the Committee decided to award John Dawson a bonus of 106% of base salary Peter Nolan a bonus of 110% of salary, Tim Watts a bonus of 110% of salary, which has been pro-rated to reflect his service in the year to the date of cessation of employment, and Stuart Paynter a bonus of 106% of salary, also prorated for his period of service in the year. The 2017 bonuses earned by John Dawson, Stuart Paynter and Peter Nolan will be paid 50% in cash and 50% in deferred share awards. Reflecting his retirement from the business, Tim Watt's bonus will be paid fully in cash. Further details are provided on page 69 with regards to how performance under the annual bonus targets translated into bonus payment.

Vesting of the 2014 LTIP award

LTIP awards were granted on 20 June 2014 to John Dawson, Peter Nolan and Tim Watts when the share price was 2.38p; the vesting conditions were as follows:

Share price at 20 June 2017	Percentage of the options granted that will vest
Less than 5p	0%
5p – 7.5p	Calculated on a straight line basis between 25% and 100%
7.5p and above	100%

The awards vested in 2017. As reported in previous Annual reports, the awards contained a provision for "banking" part of the awards based on interim share price performance which resulted in 25% of the awards being "banked" in June 2015. No further banking occurred in 2016 and the share price in 2017 was such that only the banked 25% vested, with the balance of the awards lapsing. Details are provided on page 70.

Board changes

Tim Watts resigned from the Board and retired from the Company on 29 September 2017. The remuneration arrangements in relation to Tim's retirement from the Board have been determined in accordance with the shareholder approved Directors' remuneration policy; further information is set out on page 72.

Stuart Paynter was appointed as CFO with effect from 29 August 2017. His salary was set at £207,500. Details of Stuart's remuneration received during the year are set out in the single figure table on page 68.

Proposed approach to executive remuneration for 2018

Due to the financial constraints under which the Company operates, it is pivotal that remuneration for Directors' and senior management is heavily performance driven. However the Committee also wishes to recognise the performance of John Dawson as CEO. John's experience and strong leadership has steered the business to one of growth and stability over recent years, with business changing contracts which have been reflected in the share price and underlying performance. The proposed changes to his remuneration acknowledge the extent of this performance, while remaining in line with market practice.

Stuart Paynter will receive a pay increase of 3% which is in line with the wider Oxford BioMedica workforce. When Stuart was appointed to the Board as CFO in August 2017 his salary was set at £207,500 which was below that of Tim Watts our exiting CFO. Peter Nolan is retiring from the Board in 2018 and as such, was not awarded a pay increase; the treatment of Peter's receivable remuneration will be determined in due course and disclosed in the 2018 Directors' remuneration report.

The Committee has increased John Dawson's salary by 8.5% from £350,000 to £380,000. This reflects the increase in John's experience and the strong performance he has shown in role and also the growth in responsibilities as the operational size of the business has grown substantially over recent years. Pay increases for John have been in line with, or less than, those awarded to the wider workforce over the past three years and prior to that were nil in 2013 and 2014.

Under the existing policy the maximum bonus opportunity is 125% of salary. No change is proposed under the new policy. 50% of the bonus is paid in cash, 50% is paid in shares which vest in equal tranches from one to three years following the grant of the award. Performance measures will continue to be set based on key strategic measures, and will be disclosed retrospectively as with the 2017 bonus on page 69.

The Committee is proposing to increase the maximum award for the CEO under the LTIP to 125% of salary. However the amount which John could earn at threshold will not change i.e. it will still be 25% of salary (or 20% of the total award). The additional 25% would therefore only be earned on performance above threshold. The maximum LTIP award for the other executive directors will remain at 100% of salary, with 25% of the award vesting at threshold as currently.

The Committee has always taken a prudent approach to LTIP awards – in 2017 the awards were scaled back to 90% of salary, reflecting the share price at that time, and taking into account both the dilutive impact on shareholders, and to avoid the opportunity for windfall gains. If the current share price is maintained to the point of grant in 2018 the Committee is anticipating that there would be no scale back of LTIP for the 2018 award.

The Company has historically used share price growth as its primary measure for LTIP awards and it is the Committee's view that share price growth remains the most appropriate performance measure for determining LTIP vesting, ensuring that awards are only made where significant value is delivered to shareholders and recognising that, at this stage, financial measures are not appropriate given the nature of our business. However, the Committee will be keeping the LTIP measures under review as the business grows in revenue and earnings potential. The proposed 2018 share price growth targets are 10% CAGR for threshold performance and 17.5% for maximum performance.

There will be a performance underpin, such that the awards would only vest to the extent that the Committee considers that the overall performance of the business across the period justifies it. Share price will also be averaged across a three month period to avoid rewarding for short term spikes in performance.

Summary of changes to executive remuneration for 2018

Under the remuneration policy executive directors' base salaries are normally reviewed annually. The Remuneration Committee has carried out this review in February 2018 and has awarded the following base salary increases:

	Current salary	Percentage increase	Total of increase	New salary
John Dawson	£350,240	8.5%	£29,760	£380,000
Peter Nolan	£216,430	0.0%	Nil	£216,430
Stuart Paynter	£207,500	3.0%	£6,225	£213,725

Performance objectives for the Group have been agreed by the Board and the extent to which executive directors' bonuses for 2018 are earned will be determined by the Remuneration Committee early in 2019 in the light of performance against those objectives and in line with the remuneration policy. The performance measures are based on the Company's strategic priorities, and further information is given on page 31.

The Committee also intends to grant LTIP options to the executive directors during 2018 up to 125% of salary in the case of the CEO and 100% in the case of other executive directors in accordance with the approved remuneration policy. The awards will be subject to performance measures which will be set at the time of grant but which are likely to be related to share price performance.

Non-executive director fees

Non-executive director fees have been increased as follows:

	Current fee	Total of increase	New fee
Stuart Henderson	£52,500	£12,500	£65,000
Andrew Heath	£45,500	£19,500	£65,000

Non-executive director fees were increased to reflect the increased size of the Group and prevailing market rates.

Other matters

The Committee recognises the expectations of our shareholders on executive pay and we were pleased that the 2016 Directors' remuneration report received votes in favour in excess of 99% at the 2017 AGM. Shareholders will be invited to approve the 2017 annual remuneration report and the Directors' remuneration policy at the 2018 AGM.

Andrew Heath

Chair, Remuneration Committee

Annual report on remuneration (subject to audit except where indicated)



Andrew Heath was appointed a director in January 2010 and became Deputy Chairman and Senior Independent Director in May 2011

Remuneration Committee role and members

The responsibilities of the Remuneration Committee are set out in its terms of reference which are available on the Group's website and include:

- Recommending to the Board the policy and framework for the remuneration of the executive directors and senior management. The remuneration of the non-executive directors is a matter for the Chairman
- Approval of individual remuneration packages for executive directors
- Approval of annual performance incentive plans and bonuses payable
- Approval of the Group's Long Term Incentive Plan (LTIP) for executive directors and senior management, and awards granted under the plan
- Approval of options granted to all employees under the Group's share option plan

The Remuneration Committee members are currently Andrew Heath (Chairman) and Stuart Henderson. Martin Diggle was a member of the Committee until 31 December 2016 but, as he is not considered to be independent for reasons explained in the Corporate Governance Report (page 59), he has stepped down from formal membership of the Committee. He retains "observer" status and therefore continues to receive all papers, and has a standing invitation to attend all meetings. Other directors are invited to attend meetings on an agenda driven basis.

Remuneration Committee activities during 2017

During 2017 the Committee met six times. The main activities and decisions were as follows:

- 10 February 2017 – the Committee considered whether or not bonuses should be paid to the executive directors in respect of 2016 in light of the performance against the Group's 2016 objectives, and also whether there should be salary increases for 2017. The outcome of these discussions was reported in the 2016 Annual report
- 20 June 2017 – the Committee considered the extent to which the share price performance conditions for the June 2014 LTIP grant of options had been met. The outcome was that 25% of the options granted in 2014 would vest and the remaining 75% will lapse. The Committee also approved the vesting of Deferred Bonus Plan options granted in 2014, 2015 and 2016. DBP options vest in three equal instalments on the first, second and third anniversaries of the grant
- 13 July 2017 – the Committee considered the granting of options to employees under the Group's Long Term Incentive Plan, Deferred Bonus Plan and Employee Share Option Scheme. The Committee approved the granting of the share options
- 5 September 2017 and 13 October 2017 – in September the Committee approved an invitation to all employees to participate in the 2017 offer under the Company's ShareSave Plan. In October the Committee approved the grant of options under this offer
- 13 December 2017 – the Committee reviewed the proposed draft 2018 corporate objectives, and to extend the window of completion of events for executive directors' remuneration. It was decided that the draft 2018 corporate objectives would be amended following further discussion, and will be presented to the Board in January 2018 for approval. It was agreed to extend the window for completion of events to allow qualification for 2017 executive directors' remuneration

Single total figure of remuneration

The following tables show a single total figure of remuneration for 2017 for each director and comparative figures for 2016.

2017	Salary £'000	Benefits ¹ £'000	Bonus £'000	LTIP ² £'000	Pension ³ £'000	Total £'000
John Dawson	350	1	372	35	53	811
Stuart Paynter ⁴	71	–	76	–	11	158
Peter Nolan	216	1	238	19	32	506
Tim Watts ⁵	169	1	185	22	25	402
Total	806	3	871	76	121	1,877

2016	Salary £'000	Benefits ¹ £'000	Bonus £'000	LTIP £'000	Pension ³ £'000	Total £'000
John Dawson	342	1	211	47	52	653
Paul Blake ⁶	167	17	–	–	22	206
Peter Nolan	211	1	144	25	35	416
Tim Watts	219	–	151	29	29	428
Total	939	19	506	101	138	1,703

1. Benefits comprise medical insurance
2. This comprises the LTIP awards granted in 2014 which vested in June 2017. The relevant performance criteria and the performance against them are set out on page 64. The values are calculated by reference to the share average price of 2.78p over the 3 months to 20 June 2014.
3. Pension contributions are made into the Group's defined contribution scheme or at the election of the director as a cash allowance in lieu of a company pension contribution – Paul Blake and Tim Watts had elected to receive such a cash allowance.
4. Stuart Paynter was appointed CFO with effect from 29 August 2017. His 2017 remuneration is in respect of the period from his appointment to the Board.
5. Tim Watts stepped down from the Board on 29 September 2017. His 2017 remuneration is in respect of the period to his retirement from the Board, including his 2017 bonus.
6. Paul Blake stepped down from the Board at the AGM on 7 June 2016 and his employment contract expired on 31 August 2016.

In February 2018 the Committee met to consider the achievement of the 2017 objectives and the annual bonus award for 2017. The performance of the business in 2017 is set out in detail in the Strategic report from pages 16 to 41.

Performance against the Group objectives for 2017, on which the executives' bonuses are based, was as follows:

Objective	Weighting	Performance assessed	Assessment against objective	% of bonus awarded
Developing the LentiVector® platform The LentiVector® platform is the base of our business. Targets include the use of our new 200L bioreactor process for our partners, secure regulatory approval and manufacture for commercial use.	40%	Major new commercial supply agreement signed with Novartis. Supported Novartis in their sBLA submission for DLBCL; supported EMA marketing authorisation submission for ALL; and achieved milestone for successful scale up of the suspension bioprocessing process for CTL019. Successful FDA and MHRA facilities' inspections completed with manufacturing licences awarded.	Met in full	40%
Product development Look to out-licence or spin-out our key products and formulate a process for discovery pre-clinical projects	25%	Agreed that the process and criteria for discovery pre-clinical projects and timelines for 2017 was met. However, the spin-out, out-licence and clinical trials related to OXB-102, plus out-licence for OXB-302 were not achieved.	Partially met	10%
Business development Secure further revenue and royalty generating relationships and build further on those we already have.	10%	Completed negotiations for the \$105 million licence and collaboration agreement signed with Bioverativ in February 2018.	Met in full	10%
Financial objectives Confidential financial targets were set, including ref-financing of the debt.	15%	Gross income growth of 28% achieved whilst EBITDA loss decreased from £7.1 million to £1.9 million. Oberland loan refinanced with \$55 million Oaktree facility at improved financial terms.	Met in full	15%
Corporate objectives Further organisational improvement objectives were set.	10%	Succession plans put in place to mitigate the risk of key employees leaving the business.	Met in full	10%

John Dawson's bonus is entirely linked to the achievement of the corporate objectives. Bonuses for Peter Nolan, Stuart Paynter and Tim Watts are 80% linked to corporate objectives and 20% linked to personal objectives. Mr. Nolan, Mr. Paynter and Mr. Watts were awarded 100% of their personal targets.

Accordingly, bonuses earned by the executive directors in respect of 2017 were:

- John Dawson: £372,000 (106% of salary);
- Peter Nolan: £238,000 (110% of salary);
- Stuart Paynter: £76,000 (110% of salary); and
- Tim Watts: £185,000 (110% of salary, after pro-rating to reflect his period of service in the year).

The 2017 bonuses for John Dawson, Stuart Paynter and Peter Nolan will be paid 50% in cash and 50% in deferred share awards. The deferred share awards are not subject to further performance targets and will vest in three equal instalments on the first three anniversary dates after the award date provided that the relevant participant remains employed at the first anniversary of the award. Reflecting his retirement from the business, Tim Watts' bonus will be paid fully in cash.

R Corporate governance
Directors' remuneration report

for the year ended 31 December 2017

The single total figures of remuneration for non-executive directors are shown in the table below:

Fees	2017 £'000	2016 £'000
Lorenzo Tallarigo	150	138
Andrew Heath	46	46
Stuart Henderson	53	31
Nick Rodgers	–	25
Total	249	240

Martin Diggle has elected to receive no fees for his services as a director.

Aggregate directors' emoluments	2017 £'000	2016 £'000
Salaries	806	939
Benefits	3	19
Pension /cash alternative	121	138
LTIP	76	101
Bonuses	871	506
Non-executive directors fees	249	240
Total	2,126	1,943

LTIPs vesting during 2017

LTIP awards were granted on 20 June 2014 to John Dawson, Peter Nolan and Tim Watts when the share price was 2.38p, the vesting conditions were as follows:

Share price at 20 June 2017	Percentage of the options granted that will vest
Less than 5p	0%
5p – 7.5p	Calculated on a straight line basis between 25% and 100%
7.5p and above	100%

As reported in previous Annual Reports, the awards contained a provision for "banking" part of the awards based on interim share price performance which resulted in 25% of the awards being "banked" in June 2015. No further banking occurred in 2016 and the share price in 2017 was such that only the banked 25% vested, with the balance of the awards lapsing.

The value of the awards vesting during 2017 are detailed below:

	Number of awards granted that vested	Share price at the date on which the shares vest	Value of awards on vesting¹
John Dawson	1,257,300	5.36p	£67,391
Peter Nolan	699,383	5.36p	£37,487
Tim Watts	800,101	5.36p	£42,855

1 The values are calculated by reference to the share price of 5.36p on 20 June 2017.

LTIPs awarded during 2017

On 13 July and 25 September 2017, the executive directors were awarded the following options under the Group's LTIP scheme:

	Number of options granted	Face value of grant
John Dawson (awarded 13 July 2017)	3,173,741	£314,200
Peter Nolan (awarded 13 July 2017)	1,961,197	£194,159
Stuart Paynter (awarded 25 September 2017)	2,894,003	£248,884

The number of options awarded in July 2017 and September 2017 was calculated by reference to 90% of salary divided by the average share price in the five business days preceding the relevant award (July 2017: 9.9p, September 2017: 8.6p).

Stuart Paynter was granted an LTIP award over 2,894,003 shares representing 120% of salary, as part of his recruitment package, and in order to align senior management longer term interests with those of the Group.

The awards are nil cost options and are subject to a three year vesting period. They are exercisable from the third anniversary of the award, subject to the achievement of the performance condition set out below:

Average annual compound share price growth over the three year period starting with the date of grant*	Percentage of the options granted that will vest
Less than 10%	0%
10% (i.e. 33% over 3 years)	25%
Between 10% and 20%	Calculated on a straight line basis between 25% and 100%
20% or more (i.e. 73% over 3 years)	100%

* The starting share price for July 2017 and September 2017 is 9.9p and 8.6p respectively, being the average share price over the five business days preceding the date of grant. The end share price shall be calculated as the average of the closing price for the three months period prior to 13 July 2020 and 25 September 2020.

There will also be a performance underpin, such that the awards will only vest to the extent that the Remuneration Committee considers that the overall performance of the business across the period justifies it.

Statement of directors' shareholding and share interests

The executive directors are encouraged to build up a shareholding, but there is no specific required target level. The interests in shares of the directors who served during the year as at 31 December 2017 (or, if earlier, the date of their retirement) were as follows:

	Shares held outright		Vested but unexercised options		Unvested deferred bonus plan		Unvested LTIP awards subject to performance conditions	
	2017	2016	2017	2016	2017	2016	2017	2016
Executive directors								
John Dawson	3,925,685	3,925,685	15,279,313	12,302,989	2,588,639	3,242,816	8,721,803	10,498,062
Peter Nolan	1,918,321	1,668,634	7,681,944	5,967,406	1,737,078	2,024,806	5,373,071	6,165,349
Tim Watts ¹	17,181,767	7,395,124	–	8,864,136	1,759,534	2,089,348	3,560,697	6,710,697
Stuart Paynter	–	–	–	–	–	–	2,894,003	–
Non-executive directors								
Lorenzo Tallarigo	2,173,087	1,784,122						
Martin Diggle ²	581,008,834	580,765,333						
Andrew Heath	1,607,086	1,500,000						
Stuart Henderson	333,833	333,833						

1. Tim Watts stepped down from the Board on 29 September 2017. Shareholding and share interests are as at the date of stepping down from the board.

2. Includes the interest of Vulpes Life Science Fund, Vulpes Testudo Fund and other parties connected to Martin Diggle.

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Directors' remuneration report

for the year ended 31 December 2017

During 2017 the following options have vested and lapsed:

LTIP	Unvested at 1 January 2017	Vested during 2017	Lapsed during 2017	Awarded during 2017	Unvested at 31 December 2017
John Dawson	10,498,062	1,257,300	3,692,700	3,173,741	8,721,803
Stuart Paynter	-	-	-	2,894,003	2,894,003
Peter Nolan	6,165,349	699,383	2,054,092	1,961,197	5,373,071
Tim Watts	6,710,697	800,101	2,349,899	-	3,560,697

Deferred bonus	Unvested at 1 January 2017	Vested during 2017	Awarded during 2017	Unvested at 31 December 2017
John Dawson	3,242,816	1,719,024	1,064,847	2,588,639
Peter Nolan	2,024,806	1,087,781	727,427	1,737,078
Tim Watts	2,089,348	1,015,155	757,967	1,759,534

On 10 June 2018 the performance criteria for the LTIP awards granted on 10 June 2015 will be assessed. The average share price for the five business days preceding 10 June 2015 was 9.7p and vesting conditions were set as follows:

Average annual compound share price growth over the three year period starting with the date of grant	Percentage of the options granted that will vest
Less than 15%	0%
15% (i.e. 52.1% over 3 years)	25%
Between 15% and 25%	Calculated on a straight line basis between 25% and 100%
25% or more (i.e. 95.3% over 3 years)	100%

Payment to past directors and payments for loss of office

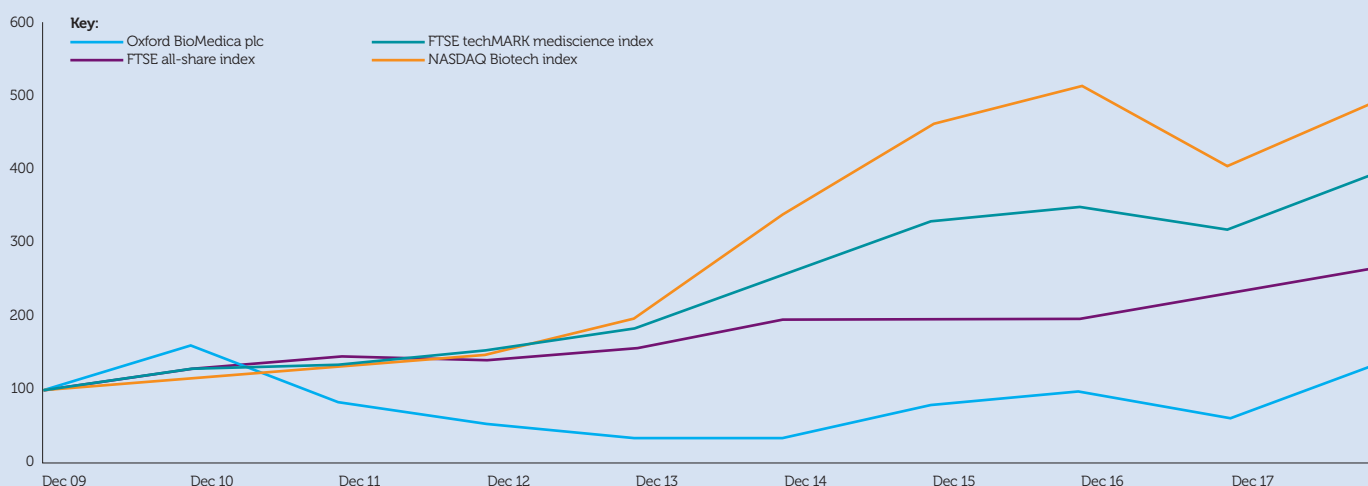
Tim Watts stepped down from the Board and retired from the Company on 29 September 2017. His remuneration earned to that date and the bonus he has earned in respect of 2017 is included in the single figure table of remuneration on page 68. He will not receive any payment for loss of office or any other payments in relation to the cessation of his employment. Consistent with the terms of the Company's remuneration policy and the rules of the LTIP, he will retain the unvested share awards made under the LTIP granted in 2015 and 2016, which will vest on their normal vesting dates, subject to the performance conditions. The awards made in 2016 will be prorated such that two thirds of the original award will vest, (subject to the performance conditions). Tim will also retain the deferred bonus shares earned but not yet vested, in respect of 2014, 2015 and 2016 bonuses. These will vest at the usual time.

As disclosed in the 2016 Directors' Remuneration Report, on his retirement from the Group in August 2016, Paul Blake retained his LTIP award granted in 2014, which remained subject to its original performance conditions.

Performance graph and comparison with CEO's remuneration

(not subject to audit)

The chart below illustrates the Company's TSR performance since January 2009 relative to the FTSE all-share index and the FTSE techMARK MediScience index. The FTSE all-share index has been selected because it represents a broad-based measure of investment return from equities. The FTSE techMARK mediScience index, comprising biotech companies, provides a second benchmark that is a more specific comparator.



CEO's remuneration in last nine years

(not subject to audit)

Year		2009	2010	2011	2012	2013	2014	2015	2016	2017
CEO's total single figure of remuneration	£'000	817 ¹	450	413	401	468	680	732	653	914
LTIP vesting	% of maximum	0%	0%	0%	40%	0%	0%	100%	50%	25%
Annual bonus	% of maximum	80%	42%	0%	17%	30%	75%	42%	50%	85%

1 On 1 September 2009 1,500,000 new Ordinary Shares were allotted to John Dawson. The shares were fully paid, and were a one-off share based bonus payment in accordance with his contract of employment, for successful achievement of certain transactions with Sanofi in April 2009. The value of the shares at the closing mid-market price on the trading day immediately prior to issue was £172,500 and the Company bore an additional cost of £120,000 required to gross up the value of the shares for income tax and National Insurance. Mr. Dawson also received a regular bonus of 80% of maximum.

Percentage change in CEO's remuneration

(not subject to audit)

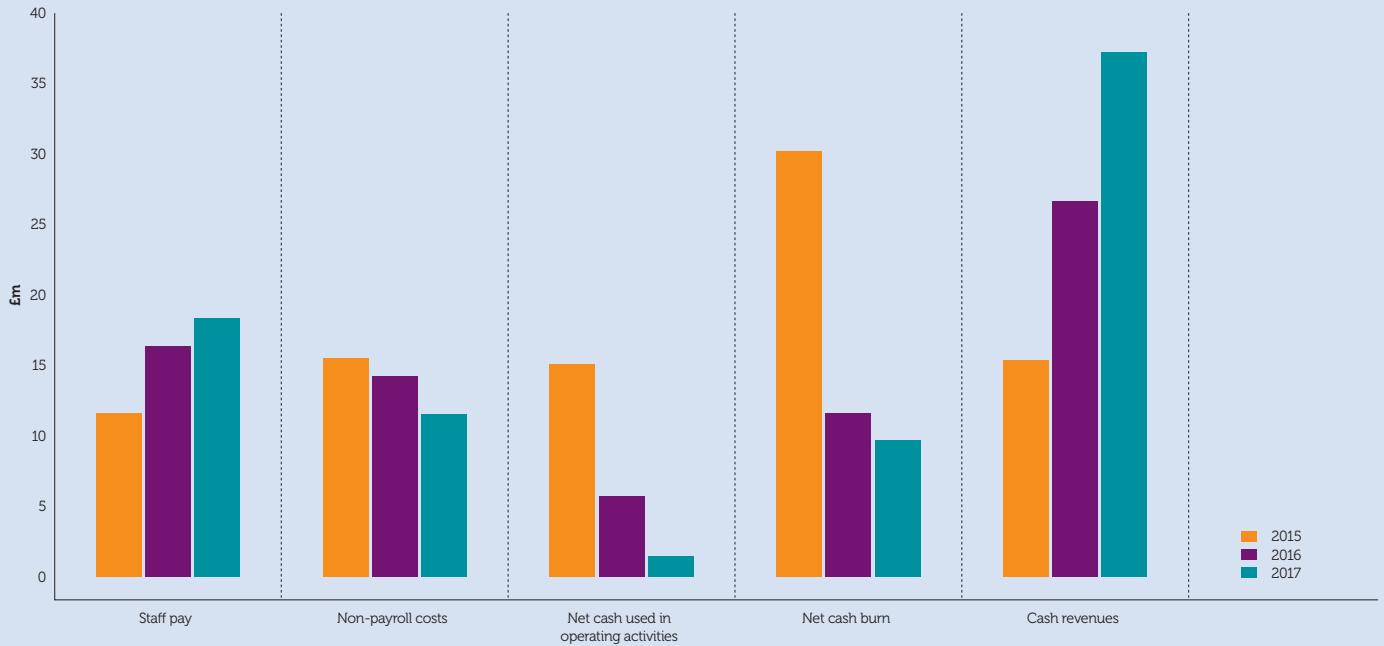
The table below shows how the percentage change in the CEO's salary, benefits and bonus between 2016 and 2017 compares with the equivalent changes in those components for a group of employees. As 2016 and 2017 have seen significant changes in headcount numbers, the Committee has chosen as the comparator group all those employees other than the CEO who were employed throughout the whole of both 2016 and 2017.

Year	Salary			Benefits			Bonus		
	2017	2016	% increase	2017	2016	% increase	2017	2016	% increase
John Dawson	350	342	2.5%	1	1	0%	372	211	76.3%
Comparator employee group	6,800	6,292	8.1%	80	85	(6.3%)	863	594	45.4%

Relative importance of spend on pay

(not subject to audit)

The chart below illustrates the spend on employee remuneration compared with the Group's key cash measures. Since the Group does not make dividend or other distributions, these have not been included in the table.



Statement of voting at AGM

(not subject to audit)

At the 2016 AGM, the 2015 Directors' Remuneration Report was approved by shareholders as follows:

Resolution	Votes for (including discretionary)	% for	Votes against	% against	Total votes cast (excluding votes withheld)	Votes withheld (abstentions)
Approval of the Directors' remuneration report	1,482,856,907	99.9%	1,251,449	0.1%	1,484,108,356	7,772,168

At the 2017 AGM, the 2016 Directors' remuneration report was approved by shareholders as follows:

Resolution	Votes for (including discretionary)	% for	Votes against	% against	Total votes cast (excluding votes withheld)	Votes withheld (abstentions)
Approval of the Directors' remuneration report	1,609,806,952	99.7%	4,701,911	0.3%	1,614,508,863	282,721,528

Advisers to the Committee

(not subject to audit)

Deloitte LLP acted as adviser to the Committee during 2017. Deloitte is a founding member of the Remuneration Consultants Group and adheres to its Code of Conduct in relation to executive remuneration consulting in the UK. Deloitte's fee for advice to the Committee during 2017 were £4,550 plus VAT.

The Committee reviewed the potential conflicts of interest and the safeguards against them and is satisfied that Deloitte does not have any such interests or connections with the Group that may impair independence.

Andrew Heath

Chair, Remuneration Committee

15 March 2018

Directors' remuneration policy

(not subject to audit)

The Company's Directors' remuneration policy set out in the 2014 Annual report was approved by shareholders at the 2015 AGM and took effect from the close of that meeting. In accordance with the applicable legislation, the Company is required to seek approval for a new Directors' remuneration policy at the 2018 AGM. In the Committee's view, that policy continues to support the execution of the Group's strategy and, accordingly, a radical overhaul of it is not proposed. The only change proposed to the maximum variable remuneration opportunities is to increase the maximum award under the LTIP to the CEO to 125%. The executive directors will remain at 100%. There is no change to the overall structure of the variable remuneration. Other, minor changes are proposed to the policy, as summarised in the statement by the Chairman of the Committee on pages 63 and 65.

Approach to executive directors' remuneration

(not subject to audit)

The ethos underlying the executive directors' remuneration structure is to:

- Promote the long term success of the Group, with transparent and stretching performance conditions which are rigorously applied
- Provide appropriate alignment between the Group's strategic goals, shareholder returns and executive reward
- Have a competitive mix of base salary and short and long term incentives, with an appropriate proportion of the package determined by stretch targets linked to the Group's performance

Our policy reflects this ethos.

The following sections of this Directors' remuneration report set out the Directors' remuneration policy for which shareholder approval will be sought at the 2018 AGM. Subject to shareholder approval, the policy will apply with effect from the close of that meeting.

Corporate governance

Directors' remuneration report

for the year ended 31 December 2017

Policy table

Component and purpose	Operation	Maximum potential and payment at threshold	Performance targets and metrics
Executive directors			
<p>Base salary</p> <p>To provide a base salary which is sufficient to attract and retain executives of a suitable calibre.</p>	<p>Base salaries are initially set by reference to market information at the time of appointment and taking into account the experience and previous package of the new director.</p> <p>Base salaries are normally reviewed annually taking into account a number of factors which may include (but are not limited to):</p> <ul style="list-style-type: none"> – underlying Group performance; – role, experience and individual performance; – competitive salary levels and market forces; and – pay and conditions elsewhere in the Group. <p>Any changes are normally effective from 1 January.</p>	<p>While there is no maximum salary, increases will normally be line with the level of salary increase awarded (in percentage of salary terms) to other employees in the Group.</p> <p>Salary increases above this level may be awarded in certain circumstances, such as, but not limited to:</p> <ul style="list-style-type: none"> – where an executive director has been promoted or has had a change in scope or responsibility; – an individual's development or performance in role (e.g. to align a newly appointed executive director's salary with the market over time); – where there has been a change in market practice; or – where there has been a change in size and/or complexity of the business. <p>Such increases may be implemented over such time period as the Committee deems appropriate.</p>	<p>While no formal performance conditions apply, an individual's performance in role is taken into account in determining any salary increase.</p>
<p>Benefits</p> <p>To provide benefits on a market competitive basis.</p>	<p>Benefits are provided in line with market practice and may include medical insurance, life assurance, permanent health insurance, provision of a company car or a car allowance and other appropriate benefits determined by the Committee. Additional benefits may be provided based on individual circumstances. These may include, for example, travel expenses.</p>	<p>There is no predetermined maximum but the totals are reviewed annually by the Remuneration Committee.</p>	<p>Not applicable.</p>
<p>Retirement benefits</p> <p>To provide funding for retirement.</p>	<p>The Group operates a defined contribution scheme for all employees including executive directors.</p> <p>In appropriate circumstances, such as where contributions exceed the annual or lifetime allowance. Executive directors may be permitted to take a cash supplement instead of some or all of the contributions to a pension plan.</p>	<p>15% of base salary.</p>	<p>Not applicable.</p>
<p>Share ownership guidelines</p> <p>To align Executives with Shareholders and provide an ongoing incentive for continued performance.</p>	<p>Shares which are fully owned with no outstanding vesting criteria count towards the shareholding guideline together with deferred annual bonus shares (on a net of tax basis).</p> <p>Executive directors will be required to retain half of any post-tax awards which vest under the long-term incentive plans, and deferred shares under the annual bonus, until the share ownership guideline has been satisfied.</p>	<p>Executive directors are required to build and maintain 150% of salary minimum level of shareholding.</p>	<p>Not applicable.</p>

Component and purpose	Operation	Maximum potential and payment at threshold	Performance targets and metrics
<p>Sharesave Scheme To create alignment with the Group and promote a sense of ownership.</p>	<p>Executive directors are entitled to participate in a tax qualifying all employee Sharesave Scheme under which they may make monthly savings contributions over a period of three or five years linked to the grant of an option over the Company's shares with an option price which can be at a discount of up to 20% to the market value of shares at grant (or such other discount as may be permitted by the applicable legislation from time to time).</p>	<p>Participation limits and the level of discount permitted in setting the exercise price are those set by the UK tax authorities from time to time.</p>	<p>Not subject to performance measures in line with HMRC practice.</p>
<p>Annual bonus To incentivise and reward delivery of the Group's objectives.</p> <p>Delivery of 50% of any bonus payment via deferred shares aligns the incentive package with shareholders' interests.</p>	<p>Annual bonuses are determined by the Committee.</p> <p>50% of the bonus is delivered as cash.</p> <p>50% of the bonus is delivered through deferred shares which ordinarily vest in three equal instalments on the first, second and third anniversaries of the award. The deferred shares are not subject to further performance targets. Deferred share awards may be made under an HMRC EMI plan where appropriate. Bonus awards are discretionary and can be removed or adjusted at the Committee's discretion.</p> <p>Dividend equivalents may be attached to the deferred shares over the deferral period. These dividend equivalents may be delivered in cash or shares and may assume the reinvestment of dividends into shares on a cumulative basis.</p> <p>Recovery provisions apply as summarised at the foot of this table.</p>	<p>The maximum bonus opportunity will not exceed 125% of base salary.</p>	<p>The performance metrics and targets are decided annually by the Committee taking into account the strategic needs of the business.</p> <p>Given the nature of the business, these objectives and metrics may change significantly each year.</p> <p>There is no minimum bonus earned if threshold performance is not met.</p>
<p>Long Term Incentive Plan (LTIP) To augment shareholder alignment by providing executive directors with longer term interests in shares whilst requiring challenging performance before LTIP awards vest.</p>	<p>At the discretion of the Committee, annual grants of conditional nominal cost share options which vest subject to the achievement of specified performance targets, typically assessed over a three year performance period.</p> <p>Awards granted under the LTIP may include dividend equivalents earned between the grant and vesting date. These dividend equivalents may be delivered in cash or shares and may assume the reinvestment of dividends into shares on a cumulative basis.</p> <p>Awards have been made under an HMRC EMI plan where appropriate.</p> <p>Recovery provisions apply as summarised in the notes to the policy table on the next page.</p>	<p>The normal maximum award is 100% of base salary in respect of a financial year for executive directors, other than the CEO for whom the maximum award is 125% of base salary. Under the share plan rules the overall maximum opportunity that may be granted in respect of a financial year is 200% of base salary. The normal maximum award limit will only be exceeded in exceptional circumstances such as the recruitment of an executive director.</p>	<p>Performance conditions will be determined in advance of grant of awards and will be based on financial measures or the achievement of strategic objectives. Financial measures may include (but are not limited to) share price and revenue measures. For the achievement of growth performance in respect of a financial measure, no more than 25% of the award will vest for threshold performance and 100% of the award will vest for maximum performance; for below threshold performance, none of the award will vest.</p> <p>For strategic measures, vesting will be determined between 0% and 100% depending upon the Committee's assessment of the extent to which the measure has been achieved.</p>

Notes to the policy table

Recovery provisions

The annual bonus and LTIP are subject to malus and clawback provisions as follows:

Annual bonus:

For up to two years following the payment of an annual bonus award the Committee may require the repayment of some or all of the cash award in the relevant circumstances (clawback). Unvested deferred bonus awards may be cancelled or reduced in the relevant circumstances (malus). For up to one year following the vesting of the first instalment of deferred shares the Committee may require the repayment of some or all of the deferred shares in the relevant circumstances (clawback).

LTIP:

The Committee has the right to reduce, cancel or impose further conditions on unvested awards in the relevant circumstances (malus). For up to two years following the vesting of a LTIP award the Committee may require the repayment of some or all of the award in the relevant circumstances (clawback).

Malus may be applied in the event of:

- A material misstatement of the Group's financial results;
- An error in the information or assumptions on which the award was granted or vests including an error in assessing any applicable performance conditions;
- A material failure of risk management by the Group;
- Serious reputational damage to the Group; or
- Material misconduct on the part of the participant.

Clawback may be applied in the event of:

- A material misstatement of the Group's financial results;
- An error in the information or assumptions on which the award was granted or vests including an error in assessing any applicable performance conditions; or
- Material misconduct on the part of the participant.

Performance targets and metrics

Performance targets for the annual bonus are set by the Committee after taking into account the strategic needs of the business. A key component of the Group's strategy is to develop gene and cell therapy products from pre-clinical proof of concept through to the end of Phase I or Phase II clinical studies before partnering or out-licensing. Targets for a particular year are therefore likely to include specific product development targets depending on the stage of development of each opportunity. The annual objectives are also likely to include targets related to generating recurring revenues such as manufacturing or development services to third parties. The performance metrics for the LTIP are determined to ensure that the most appropriate targets are set for the Group's situation at the time; awards to be granted in 2018 will be subject to measures based on share price growth and revenue.

The Committee retains the ability to adjust or set different performance measures if events occur (such as a change in strategy, a material acquisition and/or a divestment of a Group business, or a change in prevailing market conditions) which cause the Committee to determine that the measures are no longer appropriate and that amendment is required so that they achieve their original purpose.

Operation of share plans

Awards and options may be adjusted in the event of a variation of share capital or other relevant amendment in accordance with the rules of the Share Option Scheme, LTIP and Deferred Bonus Plan. The Company's share plans may be operated in accordance with their terms, including that awards may be granted as cash based awards over a notional number of shares, and that share awards may be settled in cash at the election of the Committee; the Committee would only use these cash provisions for operational flexibility, for example if a regulatory restriction in any territory prevented the Company from offering shares to an executive director.

Differences in remuneration policy for all employees

All employees receive a base salary and are entitled to participate in benefits, including the Group's defined contribution pension scheme to which the Group contributes.

Executive directors, senior managers and certain other staff receive annual bonuses. The maximum bonus potentially receivable varies between the participating employees. 50% of the bonuses of the executive directors' and senior management are delivered by deferred shares, whereas all other staff receive 100% of their bonuses in cash.

Senior Executive Team members participate in the LTIP but not the Employee Share Option Scheme. All other staff are eligible to participate in the Employee Share Option Scheme.

Consideration of employment conditions elsewhere in the Group

The Chief Executive Officer determines any salary increases and bonuses for all employees other than the executive directors. The Group participates in an annual benchmarking exercise across the UK Biotech sector which covers the majority of staff and which informs the decision making process. The Chief Executive Officer discusses the overall increase in payroll cost and the total amount to be paid in bonuses with the Chair of the Committee before implementing the salary increases and bonuses.

While the Committee has not consulted with other employees when preparing the policy for Directors' remuneration, the Committee considers the pay and employment conditions of all other employees when setting and implementing the policy for Directors' remuneration, and as noted above, the level of salary increase for the wider workforce is taken into account when determining any salary increase for executive directors.

Component and purpose	Operation	Maximum potential and payment at threshold	Performance targets and metrics
Non-executive directors			
Non-executive directors' fees To compensate non-executive directors for their services to the Group.	<p>Non-executive directors' fees are determined by the Group's Chairman at the time of appointment of a director. The Chairman's fees are set by the other non-executive directors.</p> <p>Non-executive directors may be eligible to receive benefits such as the use of secretarial support, travel costs or other benefits that may be appropriate.</p>	<p>There is no overall maximum, but fees are set taking into account the responsibilities of the role and expected time commitment. Non-executive directors may receive a base fee and a supplementary fee for additional responsibilities such as chairing a Board committee.</p> <p>Fees would normally be reviewed at the start of each three year period of appointment. However, increases in non-executive directors' fees may be made at other times.</p>	Not applicable.

Corporate governance

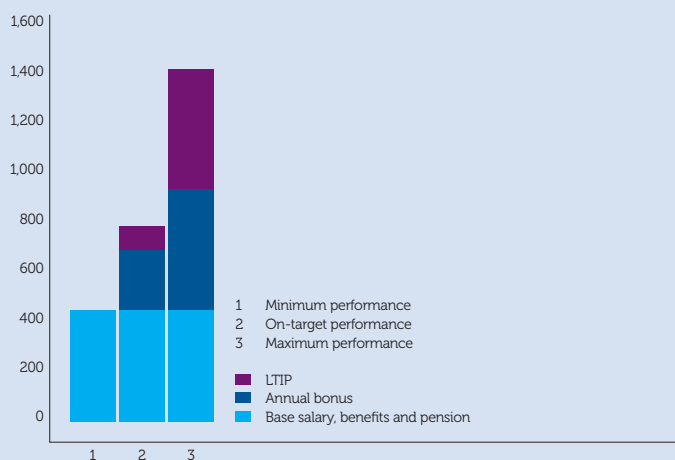
Directors' remuneration report

for the year ended 31 December 2017

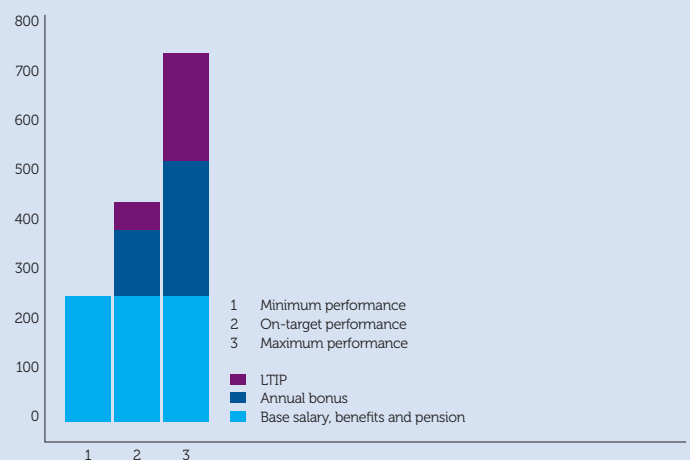
Total remuneration opportunity

The total remuneration for John Dawson and Stuart Paynter that could result from the proposed remuneration policy in 2018 under three different performance levels is shown below. A chart has not been prepared in respect of Peter Nolan, recognising that he will retire from the Board in 2018.

Component and purpose	Fixed pay	Annual Bonus (including any amount deferred under the DBP)	LTIP
Minimum performance	Fixed elements of remuneration only: – base salary – being the proposed salary for 2018 – pension contribution or salary supplement – assuming a contribution/supplement rate of 15% applied to the assumed salary; and – benefits – benefits for 2017 as stated in the single figure table on page 68.	No bonus.	No LTIP vesting.
On-target performance	As above.	62.5% of salary awarded for achieving target performance.	Award equivalent to 25% of salary vesting for achieving target performance.
Maximum performance	As above.	125% of salary awarded for achieving maximum performance.	100% of maximum award vesting (equivalent to 125% of salary for the CEO and 100% of salary for other directors) for achieving maximum performance.



John Dawson
Total remuneration (£000)



Stuart Paynter
Total remuneration (£000)

Approach to recruitment remuneration

Should it become necessary to recruit a new executive director, the Committee would ordinarily negotiate the remuneration package of the new director from the same elements described in the policy table as are applied to existing directors. The Committee would determine the individual components and overall package in the light of prevailing market conditions, remuneration of other executive directors, the calibre of the new director and the previous package of the new director. The remuneration package of the new director will be subject to the principles and limits referred to below:

- Base salary will be set at a level appropriate to the role and the experience of the director being appointed. This may include agreement on future increases up to a market rate, in line with increased experience and/or responsibilities, subject to good performance, where it is considered appropriate
- Retirement and other benefits will be provided in line with the policy
- The Committee will not offer non-performance related incentive payments (for example a “guaranteed sign-on bonus”)
- Others elements may be included in the following circumstances:
 - an interim appointment being made to fill a director role on a short-term basis
 - if exceptional circumstances require that the Chairman or a non-executive director takes on an executive function on a short-term basis
 - if a director is recruited at a time in the year when it would be inappropriate to provide a bonus or long-term incentive award for that year as there would not be sufficient time to assess performance. Subject to the limit on variable remuneration set out below, the quantum in respect of the months employed during the year may be transferred to the subsequent year so that reward is provided on a fair and appropriate basis
 - if the director will be required to relocate in order to take up the position, it is the Group’s policy to allow reasonable relocation, travel and subsistence payments. Any such payments will be at the discretion of the Committee
- The Committee may also alter the performance measures, performance period and vesting period of the annual bonus, Deferred Bonus Plan or LTIP if the Committee determines that the circumstances of the recruitment merit such alteration. The rationale will be clearly explained in the following Directors’ remuneration report
- The maximum level of variable remuneration which may be granted (excluding “buyout” awards as referred to below) is 325% of salary

Any share awards referred to in this section will be granted as far as possible under the Group’s existing share plans. If necessary, and subject to the limits referred to above, recruitment awards may be granted outside of these plans as permitted under the Listing Rules which allow for the grant of awards to facilitate, in unusual circumstances, the recruitment of an executive director.

Compensation for the forfeit of any award under arrangements with a previous employer would be considered on a case-by-case basis. The Committee will generally seek to structure such “buyout” awards or payments on a like for like basis to the remuneration arrangements forfeited. Any such payments or awards are limited to the expected value of the forfeited awards. Where considered appropriate, such special recruitment awards will be liable to forfeiture or “malus” and/or “clawback” on early departure.

Where a position is filled internally, any ongoing remuneration obligations or outstanding variable pay elements shall be allowed to continue according to the original terms.

Fees for new non-executive directors will be determined by reference to market rates for non-executive director fees for similar companies or groups.

Service contracts and policy on payment for loss of office

Executive directors' service contracts are subject to 12 months' notice from both the Group and from the director. Directors may be required to work during the notice period or be paid in lieu of notice if not required to work for the full notice period.

The details of service contracts and letters of appointment of those who served as directors during the year are:

Service contracts	Contract date	Unexpired term at 31 December 2017	Notice period
John Dawson	10 October 2008	N/A	12 months
Peter Nolan	1 May 2002	N/A	12 months
Tim Watts	9 February 2012	N/A	12 months
Stuart Paynter	29 August 2017	N/A	12 months

Letters of appointment	Date of appointment	Unexpired term at 31 December 2017	Notice period
Lorenzo Tallarigo	1 February 2016	13 months	3 months
Martin Diggle	4 October 2015	9 months	3 months
Andrew Heath	1 January 2016	12 months	3 months
Stuart Henderson	1 June 2016	17 months	3 months

All directors are subject to election by shareholders at the first opportunity after their appointment, and thereafter to re-election at intervals of not more than three years.

The principles on which the determination of payments for loss of office will be approached are set out below:

	Policy
Payment in lieu of notice	Contractual termination payments may not exceed the director's current salary and benefits (including pension contributions and any applicable salary supplement) for the notice period.
Annual Bonus	This will be at the discretion of the Committee on an individual basis and the decision as to whether or not to award a bonus in full or in part will be dependent on a number of factors, including the circumstances of the individual's departure and their contribution to the business during the bonus period in question. Any bonus amounts paid will typically be pro-rated for time in service during the bonus period and will, subject to performance, be paid at the usual time (although the Committee retains discretion to pay the bonus earlier in appropriate circumstances). The Committee has discretion to pay the whole of any bonus earned for the year of departure and preceding year in cash.
Deferred Bonus Plan	The extent to which any unvested award will vest will be determined in accordance with the rules of the Deferred Bonus Plan. Unvested awards will normally lapse on cessation of employment. However, if a participant leaves due to death, ill-health, injury, disability, the sale of his employer or any other reason, at the discretion of the Committee, the Committee shall determine whether the award will vest at cessation or at the normal vesting date. In either case, the extent of vesting will be determined by the Committee, taking into account, unless the Committee determines otherwise, the period of time elapsed from the date of grant to the date of cessation relative to the deferral period. Awards may then be exercised during such period as the Committee determines. Awards which have already vested at the date of cessation may be exercised for such period as the Committee determines.
LTIP	The extent to which any unvested award will vest will be determined in accordance with the rules of the LTIP. Unvested awards will normally lapse on cessation of employment. However, if a participant leaves due to death, ill-health, injury, disability, the sale of his employer or any other reason at the discretion of the Committee, the Committee shall determine whether the award will vest at cessation or at the normal vesting date. In either case, the extent of vesting will be determined by the Committee taking into account the extent to which the performance condition is satisfied and, unless the Committee determines otherwise, the period of time elapsed from the date of grant to the date of cessation relative to the performance period. Awards may then be exercised during such period as the Committee determines. Awards which have already vested at the date of cessation may be exercised for such period as the Committee determines.

Change of control	<p>The extent to which unvested awards under the Deferred Bonus Plan and LTIP will vest will be determined in accordance with the rules of the relevant plan.</p> <p>Awards under the Deferred Bonus Plan will vest in full in the event of a takeover, merger or other relevant corporate event.</p> <p>Awards under the LTIP will vest early on a takeover, merger or other relevant corporate event. The Committee will determine the level of vesting taking into account the extent to which the performance condition is satisfied and, unless the Committee determines otherwise, the period of time elapsed from the date of grant to the date of the relevant corporate event relative to the performance period.</p>
Other payments	<p>Payments may be made either in the event of a loss of office or a change of control under the Sharesave Scheme, which is governed by its rules and the legislation relating to such tax qualifying plans. There is no discretionary treatment for leavers or on a change of control under this scheme.</p> <p>In appropriate circumstances, payments may also be made in respect of accrued holiday, outplacement and legal fees.</p> <p>The Committee retains discretion to make additional exit payments where such payments are made in good faith in discharge of an existing legal obligation (or by way of damages for breach of such an obligation) or by way of settlement or compromise of any claim arising in connection with the termination of a director's office or employment.</p>

Existing contractual arrangements

The Committee retains discretion to make any remuneration payment or payment for loss of office outside the policy in this report:

- where the terms of the payment were agreed before the policy came into effect (provided that, in the case of any payment agreed after the Company's 2015 Annual General Meeting, they are in line with the policy approved at that meeting);
- where the terms of the payment were agreed at a time when the relevant individual was not a director of the Group and, in the opinion of the Committee, the payment was not in consideration of the individual becoming a director of the Group; and
- to satisfy contractual commitments under legacy remuneration arrangements.

For these purposes, "payments" includes the satisfaction of awards of variable remuneration and, in relation to an award over shares, the terms of the payment are agreed at the time the award is granted.

Statement of consideration of shareholder views

The Committee takes into account views of shareholders with regard to directors' remuneration. Martin Diggle, a founder of Vulpes Life Sciences Fund ("Vulpes"), the Company's largest investor, is observer of the Committee and is able to communicate the views of Vulpes on this matter. The Senior Independent Director also consults from time to time with the Company's other major investors.

By order of the Board

Andrew Heath

Chair, Remuneration Committee

15 March 2018

Directors' report

for the year ended 31 December 2017

The directors present their Annual report and audited consolidated financial statements for the year ended 31 December 2017 as set out on pages 98 to 132. This report should be read in conjunction with the corporate governance report on pages 44 to 51.

Discussions regarding financial information contained in this Annual report may contain forward-looking statements with respect to certain of the plans, current goals and expectations relating to the future financial condition, business performance and results of the Group and Company. By their nature, all forward looking statements involve risk and uncertainty because they relate to future events and circumstances that are beyond the control of the Group and Company. Readers are cautioned that, as a result, the actual future financial condition, business performance and results of the Group may differ materially from the plans, goals and expectations expressed or implied in such forward looking statements.

Strategic report

The Strategic report including the outlook for 2018 on page 22, is on pages 16 to 41. The directors consider that the Annual report and accounts, taken as a whole, are fair, balanced and understandable. In reaching this conclusion, the Audit Committee initially discussed the requirements with the Group's auditors when discussing the strategy for the 2017 audit, and the full Board reviewed the contents of the report at its 5 March 2018 meeting. Since the Board met eight times for routine meetings in 2017 the directors consider that they are sufficiently well informed to be able to make this judgement.

Key financial performance indicators (KPIs)

Key financial performance indicators are outlined in the Chief Financial Officer's review on pages 32 to 37.

Corporate governance

The Group's statement on corporate governance is included in the corporate governance report on pages 56 to 62.

Risk management

The Group's exposure to risks is set out on pages 44 to 51 (principal risks and uncertainties) and on page 112 (Note 3: financial risk management).

Dividends

The directors do not recommend payment of a dividend (2016: £nil).

Directors

Details of the directors of the Company who were in office during the year and up to the date of signing the financial statements are detailed on pages 54 to 55 and on page 64. The contracts of employment of the executive directors are subject to a twelve months' notice period. The directors' remuneration and their interests in the share capital of the Company at 31 December 2017 are disclosed in the Directors' remuneration report on pages 63 to 83.

Subsequent event

Please refer to note 34 of the financial statements on page 132 where details of subsequent events are outlined.

Appointment and replacement of directors

Directors may be appointed by an ordinary resolution at any general meeting of shareholders, or may be appointed by the existing directors, provided that any director so appointed shall retire at the next annual general meeting (AGM) and may offer himself for re-election. At each AGM any director who has served for three years, and one third of the other directors must retire, and may offer themselves for re-election. A director may be removed in the following ways: by an ordinary resolution at a general meeting; if he is prohibited by law from being a director; in the event of bankruptcy; if he is suffering from specified mental disorders; if he is absent without consent for more than six months; or by request in writing by all the other directors. Any director may appoint another director or another person approved by the other directors as an alternate director.

Directors' third party indemnity provision

The Group maintains a qualifying third party indemnity insurance policy to provide cover for legal action against its directors. This was in force throughout 2017 and at the date of approval of the financial statements.

Share capital

Structure of the Company's capital

The Company's share capital comprises a single class of 1p ordinary shares, each carrying one vote and all ranking equally with each other. Following the adoption of new articles of association in 2010, the authorised share capital of the Company is unlimited. At 31 December 2017 the Company had 3,107,704,224 shares in issue, all allotted and fully paid. There are no restrictions on the transfer of shares in the Company or on voting rights. All shares are admitted to trading on the London Stock Exchange.

Rights to issue and buy back shares

Each year at the AGM the directors seek rights to allot shares. The authority, when granted lasts for 15 months or until the conclusion of the next AGM if sooner. At the last AGM held on 23 May 2017, authority was given to allot up to 1,029,437,800 shares (that number being one third of total issued share capital of the Company at the time), subject to the normal pre-emption rights reserved to shareholders contained in the Companies Act 2006, and to allot up to a further 1,029,437,800 shares, solely in a rights issue. Authority was also given, subject to certain conditions, to waive pre-emption rights over up to 308,831,200 shares, being 10% of the shares then in issue. No rights have been granted to the directors to buy back shares.

Directors' report

for the year ended 31 December 2017

Substantial shareholdings

At 15 February 2018, the latest practical date prior to approval of the Directors' report, the Company had been notified of the following shareholdings amounting to 3% or more of the ordinary share capital of the Company.

Shareholder	Number of ordinary shares	Percentage of issued share capital
Vulpes Investment Management	581,008,834	18.7%
M&G Investments	558,825,646	18.0%
Aviva Investors	213,412,908	7.2%
Hargreaves Lansdown Asset Management	173,689,397	5.6%
Mr. S Shah	137,188,596	4.4%
Interactive Investor Sharedealing	124,454,986	4.0%

No other person has reported an interest in the ordinary shares of the Company required to be notified to the Company. No person holds shares carrying special rights with regard to control of the Company.

Employees

The Group communicates and consults regularly with employees throughout the year. Employees' involvement in the Group's performance is encouraged, with all employees eligible to participate in the share option scheme or the LTIP. Certain employees participate in discretionary bonus schemes.

The Group's aim for all members of staff and applicants for employment is to fit the qualifications, aptitude and ability of each individual to the appropriate job, and to provide equal opportunity regardless of sex, religion or ethnic origin. The Group does all that is practicable to meet its responsibility towards the employment and training of disabled people.

Further details on employees, health and safety, environmental matters and corporate social responsibility are in the corporate responsibility statement on pages 38 to 41.

Employee share schemes

The Group has established an Employee Benefit Trust (EBT) to hold shares purchased in order to settle shares awarded to executive directors and other senior managers under the Deferred Bonus Plan. The EBT currently holds 5,836,218 shares on which all the related options have vested. See Note 25 of the consolidated financial statements for further information.

Agreements that take effect, alter, or terminate because of a takeover bid or on change of control

There are no such agreements that the directors consider are material. There are no agreements providing for compensation for loss of office for directors or employees in the event of a takeover bid.

Going concern

The Group held £14.3 million of cash at the end of 2017 and £16.4 million at 28 February 2018. In March 2018, the Company completed a £19.3 million (net) equity placing in order to fund further facilities expansion. During 2017 the cash burn was significantly reduced as a result of improved cash flow from operations and reduced capital expenditure and the Directors expect further progress in 2018. Taking this into account, in conjunction with currently known and probable cash flows, the Directors consider that the Group has sufficient cash resources and cash inflows to continue its activities for not less than twelve months from the date of these financial statements and have therefore prepared the financial statements on a going concern basis.

Viability statement

Assessment of prospects

In accordance with provision C.2.2 of the UK Corporate Governance Code, the directors have assessed the prospects of the Group over the three years to December 2020. They believe three years to be appropriate due to the inherent significant uncertainties of forecasting beyond this time horizon given the nature of the business sector in which the Group operates. The assessment has been informed by the strategy adopted by the Board in 2016 and the evolution of the business over the last twelve months.

The Group's strategy is to exploit its LentiVector® platform to develop gene and cell therapy products in its own portfolio and to support the development of other companies' products. The Group is generating growing revenues and other operating income from licensing its platform technology, generating upfront receipts and royalties, and from fees for providing process development and bioprocessing services to other companies. Over the three years to December 2020 the directors believe that revenues from licensing its technology to third parties and from providing process development and bioprocessing services to its partners will be sufficient to create a sustainable company.

Assessment of viability

The main area of risk to the viability of the Group within the three-year period to December 2020 is that the Group fails to generate enough revenue from the process development and bioprocessing services it provides to third parties and, in particular, that the requirements from Novartis, the Group's current major customer, fall substantially short of current expectations. The Group is seeking to mitigate this risk by continuing to develop its technology so as to retain a leadership position and by seeking additional customers so as to diversify its exposure to Novartis. This is evidenced by the 2018 \$105 million collaboration with Bioverativ to develop and bioprocess their haemophilia product candidates, and also the growing importance of Orchard Therapeutics as a customer of the Group.

The directors anticipate that the Group has reasonable prospects for attracting further new customers and generating additional revenues in line with the increased revenues across the past four years. The Group's financial forecasts developed reflect these assumptions and therefore the directors have concluded that there is a reasonable expectation, although not a certainty, that the Group will be able to continue in operation and meet its liabilities as they fall due over the three-year period to December 2020. If additional revenues were to fall below the director's expectations, the Group might need to secure alternative sources of financing to continue to fund its operations.

Amendment of the Company's articles of association

Amendment of the Company's articles may be made by special resolution at a general meeting of shareholders.

Compliance with Listing Rule 9.8.4R

The directors have reviewed the requirements of LR 9.8.4R. The majority of these do not apply to the Group but the following are applicable.

Listing Rule	Information required	Response
LR 9.8.4 (5) and (6)	Arrangement under which a director has waived current or future emoluments.	Martin Diggle has elected to receive no fees for his services as director (page 69).
LR 9.8.4 (7) and (8)	Allotment of shares other than to existing shareholders in proportion to holdings.	Allotment of shares on exercise of options by employees under approved share schemes (Note 23, page 125).

Statement of directors' responsibilities in respect of the financial statement

The directors are responsible for preparing the Annual report and the financial statements in accordance with applicable law and regulation.

Company law requires the directors to prepare financial statements for each financial year. Under that law the directors have prepared the Group financial statements in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union and parent company financial statements in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union. Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and company and of the profit or loss of the Group and company for that period. In preparing the financial statements, the directors are required to:

- Select suitable accounting policies and then apply them consistently
- State whether applicable IFRSs as adopted by the European Union have been followed for the Group financial statements and IFRSs as adopted by the European Union have been followed for the Company financial statements, subject to any material departures disclosed and explained in the financial statements
- Make judgements and accounting estimates that are reasonable and prudent
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Group and company will continue in business

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Group and company's transactions and disclose with reasonable accuracy at any time the financial position of the Group and company and enable them to ensure that the financial statements and the Directors' remuneration report comply with the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

The directors are also responsible for safeguarding the assets of the Group and company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The directors are responsible for the maintenance and integrity of the Group and company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

The directors consider that the annual report and accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group and company's performance, business model and strategy.

Each of the directors, whose names and functions are listed in The Board of Directors confirm that, to the best of their knowledge:

- the parent company financial statements, which have been prepared in accordance with IFRSs as adopted by the European Union, give a true and fair view of the assets, liabilities, financial position and loss of the Company;
- the Group financial statements, which have been prepared in accordance with IFRSs as adopted by the European Union, give a true and fair view of the assets, liabilities, financial position and loss of the Group; and
- the Directors' Report includes a fair review of the development and performance of the business and the position of the Group and company, together with a description of the principal risks and uncertainties that it faces.

Statement as to disclosure of information to auditors

In accordance with s418 of the Companies Act 2006, so far as each director is aware, there is no relevant audit information of which the Group and Company's auditors are unaware, and each director has taken all the steps that he ought to have taken as a director in order to make himself aware of any relevant audit information and to establish that the Group and Company's auditors are aware of that information.

Independent auditors

During 2017 a tender process was completed with KPMG LLP being appointed as independent auditors. PricewaterhouseCoopers LLP will continue in office until the release of the 2017 financial statements.

Greenhouse gas emissions report

Details on greenhouse gas emissions are set out in the corporate social responsibility section on page 40.

Annual General Meeting

The Annual General Meeting will be held at 11:00 a.m. on Tuesday 29 May 2017 at the London offices of Covington & Burling LLP.

By order of the Board

Stuart Paynter

Company Secretary

15 March 2018



Stuart Paynter was appointed a director and Chief Financial Officer in August 2017

Corporate governance

Independent auditors' report

to the members of Oxford BioMedica plc

Report on the audit of the financial statements

Opinion

In our opinion, Oxford BioMedica plc's Group financial statements and company financial statements (the "financial statements"):

- Give a true and fair view of the state of the Group's and of the Company's affairs as at 31 December 2017 and of the Group's loss and the Group's and the Company's cash flows for the year then ended
- Have been properly prepared in accordance with IFRSs as adopted by the European Union and, as regards the Company's financial statements, as applied in accordance with the provisions of the Companies Act 2006
- Have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation

We have audited the financial statements, included within the Annual report and accounts 2017 (the "Annual report"), which comprise: the Group and company balance sheets as at 31 December 2017; the consolidated statement of comprehensive income, the Group and company statements of cash flows, and the Group and company statements of changes in equity attributable to owners of the parent for the year then ended; and the notes to the financial statements, which include a description of the significant accounting policies.

Our opinion is consistent with our reporting to the Audit Committee.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remained independent of the Group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, as applicable to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, we declare that non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the Company.

Other than those disclosed in note 7 to the financial statements, we have provided no non-audit services to the Group or the Company in the period from 1 January 2017 to 31 December 2017.

Our audit approach

Overview

Materiality

- Overall Group materiality: £760,000 (2016: £700,000), based on 5% of 4 year average of loss before tax
- Overall Company materiality: £723,000 (2016: £714,000), based on 1% of total assets

Audit scope

- Our work, which was conducted at the Group's head office in Oxford, included an audit of the complete financial information of the trading subsidiary, Oxford BioMedica (UK) Limited, as this entity accounted for all of the Group's revenue and 99.9% of its assets
- We also conducted site visits of the Group's manufacturing and process development facilities, primarily to obtain evidence over the year-end inventory balance

Key audit matters

- Contract accounting and revenue recognition
- Loan refinancing
- Going concern

The scope of our audit

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we looked at where the directors made subjective judgements, for example in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain.

We gained an understanding of the legal and regulatory framework applicable to the Group and the industry in which it operates, and considered the risk of acts by the Group which were contrary to applicable laws and regulations, including fraud. We designed audit procedures at Group and significant component level to respond to the risk, recognising that the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion. We focused on laws and regulations that could give rise to a material misstatement in the Group and company financial statements, including, but not limited to, the Companies Act 2006, the Listing Rules, UK tax legislation and MHRA and FDA licensing regulations. Our tests included, but were not limited to, review of correspondence with the regulators, enquiries of management. There are inherent limitations in the audit procedures described above and the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely we would become aware of it.

We did not identify any key audit matters relating to irregularities, including fraud. As in all of our audits we also addressed the risk of management override of internal controls, including testing journals and evaluating whether there was evidence of bias by the directors that represented a risk of material misstatement due to fraud.

Key audit matters

Key audit matters are those matters that, in the auditors' professional judgement, were of most significance in the audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by the auditors, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters, and any comments we make on the results of our procedures thereon, were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. This is not a complete list of all risks identified by our audit.

Corporate governance

Independent auditors' report

to the members of Oxford BioMedica plc

Key audit matter	How our audit addressed the key audit matter
<p>Contract accounting and revenue recognition</p> <p>Refer to Notes 1-2 to the financial statements for the directors' disclosures of the related accounting policies, judgements and estimates.</p> <p>A significant proportion of the revenue generated in the year arose from bioprocessing activities under the Group's collaboration agreements with Novartis. Amounts also arose from process development activities under these arrangements, including certain more judgemental elements dependent upon development activity or milestones.</p> <p>Revenue also includes up-front fees recognised over a period of time relating to capacity reservation of the Group's manufacturing facilities. Our consideration of revenue recognition focuses on the following key judgements made by management:</p> <ul style="list-style-type: none"> – The appropriateness of revenue recognised for capacity reservation fees based on batch production volumes – The appropriateness of revenue recognised for clinical support where final sign off from the customer was not been received by the end of the year – The appropriateness of revenue recognised where percentage of completion accounting has been applied on unfinished batches 	<p>For capacity reservation fees we obtained supporting evidence of the number of batches completed during the year as a percentage of the total minimum batch requirement, and evidence that the minimum capacity requirement was met. We have also confirmed that the reservation fee was allocated appropriately based on the number of batches completed.</p> <p>For clinical support revenues we obtained third party supporting evidence that procedures were completed and submitted to the customer prior to the year end, and that approval of the support was obtained subsequent to the year end.</p> <p>For unfinished manufacturing batches we held discussions with employees outside of the finance function and examined related documentation to understand the stage of completion of such batches at the balance sheet date.</p> <p>We concluded that management's revenue recognition was supported and consistent with the Group's policy and existing practice.</p>
<p>Loan refinancing</p> <p>Refer to Notes 1-2 to the financial statements for the directors' disclosures of the related accounting policies, judgements and estimates.</p> <p>During the year the Group agreed a new \$55m debt facility with Oaktree Capital Management and extinguished its previous loan with Oberland Management.</p> <p>Management has prepared a valuation of the elements of the debt facility on inception. We have focused on the following key areas of judgement in respect of the new facility:</p> <ul style="list-style-type: none"> – Classification of each element of the arrangement as either a financial liability or equity – Determination of the initial fair value of the facility 	<p>We read the relevant underlying contractual agreements and assessed the classification of each element based on the requirements of the relevant standards.</p> <p>We have recalculated the valuation of each element of the agreement either by verifying and using the data utilised by management, or using available alternative data. We have also benchmarked the fair value of the financial instrument.</p> <p>We have also considered management's estimates in relation to the initial fair value of the financial instrument and where relevant agreed this to supporting evidence.</p> <p>From the evidence obtained we found the assumptions and methodology used to classify and value the various elements of the debt facility and associated warrants to be appropriate.</p>
<p>Going concern</p> <p>The directors have concluded (see Note 1 to the financial statements) that the Group has sufficient cash resources and cash inflows to continue its activities for not less than twelve months from the date of these financial statements and have therefore prepared the financial statements on a going concern basis.</p> <p>The Group had cash and cash equivalents of £14.3 million at 31 December 2017 but continued in 2017 to consume cash. As a result there are a number of judgements inherent in assessing the Group's cash flows. Management prepared a set of cash flow forecasts from Board approved plans as well as a downside case. On 9 March 2018 the Group announced it had placed shares raising approximately £19m net of expenses to support the expansion of bioprocessing facilities.</p>	<p>We assessed the reasonableness and support for the judgements underpinning management's forecast, as well as the sensitivity of the projections to these judgements. We have obtained confirmation of the funds received from the recent placing.</p> <p>We considered the reasonableness of the assumptions within management's downside case and also performed our own sensitivities to these cash flow forecasts. We reviewed the Group's finance agreements and considered the status of any covenant requirements. Our conclusion on management's use of the going concern basis of accounting is included in the going concern section of the report below.</p>

We determined that there were no key audit matters applicable to the Company to communicate in our report.

How we tailored the audit scope

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the structure of the Group and the Company, the accounting processes and controls, and the industry in which they operate.

Our work, which was conducted at the Group's head office in Oxford, included an audit of the complete financial information of the trading subsidiary, Oxford BioMedica (UK) Limited, as this entity accounted for all of the Group's revenue and 99.9% of its assets.

We also conducted site visits of the Group's manufacturing and process development facilities, primarily to obtain evidence over the year-end inventory balance.

Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and in evaluating the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group financial statements	Company financial statements
Overall materiality	£760,000 (2016: £700,000)	£723,000 (2016: £714,000)
How we determined it	5% of 4 year average of loss before tax	1% of total assets
Rationale for benchmark applied	Loss before tax is the metric that, we believe, is most commonly used by the shareholders as a body in assessing the Group's performance. Consistent with the prior year, we use an average of the loss over the last 4 years as the results of the Group are subject to fluctuation arising from the contractual nature of the business and, in particular, upfront and milestone payments, which mean that results from one year may not be a fair representation of the activities of the business.	Total assets is the metric that we believe is most commonly used by the shareholders as a body in assessing the parent company's performance as it does not trade and as such is not profit driven.

For each component in the scope of our Group audit, we allocated a materiality that is less than our overall Group materiality. The materiality allocated to the significant component was £632,000. This is the local statutory audit materiality, which is also less than our overall group materiality.

We agreed with the Audit Committee that we would report to them misstatements identified during our audit above £38,000 (Group audit) (2016: £35,000) and £36,000 (Company audit) (2016: £36,000) as well as misstatements below those amounts that, in our view, warranted reporting for qualitative reasons.

Going concern

In accordance with ISAs (UK) we report as follows:

Reporting obligation	Outcome
We are required to report if we have anything material to add or draw attention to in respect of the directors' statement in the financial statements about whether the directors considered it appropriate to adopt the going concern basis of accounting in preparing the financial statements and the directors' identification of any material uncertainties to the Group's and the Company's ability to continue as a going concern over a period of at least twelve months from the date of approval of the financial statements.	We have nothing material to add or to draw attention to. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Group's and company's ability to continue as a going concern.
We are required to report if the directors' statement relating to Going Concern in accordance with Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit.	We have nothing to report.

Corporate governance

Independent auditors' report

to the members of Oxford BioMedica plc

Reporting on other information

The other information comprises all of the information in the Annual report other than the financial statements and our auditors' report thereon. The directors are responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

With respect to the Strategic report and Directors' report, we also considered whether the disclosures required by the UK Companies Act 2006 have been included.

Based on the responsibilities described above and our work undertaken in the course of the audit, the Companies Act 2006, (CA06), ISAs (UK) and the Listing Rules of the Financial Conduct Authority (FCA) require us also to report certain opinions and matters as described below (required by ISAs (UK) unless otherwise stated).

Strategic report and Directors' report

In our opinion, based on the work undertaken in the course of the audit, the information given in the Strategic report and Directors' report for the year ended 31 December 2017 is consistent with the financial statements and has been prepared in accordance with applicable legal requirements. (CA06) In light of the knowledge and understanding of the Group and company and their environment obtained in the course of the audit, we did not identify any material misstatements in the Strategic report and Directors' report. (CA06)

The directors' assessment of the prospects of the Group and of the principal risks that would threaten the solvency or liquidity of the Group

We have nothing material to add or draw attention to regarding:

- The directors' confirmation on page 44 of the Annual report that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity.
- The disclosures in the Annual report that describe those risks and explain how they are being managed or mitigated.
- The directors' explanation on page 87 of the Annual report as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

We have nothing to report having performed a review of the directors' statement that they have carried out a robust assessment of the principal risks facing the Group and statement in relation to the longer-term viability of the Group. Our review was substantially less in scope than an audit and only consisted of making inquiries and considering the directors' process supporting their statements; checking that the statements are in alignment with the relevant provisions of the UK Corporate Governance Code (the "Code"); and considering whether the statements are consistent with the knowledge and understanding of the Group and company and their environment obtained in the course of the audit. (Listing Rules)

Other Code Provisions

We have nothing to report in respect of our responsibility to report when:

- The statement given by the directors, on page 84, that they consider the Annual report taken as a whole to be fair, balanced and understandable, and provides the information necessary for the members to assess the Group's and company's position and performance, business model and strategy is materially inconsistent with our knowledge of the Group and company obtained in the course of performing our audit.
- The section of the Annual report on page 61 describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee.
- The directors' statement relating to the Company's compliance with the Code does not properly disclose a departure from a relevant provision of the Code specified, under the Listing Rules, for review by the auditors.

Directors' Remuneration

In our opinion, the part of the Directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006. (CA06)

Responsibilities for the financial statements and the audit

Responsibilities of the directors for the financial statements

As explained more fully in the Statement of directors' responsibilities in respect of the financial statements set out on page 88, the directors are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The directors are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or the Company or to cease operations, or have no realistic alternative but to do so.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditors' report.

Use of this report

This report, including the opinions, has been prepared for and only for the Company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

Other required reporting

Companies Act 2006 exception reporting

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- We have not received all the information and explanations we require for our audit; or
- Adequate accounting records have not been kept by the Company, or returns adequate for our audit have not been received from branches not visited by us; or
- Certain disclosures of directors' remuneration specified by law are not made; or
- The Company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns

We have no exceptions to report arising from this responsibility

Appointment

Following the recommendation of the Audit Committee, we were appointed by the members in 1996 to audit the financial statements for the period ended 29 October 1996 and subsequent financial periods. The period of total uninterrupted engagement is 22 years, covering the years ended 29 October 1996 to 31 December 2017.

Stuart Newman (Senior Statutory Auditor)

for and on behalf of PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors, Reading

15 March 2018



CLEAN MEASURING CYL

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Group financial statements

Consolidated statement of comprehensive income

for the year ended 31 December 2017

		2017	2016
		£'000	£'000
Continuing operations	Note		
Revenue	4	37,590	27,776
Cost of sales		(18,442)	(11,835)
Gross profit		19,148	15,941
Research, development and bioprocessing costs		(21,611)	(24,299)
Administrative expenses		(7,276)	(5,957)
Other operating income	4	1,774	3,002
Other gains	13	2,297	–
Operating loss	4	(5,668)	(11,313)
Finance income	6	38	34
Finance costs	6	(6,131)	(9,028)
Loss before tax		(11,761)	(20,307)
Taxation	8	2,744	3,666
Loss and total comprehensive expense for the year	27	(9,017)	(16,641)
Basic loss and diluted loss per ordinary share	9	(0.29p)	(0.60p)

There was no other comprehensive income or loss.

The loss for the year is attributable to the owners of the parent.

Group financial statements

Balance sheets

as at 31 December 2017

	Note	Group		Company	
		2017 £'000	2016 £'000	2017 £'000	2016 £'000
Assets					
Non-current assets					
Intangible assets	11	97	1,330	–	–
Property, plant and equipment	12	25,370	27,514	–	–
Investments	13	2,954	657	72,350	65,808
		28,421	29,501	72,350	65,808
Current assets					
Inventories	14	3,332	2,202	–	–
Trade and other receivables	15	17,088	6,904	9	3
Current tax assets	8	2,232	3,000	–	–
Cash and cash equivalents	16	14,329	15,335	31	5,529
		36,981	27,441	40	5,532
Current liabilities					
Trade and other payables	17	8,690	6,003	81	176
Deferred income	18	13,072	3,313	–	–
		21,762	9,316	81	176
Net current assets/(liabilities)		15,219	18,125	(41)	5,356
Non-current liabilities					
Loans	19	36,864	34,389	–	–
Provisions	20	630	622	–	–
		37,494	35,011	–	–
Net assets		6,146	12,615	72,309	71,164
Equity attributable to owners of the parent					
Ordinary shares	23	31,076	30,879	31,076	30,879
Share premium account	24	154,224	154,036	154,224	154,036
Other reserves	28	3,509	2,189	9,599	7,632
Accumulated losses	27	(182,663)	(174,489)	(122,590)	(121,383)
Total equity		6,146	12,615	72,309	71,164

The Company's registered number is 03252665.

The Company made a loss for the year of £1,207,000 (2016: £1,781,000).

The financial statements on pages 98 to 132 were approved by the Board of Directors on 15 March 2018 and were signed on its behalf by:

John Dawson
Chief Executive Officer

Group financial statements

Statements of cash flows

for the year ended 31 December 2017

	Note	Group		Company	
		2017 £'000	2016 £'000	2017 £'000	2016 £'000
Cash flows from operating activities					
Cash used in operations	29	(1,533)	(5,929)	(1,308)	(1,623)
Tax credit received		4,530	4,131	–	–
Overseas tax paid		(18)	(50)	–	–
Net cash generated from/(used in) operating activities		2,979	(1,848)	(1,308)	(1,623)
Cash flows from investing activities					
Loan to subsidiary		–	–	(4,575)	(10,346)
Purchases of property, plant and equipment	12	(1,969)	(6,458)	–	–
Interest received		38	47	–	–
Net cash used in investing activities		(1,931)	(6,411)	(4,575)	(10,346)
Cash flows from financing activities					
Proceeds from issue of ordinary share capital	23, 24	385	19,622	385	19,622
Costs of share issues	24	–	(2,125)	–	(2,125)
Interest paid		(10,800)	(3,258)	–	–
Loans received	19	38,897	–	–	–
Loans repaid		(30,536)	–	–	–
Net cash (used in)/generated from financing activities		(2,054)	14,239	385	17,497
Net (decrease) / increase in cash and cash equivalents					
Cash and cash equivalents at 1 January		15,335	9,355	5,529	1
Cash and cash equivalents at 31 December	16	14,329	15,335	31	5,529

Statements of changes in equity attributable to owners of the parent

for the year ended 31 December 2017

Group	Notes	Ordinary shares £'000	Share premium account £'000	Reserves			Accumulated losses £'000	Total equity £'000
				Merger £'000	Treasury £'000	Warrant £'000		
At 1 January 2016		25,741	141,677	2,291	(102)	–	(158,713)	10,894
Year ended 31 December 2016:								
Loss for the year		–	–	–	–	–	(16,641)	(16,641)
Total comprehensive expense for the year		–	–	–	–	–	(16,641)	(16,641)
Transactions with owners:								
Share options								
Proceeds from shares issued	23, 24	20	39	–	–	–	–	59
Value of employee services	27	–	–	–	–	–	865	865
Issue of shares excluding options	23, 24	5,118	14,445	–	–	–	–	19,563
Cost of share issues	24	–	(2,125)	–	–	–	–	(2,125)
At 31 December 2016		30,879	154,036	2,291	(102)	–	(174,489)	12,615
Year ended 31 December 2017:								
Loss for the year		–	–	–	–	–	(9,017)	(9,017)
Total comprehensive expense for the year		–	–	–	–	–	(9,017)	(9,017)
Transactions with owners:								
Share options								
Proceeds from shares issued	23, 24	197	188	–	–	–	–	385
Value of employee services	27	–	–	–	–	–	945	945
Issue of warrants	28	–	–	–	–	1,218	–	1,218
Vesting of deferred share award	27	–	–	–	102	–	(102)	–
At 31 December 2017		31,076	154,224	2,291	–	1,218	(182,663)	6,146

Company	Notes	Ordinary shares £'000	Share premium account £'000	Reserves			Accumulated losses £'000	Total equity £'000
				Merger £'000	Warrant £'000	Other £'000		
At 1 January 2016		25,741	141,677	1,580	–	5,552	(119,602)	54,948
Year ended 31 December 2016:								
Loss for the year		–	–	–	–	–	(1,781)	(1,781)
Total comprehensive expense for the year	10	–	–	–	–	–	(1,781)	(1,781)
Transactions with owners:								
Share options								
Proceeds from shares issued	23, 24	20	39	–	–	–	–	59
Credit in relation to employee share schemes	26, 28	–	–	–	–	500	–	500
Issue of shares excluding options	23, 24	5,118	14,445	–	–	–	–	19,563
Cost of share issues	24	–	(2,125)	–	–	–	–	(2,125)
At 31 December 2016		30,879	154,036	1,580	–	6,052	(121,383)	71,164
Year ended 31 December 2017:								
Loss for the year		–	–	–	–	–	(1,207)	(1,207)
Total comprehensive expense for the year	10	–	–	–	–	–	(1,207)	(1,207)
Share options								
Proceeds from shares issued	23, 24	197	188	–	–	–	–	385
Credit in relation to employee share schemes	26, 28	–	–	–	–	749	–	749
Issue of warrants	28	–	–	–	1,218	–	–	1,218
At 31 December 2017		31,076	154,224	1,580	1,218	6,801	(122,590)	72,309

Group financial statements

Notes to the consolidated financial statements

for the year ended 31 December 2017

1, Accounting policies

Oxford BioMedica plc (the Company) is a public company limited by shares, incorporated and domiciled in England, and listed on the London Stock Exchange. The consolidated financial statements for the year ended 31 December 2017 comprise the results of the Company and its subsidiary undertakings (together referred to as the Group). The Company's principal subsidiary is Oxford BioMedica (UK) Limited.

The Group is a gene and cell therapy research and development business which is also building a revenue-generating business providing bioprocessing and process development services to third parties. The Group currently has no marketed pharmaceutical products.

Basis of preparation

The principal accounting policies adopted in the preparation of these financial statements are set out below. These policies have been consistently applied to all the financial years presented, unless otherwise stated.

The financial statements have been prepared in accordance with International Financial Reporting Standards ('IFRS') and IFRS Interpretations Committee ('IFRS IC') interpretations as adopted by the European Union and with the Companies Act 2006 as applicable to companies reporting under IFRS. The financial statements have been prepared under the historic cost convention as modified by the revaluation of financial assets at fair value through profit and loss.

As more fully explained in the Directors' report on pages 84 to 89 and below, the going concern basis has been adopted in preparing the financial statements.

A summary of the more important Group accounting policies are set out below.

The preparation of the financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or where assumptions and estimates are significant to the financial statements, are disclosed in Note 2.

Going concern

The Group held £14.3 million of cash at the end of 2017 and £16.4 million at 28 February 2018. In March 2018, the Company completed a £19.3 million (net) equity placing in order to fund further facilities expansion. During 2017 the cash burn was significantly reduced as a result of improved cash flow from operations and reduced capital expenditure and the Directors expect further progress in 2018. Taking this into account, in conjunction with currently known and probable cash flows, the Directors consider that the Group has sufficient cash resources and cash inflows to continue its activities for not less than twelve months from the date of these financial statements and have therefore prepared the financial statements on a going concern basis.

Accounting developments

The new standards, new interpretations and amendments to standards and interpretations listed below have been issued but are not effective for the financial year beginning 1 January 2017 and have not been adopted early.

- IFRS 15, 'Revenue from contracts with customers'
- Amendment to IFRS 15, 'Revenue from contracts with customers'
- IFRS 16, 'Leases' (endorsed by the EU)

The following standards are not expected to have a significant impact on the Group:

- Amendments to IFRS 2, 'Share based payments' on clarifying how to account for certain types of share-based payment transactions (not yet endorsed by the EU)
- IFRS 9, 'Financial instruments'
- Amendment to IFRS 9, 'Financial instruments', on prepayment features with negative compensation (not yet endorsed by the EU)
- Amendments to IAS 28, (not yet endorsed by the EU)
- Amendments to IFRS 4, 'Insurance contracts' regarding the implementation of IFRS 9, 'Financial instruments'
- Amendments to IAS 40, 'Investment property' relating to transfer of investment property (not yet endorsed by the EU)
- Annual improvements 2014–2016, (not yet endorsed by the EU)
- IFRS 17, 'Insurance contracts' (not yet endorsed by the EU)
- IFRIC 22, 'Foreign currency transactions and advance consideration' (not yet endorsed by the EU)
- IFRIC 23, 'Uncertainty over income tax treatments'

Basis of consolidation

The consolidated financial statements comprise the Company and its subsidiary undertakings for the year to 31 December each year. Subsidiaries are entities that are directly or indirectly controlled by the Group. Subsidiaries are consolidated from the date at which control is transferred to the Group. Control exists where the Group has the power to govern the financial and operating policies of the entity so as to obtain benefits from its activities. The Group does not currently have any associates.

All intragroup transactions and balances are eliminated on consolidation.

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the fair value of the assets transferred, equity instruments issued, and liabilities incurred or assumed at the date of exchange.

Identifiable assets acquired, and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date, irrespective of the extent of any minority interest. Any excess of the cost of the acquisition over the fair value of the Group's share of the identifiable net assets acquired is recorded as goodwill. If the cost of acquisition is less than the fair value of the net assets of the subsidiary acquired, the difference is recognised directly in the statement of comprehensive income. Where necessary, adjustments are made to the financial statements of subsidiaries to bring accounting policies used into line with those of the Group.

The Group and Company have elected not to apply IFRS 3 'Business combinations' retrospectively to business combinations which took place prior to 1 January 2004, namely the acquisition in 1996 of 100% of the issued share capital of Oxford BioMedica (UK) Limited that has been accounted for by the merger accounting method.

Group financial statements

Notes to the consolidated financial statements

for the year ended 31 December 2017

Foreign currencies

Transactions in foreign currencies are translated into sterling at the rate of exchange ruling at the transaction date. Assets and liabilities in foreign currencies are retranslated into sterling at the rates of exchange ruling at the balance sheet date. Differences arising due to exchange rate fluctuations are taken to the statement of comprehensive income in the period in which they arise.

Revenue

Revenue comprises income derived from bioprocessing of clinical product for partners, fees charged for providing development services to partners, product and technology licence transactions, and funded research and development programmes.

Bioprocessing of clinical product for partners is recognised under IAS18, Revenue, with revenues recognised on a 'percentage of completion' basis dependent on the stage of completion of the contract. The gross amount due from customers on all partnerships in progress for which costs incurred plus recognised profits exceed progress billings is presented as an asset separately on the balance sheet. Consideration received in excess of the stage of completion will be deferred until such time as it is appropriate to recognise the revenue.

Revenues for providing process development activities to partners are recognised during the period in which the service is rendered on a percentage of completion basis.

Incentive receivables relating to bioprocessing or process development activities are determined by specific conditions stipulated in the relevant agreements or contracts. Incentives related to the achievement of specific deliverables are recognised on a probability adjusted basis once most of the work or identifiable deliverables have been completed and when there is a high probability that the incentive will be received. Incentives related to the provision of support services are recognised on a percentage of completion basis, but taking into account the likelihood of achievement of the deliverable.

Product and technology licence transactions typically have an initial upfront non-refundable payment on execution of the licence, and the potential for further payments conditional on achieving specific milestones, plus royalties on product sales. Where the initial amount received is non-refundable and there are no ongoing commitments from the Group and the licence has no fixed end date, the Group recognises the amount received up front as a payment in consideration of the granting of the licence on execution of the contract.

Amounts receivable in respect of milestone payments are recognised as revenue when the specific conditions stipulated in the licence agreement have been met. Payments linked to "success" such as regulatory filing or approval, or achievement of specified sales volumes, are recognised in full when the relevant event has occurred. Otherwise, amounts receivable are recognised in the period in which related costs are incurred, or over the estimated period to completion of the relevant phase of development or associated clinical trials.

Research and development funding is recognised as revenue over a period that corresponds with the performance of the funded research and development activities.

Non-cash revenues are recognised at fair value through profit and loss.

Cost of sales

Cost of sales comprises the cost of bioprocessing clinical product for partners and royalties arising on partners' licences.

The cost of bioprocessing clinical product for partners includes the raw materials, labour costs, overheads and other directly attributable costs. Costs are recognised on a percentage of completion basis dependent on the stage of completion of the contract. Costs incurred in excess of the stage of completion are recognised as work in progress until such time as it is appropriate to recognise the cost.

The Group's products and technologies include technology elements that are licensed from third parties. Royalties arising from such partners' licences are treated as cost of sales. Where royalties due have not been paid they are included in accruals. Where revenue is spread over a number of accounting periods, the royalty attributable to the deferred revenue is included in prepayments.

Research, development and bioprocessing

Research, development and bioprocessing expenditure is charged to the statement of comprehensive income in the period in which it is incurred.

Expenditure incurred on development projects is recognised as an intangible asset when it is probable that the project will generate future economic benefit, considering factors including its commercial and technological feasibility, status of regulatory approval, and the ability to measure costs reliably. Development expenditure which has been capitalised and has a finite useful life is amortised from the commencement of the commercial production of the product on a straight-line basis over the period of its expected benefit. No such costs have been capitalised to date. Other development expenditure is recognised as an expense when incurred.

Employee benefit costs

Employee benefit costs, notably holiday pay and contributions to the Group's defined contribution pension plan, are charged to the statement of comprehensive income on an accruals basis. The assets of the pension scheme are held separately from those of the Group in independently administered funds. The Group does not offer any other post-retirement benefits.

Share based payments

The Group's employee share option schemes, long term incentive plans, save as you earn scheme and deferred bonus plans allow group employees to acquire shares of the Company subject to certain criteria. The fair value of options granted is recognised as an expense of employment in the statement of comprehensive income with a corresponding increase in equity. The fair value is measured at the date of grant and spread over the period during which the employees become unconditionally entitled to the options. The fair value of options granted under the share option schemes and share save scheme is measured using the Black-Scholes model. The fair value of options granted under the LTIP schemes, which includes market condition performance criteria, is measured using a Monte Carlo model taking into account the performance conditions under which the options were granted. The fair value of options granted under the deferred bonus plan is based on the market value at the date of grant of these options.

At each financial year end, the Group revises its estimate of the number of options that are expected to become exercisable based on forfeiture such that at the end of the vesting period the cumulative charge reflects the actual options that have vested, with no charge for those options which were forfeit prior to vesting. When share options are exercised the proceeds received are credited to equity.

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for the year ended 31 December 2017

Leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. No leases have been classified as finance leases. All other leases are classified as operating leases. Costs in respect of operating leases are charged to the statement of comprehensive income on a straight-line basis over the lease term.

Grants

Income from government and other grants is recognised over the period necessary to match them with the related costs which they are intended to compensate. Grant income is included as other operating income within the statement of comprehensive income, and the related costs are included within research, development and bioprocessing costs, and administrative expenses. Where grant income received exceeds grant income recognised, it is included within deferred income on the balance sheet, whilst where grant income recognised exceeds grant income received, it is included within accrued income on the balance sheet.

Partially funded research and development

Where research and development programmes are partially funded by external parties, and the Group retains certain rights to any intellectual property and patents created by these programmes, this income is included as other operating income within the statement of comprehensive income and the related costs are included within research, development and bioprocessing costs.

Revaluation of equity instruments

Gains and losses on the revaluation of equity instruments are recognised at fair value in the statement of comprehensive income.

Finance income and costs

Finance income and costs comprise interest income and interest payable during the year, calculated using the effective interest rate method. It also includes the revaluation of external loans denominated in a foreign currency.

Taxation

The Group is entitled to claim tax credits in the United Kingdom for certain research and development expenditure. The credit is paid in arrears once tax returns have been filed and agreed. The tax credit earned in the period, based on an assessment of likely receipt, is recognised in the statement of comprehensive income with the corresponding asset included within current assets in the balance sheet until such time as it is received.

Current tax, including UK corporation tax and foreign tax, is provided at amounts expected to be paid (or recovered) using the tax rates and laws that have been enacted, or substantially enacted, by the balance sheet date.

Deferred tax is calculated in respect of all temporary differences identified at the balance sheet date. Temporary differences are differences between the carrying amount of the Group's assets and liabilities and their tax base. Deferred tax liabilities may be offset against deferred tax assets within the same taxable entity or qualifying local tax group. Any remaining deferred tax asset is recognised only when, on the basis of all available evidence, it can be regarded as probable that there will be suitable taxable profits within the same jurisdiction in the foreseeable future against which the deductible temporary difference can be utilised.

Deferred tax is measured at the average tax rates that are expected to apply in the periods in which the asset is realised or liability settled, based on tax rates and laws that have been enacted or substantially enacted by the balance sheet date. Measurement of deferred tax liabilities and assets reflects the tax consequence expected to fall from the manner in which the asset or liability is recovered or settled.

Intangible assets

Initial recognition

Intellectual property and in-process research and development acquired through business combinations are recognised as intangible assets at fair value. Other acquired intangible assets are initially recognised at cost.

Amortisation

Where the intangible asset has a finite life amortisation is charged on a straight-line basis over the remaining useful economic life from the time they become available for use. Where the useful life of the intangible asset cannot be determined, the asset is carried at cost but tested annually for impairment. Intangible assets are amortised over the length of the patent life; current lives range from 5 to 19 years.

Impairment

The carrying value of non-financial assets is reviewed annually for impairment or earlier if an indication of impairment occurs and provision made where appropriate. Charges or credits for impairment are passed through the statement of comprehensive income.

For the purposes of assessing impairments, assets are grouped at the lowest levels for which there are separately identifiable cash flows or cash-generating units. Impairment losses are recognised for the amount by which each asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. Where the asset is no longer being developed by the Group fair value less costs of disposal is used as the recoverable amount. Value in use is calculated using estimated discounted future cash flows. Key assumptions in the discounted cash flow calculations are whether:

- The product is developed by a collaborative partner who funds all future development costs and markets the product
- The Group receives an initial licence fee, milestone payments and royalties on sales
- The cash flow projections include estimates for selling price, royalty rates, population growth, disease incidence and market penetration
- The resulting cash receipts are discounted at an appropriate discount rate
- The cash flow projections are a long-term view, based on the expected patent life. Due to the length of the development cycle for innovative medicines, this period is significantly longer than five years

The key assumptions are management estimates, based where possible on available information for similar products. Due to the novelty and early stage of development of the Group's products, it is not possible to benchmark these assumptions against past experience.

Impairment and amortisation charges are included within research, development and bioprocessing costs in the statement of comprehensive income.

Intellectual property rights comprise third party patent rights that have been purchased by the Group. No in-house research and development or patent costs are included in intangible assets.

Group financial statements

Notes to the consolidated financial statements

for the year ended 31 December 2017

Property, plant and equipment

Property, plant and equipment are carried at cost, together with any incidental expenses of acquisition, less depreciation. Cost includes the original purchase price of the asset and any costs attributable to bringing the asset to its working condition for its intended use.

Depreciation is calculated to write off the cost of property, plant and equipment less their estimated residual values on a straight-line basis over the expected useful economic lives of the assets concerned. Depreciation of an asset begins when it is available for use. The principal annual rates used for this purpose are:

Freehold property	10%
Leasehold improvements	10% (or the remaining lease term if shorter)
Office equipment and computers	20 – 33%
Bioprocessing and laboratory equipment	20%

The assets' residual values and useful lives are reviewed annually.

The bioprocessing plants are reviewed annually for impairment triggers and, where necessary, a full impairment review is performed.

Financial assets: investments in subsidiaries

Investments are carried at cost less any provision made for impairment. Options over the Company's shares have been awarded to employees of subsidiary companies. In accordance with IFRS2, the Company treats the value of these awards as a capital contribution to the subsidiaries, resulting in an increase in the cost of investment.

Investments in subsidiary undertakings, including shares and loans, are carried at cost less any impairment provision. Such investments are subject to review, and any impairment is charged to the statement of comprehensive income.

At each year end the directors review the carrying value of the Company's investment in subsidiaries. Where there is a material and sustained shortfall in the market capitalisation, or a significant and sustained change in the business resulting in a decrease in market capitalisation, the directors consider this to be a trigger of an impairment review as set out in IAS 36, and the carrying value of the Company's investments in subsidiaries is adjusted. The directors consider that reference to the market capitalisation of the Group is an appropriate external measure of the value of the Company's subsidiaries for this purpose.

At year end the directors will assess the requirement to write back a portion or all of any impairment previously recognised on its investment in subsidiaries. Factors which will be taken into account with regards to this decision will be the Groups track record of improved financial results across the last three to four years, as well as the expectation of future impairments being required after a write back was accounted for.

Financial assets: available for sale investments

Investments

Other investments held by the Group are classified as fair value through profit and loss.

Bank deposits

Bank deposits with original maturities between three months and twelve months are included in current assets and are classified as available for sale financial assets. After initial recognition, available for sale investments are measured at their fair value.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the weighted average method. The cost of finished goods and work in progress comprises raw materials, direct labour, other direct costs and related production overheads (based on normal operating capacity). It excludes borrowing costs. Net realisable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

Trade receivables

Trade receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for impairment. A provision for impairment of trade receivables is established when there is evidence that the Group will not be able to collect all amounts due according to the original terms of the receivables.

Cash and cash equivalents

Cash and cash equivalents include cash in hand, bank deposits repayable on demand, and other short term highly liquid investments with original maturities of three months or less.

Trade payables

Trade payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method. Trade payables are classified as current liabilities if payment is due within one year or less. If not, they are presented as non-current liabilities.

Deferred income

Deferred income is the excess of cash received under license transactions, grants, funded research and development, revenue for activities provided to partners, and commercial bioprocessing of clinical product for partners, over the amounts recognised as revenue.

Financial Liability: loans

On initial recognition, external loans are measured at fair value plus directly attributable transaction costs.

On subsequent measurement, external loans are measured at amortised cost under the effective interest rate method. The effective interest rate method is a method of calculating the amortised cost of a financial liability and allocating the interest expense over the relevant period. The calculation of the effective interest rate takes into account the estimated cash flows which consider all the contractual terms of the financial instrument, including any embedded derivatives which are not subject to separation.

If the Group assesses that a loan has elements of both a liability and an equity component, the Group will account for the loan as a compound financial instrument separating out the individual elements into financial liabilities or equity instruments. The liability and the equity components should be presented separately on the balance sheet. On initial recognition, the issuer of a compound instrument first measures the liability component at its fair value. The equity component is measured as the residual amount that results from deducting the fair value of the liability component from the initial carrying amount of the instrument as a whole. This method is consistent with the requirements for initial measurement of a financial liability in IAS 39, and the definitions in IAS 32, and the framework of an equity instrument as a residual interest.

Provisions

Provisions for dilapidation costs and other potential liabilities are recognised when the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated.

Provisions are not recognised for future operating losses. Provisions are measured at the present value of the expenditure expected to be required to settle the obligation using a pre-tax discount rate that reflects the current market assessments of the time value of money and the risks specific to the obligations. The increase in the provision due to the passage of time is recognised as finance cost.

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Notes to the consolidated financial statements

for the year ended 31 December 2017

Share capital

Ordinary shares are classified as equity. Costs of share issues are charged to the share premium account.

Merger reserve

A merger reserve is used where more than 90% of the shares in a subsidiary are acquired and the consideration includes the issue of new shares by the Company, thereby attracting merger relief under s612 and s613 of the Companies Act 2006.

Warrant reserve

The warrant reserve comprises warrants exercisable on the enlarged Group's share capital which have been fair valued and are exercisable over a period of time.

2, Critical accounting judgements and estimates

In applying the Group's accounting policies, management is required to make judgements and assumptions concerning the future in a number of areas. Actual results may be different from those estimated using these judgements and assumptions. The key sources of estimation uncertainty and the critical accounting judgements that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

IFRS 15

The Group is required to implement a new accounting standard, IFRS 15 'Revenue from contracts with customers', from 1 January 2018.

The new standard provides a single principles-based approach to the recognition of revenue from all contracts with customers and requires revenue to be recognised when or as performance obligations in a contract are reformed. In its financial statements for 2018, the Group will adopt IFRS 15 applying the modified retrospective approach. In accordance with the requirements of the standard where the modified retrospective approach is adopted, prior year results will not be restated.

In application of the standard the Group has identified two key areas of judgement within the existing collaboration agreements, firstly in relation to the number of distinct performance obligations contained within each collaboration agreement, which include a licence and bioprocessing and process development activities within a single contract, secondly the appropriate allocation of revenue to each performance obligation to represent the fair value of the obligation. The sales royalties contained within the collaboration agreements qualify for the royalty exemption available under IFRS 15 and will continue to be recognised as the underlying sales are made.

As part of the revenue analysis performed, the Group is planning to recognise partially funded research and development incomes, currently recognised within Other income in the statement of comprehensive income, within Revenue in this statement, in line with the development of this service within the business. In 2017, the Group recognised £0.8 million of this type of income. There are not expected to be any other material impacts on reported revenue.

Revenue recognition

Under the 2017 Novartis contract an up-front fee of \$10 million was due for a three year minimum capacity reservation covering the period from 2017 to 2019. The Group have determined that this revenue should be recognised over the capacity reservation term based on the number of batches completed per year, capped at the minimum capacity requirement per year per the contract. In 2017 the Group have therefore recognised revenues of £2 million with regards to this item.

The Group has recognised a contractually agreed milestone for \$1.8 million for the provision of support to Novartis in preparation of their suspension process clinical submission. Although the milestone was formally agreed by Novartis in January, the Group concluded that the criteria for revenue recognition had been met on the basis that they had completed the procedures and the submission had been through the first levels of review with Novartis. Accordingly, a total of \$1.8 million (£1.3 million) was recognised as revenue in 2017.

The Group has a contractually agreed step milestone based on the increased scale-up of their suspension process. Dependent on productivity the Group can be awarded up to \$4 million. \$250,000 was recognised in 2016. During 2017 the Group achieved the target scale up and submitted documents supporting this. This was formally accepted by Novartis in January 2018. The Group concluded that the criteria for revenue recognition had been met on the basis that they had achieved the scale up, and the submission had been through the first levels of review with Novartis. Accordingly, the remaining \$3.8 million (£2.8 million) of revenue was recognised in 2017.

At the end of 2016, under the October 2014 contract with Novartis, management judged that \$1.2 million of a \$2 million incentive payment for provision of source documentation to support a proposed BLA submission by Novartis should be recognised on the basis that, based on the level of work performed, it is certain that the economic benefits of the transaction will flow to the entity, and the revenue and related costs can be measured reliably.

In 2016 the Group received £1.4 million in one-off payments related to IP licences. Since these payments are non-refundable and there are no ongoing commitments from the Group, the amounts received have been recognised as revenue in the year. £657,000 of these items were received in the form of shares in a partner company. These have been recognised at fair value.

IFRS 9

The Group is required to implement a new accounting standard, IFRS 9 'Financial instruments, from 1 January 2018. The Group does not expect there to be any material impacts on reported balances within the financial statements, specifically trade receivables, trade payables, investments and the loan and warrant balances.

Loan valuation

On 29 June 2017 the Group completed a new \$55 million debt facility with Oaktree Capital Management ("Oaktree"). The facility has been used to redeem the debt facility with Oberland Capital Healthcare. The Oaktree loan is repayable no later than 29 June 2020 although it may be repaid, at the Group's discretion, at any time subject to early prepayment fees and an exit fee. The loan carries an interest rate of 9.0% plus US\$ three month LIBOR, subject to a minimum of 1%. Upon achievement of certain conditions, the interest rate could reduce by 0.25% in the second year and a further 0.25% in the third year. The loan was issued at an original discount of 2.5%, and under the agreement the Company has issued 134,351,226 warrants to Oaktree (note 28).

On initial recognition, the Oaktree loan, net of the expenses incurred in the refinancing which are treated as prepaid expenses, was fair valued at £37.7 million using an implied market interest rate of 13%. We have assessed that 13% presents a market interest rate which would be offered if no warrants were issued as part of the refinancing. The warrants are therefore calculated as being the residual amount of £1.2 million after subtracting the fair value of the loan from the initial carrying amount of the instrument of £38.9 million. The warrants of £1.2 million are accounted for as equity within the balance sheet.

Intangible asset impairment

The Group has intangible assets arising from purchases of intellectual property rights and in-process R&D. Amortisation is charged over the assets' patent life on a straight-line basis from the date that the asset becomes available for use. When there is an indicator of a significant and permanent reduction in the value of intangible assets, an impairment review is carried out. The impairment analysis is principally based on estimated discounted future cash flows. Actual outcomes could vary significantly from such estimates of discounted future cash flows due to the sensitivity of the assessment to the assumptions used. The determination of the assumptions is subjective and requires the exercise of considerable judgement. Any changes in key assumptions about the Group's business and prospects, or changes in market conditions affecting the Group or its development partners, could materially affect whether impairment exists.

During the year, the Group wrote off the value of the PrimeBoost technology and poxvirus patent following the failure of Bavarian Nordics Prosvac in phase 3. As at 31 December 2017 the remaining book value of intangible assets was £0.1 million.

Revaluation of equity investments

On 29 November 2016, as part of a strategic alliance with Orchard Therapeutics, the Group received a 1.95 % equity stake in Orchard Therapeutics. A revaluation of this investment has been carried out and a gain of £2.3 million recognised during the year. As Orchard Therapeutics is a private company the investment has not been valued based on observable market data, but rather the value of the latest placing of shares by Orchard Therapeutics.

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Going concern

Management and the directors have had to make estimates and important judgements when assessing the going concern status of the Group. The conclusions of these estimates and judgements are reported in several places in this annual report including the Directors Report (page 86) and Note 1 to the financial statements (page 102).

3, Financial risk management

Financial risk factors

The Group has a simple corporate structure with the Company and its only operating subsidiary both being UK domiciled. Monitoring of financial risk is part of the Board's ongoing risk management, the effectiveness of which is reviewed annually. The Group's agreed policies are implemented by the Chief Financial Officer, who submits reports at each board meeting. The Group does not use financial derivatives, and it is the Group's policy not to undertake any trading in financial instruments.

(a) Foreign exchange risk

In 2017 the Group's revenues were mostly receivable in Sterling and US Dollars, and certain of its expenditures were payable in Euros and US Dollars. The majority of operating costs are denominated in Sterling but most of the finance costs and any related future repayment of capital will be in Dollars (please refer to Interest rate risk for further details with regards to the Oaktree loan). A 10% difference in the £/\$ exchange rate would have had an impact of approximately £336,000 (2016: £98,000) on net costs over the year and would lead to an unrealised foreign exchange gain/loss of £3.3 million on the outstanding loan balance.

The Group also has exposure to the £/€ exchange rate due to the need to fund expenditure denominated in Euros. Had the pound been 10% weaker in relation to the Euro, the increased cost in 2017 would have been approximately £37,000 (2016: £57,000). The Group's policy is to hold the majority of its funds in Sterling and US Dollars. No other hedging of foreign currency cash flows is undertaken.

(b) Interest rate risk

On 1 May 2015 the Group established a \$50 million loan facility with Oberland Capital Healthcare which was used to finance the capacity expansion programme between late 2014 and mid-2016.

On 29 June 2017 the Group was able to re-finance this loan facility with a new \$55 million facility with Oaktree Capital Management. \$50 million of the facility was drawn down as at 30 June 2017 while the remaining \$5 million of the loan facility was drawn down in July 2017. The fair value of the loan net of capitalised legal and associated finance costs has been accounted for as a £37.7 million balance within loans, and the fair value of the warrants of £1.2 million is accounted for as equity.

The Group's policy is to maximise interest receivable on deposits, subject to maintaining access to sufficient liquid funds to meet day to day operational requirements and preserving the security of invested funds. With the current low level of bank interest rates, interest receivable on bank deposits in 2017 was just £38,000 (2016: £34,000).

If interest rates had been 1% higher in 2017 the impact on cash interest paid would have been £403,000 (2016: £295,000).

With regards to the Oberland facility, interest payable as disclosed in the consolidated statement of comprehensive income would not be affected by a 1% increase in interest rates as the charge to income is determined by the required 15% rate of return to Oberland. All interest on the Oaktree facility is paid on a quarterly basis so there would be no difference between cash interest paid and interest payable.

(c) Credit risks

Cash balances are mainly held on short and medium-term deposits with financial institutions with a credit rating of at least A, in line with the Group's policy to minimise the risk of loss.

Trade debtors are monitored to minimise the risk of loss (note 15).

Derivative financial instruments and hedging

There were no material derivatives at 31 December 2017 or 31 December 2016 which have required separation, and hedge accounting has not been used.

Fair value estimates

The fair value of short term deposits with a maturity of one year or less is assumed to be the book value.

Capital Management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns to shareholders and benefits for other stakeholders, and to maintain an optimal capital structure to minimise the cost of capital. There have been no covenant breaches in relation to the loan agreements in place during the year.

Group	2017 £'000	2016 £'000
Net debt	22,535	19,054
Equity	6,695	12,615
Debt/equity%	337%	181%

4, Segmental analysis

Segmental reporting

The chief operating decision-maker has been identified as the Senior Executive Team (SET), comprising the executive directors, Chief Scientific Officer and Chief Technical Officer. The SET monitors the performance of the Group in two business segments:

- (i) Platform – this segment consists of the revenue generating bioprocessing and process development activities undertaken for third parties. It also includes internal technology developments and technical intellectual property.
- (ii) Product – this segment consists of the clinical and preclinical development of *in vivo* and *ex vivo* gene and cell therapy products which are owned by the Group.

During 2017 a change was made to the business segments monitored by SET to better reflect the way the business is being managed by the Senior Executive Team. Internal technology projects to develop new potentially saleable technology, improve our current processes and bring development & manufacturing costs down is now included within the newly named 'Platform' segment (previously 'Partnering'), rather than forming part of the "Product" segment (previously 'R&D').

Revenues, other operating income and operating loss by segment

EBITDA and Operating loss represent our measures of segment profit & loss as they are a primary measure used for the purpose of making decisions about allocating resources and assessing performance of segments.

	Platform £'000	Product £'000	Total £'000
2017			
Gross income ¹	38,537	827	39,364
EBITDA ²	2,917	(4,786)	(1,869)
Operating loss	179	(5,847)	(5,668)
2016			
Gross income ¹	29,789	989	30,778
EBITDA ²	(2,340)	(4,720)	(7,060)
Operating loss	(6,239)	(5,074)	(11,313)

1. Gross income is the aggregate of revenue and other operating income.

2. EBITDA (Earnings Before Interest, Tax, Depreciation, Amortisation, revaluation of investments and Share Based Payments) is a non-GAAP measure often used as a surrogate for operational cash flow as it excludes from operating profit or loss all non-cash items, including the charge for share options.

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Gross income includes grant income of £1.0 million (2016: £1.6 million). Grant income of £0.8 million from Innovate UK to fund clinical and pre-clinical development is included within the Product segment whilst grant income of £0.2 million from AMSCI (UK Government's Advanced Manufacturing Supply Chain Initiative) to develop our supply chain capabilities is included within Platform. Process development income is included within the Platform segment.

Costs are allocated to the segments on a specific basis as far as possible. Costs which cannot readily be allocated specifically are apportioned between the segments using relevant metrics such as headcount or direct costs.

A geographical split of operating loss is not provided because this information is not received or reviewed by the chief operating decision-maker and the origin of all revenues is the United Kingdom.

A segmental or geographical split of assets and liabilities is not provided because this information is not received or reviewed by the chief operating decision-maker. All assets are located within the United Kingdom.

Revenue by geographical location

The Group's revenue derives wholly from assets located in the United Kingdom. Analysed by location of customers, revenue derives predominantly from Europe.

Revenue by customer location	2017 £'000	2016 £'000
Europe	36,398	26,442
Rest of world	1,192	1,334
Total revenue	37,590	27,776

5, Employees and directors

The monthly average number of persons (including executive directors) employed by the Group during the year was:

By activity	2017 Number	2016 Number
Office and management	24	26
Research, development and bioprocessing	271	221
Total	295	247

Employee benefit costs	2017 £'000	2016 £'000
Wages and salaries	14,771	13,484
Social security costs	1,616	1,465
Other pension costs (note 30)	958	748
Share based payments (note 26)	749	500
Total employee benefit costs	18,094	16,197

Key management compensation	2017 £'000	2016 £'000
Wages and salaries	2,334	2,409
Social security costs	395	313
Other pension costs	158	85
Share based payments	420	290
Total	3,307	3,097

The key management figures above include executive and non-executive directors and the other members of the Senior Executive Team. Further information about the remuneration of individual directors, including the highest paid director, is provided in the audited part of the Directors' remuneration report on page 68 which forms part of these financial statements.

The Company had no employees during the year (2016: zero).

6, Finance income and costs

Group	2017 £'000	2016 £'000
Finance income:		
Bank interest receivable	38	34
Total finance income	38	34
Finance costs:		
Unwinding of discount in provisions (note 20)	(8)	(5)
Revaluation of liabilities in foreign currency	3,291	(4,104)
Interest payable	(9,414)	(4,919)
Total finance costs	(6,131)	(9,028)
Net finance income	(6,093)	(8,994)

Up to 29 June 2017, interest payable consisted of the cash interest paid on the Oberland loan facility at 10.5%, as well as the remaining 4.5% previously accrued to provide a return of 15% per annum to Oberland. The Group also incurred a loss on early extinguishment of the Oberland facility of £3.9 million included within interest payable of £9.4 million. For the remainder of 2017, interest payable consisted of interest paid at 9% plus 3-month US\$ LIBOR on the \$55 million Oaktree facility.

7, Expenses by nature

	Notes	Group		Company	
		2017 £'000	2016 £'000	2017 £'000	2016 £'000
Employee benefit costs	5	18,094	16,197	280	267
Depreciation of property, plant and equipment	12	4,113	3,340	–	–
Amortisation	11	262	335	–	–
Impairment of intangible assets	11	971	78	–	–
Raw materials and consumables used in bioprocessing		7,833	4,200	–	–
Operating lease payments		143	610	–	–
Net loss on foreign exchange		287	132	–	–

Company employee benefit costs of £280,000 (2016: £267,000) relates to non-executive costs paid by Oxford BioMedica UK Ltd and recharged to the Company.

Depreciation is charged to research, development and bioprocessing costs in the statement of comprehensive income.

During the year the Group (including its subsidiaries) obtained services from the Group's auditors and their associates as detailed below:

Services provided by the Group's auditors	Group	
	2017 £'000	2016 £'000
Fees payable for the audit of the parent company and consolidated financial statements	25	25
Fees payable for other services:		
The audit of the Company's subsidiaries	120	102
Additional fees relating to prior year audit	15	20
Other services	35	18
Tax advisory services	–	19
Tax compliance services	5	15
Services relating to company finance and business development transactions	–	264
Total	200	463

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8, Taxation

The Group is entitled to claim tax credits in the United Kingdom for certain research and development expenditure. The amount included in the statement of comprehensive income for the year ended 31 December 2017 comprises the credit receivable by the Group for the year less overseas tax paid in the year. The United Kingdom corporation tax research and development credit is paid in arrears once tax returns have been filed and agreed. The tax credit recognised in the financial statements but not yet received is included in current tax assets in the balance sheet. The amounts for 2017 have not yet been agreed with the relevant tax authorities.

	Group	
	2017 £'000	2016 £'000
Current tax		
United Kingdom corporation tax research and development credit	(2,232)	(3,000)
Overseas taxation	18	50
	(2,214)	(2,950)
Adjustments in respect of prior periods:		
United Kingdom corporation tax research and development credit	(530)	(716)
Taxation credit	(2,744)	(3,666)

The Company has no tax liability, nor is it entitled to tax credits (2016: £nil).

The tax credit for the year is higher (2016: lower) than the standard rate of corporation tax in the UK. The differences are explained below:

	Group		Company	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Loss on ordinary activities before tax	(11,761)	(20,307)	(1,207)	(1,781)
Loss on ordinary activities before tax multiplied by the standard rate of corporation tax in the UK of 19.25% (2016: 20.25%)	(2,264)	(4,061)	(232)	(356)
Effects of:				
Tax depreciation and other timing differences				
Expenses not deductible for tax purposes	645	317	–	–
R&D relief mark-up on expenses	(1,333)	(1,056)	–	–
Income not taxable	(442)	–	–	–
Tax deduction for share options less than share option accounting charge	(134)	115	–	–
Overseas tax	14	50	–	–
Tax losses carried forward to future periods	1,326	1,707	232	356
Adjustments in respect of prior periods	(556)	(738)	–	–
Total tax credit for the year	(2,744)	(3,666)	–	–

At 31 December 2017, the Group had tax losses to be carried forward of approximately £96.3 million (2016: £90.9 million). Of the Group tax losses, £96.3 million (2016: £90.9 million) arose in the United Kingdom. There is no deferred tax recognised (see note 22).

9, Basic loss and diluted loss per ordinary share

The basic loss per share of 0.29p (2016: 0.60p) has been calculated by dividing the loss for the year by the weighted average number of shares in issue during the year ended 31 December 2017 of 3,095,667,161; (2016: 2,778,182,534).

As the Group is loss-making, there were no potentially dilutive options in either year. There is therefore no difference between the basic loss per ordinary share and the diluted loss per ordinary share.

10, Loss for the financial year

As permitted by section 408 of the Companies Act 2006, the Company's statement of comprehensive income has not been included in these financial statements. The Company's loss for the year was £1,207,000 (2016: £1,781,000).

11, Intangible assets

Intangible assets comprise intellectual property rights.

	2017 £'000	2016 £'000
Cost at 1 January and 31 December	5,591	5,591
Accumulated amortisation and impairment		
At 1 January	4,261	3,848
Amortisation charge for the year	262	335
Impairment charge for the year	971	78
At 31 December	5,494	4,261
Net book amount at 31 December	97	1,330

During the year, there was a write down of the Prime Boost technology and poxvirus patent intangible asset after Bavarian Nordic's Prostavac product failed in its phase III study.

For intangible assets regarded as having a finite useful life amortisation commences when products underpinned by the intellectual property rights become available for use. Amortisation is calculated on a straight-line basis over the remaining patent life of the asset. Amortisation of £262,000 (2016: £335,000) is included in 'Research, development and bioprocessing costs' in the statement of comprehensive income.

An intangible asset is regarded as having an indefinite useful life when, based on an analysis of all of the relevant factors, there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows for the entity. There are currently no assets with indefinite useful lives.

The Company had no intangibles at 31 December 2017 or 31 December 2016.

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12, Property, plant and equipment

	Freehold property £'000	Leasehold improvements £'000	Office equipment and computers £'000	Bioprocessing and Laboratory equipment £'000	Total £'000
Cost					
At 1 January 2017	20,902	6,970	1,651	6,488	36,011
Additions at cost	269	9	1,528	163	1,969
Disposals	–	(2,290)	–	–	(2,290)
At 31 December 2017	21,171	4,689	3,179	6,651	35,690
Accumulated depreciation					
At 1 January 2017	2,306	2,798	877	2,516	8,497
Charge for the year	2,000	470	985	658	4,113
Disposals	–	(2,290)	–	–	(2,290)
At 31 December 2017	4,306	978	1,862	3,174	10,320
Net book amount at 31 December 2017	16,865	3,711	1,317	3,477	25,370

	Freehold property £'000	Leasehold improvements £'000	Office equipment and computers £'000	Bioprocessing and Laboratory equipment £'000	Assets under Construction ¹ £'000	Total £'000
Cost						
At 1 January 2016	6,938	7,397	1,374	7,574	9,744	33,027
Additions at cost	–	206	506	1,526	4,220	6,458
Reclassification	13,964	–	–	–	(13,964)	–
Disposals	–	(633)	(229)	(2,612)	–	(3,474)
At 31 December 2016	20,902	6,970	1,651	6,488	–	36,011
Accumulated depreciation						
At 1 January 2016	921	2,909	753	4,048	–	8,631
Charge for the year	1,385	522	353	1,080	–	3,340
Disposals	–	(633)	(229)	(2,612)	–	(3,474)
At 31 December 2016	2,306	2,798	877	2,516	–	8,497
Net book amount at 31 December 2016	18,596	4,172	774	3,972	–	27,514

1 Assets under construction represents the capitalisation of construction works at the Harrow House and Yarnton manufacturing facilities and the Windrush Court laboratories.

The Company had no property, plant and equipment at 31 December 2017 or 31 December 2016.

13, Investments

Investments: Group

On 29 November 2016, as part of a strategic alliance with Orchard Therapeutics, the Group received a 1.95 % equity stake in Orchard Therapeutics. A revaluation of this investment has been carried out and a gain of £2.3 million recognised during the year. As Orchard Therapeutics is a private company the investment has not been valued based on observable market data.

The aggregate fair value of the equity investment in Orchard Therapeutics is £3.0 million (2016: £0.7 million).

	2017 £'000	2016 £'000
At 1 January	657	–
Recognition of milestones/upfronts	–	657
Revaluation of investments	2,297	–
At 31 December	2,954	657

Investments: Company

	2017 £'000	2016 £'000
Shares in group undertakings		
At 1 January and 31 December	15,182	15,182
Loans to group undertakings		
At 1 January	170,639	160,293
Loan advanced in the year	5,793	10,346
At 31 December	176,432	170,639
Total investments in shares and loans to group undertakings	191,614	185,821
Accumulated impairment		
At 1 January and 31 December	126,065	126,065
Net book amount at 31 December	65,549	59,756
Capital contribution in respect of employee share schemes		
At 1 January	6,052	5,552
Additions in the year (note 26)	749	500
At 31 December	6,801	6,052
Total investments	72,350	65,808

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Interests in subsidiary undertakings

	Country of incorporation	Description of shares held	Proportion of nominal value of issued shares held by the Group and Company	Nature of business
Oxford BioMedica (UK) Limited	Great Britain	1p ordinary shares	100%	Gene therapy research and development
Oxxon Therapeutics Limited	Great Britain	1p ordinary shares	100%	Dormant

The registered office of both subsidiaries is Windrush Court, Transport Way, Oxford, OX4 6LT.

In addition, during 2014, the Group set up the Oxford BioMedica Employee Benefit Trust (EBT) to hold market-purchased shares to settle the 2013 deferred bonus share awards made to executive directors and employees (Note 25).

All of the above subsidiaries have been consolidated in these financial statements.

At each year end the directors review the carrying value of the Company's investment in subsidiaries. Where there is a material and sustained shortfall in the market capitalisation, or a significant and sustained change in the business resulting in a decrease in market capitalisation, the directors consider this to be a trigger of an impairment review as set out in IAS 36, and the carrying value of the Company's investments in subsidiaries is adjusted. The directors consider that reference to the market capitalisation of the Group is an appropriate external measure of the value of the Group for this purpose. Following an impairment review at 31 December 2017 no impairment charge was assessed to be required. Cumulative impairment of £126.0 million has been recognised up to 31 December 2017.

14, Inventories

Group	2017 £'000	2016 £'000
Raw Materials	1,895	2,120
Work-in-progress	1,437	82
Total inventory	3,332	2,202

Inventories constitute raw materials held for commercial bioprocessing purposes, and work-in-progress inventory related to contractual bioprocessing obligations.

During 2017, the Group wrote down £53,000 (2016: £29,000) of inventory which is not expected to be used in production or sold onwards. The Company holds no inventories.

15, Trade and other receivables

	Group		Company	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Trade receivables	5,705	1,969	–	–
Accrued income	8,681	2,919	–	–
Other receivables	23	238	–	–
Other tax receivable	1,288	1,330	–	–
Prepayments	1,391	448	9	3
Total trade and other receivables	17,088	6,904	9	3

The fair value of trade and other receivables are the current book values.

Included in the Group's trade receivable balance are debtors with a carrying amount of £65,000 (2016: £47,000) which were past due at the reporting date, all of which have since been received.

Ageing of past due but not impaired trade receivables:

	2017 £'000	2016 £'000
0 – 30 days	65	5
30 – 60 days	–	42
	65	47

Accrued income of £8.7 million (2016: £2.9 million) arises where work has been undertaken which is recoverable from third parties, but which has not yet been invoiced. The balance mainly relates to commercial development milestones which have been accrued as the specific conditions stipulated in the license agreement have been met, and commercial development work orders accrued on a percentage complete basis which will be invoiced as the related work package completes.

The carrying amounts of the Group's trade and other receivables are denominated in the following currencies:

	2017 £'000	2016 £'000
Sterling	16,684	6,893
US Dollar	404	11
	17,088	6,904

The Company's receivables are all denominated in Sterling.

The maximum exposure to credit risk at the reporting date is the fair value of each class of receivable above. The Group does not hold any collateral as security.

16, Cash and cash equivalents

The Group is required under the Oaktree Facility to maintain cash and cash equivalents of not less than \$5.0 million (£3.7 million) while the Oaktree Facility is outstanding.

17, Trade and other payables

	Group		Company	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Trade payables	3,682	1,576	–	–
Other taxation and social security	579	442	–	–
Accruals	4,429	3,985	81	176
Total trade and other payables	8,690	6,003	81	176

18, Deferred income

Deferred income arises when the Group has received payment for services in excess of the stage of completion of the services being provided.

The Company had no deferred income in 2017 or 2016.

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19, Loans

On 29 June 2017 the Group completed a new \$55 million debt facility with Oaktree Capital Management ("Oaktree"). The facility has been used to redeem the debt facility with Oberland Capital Healthcare.

The Oaktree loan is repayable no later than 29 June 2020 although it may be repaid, at the Group's discretion, at any time subject to early prepayment fees and an exit fee. The loan carries an interest rate of 9.0% plus US\$ three month LIBOR, subject to a minimum of 1%. Subject to achieving certain conditions, the interest rate could reduce by 0.25% in the second year and a further 0.25% in the third year. The loan was issued at an original discount of 2.5%, and under the agreement the Company has issued 134,351,226 warrants to Oaktree (note 28). The loan is secured over all assets of the Group including intellectual property. The terms also include financial covenants relating to the achievement of revenue targets and a requirement to hold a minimum of \$5 million cash at all times.

On initial recognition, the Oaktree loan, net of the expenses incurred in the refinancing which are treated as prepaid expenses, was fair valued at £37.7 million.

In May 2015, the Group entered into a \$50 million loan facility with Oberland. The Group drew down \$40 million (£26.1 million) of the facility to finance the Group's expansion of its bioprocessing and laboratory capacity in order to enable it to deliver on commitments under its bioprocessing agreement with Novartis. Over the course of the loan term, cash interest was payable quarterly at an annual interest rate of 9.5% plus the greater of 1% and three-month LIBOR. The loan was issued at an original discount of 2.5%, and a repayment fee was also due on repayment. In addition to interest, the Group would also have been required to pay an additional amount of 0.35% of its annual worldwide net revenue from 1 April 2017 to 31 December 2025 for each \$5 million of loan drawn down over \$30 million.

As the loan was repaid after the second anniversary, under the terms of the agreement, there was a true-up payment payable to ensure that Oberland received an aggregate return of 15% per annum over the period of the loan. The Group was also required to maintain a cash balance of not less than \$10 million in a ring-fenced account whilst the Oberland Facility was outstanding.

The Oberland Facility was fully repaid on 29 June 2017 at a cost of £36.3 million including the accrued interest and loss on early extinguishment of £5.3 million.

20, Provisions

Group	2017 £'000	2016 £'000
At 1 January	622	1,371
Unwinding of discount	8	5
Utilisation of provision	–	(833)
Additional provision recognised	–	79
At 31 December	630	622
	2017 £'000	2016 £'000
Current	–	–
Non-current	630	622
Total provisions	630	622

The dilapidations provisions relate to anticipated costs of restoring the leasehold Medawar and Yarnton properties in Oxford, UK to their original condition at the end of the lease terms in 2016 and 2024 respectively, discounted using the rate per the Bank of England nominal yield curve. The equivalent rate was used in 2016. The provisions will be utilised at the end of the leases if they are not renewed, and for that reason, the provision in respect of the Medawar Centre was released in 2016 at the end of the lease.

The Company had no provisions at 31 December 2017 or 31 December 2016.

21, Financial instruments

The Group and Company's financial instruments comprise cash and cash equivalents, trade and other receivables, loans, and trade and other payables. Additional disclosures are set out in the corporate governance statement and in note 3 relating to risk management.

The Group had the following financial instruments at 31 December each year:

	Financial assets at fair value through profit & loss		Loans & receivables		Amortised costs, loans & other liabilities	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Cash and cash equivalents (note 16)	–	–	14,329	15,335	–	–
Trade receivables and other receivables (note 15)	–	–	14,409	5,126	–	–
Investments (note 13)	2,954	657	–	–	–	–
Trade and other payables excluding tax (note 17)	–	–	–	–	8,111	5,561
Loans (note 19)	–	–	–	–	36,864	34,389
	2,954	657	28,738	20,461	44,975	39,950

Floating rate instant access deposits earned interest at prevailing bank rates.

	2017	2016
	Year average Weighted average rate	Year average Weighted average rate
Sterling	0.49%	0.46%
US Dollars	0.66%	0.26%

In accordance with IAS 39 'Financial instruments: Recognition and measurement' the Group has reviewed all contracts for embedded derivatives that are required to be separately accounted for if they meet certain requirements set out in the standard. There were no such derivatives identified at 31 December 2017 or 31 December 2016.

Fair value

The directors consider that the fair values of the Group's financial instruments do not differ significantly from their book values.

The carrying amounts of the Group's cash and cash equivalents are denominated in the following currencies:

	2017 £'000	2016 £'000
Sterling	3,843	7,076
US Dollar	10,486	8,259
	14,329	15,335

Financial liabilities classified as level 3 in hierarchy

The investment in Orchard Therapeutics is classified as at fair value through profit and loss. Please refer to note 13 for further information.

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Maturity analysis of the Group's financial liabilities

The following table analyses the contractual undiscounted cash flows payable, as well as the carrying value and fair value of Group borrowings at the date of the statement of financial position. Contractual cash flows in respect of interest payments are calculated using interest rates applicable at the date of the statement of financial position. The Group also has short-term receivables and payables that arise in the normal course of business and these are not included in the following table. Any cash flows based on floating interest rates are based on interest rates prevailing at 31 December 2017:

	Due within 1 year £'000	Due between 1 and 2 years £'000	Due between 2 and 3 years £'000	Total payments to maturity £'000	Carrying value £'000
Oaktree Capital Management					
Interest	4,144	4,043	1,996	10,183	–
Capital	–	–	41,494	41,494	36,864
	4,144	4,043	43,490	51,677	36,864

All contractual payments are in US dollars. Interest payments are floating rate payments whilst the capital repayment at the end of the term is fixed.

Reconciliation in liabilities from financing activities

	2017 £'000
At 1 January 2017	34,389
Interest payable	9,414
Foreign exchange movement	(3,283)
Cash interest paid	(10,800)
Oberland loan repayment	(30,536)
Oaktree facility drawn down	38,897
Warrants recognised separately (note 28)	(1,218)
At 31 December 2017 (note 19)	36,864

22, Deferred taxation

Neither the Company nor the Group had any recognised deferred tax assets or liabilities at 31 December 2017 (2016: £nil). In light of the Group's continuing losses, recovery of the deferred tax asset is not sufficiently certain, and therefore no asset has been recognised.

The main rate of corporation tax in the UK reduced from 20% to 19% with effect from 1 April 2017 and will reduce further to 17% with effect from 1 April 2020.

Group	Tax depreciation £'000	Provisions £'000	Tax losses £'000	Share options £'000	Total £'000
Deferred tax (assets)/liabilities – not recognised					
At 1 January 2017	(1,281)	(255)	(16,025)	(288)	(17,849)
Origination and reversal of temporary differences	210	122	(353)	140	119
At 31 December 2017	(1,071)	(133)	(16,378)	(148)	(17,730)
At 1 January 2016	(972)	(270)	(17,869)	(192)	(19,303)
Origination and reversal of temporary differences	(309)	15	1,844	(96)	1,454
At 31 December 2016	(1,281)	(255)	(16,025)	(288)	(17,849)

23, Ordinary shares

Group and Company	2017	2016
Issued and fully paid	£'000	£'000
Ordinary shares of 1p each		
At 1 January – 3,088,047,310 (2016: 2,574,252,580) shares	30,879	25,741
Allotted for cash in placing and subscription – nil (2016: 511,755,188) shares	–	5,118
Allotted on exercise of share options – 19,656,914 (2016: 2,039,537) shares	197	20
At 31 December – 3,107,704,224 (2016: 3,088,047,310) shares	31,076	30,879

In February 2016 the Company raised £8.1 million gross proceeds by way of a placing of 128,383,528 ordinary shares at a price of 6.3 pence per share. Net proceeds after expenses were £7.5 million.

In September 2016 the Company raised £11.5 million gross proceeds by way of a placing of and subscription for 383,371,665 ordinary shares at a price of 3.0 pence per share. Net proceeds after expenses were £10.0 million.

24, Share premium account

Group and Company	2017	2016
	£'000	£'000
At 1 January	154,036	141,677
Premium on shares issued for cash in placing and subscription	–	14,445
Premium on exercise of share options	188	39
Costs associated with the issue of shares	–	(2,125)
At 31 December	154,224	154,036

25, Options over shares of Oxford BioMedica plc

The Company has outstanding share options that were issued under the following schemes:

- The 2007 Share Option Scheme (approved February 2007)
- The 2015 Executive Share Option Scheme (approved May 2015)
- The 2007 Long Term Incentive Plan (LTIP) (approved February 2007)
- The 2015 Long Term Incentive Plan (LTIP) (approved May 2015)
- The 2013 Deferred Bonus Plan (approved February 2014)
- The 2015 Deferred Bonus Plan (approved May 2015)
- The 2015 Save As You Earn Scheme (approved May 2015)

Share options are granted to executive directors and selected senior managers under the Company's Long Term Incentive Plans (LTIP) and to other employees under the Share Option Schemes. All option grants are at the discretion of the Remuneration Committee.

Options granted under the 2007 and 2015 LTIPs to directors and other senior managers are subject to market condition performance criteria and will vest only if, at the third anniversary of the grant, the performance criteria have been met. Failure to meet the minimum performance criteria by the third anniversary results in all the granted options lapsing. The performance criteria are described in the Directors' remuneration report. LTIP awards made to date are exercisable at either par or a nil cost on the third anniversary of the date of grant, and lapse 10 years after being granted.

Options granted under the 2007 Share Option Scheme have fixed exercise prices based on the market price at the date of grant. They are not subject to market condition performance criteria and the lives of the options are ten years, after which the options expire. Options granted prior to 2012 cannot normally be exercised before the third anniversary of the date of grant. Options granted under the 2007 Scheme during 2012 to 2014, with one exception, vest in tranches of 25% from the first to fourth anniversaries of the grant dates.

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Options granted under the 2015 Executive Share Option Scheme have fixed exercise prices based on the market price at the date of grant. They are not subject to market condition performance criteria and the lives of the options are ten years, after which the options expire. Options granted under the 2015 Scheme cannot normally be exercised before the third anniversary of the date of grant.

Options granted under the 2015 Save As You Earn Scheme have fixed exercise prices based on the market price at the date of grant. They are not subject to market condition performance criteria and the lives of the options are ten years, after which the options expire. Options cannot be exercised before the third anniversary of the date of grant.

Share options outstanding at 31 December 2017 have the following expiry date and exercise prices:

Options granted to employees under the Oxford BioMedica 2007 and 2015 Share Option Schemes

2017 Number of shares	2016 Number of shares	Exercise price per share	Date from which exercisable	Expiry date
300,000	425,000	5.8p	Vested	13/10/18
102,527	151,877	6.1p	Vested	25/03/19
1,156,967	1,545,983	5.4p to 5.8p	Vested	15/03/21 to 04/10/21
1,906,324	2,822,537 ¹	2.3p to 3.1p	Vested	08/05/22 to 21/12/22
3,271,308	5,164,133 ¹	1.6p to 2.8p	22/05/14 to 19/11/14 ¹	22/05/23 to 19/11/23
4,015,401	5,475,269 ¹	2.0p to 4.0p	03/06/15 to 17/10/15 ¹	03/06/24 to 17/10/24
8,792,934 ²	9,172,881 ²	9.8p	13/03/18 to 01/06/18	13/03/25 to 10/06/25
11,805,241 ²	13,576,673 ²	5.5p	16/05/19 to 13/10/19	16/05/26 to 13/10/26
18,955,516 ²	–	9.9p	13/07/20	13/07/27
50,306,218	38,334,353			

Note 1 – With one exception, options granted in 2012, 2013 and 2014 vest in 25% tranches on the first to fourth anniversaries of the grant date. The date from which exercisable shows the date on which the first 25% vests

Note 2 – Options granted under the 2015 Executive share option scheme

Options granted to employees under the Oxford BioMedica 2015 Save As You Earn Scheme

2017 Number of shares	2016 Number of shares	Exercise price per share	Date from which exercisable	Expiry date
3,351,096	4,214,046	6.2p	01/10/18	01/10/25
7,602,679	8,293,338	2.9p	13/10/19	13/10/26
4,000,051	–	6.6p	12/10/20	12/10/27
14,953,826	12,507,384			

Options granted under the Oxford BioMedica 2007 and 2015 Long Term Incentive Plans

2017 Number of shares	2016 Number of shares	Exercise price per share	Date from which exercisable	Expiry date
1,000,000	1,000,000	1p	Vested	13/10/18
10,880,000	20,480,000	1p	Vested	30/06/22
6,358,508	8,975,127	1p	Vested	12/06/23
5,366,942	20,879,740 ¹	1p	Vested	20/6/24 to 17/10/24
10,545,754 ^{1,2}	10,545,754 ^{1,2}	0p	10/01/18	10/01/25
8,945,532 ^{1,2}	8,945,532 ^{1,2}	0p	16/05/19	16/05/26
11,201,233 ^{1,2}	–	0p	17/07/20 to 25/09/20	17/07/27 to 25/09/27
54,297,969	70,826,153			
119,558,013	121,667,890			

Note 1 – These LTIP awards will vest provided that performance conditions specified in the Directors' remuneration report are met

Note 2 – Options granted under the 2015 LTIP

Deferred Share Awards

The executive directors and certain other senior managers have been awarded deferred bonuses in the form of share options. These options will vest provided that the managers are still employed by the Group on certain specified future dates and are exercisable at nil p on either the first three anniversaries of the grant or the third anniversary of the grant dependent on the option conditions. Options with a value of £314,000 vested during 2017 (2016: £365,000).

The options granted under the 2013 Deferred Bonus Plan will be satisfied by market-purchased shares held by the Oxford BioMedica Employee Benefit Trust (EBT). As at 31 December 2017, all shares held by the EBT had vested. The EBT is consolidated at year end with the shares held in trust accounted for as part of the treasury reserve within equity (Note 28). During the year 1,325,035 shares from the EBT were exercised.

The options granted under the 2015 Deferred Bonus Plan will be satisfied by new issue shares at the time of exercise.

Certain options granted to UK employees could give rise to a national insurance (NI) liability on exercise. A provision of £168,000 (2016: £80,000) is included in accruals for the potential NI liability accrued to 31 December on exercisable options that were above water, based on the year-end share price of 8.85p (2016: 4.07p) per share.

26, Share based payments

The fair values of options granted during the year were calculated using the following assumptions:

Share options (Model used: Black Scholes)	Options awarded 13 July 2017
Share price at grant date	8.85p
Exercise price	9.93p
Vesting period (years)	3
Total number of shares under option	20,905,921
Expected volatility (weighted average)	63%
Expected life (years)	3
Risk free rate (weighted average)	0.37%
Fair value per option	3.4p

Save As You Earn scheme awards (Model used: Black Scholes)	Options awarded 12 October 2017
Share price at grant date	9.00p
Exercise price	6.56p
Vesting period (years)	3
Total number of shares under option	4,000,051
Expected volatility (weighted average)	63%
Expected life (years)	3
Risk free rate (weighted average)	0.55%
Fair value per option	4.6p

LTIP awards (Model used: Monte Carlo)	LTIPs awarded 13 July 2017 and 25 September 2017
Share price at grant date	8.85p and 8.75p
Exercise price	0.0p
Vesting period (years)	3
Total number of shares under option	8,307,230 and 2,894,003
Expected volatility (weighted average)	62% and 63%
Expected life (years)	3
Risk free rate (weighted average)	0.37% and 0.50%
Fair value per option	5.13p and 5.14p

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The tables below show the movements in the Share Option Scheme, Save As You Earn Scheme and the LTIP during the year, together with the related weighted average exercise prices.

Excluding the LTIP awards which are exercisable at par/nil value, the weighted average exercise price for options granted during the year was 9.4p (2016: 4.5p).

19,656,914 options were exercised in 2017 (2016: 2,039,537), including 1,490,755 of deferred bonus options (2016: nil).

The total charge for the year relating to employee share-based payment plans was £749,000 (2016: £500,000), all of which related to equity-settled share based payment transactions.

Share options excluding LTIP	2017		2016	
	Number	Weighted average exercise price	Number	Weighted average exercise price
Outstanding at 1 January	50,841,737	5.1p	33,077,086	5.5p
Granted	24,120,663	9.4p	22,602,217	4.6p
Forfeited	(4,202,453)	6.7p	(2,348,886)	6.0p
Exercised	(4,439,429)	2.8p	(1,186,440)	2.5p
Cancelled	(1,060,474)	5.0p	(1,302,240)	6.2p
Outstanding at 31 December	65,260,044	6.7p	50,841,737	5.1p
Exercisable at 31 December	9,478,677	3.0p	10,109,530	3.1p
Exercisable and where market price exceeds exercise price at 31 December	9,478,677	3.0p	7,986,670	2.4p

LTIP awards (options exercisable at par value 1p or nil cost)	2017	2016
	Number	Number
Outstanding at 1 January	70,826,153	72,407,302
Granted	11,201,233	8,945,532
Expired	(14,002,687)	(9,750,907)
Exercised	(13,726,730)	(775,774)
Outstanding at 31 December	54,297,969	70,826,153
Exercisable at 31 December	23,605,450	30,455,127

Range of exercise prices	2017			2016		
	Weighted average exercise price	Number of shares	Weighted average remaining life (years) Contractual	Weighted average exercise price	Number of shares	Weighted average remaining life (years) Contractual
LTIP:						
Exercisable at par or at nil cost	0.4p	54,297,969	7.0	0.7p	70,826,153	7.1
Options:						
1p to 3p	2.5p	13,513,532	7.5	2.5p	17,137,416	8.3
3p to 5p	3.5p	3,282,180	5.4	3.5p	4,617,911	6.3
5p to 7p	5.8p	20,715,882	8.1	5.7p	19,913,529	8.7
7p +	9.9p	27,748,450	8.9	9.8p	9,172,881	8.4
		119,558,013			121,667,890	

27, Accumulated losses

	Group		Company	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
At 1 January	(174,489)	(158,713)	(121,383)	(119,602)
Loss for the year	(9,017)	(16,641)	(1,207)	(1,781)
Share based payments	945 ¹	865 ¹	–	–
Vesting of deferred share award	(102)	–	–	–
At 31 December	(182,663)	(174,489)	(122,590)	(121,383)

Note 1 – The credit to accumulated losses is made up out of the charge for the year relating to employee share-based payment plans of £749,000 (2016: £500,000) (note 26), £314,000 (2016: £365,000) related to the vesting of deferred share awards made to executive directors and senior managers, less £118,000 (2016: nil) in relation to the exercise of 1,325,035 of these deferred share awards (note 25).

Neither the Company nor its subsidiary undertakings had reserves available for distribution at 31 December 2017 or 31 December 2016.

28, Other reserves

Group	Warrant reserve £'000	Merger reserve £'000	Treasury reserve £'000	Total £'000
At 1 January 2017	–	2,291	(102)	2,189
Issue of warrants	1,218	–	102	1,320
At 31 December 2017	1,218	2,291	–	3,509
At 1 January and 31 December 2016	–	2,291	(102)	2,189

The Group merger reserve at 31 December 2017 and 2016 comprised £711,000 arising from the consolidation of Oxford BioMedica (UK) Ltd using the merger method of accounting in 1996, and £1,580,000 from the application of merger relief to the purchase of Oxxon Therapeutics Limited in 2007.

All shares previously held in the treasury reserve have now vested leaving a balance of nil (2016: 4,053,751) (Note 25).

Under the Oaktree loan agreement the Company has issued 134,351,226 warrants to Oaktree, equivalent to 4.4% of the enlarged Group's share capital. The warrants are exercisable at the nominal share price of 1p and may be exercised at any time over the next ten years. The warrants have been fair valued at £1.2 million net of related expenses and this amount has been credited to the warrant reserve.

Company	Warrant reserve £'000	Merger reserve £'000	Share Scheme Reserve £'000	Total £'000
At 1 January 2017	–	1,580	6,052	7,632
Credit in relation to employee share schemes	–	–	749	749
Issue of warrants	1,218	–	–	1,218
At 31 December 2017	1,218	1,580	6,801	9,599
At 1 January 2016	–	1,580	5,552	7,132
Credit in relation to employee share schemes	–	–	500	500
At 31 December 2016	–	1,580	6,052	7,632

Options over the Company's shares have been awarded to employees of subsidiary companies. In accordance with IFRS 2 'Share-based Payment' the expense in respect of these awards is recognised in the subsidiaries' financial statements (see note 26). In accordance with IFRS 2 the Company has treated the awards as a capital contribution to the subsidiaries, resulting in an increase in the cost of investment of £749,000 (2016: £500,000) (see note 13) and a corresponding credit to reserves.

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29, Cash flows from operating activities

Reconciliation of loss before tax to net cash used in operations:

	Group		Company	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Continuing operations				
Operating loss	(5,668)	(11,313)	(1,207)	(1,781)
Adjustment for:				
Depreciation	4,113	3,340	–	–
Amortisation of intangible assets	262	335	–	–
Charge for impairment	971	78	–	–
Charge in relation to employee share schemes	945	865	–	–
Non-cash gains	(2,297)	(657)	–	–
Changes in working capital:				
(Increase)/decrease in trade and other receivables	(11,183)	4,683	(6)	8
Increase/(decrease) in trade and other payables	2,687	(3,283)	(95)	150
Increase in deferred income	9,759	268	–	–
Increase/(decrease) in provisions	8	(749)	–	–
(Increase)/decrease in inventory	(1,130)	504	–	–
Net cash used in operations	(1,533)	(5,929)	(1,308)	(1,623)

30, Pension commitments

The Group operates a defined contribution pension scheme for its directors and employees. The assets of the scheme are held in independently administered funds. The pension cost charge of £958,000 (2016: £748,000) represents amounts payable by the Group to the scheme. Contributions of £138,000 (2016: £109,000), included in accruals, were payable to the scheme at the year-end.

31, Operating lease commitments – minimum lease payments

The future aggregate minimum lease payments under non-cancellable operating leases are as follows:

Group	2017 £'000	2016 £'000
Not later than one year	94	104
Later than one year and not later than five years	330	339
Over five years	144	226
Total lease commitments	568	669

The Group leases equipment under non-cancellable operating lease agreements. The Group also leased its Medawar Centre laboratories and offices up until 2016, and continues to lease the manufacturing site at Yarnton, Oxford under a non-cancellable operating lease agreement. The leases have various terms, escalation clauses and renewal rights.

The Company had no operating lease commitments during the year (2016: none).

32, Contingent liabilities and capital commitments

The Group had commitments of £850,000 for capital expenditure for leasehold improvements, plant and equipment not provided for in the financial statements at 31 December 2017 (2016: £237,000).

33, Related party transactions

Identity of related parties

The Group consists of a parent, Oxford BioMedica plc, one wholly-owned trading subsidiary (Oxford BioMedica (UK) Limited), the principal trading company, and one dormant subsidiary (Oxxon Therapeutics Limited), which was acquired and became dormant in 2007 when its assets and trade were transferred to Oxford BioMedica (UK) Limited. The registered address for the Company and all of its subsidiaries is Windrush Court, Transport Way, Oxford OX4 6LT.

The parent company is responsible for financing and setting group strategy. Oxford BioMedica (UK) Limited carries out the Group strategy, employs all the UK staff including the directors, and owns and manages all of the Group's intellectual property. The proceeds from the issue of shares by the parent are passed from Oxford BioMedica plc to Oxford BioMedica (UK) Limited as a loan, and Oxford BioMedica (UK) Limited manages group funds and makes payments, including the expenses of the parent company.

Company: transactions with subsidiaries	2017	2016
	£'000	£'000
Purchases:		
Parent company expenses paid by subsidiary	(976)	(2,448)
Warrants:		
Issue of warrants for shares as part of consideration for loan obtained by subsidiary	1,218	–
Cash management:		
Cash loaned by parent to subsidiary	5,551	12,794

The loan from Oxford BioMedica plc to Oxford BioMedica (UK) Limited is unsecured and interest free. The loan is not due for repayment within 12 months of the year end. The year-end balance on the loan was:

Company: year-end balance of loan	2017	2016
	£'000	£'000
Loan to subsidiary	176,432	170,639

The investment in the subsidiary, of which the loan forms part, has been impaired by £126 million (note 13) in previous years.

In addition to the transactions above, options over the Company's shares have been awarded to employees of subsidiary companies. In accordance with IFRS 2, the Company has treated the awards as a capital contribution to the subsidiaries, resulting in a cumulative increase in the cost of investment of £6,801,000 (2016: £6,052,000).

There were no transactions (2016: none) with Oxxon Therapeutics Limited.

Company: transactions with related parties

There is an outstanding balance of £5,000 (2016: £28,000) owed to Lorenzo Tallarigo at year end. There were no other outstanding balances in respect of transactions with directors and connected persons at 31 December 2017 (2016: none). Key person remuneration can be seen in note 5 of the financial statements.

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34. Subsequent events

On 15 February 2018, the Group announced that it had completed a major new collaboration and licence agreement with Bioverativ Inc. for the development and manufacturing of lentiviral vectors to treat haemophilia. The agreement includes a licence to use Oxford BioMedica's LentiVector-Enabled™ technology and access to its industrial-scale manufacturing technology.

Under the terms of the agreement, Oxford BioMedica will receive a \$5 million upfront payment from Bioverativ. Oxford BioMedica is also eligible to receive various milestone payments, potentially worth in excess of \$100 million, and undisclosed royalties on net sales of Bioverativ's lentiviral vector haemophilia products. Bioverativ will fund process development and scale-up activities for its lentiviral vector haemophilia products. The agreement allows for the parties to put in place a clinical supply agreement for GMP manufacturing of haemophilia products by Oxford BioMedica.

On 9 March 2018, the Group announced that it had placed 174,346,817 new ordinary shares in the Company at a price of 11.75 pence per share with both new and existing investors. The price of 11.75 pence per share represented a 6% discount to the closing price of 12.48 pence per share on 8 March 2018. Gross proceeds from the placing were £20.5 million, net proceeds were £19.3 million.

The \$55 million debt facility with Oaktree Capital Management ("Oaktree") contains an anti-dilution provision under which, if the Group issues new ordinary shares, the number of warrants held by Oaktree will be adjusted depending on the price at which the new ordinary shares are issued relative to an average trailing volume weighted share price. Consequently, Oxford BioMedica is required to issue 133,156 warrants to Oaktree following completion of the Placing representing an increase of 0.1% over the 134,351,226 warrants already issued to Oaktree as announced on 30 June 2017.

The Group announced in January 2018 that it has been awarded a £3 million grant by the UK's innovation agency, Innovate UK, to support the UK's efforts to produce viral vectors and ensure adequate supply to meet future demand. The grant will be used to support investment in equipment for vector development, vector manufacture, storage and analytical equipment, as well as other items that are key for the operation of vector GMP facilities. In addition, a small part of the grant will be used to support the planning for the transition of GMP suites from the use of adherent to suspension cultures.

The Group notes that during March 2018 it was subject to a cybersecurity incident which involved unauthorised access to part of the Group's computer systems. As soon as it was discovered, the Group took immediate steps to respond to and manage the incident appropriately. The Group's initial investigations have indicated that unauthorised access was gained via a single and isolated user account which has since been disabled. However, it is possible that the person or persons behind the incident may release some data. The Group's investigation is continuing and includes an ongoing review of the Group's information security systems. The Group would like to reassure clients, shareholders and other stakeholders that this incident has not affected, and does not affect, its ability to do business. The Group has contacted those clients it believes may have been affected. The Group does not expect the incident, including any possible release of data, to have a material effect on its operations or financial position.

Oxford BioMedica specific terminology

LentiVector® platform

Oxford BioMedica's LentiVector® platform technology is an advanced lentiviral vector based gene delivery system which is designed to overcome the safety and delivery problems associated with earlier generations of vector systems. The technology can stably deliver genes into cells with up to 100% efficiency and can integrate genes into non-dividing cells including neurons in the brain and retinal cells in the eye. In such cell types, studies suggest that gene expression could be maintained indefinitely. The LentiVector® platform technology also has a larger capacity than most other vector systems and can accommodate multiple therapeutic genes.

OXB-102: Parkinson's disease

OXB-102 is a gene-based treatment for Parkinson's disease, a progressive movement disorder caused by the degeneration of dopamine producing nerve cells in the brain. OXB-102 uses the Company's LentiVector® platform technology to deliver the genes for three enzymes that are required for the synthesis of dopamine. The product is administered locally to the region of the brain called the striatum, converting cells into a replacement dopamine factory within the brain, thus replacing the patient's own lost source of the neurotransmitter.

OXB-201: "wet" age-related macular degeneration

OXB-201 is a gene-based treatment for neovascular "wet" age-related macular degeneration (AMD) and diabetic retinopathy (DR). OXB-201 aims to preserve and improve the vision of patients through anti-angiogenesis; blocking the formation of new blood vessels. The product uses the Company's LentiVector® platform technology to deliver two anti-angiogenic genes, endostatin and angiostatin, directly to the retina.

SAR 422459: Stargardt disease

SAR 422459 is a gene-based therapy for the treatment of Stargardt disease. The disease is caused by a mutation of the ABCR gene which leads to the degeneration of photoreceptors in the retina and vision loss. SAR 422459 uses the Company's LentiVector® platform technology to deliver a corrected version of the ABCR gene. A single administration of the product directly to the retina could provide long-term or potentially permanent correction.

SAR 421869: Usher syndrome type 1B

SAR 421869 is a gene-based therapy for the treatment of Usher syndrome 1B. The disease is caused by a mutation of the gene encoding myosin VIIA (MYO7A), which leads to progressive retinitis pigmentosa combined with a congenital hearing defect. SAR 421869 intends to address vision loss due to retinitis pigmentosa by using the Company's LentiVector® platform technology to deliver a corrected version of the MYO7A gene. A single administration of the product could provide long-term or potentially permanent correction.

OXB-202: corneal graft rejection

OXB-202 is a gene-based treatment for the prevention of corneal graft rejection. Corneal grafting arises from a need to remove and replace pathology arising in the cornea causing 'clouding'. Although one of the most successfully transplanted tissues, a significant number of grafts are rejected due to vascularisation. OXB-202 uses the Company's LentiVector® platform technology to deliver endostatin and angiostatin ex vivo to donor corneas prior to transplant in order to block vascularisation and to prevent graft rejection.

5T4 tumour antigen

The 5T4 tumour antigen is a unique protein found on most common types of solid cancer. It is potentially a valuable target for novel anti-cancer interventions given its restricted expression in normal tissues and its high prevalence on the surface of both primary and metastatic cancerous cells. The 5T4 tumour antigen was identified through research into the similarities between the development of the placenta during pregnancy and the progression of cancer. 5T4 is produced by both cancerous cells and also by placental and foetal cells, suggesting that the process of immunological escape in pregnancy and cancer is based on similar mechanisms.

OXB-302 (CAR-T5T4): cancer

OXB-302 aims to destroy cancerous cells expressing the 5T4 tumour antigen. It uses the Group's LentiVector® platform and 5T4 antigen to target cancer cells expressing 5T4 tumour antigen expressed on the surface of most solid tumours and some haematological malignancies.

Terminology not specific to Oxford BioMedica

AAV

Adeno-associated viruses (AAV) is a small virus which infects humans and some other primate species.

Advanced Manufacturing Supply Chain Initiative (AMSCI)

The Advanced Manufacturing Supply Chain Initiative is a funding competition designed to improve the global competitiveness of UK advanced manufacturing supply chains.

Anti-angiogenesis

The creation of new blood vessels, known as angiogenesis, is a critical element in tumour formation and growth. Endostatin and angiostatin were discovered by one of the best known researchers in the field of angiogenesis, Dr. Judah Folkman of Children's Hospital and the Harvard Medical School in Boston. The proteins have shown potent anti-cancer activity in preclinical models and a potentially additive effect when used in combination.

Biologics License Application (BLA)

The BLA is a request for permission to introduce or deliver for introduction, a biological product into the US market.

CAR-T therapy

Adoptive transfer of T cells expressing Chimeric Antigen Receptors (CAR) is an anti-cancer therapeutic as CAR-modified T cells can be engineered to target virtually any tumour associated antigen.

Cell therapy

Cell therapy is defined as the administration of live whole cells in a patient for the treatment of a disease often in an *ex vivo* setting.

Clinical trials (testing in humans)

Clinical trials involving new drugs are commonly classified into three phases. Each phase of the drug approval process is treated as a separate clinical trial. The drug-development process will normally proceed through the phases over many years. If the drug successfully passes through all phases it may be approved by the regulatory authorities

- Phase I: screening for safety
- Phase II: establishing the efficacy of the drug, usually against a placebo
- Phase III: final confirmation of safety and efficacy

CTL019

CTL019 is a CAR-T cell therapy for patients with B cell cancers such as acute lymphoblastic leukemia (ALL), B cell non-Hodgkin lymphoma (NHL), adult disease chronic lymphocytic leukemia (CLL) and diffuse large B cell lymphoma.

DLBCL

Diffuse large B-cell lymphoma (DLBCL) is a cancer of B cells, a type of white blood cell responsible for producing antibodies. It is the most common type of non-Hodgkin lymphoma among adults.

DNA

Deoxyribonucleic acid (DNA) is a molecule that carries genetic information.

Ex Vivo

Latin term used to describe biological events that take place outside the bodies of living organisms.

FDA

US Food and Drug Administration (FDA) is responsible for protecting the public health by assuring the safety, effectiveness, quality, and security of human and veterinary drugs, vaccines and other biological products, and medical devices.

Gene therapy

Gene therapy is the use of DNA to treat disease by delivering therapeutic DNA into a patient's cells which can be in an *ex vivo* or *in vivo* setting. The most common form of gene therapy involves using DNA that encodes a functional, therapeutic gene to replace a mutated gene. Other forms involve directly correcting a mutation, or using DNA that encodes a therapeutic protein drug to provide treatment.

GxP, GMP, GCP, GLP

GxP is a general term for Good (Anything) Practice. GMP, GCP and GLP are the practices required to conform to guidelines laid down by relevant agencies for manufacturing, clinical and laboratory activities.

Innovate UK

Innovate UK is the UK's innovation agency. Its role is to stimulate innovation, working with business and other partners, in order to accelerate economic growth.

In Vitro

Latin term (for within the glass) refers to the technique of performing a given procedure in a controlled environment outside of a living organism.

In Vivo

Latin term used to describe biological events that take place inside the bodies of living organisms.

IP

Intellectual Property (IP) refers to creative work which can be treated as an asset or physical property. Intellectual property rights fall principally into four main areas; copyright, trademarks, design rights and patents.

Investigational Medicinal Product (IMP)

A pharmaceutical substance being tested in a clinical trial.

Lentiviral vectors

Gene delivery vector based on lentiviruses.

Pre-clinical studies

Pre-clinical studies (also known as non-clinical studies) is the stage of research that takes place before clinical trials can begin during which important feasibility, iterative testing and drug safety data is collected.

r/r paediatric ALL

Relapsed or refractory (r/r) acute lymphoblastic leukaemia (ALL) is a type of cancer in which the bone marrow in children and young adults make too many immature B lymphocytes (a type of white blood cell) that are resistant to treatment.

SPV

Special Purpose Vehicle (SPV) is a subsidiary company with an asset/liability structure and legal status that is created to fulfil specific objectives.

UK Corporate Governance Code (the Code)

The UK Corporate Governance Code is published by the UK Financial Reporting Council and sets out standards of good practice in relationship to board leadership and effectiveness, remuneration, accountability and relations with shareholders.

Viral vectors

Are tools commonly based on viruses used by molecular biologists to deliver genetic material into cells.

Definitions of non-GAAP measures**EBITDA**

EBITDA (Earnings before Interest, Tax, Depreciation, Amortisation and share based payments) is a non-GAAP measure and is often used as a surrogate for operational Cash flow.

EBIDA

EBIDA is an internal measure used by the Group, defined as EBITDA with the R&D tax credit included.

Gross income

Gross income is the aggregate of Revenue and Other Operating income.

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