Oxford Biomedica

Preparing for success

Annual report and accounts 2019

Oxford Biomedica in brief

Oxford Biomedica is a pioneer of gene and cell therapy with a leading position in lentiviral vector 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 system, LentiVector® platform, 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, liver and CNS disorders.

The Group has also entered into a number of partnerships, including with Novartis, Bristol Myers Squibb, Sanofi, Axovant Gene Therapies, Orchard Therapeutics, Boehringer Ingelheim, the UK Cystic Fibrosis Gene Therapy Consortium and Imperial Innovations, 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 550 people.

Oxford Biomedica

A leader in a rapid growth sector

Demand is reaching new heights

Interest in gene and cell therapies is booming. It's become a reality; working for patients, curing disease and changing lives.

Read more about how our LentiVector® delivery system is delivering the future of medicine today on page 4.

An area bursting with activity

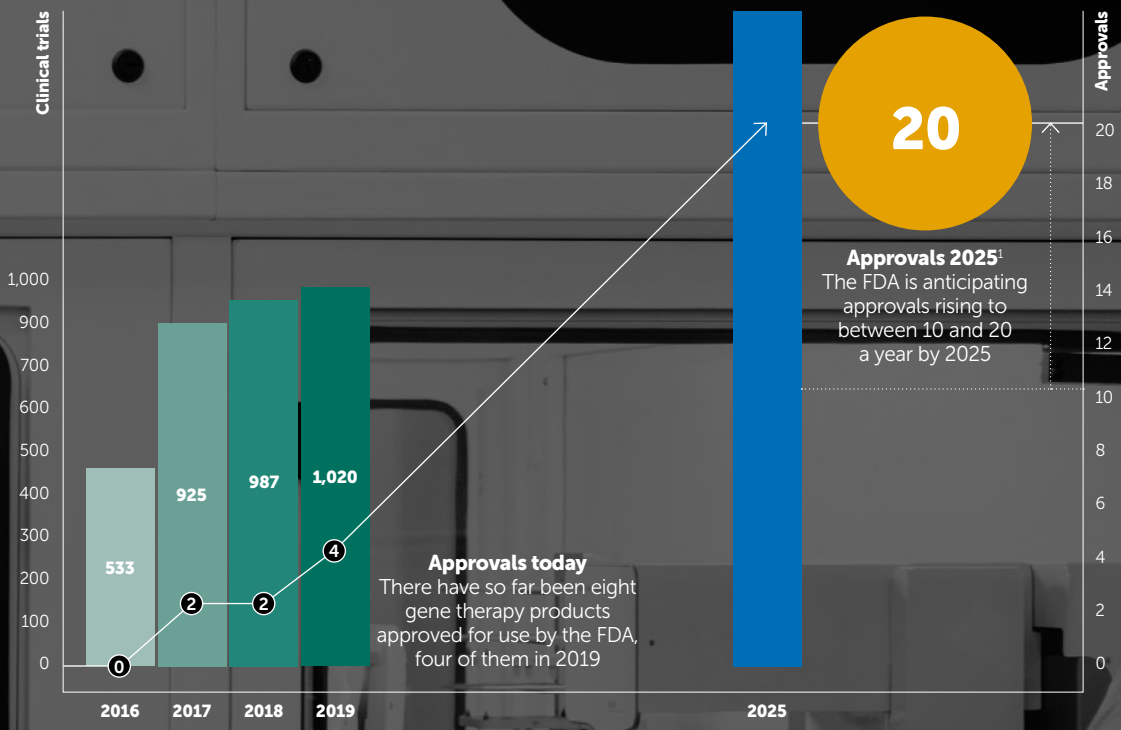
The sector is rapidly expanding with an ever-increasing amount of new gene therapies in development – all competing to deliver the next generation commercial treatments.

Read more about how the Group is expanding capacity to meet increasing demand on page 8.

Leading industrialisation

Oxford Biomedica has played an important role in developing this science as healthcare's future. The Group is now preparing to maximise its impact and success.

Read more about how the Group is moving Lentiviral vectors towards critical mass on page 12.



Clinical trials underway worldwide

Both submissions and approvals have been increasing steadily and are now expected to accelerate imminently[2]

Sources:
[1] FDA, [2] Alliance of Regenerative Medicine.

Preparing for success

Demand in the gene and cell therapy sector is reaching new heights

Demand in the gene and cell therapy sector is reaching new heights

The Group is in a perfect position to exploit an exciting global opportunity

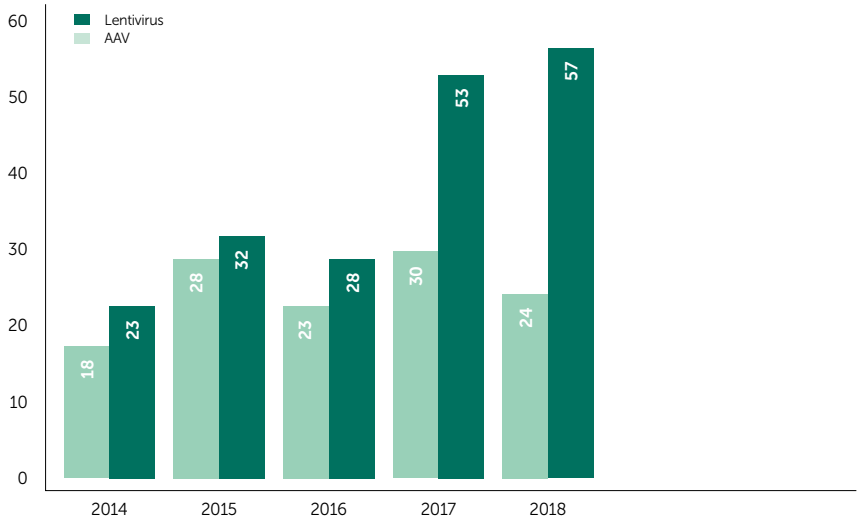
The fast growing cell and gene therapy market

The cell and gene therapy market continues to grow strongly post the first approval of a CAR-T therapy in the market with Novartis's Kymriah® in August 2017. Since then four further cell and gene therapy products have been approved and growth in clinical trials in the area has grown substantially.

The cell and gene therapy market is expected to grow to a multi-billion dollar market and the total number of gene therapy and gene-modified cell therapy trials has increased from 533 in 2016 to 1,020 in 2019 representing a CAGR 17.6%. The US Food and Drug Administration in anticipation of this growth has stated their intension to hire 50 additional clinical reviewers to handle the increase in submissions and the FDA estimates that by 2025 they will be approving 10 to 20 cell and gene therapy products a year.

Cell and Gene therapies use vectors to deliver genetic information into a patient's cells. There are two types of vector most commonly used lentiviral based vectors (LV) and adeno-associated virus based vector (AAV).

Global clinical trials with lentiviral vectors have grown faster than any other type and are the largest numerically having grown from 23 clinical trial initiations in 2014 to 57 in 2018 (CAGR 25.5%).



Number of trials using each vector type (global)

"We anticipate that by 2020 we will be receiving more than 200 INDs (in gene and cell therapy products) per year, building upon our total of more than 800 active cell-based or directly administered gene therapy INDs currently on file with the FDA. And by 2025, we predict that the FDA will be approving 10 to 20 cell and gene therapy products a year."

Scott Gottlieb M.D.
Former FDA Commissioner
15 January 2019

LentiVector® platform works

Oxford's Biomedica's unparalleled expertise with lentiviral vectors not only spans *in vivo* and *ex vivo* programmes but also multiple therapeutic areas covering gene modified cell therapies, ocular diseases, CNS disorders, liver diseases and respiratory disease.

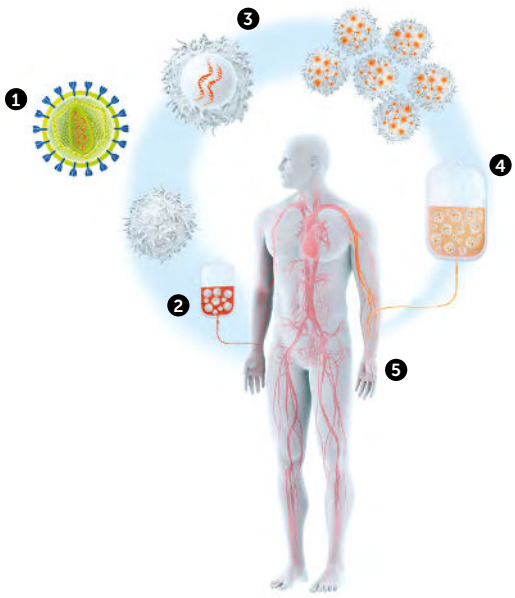
This expertise and the continual innovation across the platform to expand the reach of gene therapy means Oxford Biomedica is able to enable its partners as well as in house programs to expand into areas otherwise deemed too technically challenging or costly to pursue.

The Group generates revenue from providing its process development and manufacturing services, and as well as from royalties once treatments are approved and available for use as they use the Group's intellectual property as an integral part of what makes these new treatments work.

Lentivector® gene delivery system – enabling the next generation of medical advances

As at the end of December 2019 the company had 13 partner programmes in their pipeline comprising eight *ex vivo* and five *in vivo* programmes. This increased by an additional four *ex vivo* programmes on signing with Bristol Myers Squibb in March 2020, as well as the additional programme from Novartis in the first quarter of 2020 and COVID-19 vaccine programme in April 2020. In total the Group is working with partners on 10 CAR-T/TCR-T programmes, including Novartis' Kymriah®, the first FDA and EMA approved CAR-T therapy.

Examples of how our technology works can be found in our manufacturing brochure which can be downloaded here: *www.oxb.com/bioprocessing*



Lentivector® gene delivery system – how it works for the Novartis Kymriah® CAR-T therapy

1. **Making a safe vector from a virus specific to the partners needs**
   To make a safe vector system the viral genes are removed; this also creates space for the therapeutic vector payload. The gene/s that need to be delivered to the target cells are engineered into the vector genome. In the case of CAR-T therapy this gene encodes for a specific chimeric antigen receptor (CAR) as required by the partner. Scale up is then undertaken to take the production to a commercial 200L scale.

2. **Production of GMP lentiviral vector**
   200L bioreactors are used to produce a batch of the specific lentiviral vector which encodes for the chimeric antigen receptor (CAR) targeting the particular antigen in question on the target cell. In Kymriah® for example the lentiviral vector encodes for a CAR targeting CD19 which is expressed on B-cell cancers. Post batch production and multiple confirmatory assays the vector is them shipped to the partner.

3. **T-cells isolated from patient**
   The partner arranges patient blood collection and T-cell isolation.

4. **Lentiviral vector encoding CAR targeting the specific antigen are used to transduce expanded T-cells**
   T-cells harvested from the patient are transduced with the lentiviral vector encoding the specific CAR. The resulting modified T-cells are expanded *ex vivo* prior to infusion into the patient.

5. **The modified T-cells are infused back into the patient**
   Once inside the patient, the CAR modified T-cells target 'hunt' cancer cells and destroy them and then multiply. These specific antigen targeting T-Cells destroy the target cells expressing the antigen (in the case of Kymriah® tumour cells expressing CD19) and persist in the body to guard against residual or recurring disease.

With the addition of two new facilities, Oxford Biomedica has more than doubled its footprint

Preparing for success

An area bursting with activity

Lentiviral vectors have several important advantages over AAV

A key advantage of the family of vectors that includes lentiviral vector is their ability to integrate into the DNA of target cell so that the genetic information will be copied as cells divide so that this becomes a permanent modification. This is essential for *ex vivo* therapies; while AAV vectors have some ability to integrate this is limited and hence are currently only used *in vivo* applications in cells with limited or no cell division.

Lentiviral vectors can carry about twice the genetic payload compared to AAV, this allows for the carriage of larger genes (up to 10kb) and/or the carriage of more than one gene. This capability for example has been used with Parkinson's disease programme, Axo-Lenti-PD which contains three genes. This programme was developed in house before being out-licenced to Axovant in 2018.

There is no pre-existing immunity for lentiviral vectors and hence no pre-screening is needed.

	Lentiviral Vectors	AAV Vectors
Efficient *in vivo* gene delivery	✓ ✓ ✓	✓ ✓ ✓
Safe and well tolerated	✓ ✓ ✓	✓ ✓ ✓
Large therapeutic payload	✓ ✓ ✓	✗
No pre-existing immunity	✓ ✓ ✓	✗
Permanent modifications of dividing cells	✓ ✓ ✓	✗
IP protection	✓ ✓	✓
Ease of manufacture	✓	✓ ✓

Lentiviral vectors vs. AAV vectors
Lentiviral vectors such as the Group's Lentivector® delivery system hold some key advantages over AAV vectors.

✓ Yes
✓ Good
✓ Excellent
✗ No

6 years

Lentiviral vectors demonstrate long term expression
Lentiviral vectors have demonstrated dose dependant, stable, long term expression out more than 6 years* following a single in vivo administration.

*Campochiaro et al.
Hum Gene Ther 28 (1):99-111, 2016

Significant additional capacity will match global demand

Oxbox Bioprocessing facility

As the cell and gene therapy field continues to expand, the Group leased an additional facility in Oxford at the end of 2018 to meet the anticipated higher demand for lentiviral vectors. The new 84,000 sqft (7,800 sqm) facility, Oxbox, complements Oxford Biomedica's three existing state-of-the-art GMP production suites. The initial development phase will fit out approximately 45,000 sqft (4,200 sqm) in the new facility with four GMP clean rooms, two fill / finish suites, offices, warehousing and QC laboratories.

During 2019, facility development made good progress, with the production suites' building phase completed by the end of the year as planned. Validation commenced at the start of 2020, and the Group anticipates achieving regulatory approval and manufacture of the first commercial batches by the end of the first half, 2020. In parallel, development of the fill / finish suites are progressing well, with handover of the first suite expected by the end of 2020.

Windrush Innovation Centre

Alongside the expansion of Oxford Biomedica's manufacturing capacity, the Group is in the process of establishing the Windrush Innovation Centre (WIC), a new 32,000 sqft (2,970 sqm) discovery and innovation hub. This brings together research, automation, process development and bioprocessing teams to drive LentiVector® platform innovation and progress the proprietary pipeline. Occupation of the facility began during the first half of 2019 with increased utilization expected during 2020.

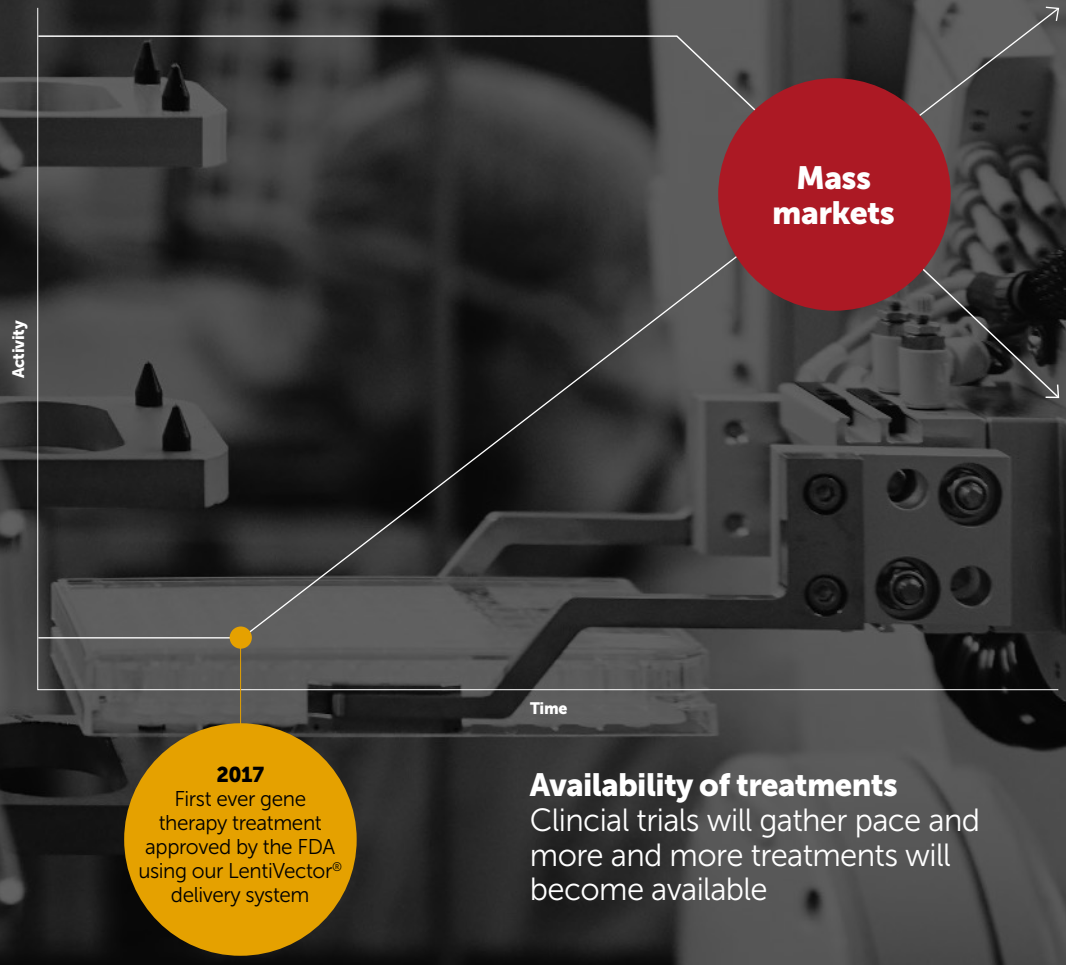
With the addition of these two new facilities, Oxford Biomedica has more than doubled its footprint, which now extends to over 226,000 sqft (21,000 sqm). With its five specialist facilities centred around Oxford, the Group has built a global hub for lentiviral vector development and commercialisation.

Expanding capacity
The images above show three of the Group's five facilities in Oxford.

1. Shown in the top image is the Group's Windrush headquarters (building complex on the right).
2. The new Windrush Innovation centre is next door to the Group's headquarters (building complex on the left).
3. The bottom image is the Group's new Oxbox facility.

Driving cost down through industrialisation

Oxford Biomedica is working to reduce manufacturing costs, already making progress and setting new standards

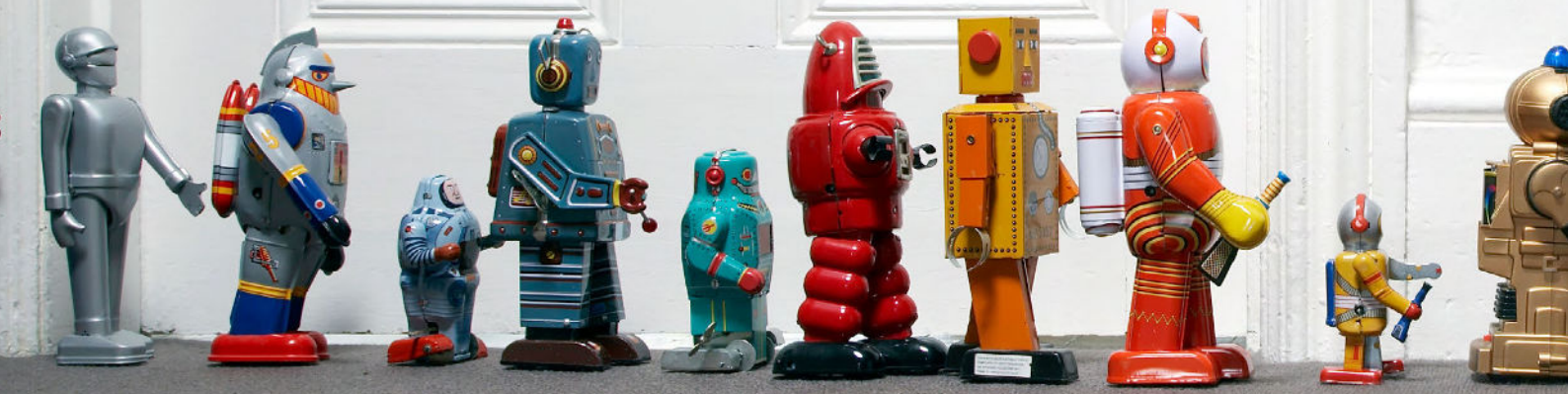


Availability of treatments

Clincial trials will gather pace and more and more treatments will become available

Preparing for success

Leading industrialisation

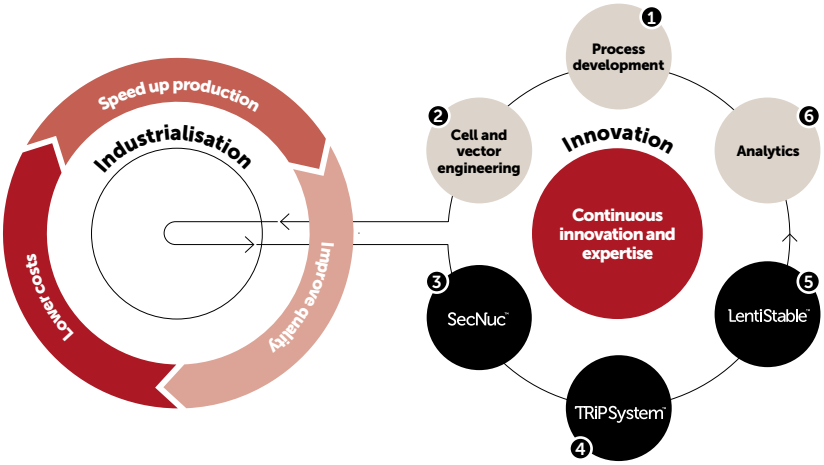


Driving lentiviral vectors towards critical mass

Proprietary platform innovation

Through proprietary platform innovation the Group is driving the industrialisation of lentiviral vectors. The Group is able to leverage our expertise to deliver lentiviral vector based gene therapies. The Group's CDMO revenues provide a solid growing financial foundation with significant upside from the Group's proprietary pipeline.

What the sector urgently needs to do: **How Oxford Biomedica is answering this:**



The LentiVector® platform – leading commercial lenti-based delivery system:

1. **Process development**
   State-of-the-art facilities spread over 12,000 sqft (1,115 sqm) and 2 sites. Serum-free suspension bioreactor process.
2. **Cell and vector engineering**
   Optimised cell lines for simplified and scalable manufacturing. Next generation vectors with pseudotyping expertise. Access to EIAV and HIV-1.
3. **SecNuc™**
   Efficient clearance of residual DNA during vector production. Streamlines vector production and reduces cost of goods.
4. **TRiPSystem™**
   Repression of transgene during vector production. Maximises yields and improves product quality.
5. **LentiStable™**
   Inducible stable packaging and producer cell lines Simplified, cost effective and scalable manufacturing process.
6. **Analytics**
   Analytical methods recognised by regulatory authorities. Quality systems ensuring compliant release of batches. Automated systems increase efficiency and reproducibility.

Continuous innovation is driving the cost of gene therapy down

As a pioneer in its field, Oxford Biomedica has built an enviable position as a world leading lentiviral vector company. The Group brings together innovation, expertise and infrastructure that spans the entire product development and commercialisation process. This provides a uniquely diversified business model offering the prospect of long-term sustainable growth.

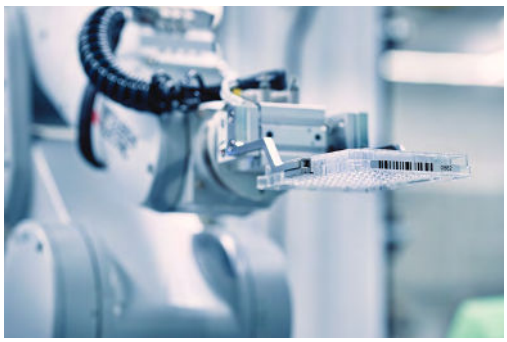
The Group's LentiVector® platform enables the industrialisation of the lentiviral vector, and underpins both its partnerships and in-house pipeline. Constant innovation is accelerating operational efficiency and driving down costs, whilst ongoing investment, such as through the Group's new artificial intelligence collaboration with Microsoft, maintains the LentiVector® platform's world-leading position.

By spearheading the industrialisation of the lentiviral vector, Oxford Biomedica can capture significant value from the rapidly growing gene and cell therapy sector.

The Group continuously innovates to improve its LentiVector® platform by:

- Engineering our proprietary cell lines and vectors to improve bioprocessing yield, developing new analytical methods to increase efficiency and quality, investing in automation.
- The Group's automated systems are already enabling faster cell line screening as well as highly efficient process development and analytical testing.
- The Group's investment in robotics and state-of-the-art manufacturing technologies increases productivity while reducing development timings and process risk, using *in silico* design tools and machine learning to drive development and innovation via the Group's new partnership with Microsoft signed in 2019.

In collaborating with innovative companies to integrate cutting edge technologies into the LentiVector® platform, Oxford Biomedica is committed to driving costs down, enabling it become a first choice technology for anyone developing lentiviral based gene therapy treatments.



Investment in new technologies
Automation and robotics are unlocking productivity. Our automated systems are already enabling faster cell line screening as well as highly efficient process development and analytical testing.

Healthcare stands at a pivotal moment.

For decades, gene therapy was a hope; that the future could bring something better for people suffering from life threatening and debilitating diseases for which there is no effective available treatments.

Today gene therapy is a reality; working for patients, curing disease and changing lives.

Group at a glance

Who the Group is

In the fast growing Gene and Cell therapy sector the Group is leading the way in lentiviral vectors.

The Group has the first FDA and EMA approved lentiviral vector-based gene delivery system through the Group's collaboration with Novartis on Kymriah.®

The Group is a leading global lentiviral vector specialist with:

— 19 partner programmes.

— Eight proprietary products candidates.

— Over 550 staff.

— Facilities covering in excess of 226,000 sqft (21,000 sqm).

A first choice partner

NOVARTIS

SANOFI

Boehringer Ingelheim

gtxx UK CYSTIC FIBROSIS GENE THERAPY CONSORTIUM

Orchard therapeutics

axovant GENE THERAPIES

Santen

Bristol Myers Squibb

UNIVERSITY OF OXFORD

COVID-19 vaccine trial

Where the Group is

Oxford is one of the global hotspots for gene and cell therapy

Windrush Court and Windrush Innovation Centre, Oxford, UK
The Group's headquarters are within our Windrush Court facility which also houses 32,000 sqft (2,970 sqm) of lab space. Next door is our new Innovation Centre which has a further 32,000 (2,970 sqm) sqft of laboratory and office space.

Harrow House and Chancery Gate, Oxford, UK
The Group's Harrow House facility first received MHRA approval to manufacture in 2012. It has around 4,000 sqft of manufacturing space with two clean rooms. Harrow House and Chancery Gate are located directly opposite our headquarters.

Yarnton, Oxford, UK
Yarnton is where the Group's facility has FDA and MHRA approval to manufacture. It has around 6,000 sqft of manufacturing space, including one clean room.

Oxbox, Oxford, UK
The Group's newest 84,000 sqft (7,800 sqm) facility is Oxbox. The Group is currently fitting out a portion of this building to provide 45,000 sqft (4,200 sqm) of manufacturing space to include four cGMP suites and two Fill and Finish suites. The facility has room for significant future expansion.

Oxford, UK
Facilities less than one hour from London Heathrow Airport.

>550

Employees
Oxford Biomedica employes over 550 people at the Group's Oxford locations.

What the Group does

CDMO and partner's programmes

The Group has strong partnerships with Novartis, Bristol Myers Squibb, Bioverativ (part of the Sanofi Group), Boehringer Ingelheim, the UK Cystic Fibrosis Gene Therapy Consortium and Imperial Innovations, Santen, the Oxford COVID-19 consortium and Orchard Therapeutics, providing them with access to the Group's intellectual property, state-of-the-art production facilities and expertise. These partnerships provide the Group with multiple income streams, consisting of upfront milestone payments, development and production fees and potential royalties on future product sales.

Oxford Biomedica's products

Using the Group's unique LentiVector® delivery platform, the Group has created a valuable portfolio of gene and cell therapy product candidates in the areas of oncology, ophthalmology, liver and CNS disorders.

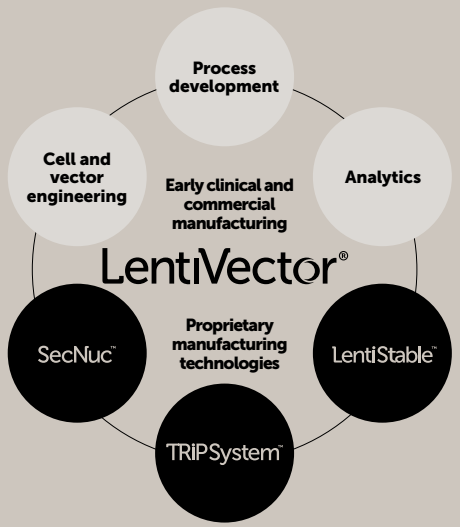
The Group plans to progress its wholly-owned products via spin-outs and out-licensing opportunities, while continuing to invest in the Group's LentiVector® platform. The Group plans to continue its pre-clinical R&D to discover new potential products and are willing to make modest investments to internal and external assets up to early clinical stage before looking to spin out or out-licence to a partner.

The Group has licensed products and technology rights to Sanofi and Axovant.

Indications:
Oncology
Opthamology
CNS
Liver

Proprietary platform innovation

Through proprietary platform Innovation the Group is driving the industrialisation of lentiviral vectors. The Group is able to leverage our expertise to deliver lentiviral vector based gene therapies.



Products pipeline

The Group is currently working on 19 partner programmes and has eight proprietary programmes of which three have been out-licenced.

CDMO Pipeline

The Group is working with partners on 19 programmes compared to nine at the end of 2018. Oxford Biomedica receives multiple revenues streams from its work with partners inclining upfront licence fees, process development fees and incentives, bioprocessing revenues and royalties on sales once a therapy has reached the market.

Read more about our CDMO pipeline on pages 28 and 29.

Gene therapeutics pipeline

The Group has eight programmes in its gene therapeutics pipeline of which three have been out-licenced. Revenues from out-licenced programmes come in the form of upfront, milestones and royalties.

Read more about our the Group's gene therapeutics pipeline on page 30.

Pipeline indications

1. Oncology
2. Haematology
3. Immunology
4. Metabolic
5. Neurology
6. Ophthalmology
7. Respiratory
8. Central Nervous System (CNS)
9. Infectious Disease
10. Hepatology

(1) Treatment approved

The Group's business model

❶ LentiVector® platform

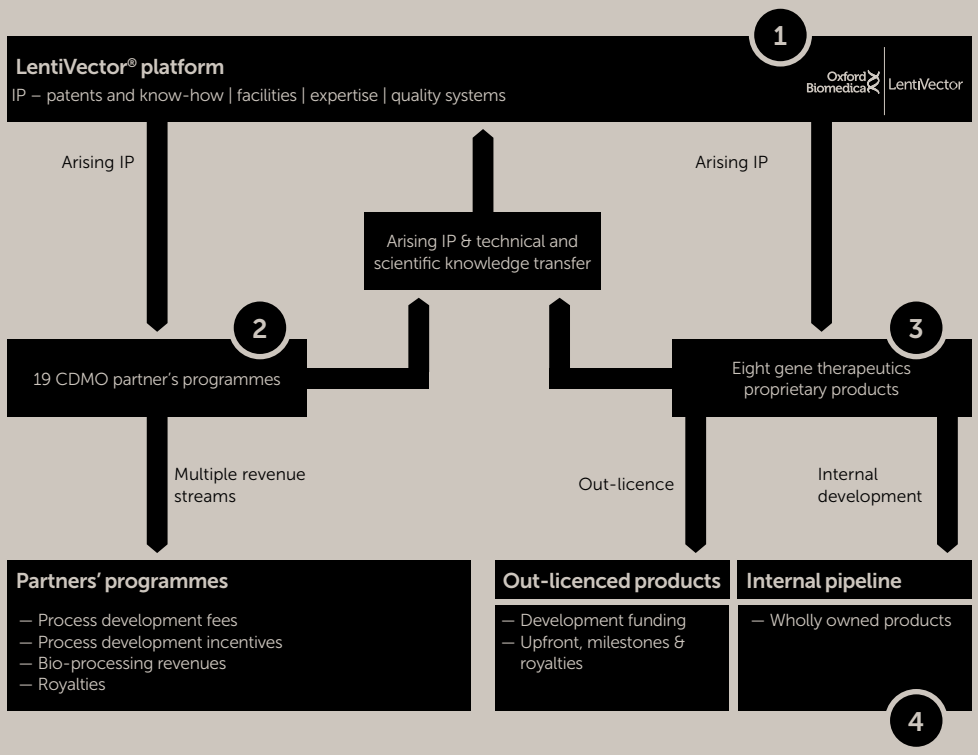
The Group's LentiVector® platform is at the heart of Oxford Biomedica. The IP, patents and know-how, along with the Group's 20 plus years of expertise in applying its LentiVector® technology for both *in vivo* and *ex vivo* therapies has made the Group not only a pioneer in the field but also the global leader that it is today. Looking to the future, further innovation on the platform is key to the Group's success and to remain at the forefront of this technology. This constant innovation and ongoing investment in the platform alongside new collaborations such with Microsoft in artificial intelligence and machine learning will accelerate operational efficiency and driving down costs. The Group's mission though this investment and innovation is to industrialise lentiviral vector and in the process of doing so seed the Group's technology and IP across the cell and gene therapy markets to enable the full potential of this market to be reached and for Oxford Biomedica to reap the benefits of being a key enabler in this new wave of medical advancement.

Link to risks Ⓐ Ⓒ Ⓔ

❷ Partner programmes: Contract Development and Manufacturing Organisation, (CDMO)

Oxford Biomedica was the first FDA and EMA approved commercial supplier of lentiviral vectors and in the last year has seen its partner funded pipeline grow from ten to 19 programmes. The Group leverages its position to provide partners with access to its world-leading capabilities and is the leading supplier of scale up solutions and commercial supply. Oxford Biomedica's high-value, customer-centric partnerships form a strong business foundation, bringing ongoing repeatable revenues as demonstrated by the Group's recently extended commercial supply agreement with Novartis and new partnership with Bristol Myers Squibb. As Oxford Biomedica continues its growth it is building new capacity, such as its Oxbox facility, to meet the increasing demand for its expertise. The Group expects the pipeline of partnerships to expand further as the year progresses.

Link to risks Ⓐ Ⓑ Ⓒ Ⓔ



Orchard therapeutics · NOVARTIS · SANOFI · Oxford Biomedica

Bristol Myers Squibb · axovant GENE THERAPIES

Santen · SANOFI

Boehringer Ingelheim · gtxx UK CYSTIC FIBROSIS GENE THERAPY CONSORTIUM

UNIVERSITY OF OXFORD · COVID-19 vaccine trial

❸ OXB products (gene therapeutics)

Whilst the Group's partnerships are the foundation of a strong underlying business, its wholly-owned gene and cell therapy pipeline offers significant upside. Leveraging its internal research expertise developed over 20 years, the Group selects patient-centric product candidates targeting clinical excellence. These are progressed through proof-of-concept, and potentially into early clinical development, before seeking third-party funding for full development and commercialisation. This approach reduces risk while retaining significant value through licence income, milestone payments and sales royalties. Additionally, Oxford Biomedica seeks to retain manufacturing rights for its out-licensed programmes, capturing further value throughout their development and commercialisation. This pipeline strategy is exemplified by the Group's 2018 land-mark out-licensing agreement with Axovant for the Group's Parkinson's disease candidate.

Link to risks Ⓐ Ⓒ Ⓓ Ⓔ

❹ Proprietary internal pipeline

Following an internal pipeline review priorities have now been set for where investment will be made. OXB-302 is the Group's priority candidate and targets haematological tumours with a CAR-T 5T4. The 5T4 antigen has been shown to be highly expressed on various haematological tumours as well as most solid tumours with restricted expression on normal tissues. Advanced pre-clinical work is continuing on OXB-302 as the programme moves towards entry into the clinic. OXB-203, currently in pre-clinical studies, is targeting Wet AMD and uses Oxford Biomedica's technology to deliver a gene to express afibercept (a VEGF-trap). This programme builds on the demonstrated long term gene expression data seen with its predecessor OXB-201, targeting angiostatin and endostatin for which work has now been halted with VEGF-trap approach taken with OXB-203 seen as a better validate target for wet-AMD. In addition, OXB-202, which targeted the same genes as OXB-201 but for corneal graft rejection, will also no longer be further advanced due to moving away from the angiostatin/endostatin approach. In addition, the Group is continuing pre-clinical work on OXB-204 (LCA10) and OXB-103 (ALS) and a new pre-clinical program, OXB-401 (liver indication), has been initiated. Work on OXB-208 (RP1) has been de-prioritised and hence halted in favour of far more promising programmes. There were no cost implications that resulted from the decision to stop.

Link to risks Ⓐ Ⓓ Ⓔ

Value creation for our stakeholders in 2019

Shareholders

The Group's shareholders play an important role in monitoring and safeguarding the governance of the Group by ensuring their views are brought into Board discussions and considered in decision making.

200

In 2019 we attended over 200 meetings in the investor community

Partners

The Group will continue to target new strategic commercial relationships in 2020, whilst continuing to maintain the very good relationship it has with its existing partners.

19

Partner programmes

Employees

The Group's team are some of the most highly skilled and focused people in the cutting edge world of gene and cell therapy, working in office and laboratory facilities that are amongst the best.

100

New colleagues in 2019

Local communities

The Group has provided high skilled jobs to the local community, and have established an apprenticeship scheme in collaboration with Advanced Therapies Apprenticeship Community and the University of Kent.

8

Apprenticeships created in 2019

Governing bodies and regulators

The Group operates in a highly regulatory environment. With a long history of achievements, the Group's technology is recognised by regulators on both sides of the Atlantic.

Read more about the Group's stakeholders on pages 22 and 23.

Principal risks facing the business

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 out-licence or spin-out the Group's product development candidates so that development stops.
- Ⓔ Inability to attract and/or retain highly skilled employees.

The principle risks facing the Group, including how they are managed and mitigated, are set out in detail on pages 58 to 62.

The Group's stakeholders

The Group believes that, to maximise value and secure long-term success, the Group must take account of what is important to key stakeholders. This is best achieved through proactive and effective engagement. A stakeholder mapping exercise identified the Group's key stakeholders and channels for engagement.

s172 Companies Act 2006

The Group sets out in the adjacent table the key stakeholder groups, the material issues and how the Group engages with them. Each stakeholder group requires a tailored engagement approach to foster effective and mutually beneficial relationships.

By understanding the Group's stakeholders, the Group can factor into Board meeting discussions the potential impact of decisions on each stakeholder group and consider their needs and concerns, in accordance with s172 of the Companies Act 2006 (see page 68). The Group works effectively with its employees, customers and suppliers, to make a positive contribution to local communities and achieve long-term sustainable returns for the Group's investors. Acting in a fair and responsible manner is a core element of the Group's business practice as seen in the Responsible business report on pages 48 to 54.

Key stakeholders

We have identified seven key stakeholders as follows:

❶ Employees
❷ Patients
❸ Customers
❹ Local communities
❺ Suppliers
❻ Regulators
❼ Shareholders

Stakeholders

❶ Employees

The Group has an experienced, diverse and dedicated workforce which it recognises as a key asset of the business. Therefore, it is important that the Group continues to create the right environment to encourage and create opportunities for individuals and teams to realise their full potential.

❷ Patients

The Group works on the development of innovative products either by itself or with partners in order to provide life changing treatments to patients.

❸ Customers

The continued performance of the Group's business would not be possible without understanding the customers' needs and future aspirations. Many of the customers have come to the Group as their businesses have moved into the cell and gene therapy sector, which is testament to the Group's expertise and leadership in the sector.

❹ Local communities

The Group is committed to supporting the communities in which the Group operates, including local businesses, residents, schools and the wider public.

❺ Suppliers

The Group outsource some of its activities to third-party suppliers and providers. As a result, it is crucial that the Group develops strong working relationships with the Group's suppliers, so the Group can enhance the efficiency of the business and create value.

❻ Regulators

The Group operates in a highly regulated environment and it is important that it engages with the regulators as required.

❼ Shareholders

The Groups shareholders play an important role in monitoring and safeguarding the governance of the Group.

Key issues	How the group engages	2019 highlights	Further links
– Opportunities for development and progression. – Health, safety and wellbeing. – Opportunity to share ideas and make a difference. – Diversity and inclusion.	The Group has an open, collaborative and inclusive management structure and engages regularly with employees. The Group does this through site visits by Board members, an appraisal process, structured career conversations, management development programmes, employee surveys, webinars and webcasts, digital sharing platforms, company presentations, town hall meetings, email briefings and newsletters and its well-being programme. Employee engagement is frequently measured and the Group has designated Stuart Henderson, as the Non-Executive Director to oversee employee engagement, including gathering the views of the workforce. The Group is also in the process of establishing a workforce advisory panel.	– Stuart Henderson designated as the Non-Executive Director to engage with the workforce advisory panel. – Roll out of the management development programme. – Roll out of the Rewards programme.	p. 96 People and Employee. p. 49 Rewards. p. 49 Employee bonus. p. 49 Diversity. p. 50 Employee communication.
– Patient safety. – Well-designed clinical trials. – Progressing product candidates to the market.	Via the Clinical Development Service department the Group consults with key clinical opinion leaders/physicians and regulatory experts in order to design safe clinical trials for patients.	– More than 200 patients treated with the Group's lentiviral vectors.	p. 54 Clinical trials and ethics.
– Understand customers' needs. – Customer retention and expansion of programmes. – Identification of new customers.	Via the Group's client partner & alliance management department and also the business development team, the Group communicates regularly with its existing customers/partners to discuss their goals and incorporate them into the Group's schedules/strategy. The Group does this through meetings, joint steering committees, engagement events and forums. This active engagement ultimately ensures that the Group meets their needs and assists them to achieve their business goals.	– Added additional CART targets with Novartis. – Progressed programmes with the Group's partners as per agreement.	p. 29 2019 Performance review. p. 81 Executive annual bonus.
– School and careers events. – Local charity involvement.	The Group engages with the local community not only through the planning process but also through the Group's "Helping hands" forum, with volunteering, fundraising and charity work. The Group also attends schools and career fairs, and also provides apprenticeships and work experience opportunities. The Group also liaises with industry bodies and government organisations to enhance the positive impact the Group has on the communities and sector in which it operates.	– Eight apprenticeships – Appointment of an early careers advisor – £9,500 in fundraising for local Oxford charity.	p. 48 People. p. 51 Charitable work. p. 51 Community. p. 51 Apprenticeship scheme. p. 51 Charitable giving.
– Long-term partnerships. – Collaborative approach.	Through effective collaboration, the Group aims to build long-term relationships with its suppliers so that both parties benefit. The Group has regular supplier meetings and business reviews and has a supplier code of conduct.	– Establishment of procurement and supplier function to interact with suppliers more effectively.	p. 62 Brexit. p. 54 Slavery and code of conduct.
– Meeting regulatory compliance.	The Group has dialogue with government regulatory bodies on a regular basis and attends industry forums. The Group also has compliance audits performed by both government regulatory bodies and by its customers.	– Four audits by government regulatory bodies. – Two audits by customers.	p. 59 Regulatory risk.
– Corporate governance. – Business ethics. – Strategy and business model – Financial performance.	Through the Group's investor relations programme which includes regular updates, meetings, roadshows and the Group's Annual General Meeting (AGM) and the fact that representatives of two major shareholders sit on the Board, the Group ensures shareholder views are brought into the Board discussions and considered in the Groups decision making. The Group also engages with shareholders via the Annual Report and Accounts and the Corporate website.	– 200+ meetings with the investor community. – 30+ shareholders attended the AGM. – New investor in Novo Holdings.	p 70 Shareholder engagement in 2019. p. 79 Remuneration – annual bonus and LTIP.

Operational highlights delivered in 2019

Novartis partnership

— Novartis extended its commercial supply agreement by a further five years in December and extended the number of lentiviral vector programmes in the collaboration from two to five. The agreement includes a minimum of $75 million over five years in manufacturing batch revenues in addition to undisclosed process development fees, with other financial terms, such as royalties, as previously agreed. See page 28.

— Kymriah® roll out accelerating in relapsed and refractory B-cell acute lymphoblastic leukaemia and relapsed and refractory diffuse large B-cell lymphoma with reimbursement approved in 20 countries in at least one indication. See page 28.

— Continued strong performance as sole global supplier of lentiviral vector for Kymriah® CAR-T therapy. See page 29.

New partnerships

— Collaboration, option and licence agreement established with Santen Pharmaceutical Co Ltd for development of gene therapy vectors targeting an inherited retinal disease. See page 29.

— Collaboration established with Microsoft Research to leverage machine learning and Cloud Computing to improve process efficiency and reduce costs. See page 31.

Proprietary product development

— First patient dosing in second cohort of SUNRISE-PD phase II study in Parkinson's disease triggered £11.5 million ($15 million) milestone payment from partner Axovant. See page 30.

— The Group's partner, Axovant, announced twelve month follow-up data in January 2020 from the first cohort of the SUNRISE-PD study on two patients where a continued improvement in UPRDS Part III 'OFF' Score at twelve months over the six month data was reported.

Expansion of bioprocessing and laboratory facilities

— Development of major new 84,000 sqft (7,800 sqm) bioprocessing facility on target with initial building phase completed, validation ongoing and first commercial batches anticipated in the first half of 2020. See page 31.

— Occupation of new 32,000 sqft (2,970 sqm) Windrush Innovation Centre (WIC) commenced during 2019 with increased utilisation expected during 2020. See page 32.

Post Period Highlights

— Signed new licence and five-year clinical supply agreement with Juno Therapeutics / Bristol Myers Squibb for initially four CAR-T and TCR-T programmes. $10 million upfront payment and up to $217 million in development, regulatory and sales related milestones in addition to undisclosed process development, scale up and batch revenues and an undisclosed royalty on sales. See page 18.

— In the first quarter of 2020 the Group started work on an additional vector construct for Novartis which now takes the total number of active vector constructs to six.

— In April the Group has joined a Consortium led by the Jenner Institute, Oxford University, to rapidly develop, scale-up and manufacture a potential vaccine candidate for COVID-19 called ChAdOx1 nCoV-19. AstraZeneca subsequently entered into an agreement with Oxford University for the global development and distribution of the vaccine on 30th April. While the potential impact on the Group is currently uncertain, should clinical trials be successful the Group will provide access to its large scale GMP manufacturing facilities including Oxbox to support the manufacturing scale up for Oxford University and AstraZeneca.

— Subsequent to year end the Group identified an issue regarding an aspect of certain process development work performed on behalf of a customer in 2018 and 2019 which potentially could give rise to a material claim against the Group. The Group has been in communication with the third party but is not yet in a position to verify or validate any information relating to this matter due to the very recent timing of this issue being identified.

Financial highlights delivered in 2019

£53.5m

Equity placing in May 2019
Successful £53.5 million equity placing used primarily to repay the loan facility with Oaktree Capital Management with Novo Holdings joining the share register.

£64.1m

Revenue
Revenue decreased by 4% from £66.8 million to £64.1 million.

+17%

Bioprocessing & Commercial development revenue
Bioprocessing and commercial development revenues increased by 17% to £47.3 million (2018: £40.5 milllion).

£16.8m

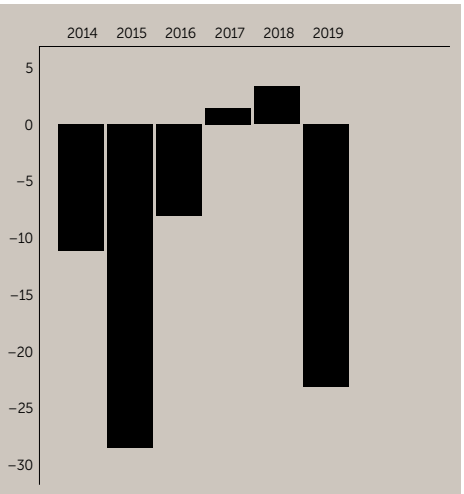
Licences, milestones & royalties revenue
Licences, milestones & royalties revenues decreased to £16.8 million (2018: £26.3 million).

+57%

Operating expenses[2]
Operating expenses increased by 57% from £26.6 million to £41.9 million.

£25.8m

Capital expenditure
Capital expenditure £25.8 million (2018: £10.1 million).



Cash outflow before financing activities
£m

£5.2m

Operating EBITDA[1] loss
Operating EBITDA loss incurred of £5.2 million (2018: £13.4 million profit).

£16.2m

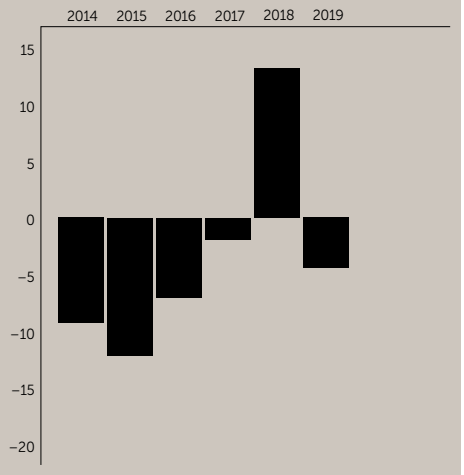
Cash
Cash of £16.2 million (31 December 2018: £32.2 million).

£14.5m

Operating loss
Operating loss incurred of £14.5 million (2018: £13.9 million profit).

£22.9m

Cash outflow
Cash outflow before financing activities increased by £25.7 million to £22.9 million (2018: £2.8 million inflow).



Operating EBITDA
£m

£43.6m

Loan facility repayment in June 2019
Successful £43.6 million repayment of our loan facility with Oaktree Capital Management.

£1.9m

Change in fair value
£1.9 million loss (2018: £6.0 million gain) in fair value of Orchard Therapeutics available for sale asset.

1. Operating EBITDA (Earnings Before Interest, Tax, Depreciation, Amortisation, revaluation of investments and assets held for sale, 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. A reconciliation to GAAP measures is provided on page 42.
2. Operating expenses are made up out of Bioprocessing expenses, research and development expenses and administrative expenses. A reconciliation to GAAP measures is provided on page 42.

Chairman's statement

The Group achieved strong revenue growth in its underlying bioprocessing and process development business, established new and extended partnerships and delivered on its capacity expansion programme. With these strong foundations in place, the Group is ideally placed to deliver value by pursuing its mission of curing patients as a fully integrated gene therapy company.

Building a gene and cell therapy leader

As a pioneer in its field, Oxford Biomedica has built an enviable position as a world leading lentiviral vector company. The Group brings together innovation, expertise and infrastructure that spans the entire product development and commercialisation process. This provides a uniquely diversified business model offering the prospect of long-term sustainable growth.

By spearheading the industrialisation of the lentiviral vector, Oxford Biomedica can capture significant value from the rapidly growing gene and cell therapy sector, without the major financial and clinical risks associated with a more traditional biotechnology business. The Group's underlying bioprocessing and process development business is complemented by its wholly-owned pipeline of earlier-stage product candidates, which offer major upside potential.

Investing in innovation

The gene and cell therapy sector is maturing rapidly, as ever more products move towards commercialisation. Oxford Biomedica is taking advantage of this opportunity to lead in the industrialisation of lentiviral vectors, through ongoing investment in platform innovation, development capabilities, production capacity and expert people building the Group's critical mass.

The Group's investment strategy is making good progress, and a strategic investment from leading life sciences investor Novo Holdings has further strengthened our ability to accelerate this. The Group used the proceeds from the Novo Holdings investment to fully repay debt and further boost its Statement of financial position to support its LentiVector® platform and in-house pipeline. By investing across its business, Oxford Biomedica is building its long-term, sustainable future. As it reaches optimal scale, the Group anticipates a smoother growth trajectory with increasingly robust and predictable income.

"I am pleased to report that Oxford Biomedica made good progress in 2019, as it continued to consolidate its position as a world leading gene and cell therapy business."

Dr. Lorenzo Tallarigo
Chairman

Investing in the team

Throughout 2019, the Group continued its transformation, with the completion of the first phase of its new Oxbox manufacturing facilities and continued delivery across its partnerships. This ongoing progress was supported by significant growth in the Oxford Biomedica team, and during the year the Group welcomed over 100 new colleagues who bring a range of production, analytical and research expertise. They are complemented by a broadened Senior Executive Team, and the addition of a further Non-Executive Board Director, Robert Ghenchev, who joins the Company as Head of Novo Growth at Novo Holdings. The Group continues to grow at a rapid pace and is looking to strengthen the Board further with the appointment of additional Non-Executive Directors. In addition, having served four years as Chairman, I have informed the Group of my intention to retire from Oxford Biomedica's board. I will continue as Chairman while the Group completes a search for my replacement. On behalf of the Board, I would like to welcome our new colleagues, and thank all our employees for their fantastic dedication and hard work during the year, which has enabled Oxford Biomedica to build the world-leading position it holds today.

Positive outlook

The growth of the gene and cell therapy field continues at an exciting pace. With its unique capabilities and diversified business model Oxford Biomedica is ideally positioned to contribute to the sector's success, capture value and build a world-leading business. The Group has delivered a large number of its targets in 2019, and during the coming year Oxford Biomedica looks forward to progressing each of its operating segments as it continues to meet the growing demands of the burgeoning gene and cell therapy industry.

Dr. Lorenzo Tallarigo
Chairman

A world leader in the industrialisation of lentiviral vectors
Oxford Biomedica is taking advantage of the gene and cell therapy sector maturing rapidly, seizing opportunity to lead in the industrialisation of lentiviral vectors, through ongoing investment in platform innovation, development capabilities, production capacity and expert people building the Group's critical mass.

+100 people

Adding to our teams
The Group welcomed over 100 new colleagues who bring a range of production, analytical and research expertise.

Chief Executive Officer's and 2019 performance review

Oxford Biomedica made good progress during 2019, extending our commercial supply agreement with Novartis for another five years, establishing a new partnership with Santen and delivering our new facilities expansion on target. The cell and gene therapy sector continues its rapid growth, and we remain at the forefront of innovation. Our new collaboration with Microsoft is harnessing the power of artificial intelligence to further boost the efficiency of our world-leading LentiVector® delivery platform, as we continue the industrialisation of lentiviral vector development and manufacture. We are building an exciting business, and with the significant investment by Novo Holdings in 2019, our simplified Statement of financial position places us in a stronger position to realise the potential of our world-leading technology.

Oxford Biomedica continued to make strong progress in 2019, consolidating its position as a world leading lentiviral vector company. It increased its portfolio of collaborations, with the addition of Santen to its list of partners, and advanced its pipeline of proprietary products, supporting the clinical development of AXO-Lenti-PD following its out-licensing in 2018. It continued to develop its LentiVector® cell and gene delivery platform and boosted its manufacturing business with the extension of the supply agreement for Novartis' CAR-T portfolio. In parallel, expansion of the Group's industrial-scale bioprocessing facilities continued on track, and its newly established collaboration with Microsoft is applying innovative machine learning to further enhance its LentiVector® platform.

Oxford Biomedica's financial performance demonstrates the Group's growing maturity as a leading gene and cell therapy business. The Group's underlying business enjoyed continued strong growth, with its bioprocessing and process commercial development revenues increasing by 17%. While this was offset to some extent by lower licensing income, the Group strengthened its Statement of financial position with a major investment from Novo Holdings. As Oxford Biomedica continues its strong underlying growth, the Group anticipates further increase in manufacturing revenues smoothing its revenue trajectory as it builds an exciting long-term business maximizing the opportunity in the fast growing cell and gene therapy market.

"The cell and gene therapy sector continues its rapid growth, and we remain at the forefront of innovation."

John Dawson
Chief Executive Officer

Novartis partnership progress

Throughout 2019, the Group continued to deliver under its partnership with Novartis for the commercial and clinical supply of lentiviral vectors for Kymriah® (tisagenlecleucel, formerly CTL019) and Novartis' broader CAR-T portfolio. Kymriah® is a ground-breaking CAR-T therapy that uses patients' T cells to target cancer. It is indicated in relapsed and refractory B-cell acute lymphoblastic leukaemia (r/r ALL) and relapsed and refractory diffuse large B-cell lymphoma (r/r DLBCL). During 2019 it continued its rapid global roll out, and both product approvals and reimbursement continue to grow. Currently, 20 countries, including the US, Canada, Japan, Australia and a number of countries in Europe, have approved reimbursement in at least one indication. Kymriah® remains the first and only CAR-T therapy to receive regulatory approval in two distinct B-cell malignancies in these territories, and was the first lentiviral vector based therapy to be approved in the US and Europe.

In December, the success of the Novartis partnership culminated in the extension of the supply agreement for an additional five years, covering five lentiviral vectors for CAR-T products, including Kymriah®. Under the terms of the agreement, Oxford Biomedica will receive $75 million minimum of manufacturing revenues over the five years, in addition to process development and facility reservation fees and royalties on product sales as agreed in the initial 2014 collaboration. The Group remains the sole global supplier of lentiviral vector for Kymriah® and will allocate a dedicated manufacturing facility at its new Oxbox commercial production site to the partnership.

Santen partnership

In June 2019, the Group established a new partnership with leading multi-national ophthalmology company Santen Pharmaceutical Co Ltd. Santen is the market leader for ophthalmic prescription pharmaceuticals in Japan and has a global presence in over 60 countries.

Under the terms of the R&D collaboration, option and licence agreement, Oxford Biomedica will develop and manufacture lentiviral vectors for novel gene therapy products targeting the treatment of an inherited retinal disease. On exercise of the option to access the Group's LentiVector® platform and industrial-scale production capabilities, Santen will pay an undisclosed milestone, in addition to future development milestones and single-digit royalties on product sales. Under the agreement, Oxford Biomedica retains an option to partner and co-fund product development and commercialisation in the United States and Europe.

Other existing partner programmes

During the year, the Group continued to progress its portfolio of existing collaborations. These provide partners with access to its innovative LentiVector® gene and cell therapy delivery platform, development and production expertise and world-leading industrialisation capabilities.

The portfolio includes the Group's $105 million strategic partnership with Sanofi (formally Bioverativ) for the development and manufacture of lentiviral vectors targeting the treatment of haemophilia, Orchard therapeutics in the treatment of adenosine deaminase severe combined immunodeficiency (ADA-SCID), MPS-IIIA and a third undisclosed programme, as well as a collaboration with the UK Cystic Fibrosis Gene Therapy Consortium, Boehringer Ingelheim and Imperial Innovations developing a novel inhaled gene therapy for cystic fibrosis.

Proprietary product development: Axovant Gene Therapies licensing agreement

In 2018, the Group signed an agreement estimated to be worth up to $842.5 million agreement with Axovant Sciences (now Axovant Gene Therapies) for the exclusive worldwide development and commercialisation rights to Oxford Biomedica's internally developed gene therapy candidate for Parkinson's disease, OXB-102 (subsequently renamed AXO-Lenti-PD). This landmark agreement validated the Group's proprietary portfolio strategy, with product innovation and initial development conducted in-house prior to attracting partner funding for clinical development and commercialisation, while retaining significant economic interest for Oxford Biomedica.

Lentiviral vectors for Kymriah®
Throughout 2019, the Group continued to deliver under its partnership with Novartis for the commercial and clinical supply of lentiviral vectors for Kymriah®.

+5 years

Novartis partnership
We extended our commercial supply agreement with Novartis for another five years.

US$15m

Axovant collaboration and licence agreement
Dosing of the first patient in the second cohort of Axovant's phase II study of AXO-Lenti-PD triggered a £11.5 million ($15 million) milestone payment.

Chief Executive Officer's and 2019 performance review

In April 2019, dosing of the first patient in the second cohort of the SUNRISE-PD phase II study of AXO-Lenti-PD triggered a £11.5 million ($15 million) milestone payment to Oxford Biomedica.

In June 2019, six-month data from the first dose cohort showed patients continued to improve across multiple metrics with no serious adverse events related to the treatment, which was generally well tolerated. In January 2020, 12-month data from this group demonstrated a continued favourable safety profile and a 37% improvement in motor function from baseline as assessed by the UPDRS Part III 'OFF' score. This followed an improvement of 29% at six months on the same scale. Enrolment into the second dose cohort continues and Axovant anticipates announcing six month data from the first six patients in cohort one and two by the fourth quarter of 2020. Based on the outcome of the dose-escalation phase, and development of a suspension-based manufacturing process, Axovant expects to begin the randomised, sham-controlled portion of the study by the end of the year.

Proprietary in-house product development

In line with the Group's proprietary portfolio strategy, Oxford Biomedica is engaged in partnering discussions to out-license or spin-out a number of its pipeline product candidates. The current portfolio consists of five patient-centric products targeting a number of indications in ophthalmology, oncology, liver and CNS disorders.

Following an internal pipeline review priorities have now been set for where pre-clinical investment will be made, to potentially take through into early stage clinical studies in the coming 12-18 months. OXB-302 is the Group's priority candidate and targets haematological tumours with a CAR-T 5T4. Advanced pre-clinical work is continuing on OXB-302 as the programme moves towards entry into the clinic. OXB-203, currently in pre-clinical studies, is targeting Wet AMD and uses Oxford Biomedica's technology to deliver a gene to express afibercept. This programme builds on the demonstrated long term gene expression data seen with its predecessor OXB-201, for which work has now been halted. In addition, the Group is continuing pre-clinical work on OXB-204 (LCA10) and OXB-103 (ALS) and a new pre-clinical program, OXB-401 (liver indication), has been initiated.

LentiVector® platform development

Oxford Biomedica's LentiVector® platform is a unique combination of expertise, intellectual property and world-class facilities, all focused on the industrialisation of the lentiviral vector. This world-leading, innovation-centric platform is the foundation of the Group's collaborations and proprietary pipeline. Oxford Biomedica's investment strategy is designed to maintain LentiVector® platform's leading position through constant innovation, enhanced operational efficiency and expanded capacity.

Progress our portfolio of existing collaborations
During the year, the Group continued to progress its portfolio of existing collaborations. These provide partners with access to its innovative LentiVector® gene and cell therapy delivery platform, development and production expertise and world-leading industrialisation capabilities.

Innovation

During 2019, Oxford Biomedica extended its programme of innovation, establishing a collaboration with Microsoft Research. This aims to harness the power of artificial intelligence to enhance vector development and industrial-scale production by improving process efficiency and consistency. The collaboration will apply machine learning and cloud computing to the large datasets generated during process development, analysis and manufacture. By combining computational modelling, novel algorithms and laboratory automation the project aims to improve vector yield and purity, providing quicker, cheaper and more reliable manufacture.

The Group's continuous improvement programme focuses on developing, refining and enhancing its technology. In recent years, Oxford Biomedica has developed its proprietary Transgene Repression in vector Production (TRiP) manufacturing system to dramatically improve vector yields, and its LentiStable™ packaging and producer cell lines to enable scalable, cost-effective manufacturing. Ongoing investment in high-throughput automation and robotics is streamlining production, reducing costs and enabling faster screening and analytical testing.

Collaboration with Microsoft Research
During 2019, Oxford Biomedica extended its programme of innovation, establishing a collaboration with Microsoft Research. This aims to harness the power of artificial intelligence to enhance vector development and industrial-scale production by improving process efficiency and consistency.

Capacity expansion

As the cell and gene therapy field continues to expand, the Group leased an additional facility in Oxford at the end of 2018 to meet the anticipated higher demand for lentiviral vectors. The new 84,000 sqft (7,800 sqm) facility, Oxbox, complements Oxford Biomedica's three existing state-of-the-art GMP production suites. The development phase fits out approximately 45,000 sqft (4,200 sqm) in the new facility with four GMP clean rooms, two fill/finish suites, offices, warehousing and QC laboratories, with the remaining fallow area to be developed in future at the appropriate time

During 2019, facility development made good progress, with the production suites' building phase completed by the end of the year as planned. Validation is currently ongoing, and the Group anticipates achieving regulatory approval and manufacture of the first commercial batches by the end of the second half of 2020. In parallel, development of the fill / finish suites is progressing well, with hand over expected by the end of the year. As announced in December, Oxford Biomedica will have a dedicated a manufacturing suite for Novartis within Oxbox.

Alongside the expansion of Oxford Biomedica's manufacturing capacity, the Group is in the process of establishing the Windrush Innovation Centre (WIC), a new 32,000 sqft (2,970 sqm) discovery and innovation hub. This brings together research, automation, process development and bioprocessing teams to drive LentiVector® platform innovation and progress the proprietary pipeline. Occupation of the facility began during the first half of 2019 with increased utilisation expected during 2020.

With the addition of these two new facilities, Oxford Biomedica has more than doubled its footprint, which now extends to over 226,000 sqft (21,000 sqm). With its five specialist facilities centred around Oxford, the Group has built a global hub for lentiviral vector development and commercialisation.

>60 countries

Santen partnership
In 2019 the Group established a new partnership with leading multi-national ophthalmology company Santen Pharmaceutical Co Ltd, is the market leader for ophthalmic prescription pharmaceuticals in Japan with a global presence in over 60 countries.

Chief Executive Officer's and 2019 performance review

Investment progress

In the first half of 2019, Oxford Biomedica received major support from leading life sciences investor Novo Holdings. At the end of May 2019, Novo Holdings invested £53.5 million in the Group in return for new ordinary shares issued at the prevailing market rate, representing 10.1% of the newly-enlarged share capital. Oxford Biomedica utilised the funds to repay the £43.6 million debt facility provided previously by Oaktree Capital Management, thereby simplifying and strengthening the Group's Statement of financial position. The Group invested the balance of the proceeds in its LentiVector® platform and in-house pipeline programmes.

Building a global hub
With its five specialist facilities centred around Oxford, the Group has built a global hub for lentiviral vector development and commercialisation.

Organisational progress

As a highly-regarded long-term investor with a successful track record of working with innovative life sciences companies, Novo Holdings was granted the right to appoint a Non-Executive Director under the terms of its subscription agreement. Following the issuance of the new shares, the Group welcomed Robert Ghenchev to the Board. Robert is Head of Novo Growth at Novo Holdings and brings a wealth of corporate finance experience to Oxford Biomedica.

During the year, the wider Oxford Biomedica team also continued to grow, reflecting the rapid expansion of the business. The Senior Executive Team was strengthened with the addition of two newly-created positions: General Counsel and Chief Medical Officer. This growth was mirrored across the business as the Group continued its facilities expansion programme. Headcount increased as planned with the total reaching 554 at the end of the year, compared with 432 at the end of 2018, with significant growth in the bioprocessing, analytics and platform research teams.

Assessment of COVID-19 Potential impact

The Group has conducted an assessment of the potential financial and operational risks to the business and has implemented a daily senior management working group to monitor current COVID-19 developments, GOV.UK guidance and to direct the Group's phased response.

The Group takes comfort from:

— The day to day changes in working practices put in place to protect our employees seem to be effective, with work continuing on in an as near to normal way as possible.

— Revenues and their subsequent receipts are based on long term contracts with financially sound and resilient companies.

— The Group has a stronger and more diversified customer base than it has had previously.

— The Group has key worker status which allows us to continue providing services to our customers throughout the lockdown period.

While the Group is yet to experience any significant impact from the virus, there may be an impact on revenue, supply chain and operating facilities if the situation continues or worsens. Management continues to constantly monitor the ongoing situation.

Outlook

In the coming year, Oxford Biomedica plans to build on the progress made across its business in 2019. The Group anticipates continued strong revenue growth from its portfolio of bioprocessing and development partnerships, including its extended supply agreement with Novartis. With its new Oxbox manufacturing facility coming on stream during 2020, the Group will have significant additional capacity to serve the rapidly growing gene and cell therapy sector. The Group anticipates adding further partnerships during the year, as well as expanding the number of existing partner programmes entering development.

During 2020, Oxford Biomedica intends to continue its investment strategy, bringing its Oxbox manufacturing facility online, increasing its laboratory capacity, training its newly-enlarged team and maintaining the innovation that underpins its world-leading LentiVector® platform and proprietary portfolio. With the Oxbox construction phase of the 45,000 sqft (4,200 sqm) building fully completed in 2019, the Group anticipates somewhat lower capex expenditure in 2020, with higher operating expenses due to the enlarged team working on the Group's partnerships.

The Group also plans to attract third-party funding to progress the clinical development of its in-house proprietary products. While the timing of these transactions is less predictable than ongoing delivery under bioprocessing agreements, the 2018 $842.5 million Axovant collaboration demonstrates the potential to create significant shareholder value.

With the ongoing success of its Novartis collaboration and progress across its other partnerships validating the LentiVector® platform, the Group has built an industry leading position. As it continues to invest in its future, it intends to progress each segment of its business. By leveraging its strong and growing bioprocessing and development business to smooth less predictable but potentially significant licensing income, Oxford Biomedica intends to drive towards long-term stable profitability whilst delivering major benefits for patients, partners and shareholders alike. Despite the COVID-19 pandemic, the Group looks forward to another successful year and is making encouraging progress towards this goal.

John Dawson
Chief Executive Officer

Progressing our in-house product pipeline
The Group plans to attract third-party funding to progress the clinical development of its in-house proprietary products.

NOVARTIS

Validating the LentiVector® Platform
The ongoing success of our Novartis collaboration and progress across our other partnerships is validating the LentiVector® platform.

Management team

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 US$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.

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.

Jason Slingsby

Chief Business Officer

Jason joined Oxford Biomedica in 2015 as Head of Business Development and was promoted to Chief Business Officer in May 2019. He has 20 years' experience in the biotechnology industry in biologics, vaccines and gene therapy. He has worked in international business development roles at Sosei Co., Ltd. and Intercell AG and was co-founder and CEO of ProtAffin AG, a venture capital backed company in Austria and UK. Jason started his career as a post-doctoral scientist at Oxford Biomedica and first worked at the company 1997-2000. He was awarded a 1st class BA (Hons) in Biochemistry from Magdalen College, Oxford University and also completed a PhD in complex disease genetics from Imperial College London. Jason was also awarded an MBA with distinction from London Business School in 2002.

James Miskin

Chief Technical Officer

Dr Miskin joined Oxford Biomedica in 2000. He has more than 18 years' experience in gene and cell therapy, 14 of which have been in the GxP (good practice) environment. In his current role, he has overall responsibility for Oxford Biomedica's Quality systems, analytical testing and lentiviral based bioprocessing development, as well as client programmes and alliance management. He is also a named inventor on several patents in the field. He holds a Bachelor of Science degree and a 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 and the Advanced Therapies section of The Medicines Manufacturing Industry Partnership (MMIP).

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. 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 Corporate Member of the UK BioIndustry Association Board.





Full biographies for the Board of Directors can be found on pages 64 to 65.

Nick Page

Chief Operations Officer

Nick joined Oxford Biomedica in April 2019. Prior to joining he has held a number of senior operational leadership positions in the pharmaceutical industry, most recently as Platform Head of Anti-infectives within Novartis. His 40+ years of industry experience include API, Solid oral dose, Sterile, and Radiopharmaceutical manufacturing in various organisations encompassing innovative, generic and contract manufacturing. During his career he has spent several years working in China and India as well as in Global roles. He originally qualified as a Chartered Chemist and also has an MBA from The Open University.

Dmitry Zamoryakhin

Chief Medical Officer

Dmitry joined Oxford Biomedica in July 2019 as a permanent member of the Senior Executive Team having previously worked for 10 months with the company as a consultant. He brings 15+ years of experience in clinical development within the pharmaceutical and biotechnology industry. He started his pharmaceutical career at GSK, then moving to Ono Pharmaceutical and later to Daiichi Sankyo where he spent over 7 years in cardiovascular and metabolic diseases. Before joining Oxford Biomedica, Dmitry spent 2 years working with Grunenthal GmbH in Germany, most recently as a Head of Development Strategy and Intelligence. He holds a medical doctor's degree and specialisation in obstetrics and gynaecology as well as an MBA from Warwick Business School.

Helen Stephenson-Ellis

Chief People Officer

Helen joined Oxford Biomedica in April 2018. She brings 20 years' experience in senior Human Resources roles within the Biopharmaceutical sector, including a number of years in various HR Business Partnering roles in GSK. Following AstraZeneca's acquisition of MedImmune, she moved to Cambridge UK to head up HR for MedImmune's site there, followed by a period as Global HR Director within AstraZeneca. Prior to joining Oxford Biomedica, she was Group Human Resources Director for Vernalis plc, leading HR across Vernalis' UK and US sites. She holds a BA (Hons) degree from Northumbria University in the UK and is a member of the Chartered Institute of Personnel and Development.

Natalie Walter

General Counsel

Natalie joined Oxford Biomedica in May 2019 as General Counsel. She has over 20 years' experience as a corporate lawyer advising life sciences companies, including Oxford Biomedica, on a range of business and transactional issues, equity capital markets transactions, mergers and acquisitions and corporate governance. Natalie also sits on the board of C4X Discovery Holdings plc as a non-executive director. Natalie has worked for a number of UK and US law firms, as well as working at Lehman Brothers as a Director and Legal Counsel for the Equity Capital Markets division. She was most recently a Partner with Covington & Burlington.




Delivery of 2019 objectives

2019 objectives	Performance against priorities
1 Partners/Capacity/Technology advancement The key objective for 2019 is to service the Group's customers as agreed with them and reach key milestones for Novartis, Orchard Therapeutics and Bioverativ (now Sanofi).	A B These targets were mainly met. The Group achieved key milestones for Novartis with the conversion to a suspension production process and expanding the portfolio of products with them. The Group also progressed the Orchard Therapeutics programme as agreed, along with successful progression of the CF programme. In addition, the handover and commissioning of Oxbox was achieved on time. The Group does note the issue identified in April 2020 with regards to the customer commercial development work packages, but believe that the assessment of performance is fair in terms of the objectives having been mainly met. Refer note 36 of the financial statements for further information on this issue
2 Patent/product advancement and innovation Goals for 2019 were to advance two new platform products into the Group's portfolio, alongside technical (two new patentable inventions) along with data driven innovations in the platform. These goals are essential to keep the Group ahead of the competition. Valuable pipeline products such as AXO-Lenti-PD, which has been seen to bring great value to the Group, move forward in clinical development.	A B These goals were mainly met. The Group strengthened the pipeline with two new programmes OXB-203 and OXB-302 progressing through proof of concept to pre-clinical studies, along with two new potential inventions filed for the platform process. Digital advancement via the Microsoft collaboration is underway but has only been partially met. Axo-Lenti-PD has moved forward in clinical development into cohort 2 studies.
3 Financial The financial objectives set out for 2019 were to achieve revenue and EBITDA targets which were driven by the budget. Set in the regime of aggressively growing sales with strict control of costs, these were going to be a significant challenge. Assumptions in the budget included new manufacturing deals and a product out licensing deal, along with refinancing/clear the loan on more favourable terms.	C B Overall the financial objectives were not met. The Group did manage to extinguish the loan, however, which was a key objective. However, the Group did not achieve the revenue and EBITDA target as per the budget or the cash in-flow as per budget. This was due to not completing a product out-licensing deal or a large manufacturing deal as targeted by the end of the year.
4 Business development A critical success factor for 2019 was the signing of new deals. The plan was to out-licence one product, agree three platform technology deals and start two feasibility studies.	B C The objectives were only partially met. The plan to out-licence one product was not achieved and of the three platform technology deals only two were signed (Novartis and Santen) by the end of 2019. The goal of signing two new feasibility studies was achieved, however.
5 Organisational development With the rapid pace of growth for the Group, together with competition for key staff in the Group's field it is essential that the Group builds a culture, competitive rewards/benefits and staff support systems to ensure a balanced productive work force for the future. A programme to enhance the organisation effectiveness is planned along with the creation of a discovery/innovation centre.	A These objectives were met in full. The Reward strategy was successfully developed and communicated to include competitive grading and pay structures and benefits. The organisation effectiveness programmes were also rolled out to include annual performance management, management development programme and talent management. The creation of the Windrush Innovation Centre, which is the Group's discovery/innovation hub was also established.

A Met
B Part met
C Not met

Objectives set for 2020

Partners/Capacity/Technology Advancement

The key here in 2020 is to service the Group's customers as agreed with them and reach key milestones for Novartis and other key partners. In addition, it is fundamental to the Group's future success that appropriate regulatory approvals are received for Oxbox.

Patent/product advancement and innovation

In 2020, the goal is to advance two new platform products into the Group's portfolio, alongside technical (two new patentable inventions) and process (rapid process and improved process) innovations to the platform that is essential to keep the Group ahead of the competition.

Financial objectives

The financial objectives for 2020 are to achieve revenue and EBITDA targets which are driven by the budget. Set in the regime of aggressively growing sales with strict control of costs, these are going to be a significant challenge. Assumptions in the budget include new manufacturing deals and a product out licensing deal, along with strengthening the Statement of financial position. The Group is also looking to create internal divisions for financial reporting aligned with the new segments.

Business development

The key success factor for 2020 will continue to be new deals. The plan is to out-licence one product, agree three platform technology deals and start two new feasibility studies.

NOVARTIS
Bristol Myers Squibb
Santen
Boehringer Ingelheim
SANOFI
axovant GENE THERAPIES
Orchard therapeutics
gtx UK CYSTIC FIBROSIS GENE THERAPY CONSORTIUM
UNIVERSITY OF OXFORD
COVID-19 vaccine trial

Organisational development

With the rapid pace of growth for the Group, together with competition for key staff in the Group's field the Group continues to build a culture of competitive rewards/benefits and staff support systems to ensure a balanced productive work force for the future in 2020. Stakeholder engagement is also very important, as well as the implementation the Group's ESG targets. The goal in 2020 is also to enhance the Group's organisation effectiveness programme through implementing a business change portfolio.

Financial review

Operational transformation

In 2019, the Group moved towards completion of phase 1 of its Oxbox bioprocessing facility and made many other investments in its goal to industrialise the process of making Lentiviral vectors. The first two clean rooms are expected to be producing commercial and clinical batches in 2020. Importantly, the Group will bring Fill & Finish in house for the first time in this new facility. This will provide our customers with an end to end offering. We will continue to make selective investments in infrastructure to both have the capacity for new customers and to innovate valuable Intellectual Property to add to our offering.

The Group has continued to build on the significant commercial success achieved during 2018. Bioprocessing and commercial development revenue increased by 17% with growth driven by the new commercial arrangements signed with Axovant, Sanofi (Bioverativ) and the UK Cystic Fibrosis Gene Therapy Consortium, and increased bioprocessing volumes as a result of Novartis' continued commercial roll-out of Kymriah® across the globe with the product now having approved reimbursement in 20 countries.

A 5 year extension to the current commercial supply agreement with the Group's long term partner, Novartis, was signed in December 2019, and a new research and development collaboration was signed with Santen.

A significant clinical milestone was reached by Axovant with the dosing of the first patient in the second cohort of the AXO-Lenti-PD Parkinson's disease clinical trial, triggering a £11.5 million ($15 million) milestone to Oxford Biomedica.

The Group also made significant improvements to its Statement of financial position with £53.5 million of equity raised from new Investor Novo Holdings which was used to fully repay the £43.6 million ($55 million) Oaktree loan.

Selected highlights are as follows:

— Revenues from the underlying bioprocessing and commercial development business continued to show good year on year growth. Despite the capacity constraints within the business, growth in full year revenues of 17% was achieved driven by double digit growth across both activities. Revenues from the bioprocessing and commercial development business has now increased by 557% since 2013.

— Revenues from milestones, licences and royalties declined 36% on the prior year with the £11.5 million ($15 million) Axovant milestone and strongly growing royalties unable to compensate for the sizable licence income received on signing the Sanofi (Bioverativ) and Axovant agreements in 2018. The timing of receipt of milestone and licence revenues are, by nature, hard to predict especially when connected to the execution of new licence and supply agreements.

"2019 has been year of operational transformation with the construction of the Oxbox bioprocessing facility and underlying revenues continuing to show good growth as we built on the successful partnerships signed in the current as well as prior periods."

Stuart Paynter
Chief Financial Officer

— Total revenues decreased by 4% over 2018, but has now increased by 371% since 2013 when the revenue generating Platform division was created.

— In 2019 the Group did not recognise revenues of £1.8 million (2018: Nil) relating to an estimate of bioprocessed product for which revenue has previously been recognised and which may be reversed should the product go out of specification.

— Operating EBITDA and operating profits slipped back into a loss-making position due to lower milestone and licensing revenue and investment by the Group into its bioprocessing operations and people in preparation for the Oxbox bioprocessing facility coming online in 2020.

— The Product division made an Operating EBITDA[1] profit of £6.5 million (2018: £3.6 million) and an operating profit of £5.7 million (2018: £2.5 million).

— Cash used in operations of £6.6 million in 2019 (2018: £9.2 million inflow) reflected revenue mix and the operational investments explained above.

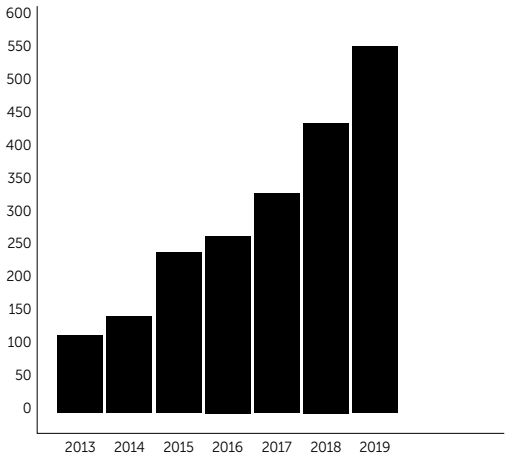
— £53.5 million of equity was raised from new Investor Novo Holdings which was used to fully repay our £43.6 million ($55 million) Oaktree loan facility.

— Cash at 31 December was £16.2 million reflecting the continued capital expenditure on the new Oxbox bioprocessing facility.

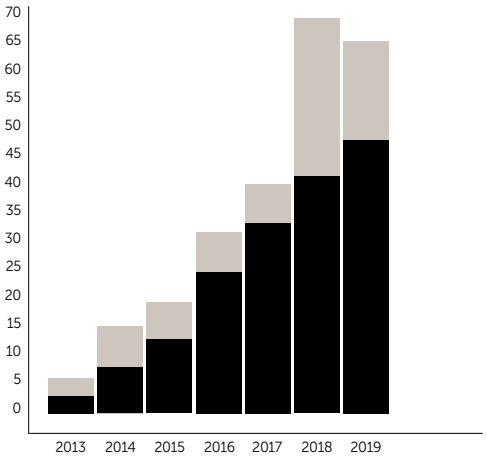
Overview

The slight decrease in revenues was largely driven by the fact that the £11.5 million ($15 million) milestone triggered with the dosing of the first patient in the second cohort of the AXO-Lenti-PD Parkinson's disease clinical trial, and the 17% increase in the Bioprocessing and commercial development revenue, was just not sufficient to offset the £18.3 million worth of license revenue received in 2018 as a result of the Axovant and Bioverativ (Sanofi) deals. Bioprocessing and commercial development revenues increased from the prior year with double digit growth across both activities. The chart opposite shows the growth in output since 2013.

Operating costs, including Cost of Sales, grew by 30%, and by 29% when non-cash items[1] are excluded. Manpower and facility costs have increased as the Group invested heavily in its bioprocessing operations and people in preparation for the Oxbox bioprocessing facility coming online in 2020. This investment is expected to allow the Group to meet increasing customer demand, both for bioprocessing and commercial development services, thereby positioning for future growth in activities in 2020 and beyond. Headcount rose from 432 at December 2018 to 554 at the end of 2019.



Year-end headcount



Revenue
£m

Licence, milestones and grants (light tints)
Bioprocessing and process development (dark tints)

1 Operating EBITDA (Earnings Before Interest, Tax, Depreciation, Amortisation, revaluation of investments and assets at fair value through profit & loss, 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. A reconciliation to GAAP measures is provided on page 42.

2 Non-cash items include depreciation, amortisation, revaluation of investments, Fair value adjustments of assets held at fair value through profit & loss and the share based payment charge. A reconciliation to GAAP measures is provided on page 41.

The Group has also recognised a £1.9 million loss on revaluation of the Orchard Therapeutics investment asset after the share price gave up some of the large gains (2018: £6.0 million) achieved during 2018, although this was fully offset by a £2.3 million increase in the R&D tax credit as the Group incurred additional qualifying research and development expenditure in 2019.

The signing of commercial contracts in 2018 with Axovant, Sanofi (Bioverativ) and the UK Cystic Fibrosis Gene Therapy Consortium, the five year extension to the current commercial supply agreement with Novartis, and a new research and development collaboration with Santen in 2019 have strengthened the Group's commercial pipeline, diversified the Group's customer base and bolstered the Group's commercial development revenues in 2019. Additional commercial development and bioprocessing revenues are expected from these partnerships in the future. The Group will ensure that it continues to foster its current strong customer relationships, whilst continuing the Group's stated aim of targeting new strategic commercial partnerships to build on the platform of established growth.

The Group will continue its proven strategy of developing its proprietary technologies, processes and products, and will seek partnerships for later stage clinical studies. The Group has recently undertaken a review of its pipeline to determine which programmes it would focus on in pre-clinical development to potentially take through into early stage clinical studies in the coming 12-18 months. The Group will continue to assess the financial risk/reward profile of these projects and will seek to provide maximal returns to shareholders accordingly.

Key Financial and Non-financial Performance Indicators

£m	2019	2018	2017	2016	2015
Revenue					
Bioprocessing/commercial development	**47.3**	40.5	31.8	22.6	11.3
Licences, milestones & royalties	**16.8**	26.3	5.8	5.2	4.6
	64.1	66.8	37.6	27.8	15.9
Operations					
Operating EBITDA[1]	**(5.2)**	13.4	(1.9)	(7.1)	(12.1)
Operating profit/(loss)	**(14.5)**	13.9	(5.7)	(11.3)	(14.1)
Cash flow					
Cash generated from/(used in) operations	**(6.6)**	9.2	(1.5)	(5.9)	(14.9)
Capex[3]	**25.8**	10.1	2.0	6.4	16.6
Cash burn[2]	**26.3**	1.9	9.8	11.5	29.8
Financing					
Cash	**16.2**	32.2	14.3	15.3	9.4
Loan	**–**	41.2	36.9	34.4	27.3
Non-Financial Key Performance Indicators					
Headcount					
Year-end	**554**	432	321	256	231
Average	**500**	377	295	247	196

1 Operating EBITDA (Earnings Before Interest, Tax, Depreciation, Amortisation, revaluation of investments and Assets at fair value through profit & loss, 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 based payments. A reconciliation to GAAP measures is provided on page 42.
2 Cash burn is net cash generated from operations plus net interest paid plus capital expenditure. A reconciliation to GAAP measures is provided on page 44.
3 This is Purchases of property, plant and equipment as per the cash flow statement which excludes additions to Right-of-use assets. A reconciliation to GAAP measures is provided on page 44.

The Group evaluates its performance by making use of alternative performance measures as part of its Key Financial Performance Indicators (refer table above). The Group believes that these Non-GAAP measures, together with the relevant GAAP measures, provide an accurate reflection of the Group's performance over time. The Board has taken the decision that the Key Financial Performance Indicators against which the business will be assessed are Revenue, Operating EBITDA and Operating Profit/(loss).

Revenue

Revenue decreased by 4% to £64.1 million as compared to 2018 (£66.8 million). Revenue generated from bioprocessing/ commercial development increased by 17% to £47.3 million (from £40.5 million in 2018), and is up 557% since 2013. The main contributor to growth has been the revenues generated from increased commercial development services provided to new customers Cystic Fibrosis Consortium, Axovant and Santen, as well as growth in Novartis commercial bioprocessing volumes.

Revenues from licence fees, milestones and royalties, including the £11.5 million ($15 million) Axovant milestone, represented a decrease of 36% from the prior year due to £18.3 million of licence income received in 2018 on the signing of the Sanofi (Bioverativ) and Axovant agreements not recurring.

The largest portion of the Group's revenue continues to be derived from its relationship with Novartis, although this has now reduced to just over 50% of revenues as we continue to diversify our customer base and revenue streams.

£m	2019	2018	2017	2016	2015
Revenue	**64.1**	66.8	37.6	27.8	15.9

Operating EBITDA

£m	2019	2018	2017	2016	2015
Revenue	**64.1**	66.8	37.6	27.8	15.9
Other income	**0.9**	1.1	1.8	3.0	2.9
Total expenses	**(70.2)**	(54.5)	(41.3)	(37.9)	(30.9)
Operating EBITDA[1]	**(5.2)**	13.4	(1.9)	(7.1)	(12.1)
Non cash items[2]	**(9.3)**	0.5	(3.8)	(4.2)	(2.0)
Operating (loss)/profit	**(14.5)**	13.9	(5.7)	(11.3)	(14.1)

1 Operating EBITDA (Earnings Before Interest, Tax, Depreciation, Amortisation, revaluation of investments and Assets at fair value through profit & loss, 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 based payments. A reconciliation to GAAP measures is provided on page 42.
2 Non-cash items include depreciation, amortisation, revaluation of investments, Fair value adjustments of available-for-sale assets and the share based payment charge.

Revenue decreased by 4% in 2019 whilst the Group's cost base grew by 29% to £70.2 million both to accommodate the growth in bioprocessing and commercial development revenues and in bringing online in the first half of 2020 additional Oxbox bioprocessing capacity. The Operating EBITDA loss of £5.2 million is £18.6 million lower than the £13.4 million profit generated in 2018 as a result of increased operational cost and lower license revenues when compared to the prior year. If IFRS 16 (Leases) was not implemented at the start of 2019, the Operating EBITDA loss would be £6.0 million on a like for like basis with 2018.

Total Expenses

In order to provide the users of the accounts with a more detailed explanation of the reasons for the year on year movements of the Group's operational expenses included within Operating EBITDA, the Group has added together research and development, bioprocessing and administrative costs and has removed depreciation, amortisation and the share option charge as these are non-cash items which do not form part of the Operating EBITDA alternative performance measure. As Operating profit/(loss) is assessed separately as a key financial performance measure, the year on year movement in these non-cash items is then individually analysed and explained specifically in the Operating and Net profit/(loss) section. Expenses items included within Total Expenses are then categorised according to their relevant nature with the year on year movement explained in the second table on the next page.

£m	2019	2018	2017	2016	2015
Research and development	**22.6**	18.0	21.6	24.3	20.3
Bioprocessing costs[1]	**7.4**	1.2	–	–	–
Administrative expenses	**11.9**	7.4	7.3	6.0	6.7
Operating expenses[2]	**41.9**	26.6	28.9	30.3	27.0
Depreciation	**(5.8)**	(4.3)	(4.1)	(3.3)	(1.3)
Amortisation	**–**	–	(1.2)	(0.3)	(0.4)
Share option charge	**(1.6)**	(1.1)	(0.7)	(0.6)	(0.2)
Adjusted Operating Expenses[1]	**34.5**	21.2	22.9	26.1	25.1
Cost of sales	**35.7**	33.3	18.4	11.8	5.8
Total Expenses[3]	**70.2**	54.5	41.3	37.9	30.9

£m	2019	2018	2017	2016	2015
Raw materials, consumables and other external bioprocessing costs	**22.8**	18.3	13.2	9.3	6.1
Manpower-related	**35.2**	26.7	19.3	17.4	13.6
External R&D expenditure	**1.4**	1.9	1.7	2.8	3
Other costs	**10.8**	7.6	7.1	8.4	8.2
Total expenses[1]	**70.2**	54.5	41.3	37.9	30.9

1 Bioprocessing costs have increased from the prior period due to additional facility costs, headcount and related spend incurred due to the Group's investment in additional bioprocessing capacity at Oxbox. It was also impacted by downtime at the Group's Yarnton bioprocessing facility as when it was converted from an adherent process to bioreactors, the costs were not recovered to cost of goods but remained in bioprocessing whilst the facility was not in use.
2 Research, development, bioprocessing and administrative expenses excluding depreciation, amortisation and the share option charge.
3 Cost of goods plus research, development, bioprocessing and administrative expenses excluding depreciation, amortisation and the share option charge.

— Raw materials, consumables and other external bioprocessing costs have increased as a result of the increase in commercial development activities and bioprocessing volumes, as well as higher material and subcontracted spend.

— The increase in manpower-related costs is due to the increase in the average headcount from 377 in 2018 to 500 in 2019. This is as a result of increasing commercial development and bioprocessing capacity in line with the Group's increased revenues, as well as in anticipation of Oxbox coming online in the first half of 2020.

— External R&D expenditure was lower due to lower levels of pass-through clinical development spend for Axo-Lenti-PD as the development was fully taken over by Axovant at the end of 2018.

— Other costs were higher due to increased facility costs for the Oxbox and Windrush Innovation Centre properties, as well as a forex loss of £0.6 million (2018: £1.3 million gain) as sterling weakened against the dollar. Due to the implementation of IFRS 16 (Leases) at the start of 2019, £0.8 million worth of operating lease payments now form part of the depreciation of the right-to-use asset (£0.7 million), and the interest on the lease liability (£0.7 million).

Operating and Net profit/(loss)

£m	2019	2018	2017	2016	2015
Operating EBITDA	**(5.2)**	13.4	(1.9)	(7.1)	(12.1)
Depreciation, Amortisation and share option charge	**(7.4)**	(5.5)	(6.1)	(4.2)	(2.0)
Revaluation of investments/ Change in fair value of assets at fair value through profit and loss	**(1.9)**	6.0	2.3	–	–
Operating (loss)/profit[1]	**(14.5)**	13.9	(5.7)	(11.3)	(14.1)
Interest	**(5.4)**	(6.2)	(9.3)	(4.9)	(1.9)
R&D tax credit	**4.8**	2.5	2.7	3.7	4.0
Foreign exchange revaluation (non cash)	**(1.0)**	(2.7)	3.3	(4.1)	(1.0)
Net(loss)/profit	**(16.1)**	7.5	(9.0)	(16.6)	(13.0)

[1] If IFRS 16 (Leases) were not implemented at the start of 2019, the operating loss would be £13.8 million on a like for like basis with 2018.

The Operating EBITDA loss for 2019 is further negatively impacted by a £1.9 million loss on revaluation of the Orchard Therapeutics investment asset after the share price gave up some of the large gains achieved during 2018. The depreciation, amortisation and share option charge was higher in 2019 due to depreciation on an increased asset base, depreciation arising on leased assets following the adoption of IFRS 16 (Leases), and a higher share option charge due to the increased employee headcount. The interest charge of £5.4 million was lower than the prior year as the Oaktree loan was repaid at the end of June 2019, although this decrease was offset by a non-cash accelerated interest charge incurred as a result of the early repayment of the loan, and interest arising on the adoption of IFRS 16 (Leases). The R&D tax credit in 2019 has increased due to additional research and development expenditure, both in terms of headcount and materials. The net loss in 2019 was negatively impacted by the devaluation of sterling against the dollar, resulting in a foreign exchange loss of £1.0 million being recognised which was mainly as a result of the revaluation of the previously held dollar denominated Oaktree loan.

Segmental analysis

Reflecting the way the business is currently being managed by the Senior Executive Team, the Group reports its results within two segments, namely the 'Platform' segment which includes the revenue generating bioprocessing and process development activities for third parties (i.e. the Partner programmes CDMO business), and internal technology projects to develop new potentially saleable technology, improve the Group's current processes and bring development and manufacturing costs down within the LentiVector® Platform. The other segment, "Product", includes the costs of researching and developing new gene therapeutic product candidates.

£m	Platform	Product	Total
2019			
Revenue	**51.0**	**13.1**	**64.1**
Operating EBITDA	**(11.7)**	**6.5**	**(5.2)**
Operating (loss)/profit	**(20.2)**	**5.7**	**(14.5)**
2018			
Revenue	55.0	11.8	66.8
Operating EBITDA	9.8	3.6	13.4
Operating profit/(loss)	11.4	2.5	13.9

The Platform segment in 2019 saw a decrease in revenue of 8% from £55.0 million to £51.0 million as license income from new customers in 2018 as a result of the Axovant and Bioverativ (Sanofi) deals did not recur. This was however partly offset by increased bioprocessing volumes and additional commercial development services provided. Operational results were further impacted by additional investment in headcount and facilities resulting in an operating EBITDA loss of £11.7 million, as compared to a profit of £9.8 million in 2018. The Group continues to target increased profitability from this segment through higher bioprocessing volumes, increased royalty payments from partners, and additional commercial development services to customers.

The Product segment has generated revenues of £13.1 million and an Operating EBITDA profit of £6.5 million (2018: £3.6 million) largely as a result of the £11.5 million ($15 million) Axovant milestone achieved in April 2019 on dosing of the first patient in the second cohort. The segment also generated an Operating profit of £5.7 million (2018: £2.5 million).

Cash flow

The Group held £16.2 million cash at 31 December 2019, having begun the year with £32.2 million. Significant movements across the year are explained below.

— The operating loss in 2019 was £28.4 million lower than the operating profit of £13.9 million achieved in 2018, principally as a result of lower license fees, but also increased operational investments in headcount and facility costs, as well as lower revaluation gains on Assets at fair value through profit & loss.

— This loss flowed through to Operating EBITDA which decreased by £18.6 million to a loss of £5.2 million (2018: £13.4 million profit).

— Cash used in operations was £6.6 million, a £15.8 million reversal from the £9.2 million cash generated in 2018.

— Net cash used in operations during 2019 at £3.5 million was helped by a £3.1 million R&D tax receipt, down £0.6 million from the prior year. This was due to the tax credit being capped as a result of the profits achieved in 2018 as compared to 2017.

— Interest paid during the year was £3.3 million, down from £4.7 million in the prior year as the Oaktree loan facility was paid at the end of June 2019.

— £6.3 million of funds was generated from the sale of shares of the Orchard investment asset.

— Purchases of property, plant and equipment increased from £10.1 million to £25.8 million, mainly consisting of purchases of equipment and leasehold improvements for the new Oxbox manufacturing facility.

— Cash burn, the aggregate of these items, was therefore increased from £1.9 million in 2018 to £26.3 million in 2019 as a result of the lower level of cash generated from the Group's operations, and the increased capital expenditure on the Oxbox bioprocessing facility.

— The net proceeds from financing during 2019 were £10.3 million, consisting almost entirely of the Novo Holdings equity raise of £53.5 million which was used to fully repay the £43.6 million ($55 million) Oaktree loan.

— The result of the above movements is a net decrease in cash of £16.0 million from £32.2 million to £16.2 million.

£m	2019	2018	2017	2016	2015
Operating (loss)/profit	**(14.5)**	13.9	(5.7)	(11.3)	(14.1)
Non-cash items included in operating loss	**9.3**	(0.5)	3.8	4.2	2.0
Operating EBITDA	**(5.2)**	13.4	(1.9)	(7.1)	(12.1)
Working capital movement	**(1.4)**	(4.2)	0.4	1.2	(2.8)
Cash (used in)/ generated from operations	**(6.6)**	9.2	(1.5)	(5.9)	(14.9)
R&D tax credit received	**3.1**	3.7	4.5	4.1	3.2
Net cash (used in)/generated from operations	**(3.5)**	12.9	3.0	(1.8)	(11.7)
Interest paid, less received	**(3.3)**	(4.7)	(10.8)	(3.3)	(1.5)
Sale of investment asset	**6.3**	–	–	–	–
Capex	**(25.8)**	(10.1)	(2.0)	(6.4)	(16.6)
Cash burn	**(26.3)**	(1.9)	(9.8)	(11.5)	(29.8)
Net proceeds from financing	**10.3**	19.8	8.8	17.5	25.0
Movement in year	**(16.0)**	17.9	(1.0)	6.0	(4.8)

Statement of financial position review

The most notable items on the Statement of financial position, including changes from 31 December 2018, are as follows:

— Assets at fair value through profit & loss decreased by £6.3 million as a result of the sale of Orchard shares, and by £1.9 million due to the devaluation of the Orchard investment based on the quoted Orchard share price at year end.

— Property, plant and equipment has increased by £30.1 million to £61.9 million as depreciation of £5.8 million only partially offset additions of £29.6 million, mainly purchases of equipment and leasehold improvements for the new Oxbox manufacturing facility, a £3.7 million Oxbox leasehold restoration asset, and £6.4 million of right to use asset recognised upon the implementation of IFRS 16 (Leases).

— Inventories have decreased from £4.3 million to £2.6 million due to work in progress balances released to cost of goods due to the ability to more accurately reflect the percentage of completion on bioprocessing batches, as well as lower raw material levels after planned increases in stock levels at 31 December 2018 due to Brexit uncertainty.

— Trade and other receivables increased from £30.6 million to £33.7 million, due predominantly to the increased levels of process development activities, as well as the timing of bioprocessing orders placed at year-end.

— Tax assets increased from £2.4 million to £5.4 million due to increased research and development expenditure qualifying for tax relief.

— Trade and other payables increased from £11.4 million to £14.3 million, due to the purchases of equipment and leasehold improvements for the new Oxbox manufacturing facility, as well as an increased level of operational activity.

— Contract liabilities decreased from £18.5 million in 2018 to £14.9 million due to the release of the NVS bioprocessing capacity reservation fee and the funds received in advance for Axovant process development activities.

— Deferred Income decreased from £5.0 million in 2018 to £4.3 million mainly due to the reclassification of a £2.3 million lease incentive upon implementation of IFRS 16 (Leases), partly offset by the £0.4 million Santen option and the net movement in innovate capex grant funding of £1.5 million.

— The Oaktree loan balance of £41.2 million at 31 December 2018 was fully repaid during 2019 after the Group raised £53.5 million equity from new Investor Novo Holdings.

— Lease liabilities of £8.4 million were recognised as required by the implementation of IFRS 16 (Leases) from the start of 2019.

Events after the Statement of financial position date – contingent liability

The Group routinely enters into a range of contractual arrangements in the ordinary course of business which may give rise to claims or potential litigation against the Group.

Subsequent to year end the Group identified an issue regarding an aspect of certain process development work performed on behalf of a customer in 2018 and 2019 which potentially could give rise to a material claim against the Group. The Group has been in communication with the third party but is not yet in a position to verify or validate any information relating to this matter due to the very recent timing of this issue being identified.

As at 31 December 2019, the Group regards this matter as an adjusting post Statement of financial position event (IAS10) and has assessed the performance obligations for which the revenue has been recognised and reversed all potentially affected revenues relating to the work packages with the liability recognised within Contract liabilities due within one year.

In addition, the Group expects that the potential liability arising with regards to the affected work packages will be extinguished either through re-performance of the affected work packages, or ultimately form part of any potential claim. If a claim were to materialise, the Group estimates the range of all potential costs could be between £250,000 and £1,000,000. However, as there is no such claim to date and given the early stage of the investigation into the cause, no liability has been recognised at the Statement of financial position date, as in management's opinion it is too early to consider the above estimate sufficiently reliable to recognise a provision (if any) in respect of this matter. The assessment required is inherently judgmental, and there is a risk that the final settlements are materially different to the range provided above or do not include all claims and therefore the amounts may be understated.

A contingent asset could potentially exist within the financial statements for the insurance cover that the Group maintains, however the Group cannot determine the extent of any cover until further investigation is undertaken as necessary. On this basis it is too early to assess the likelihood of an asset arising, therefore no contingent asset has been recognised.

No other amounts have been provided for in respect of this matter.

Financial outlook

The Group is targeting improved financial performance in 2020. The contracts signed in 2018 with Axovant, Sanofi (Bioverativ) and the UK Cystic Fibrosis Gene Therapy Consortium have bolstered the Group's commercial development revenues in 2019, with additional commercial development and bioprocessing revenues expected from these partnerships in the future. The Group's customer base also continues to diversify with the signing of a new commercial collaboration agreement with Santen Pharmaceutical Company.

The Group will continue to target improvements in its commercial relationship with its existing customers. The signature of a five year extension to the commercial supply agreement with Novartis is testament to the joint success achieved in this strategically important collaboration since 2013. Novartis continues to launch Kymriah® across the globe with the product now having approved reimbursement in 20 countries. New marketing approvals were seen in Japan with Kymriah® being the only CAR-T available in Asia. The Group will continue to target new strategic commercial relationships in 2020, whilst remaining focused on meeting the growing demands of its existing customer base.

The Group is continuing the development of its proprietary pipeline, and while discussions are ongoing for further out-licensing or spin-out of these programmes, the Group has also undertaken a review of its pipeline to determine which programmes it would focus on in pre-clinical development to potentially take through into early stage clinical studies in the coming 12-18 months.

The Group continues to make selective strategic investments in its products and enabling technologies where the opportunity exists to increase shareholder value and improve patient outcomes. The Group will continue to invest in early stage concepts and pre-clinical studies, and in its key LentiVector® technology platform.

Going concern

The financial position of the Group, its cash flows and liquidity position are described in the primary statements and notes to these financial statements.

The Group held £16.2 million and £17.2 million of cash at the end of December 2019 and April 2020 respectively. Although in 2019 the Group recorded an operating loss of £14.5 million and did not generate positive operational cash flow, this was largely due to operational scale-up of investments in its people and operational capabilities as part of the strategic decision to increase its bioprocessing capacity.

In assessing the going concern assumptions, the Board has undertaken a rigorous assessment of the forecasts and assessed identified downside risks and mitigating actions. The downside risks include a number of severe but plausible scenarios incorporating underperformance against the business plan, unexpected cash outflows and fewer new customers. Due to the Group's scale-up of investments and strategic decision to increase it's bioprocessing facility, the Group requires additional financing in the form of equity financing, loan financing or other government finance initiatives in order to continue its operations and current capabilities.

Due to volatility in the financial markets created by the impact of the COVID-19 pandemic, fund raising through issuance of equity to the investment community as planned has become very difficult and the Group has not had the opportunity to raise funding in line with the originally planned timeline. Therefore, the Board has undertaken a much more rigorous review of the detailed cash flow forecast prepared as part of the going concern assessment process. The process identified that the Group would not be able to continue its activities for at least 12 months from the date of approval of these financial statements if the Group could not secure the external financing and continue to execute and recover known and expected revenues from existing customers under long term contracts, which are ongoing but still to be delivered or securing the benefit of any upfront receipts from licensing out the Group's intellectual property or win new customer contracts for process development and bioprocessing services.

Whilst it is difficult to estimate the impact of COVID-19 due to the rapidly changing nature of the pandemic, the cash flow forecasts include the Group's current assumptions, taking into account the severe but plausible downsides. The assumptions include a reduction in revenues by almost 30% (fewer new customer, lower demand from existing customers and reduction in milestones), a reduction in associated costs and lower discretionary capital expenditure.

If the Group is unable to the secure the external financing and receipt the revenues described above, it has assessed that it would not be able to generate sufficient cash flows to support its level of activities beyond the third quarter of 2020. The above situation gives rise to a material uncertainty, as defined in auditing and accounting standards, related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern and in such circumstances, it may therefore be unable to realise its assets and discharge its liabilities in the normal course of business.

However, despite the above uncertainties, the Board has the confidence that the accounts should be prepared on a going concern basis for the following reasons:

- The Group has key worker status which allows continuity of providing services to the Group's financially stable customer base throughout the lockdown period.
- The Group's ability to continue to be successful in winning new customers and building its brand as demonstrated by:
  - Signing the substantial license, manufacturing and development agreement with Juno (BMS) in March 2020.
  - Joining a Consortium led by the Jenner Institute, Oxford University, to rapidly develop, scale-up and manufacture a potential vaccine candidate for COVID-19, with Government support for the funding of the project expected.
- The Group's ability to potentially access the Government Coronavirus Business Interruption Loan Scheme and also external debt finance as required.
- The Group's history of being able to access capital markets.
- The Group's ability to control capital expenditure costs and lower other operational spend, as necessary.

Therefore the Directors have continued to adopt the going concern basis of preparation in the financial statements.

Although the UK's decision to leave the European Union may significantly affect the fiscal, monetary and regulatory landscape in the UK, the Group has assessed the future impact of Brexit on its operations to be minor. Further details of the Group's contingency planning is provided on page 62.

Stuart Paynter
Chief Financial Officer

Responsible business

Oxford Biomedica is committed to its role as a responsible business and the Group has developed a policy and strategy to ensure it meets this objective. The responsible business committee, which has been established, is chaired by John Dawson, the Group's Chief executive Officer.

The Groups responsible business mission is to deliver life changing gene therapies to patients in an ethical and socially responsible way. The Group's work is governed by its values.

The Group's strategy is focused on a number of main areas:

People

Safety

Being able to deliver the Group's products and services both safely and sustainably is the number one priority. Via the systematic evaluation all of activities, the Group ensures that significant risks are identified and controlled in such a way as to minimise the risk to employees and anyone else who may be affected by the Group's acts or omissions. The Group endeavours to maintain its facilities and equipment to the highest standards.

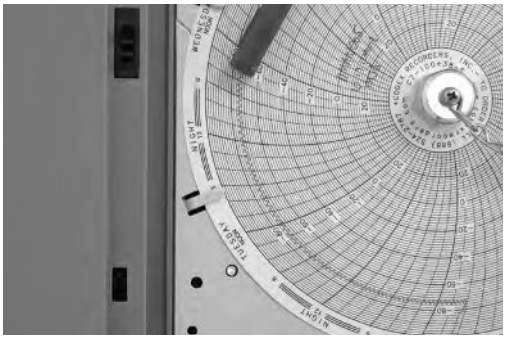
The Group's Health and Safety Management System covers all aspects of its work, from working with biological materials, to use of display screen equipment. The Safety Management System continues to evolve and grow with the organisation, and the Group has taken steps to improve consultation in developing policies and procedures to ensure they adequately reflect working practices. Improving employee engagement is a focus for the year ahead, and the Group plans to run a safety climate survey in the first quarter of 2020 to actively engage all staff and identify areas for improvement.

Oxford Biomedica continues to have a first-class safety record, with no reportable incidents in the reporting year. Health and Safety is a standing item on the Board's agenda, and the Group has taken steps to improve the metrics used to monitor performance in this important part of the business. The Group is committed to meet both the letter and spirit of all health and safety regulation and best practice.

Values

The Group's company values are: 'Have integrity', 'Be inspiring' and 'Deliver innovation'.

These three values govern the way that the Group does business, how the Group works together and the interactions the Group has with all its stakeholders.



Have integrity
We always do the right thing. Whatever the situation and consequences, we do what's right for employees, patients and partners. We make objective decisions and can be trusted to deliver on our commitments.

Be inspiring
We succeed together through our passion, commitment and teamwork. Through our actions and behaviours, we create an environment which positively challenges, engages and excites us.

Deliver innovation
We drive credible science to realise incredible results. We deliver ground-breaking scientific excellence by nurturing exceptional talent. Together, we continually improve by generating new ideas and creative ways of working to bring about better solutions for patients.

The Group's values are also reflected in the people processes – the Group looks for evidence that the job candidates share the values. The values are an important factor in measuring performance, and the Group recognises and rewards adherence to the values.

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 embrace diversity in all forms.

The table shows the gender split across the organisation as at 31 December 2019:

	Male	Female	Total	% Male	% Female
Board including Non-Executive Directors	7	1	8	87%	13%
Senior managers	22	14	36	61%	39%
All other employees	234	276	510	46%	54%
Total	**263**	**292**	**554**	**47%**	**53%**

The Gender Pay Gap Report for 2019 has been prepared by the Group and the Group is pleased to report an increase in representation of female employees at the more senior levels of the organisation over the last year. This has had a positive impact on the Group's gender pay ratio. For full details of the report please visit the website at www.oxb.com.

Reward

The Group is committed to providing competitive reward packages for all employees. The Group participate in industry specific pay surveys which inform the salaries which are reviewed annually. In 2020, the Group is introducing a company-wide cash bonus scheme which will give employees at all levels the opportunity to share in the success of the Company by receiving a cash bonus linked to their grade level and their own personal performance.

Through the Group's comprehensive benefits programme, employees are encouraged to save for the future, via the pension plan. The Group also provide employees with protection should they fall sick or be unable to work through long term disability. The Group has recently improved maternity pay provision, and increased sick pay benefits.

The Group also provides all employees with the opportunity to own a share in the business through share option and share save schemes.

Delivering safely and sustainably
Being able to deliver the Group's products and services both safely and sustainably is the number one priority.

Sharing in our success
The Group is introducing a company-wide cash bonus scheme which will give employees at all levels the opportunity to share in the success of the Company by receiving a cash bonus linked to their grade level and their own personal performance.

Training and Development

The Group invests in the development of its people at all levels. Every employee has a development plan, and throughout the year there are a range of development courses, both classroom based and on-line offered to all employees.

The Group has a modular Management Development Programme which is offered to all managers at OXB. Managers attend modules in various management related topics over a period of several months, and are given support to embed their learning throughout the programme. During 2019, around 100 managers attended this programme and a similar number will benefit from it in 2020.

Training is also essential for ensuring compliance with the Group's processes and the safety and wellbeing of everyone who works in the facilities.

Employee Well-being

The well-being of the Group's people is very important. The Group has an on-site occupational health service, which, in addition to providing job specific health surveillance, is also available for medical referrals and advice on general well-being. In 2020, the Group is also focused on providing support to help identify and manage mental health issues in the workplace.

During the COVID-19 pandemic the safety and well-being of our staff is paramount. The Group has a duty of care towards all employees, and therefore the Group expects some of our staff to be required to self-isolate to prevent the possible spread of infection. The Group continually assesses the risks for employees and regularly communicates with staff on the ongoing situation and has implemented steps to contain any spread such as publicising good personal hygiene practices, provision of hand sanitiser in common areas, wearing of face masks, staggering of shifts, enforcing a travel management prevention strategy and encouraging people to work from home.

Employee Communication

The Group acknowledges the importance of communication and consultation across the business. The Group uses a variety of communications channels to share information on the business, science, and other topics of interest to employees. These include regular all-employee town hall briefings, R&D seminars, employee newsletters, and work-related social media. The Group is currently reviewing its communication strategy, including the channels used to ensure that the Group is able to keep all its employees engaged as the business grows.

Well-being
The Group has an on-site occupational health service, which, in addition to providing job specific health surveillance, is also available for medical referrals and advice on general well-being.

Disposal of chemical waste
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.

Community

The Group recognises the value of being a good local citizen in the Oxford community. The Group endeavours 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. The Group seeks 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 its employees. The Group has a well-established Cycle-To-Work scheme and interest-free season ticket loans to help minimise its traffic impact on the local area.

Apprenticeship scheme

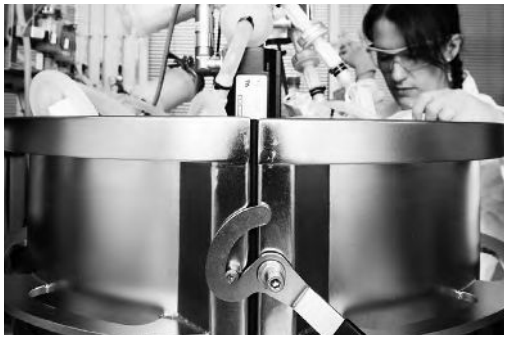
As part of the Group's focus of delivering local benefits and providing high skilled jobs to the local community the Group has established an apprenticeship scheme in collaboration with Advanced Therapies Apprenticeship Community and the University of Kent. Currently the Group has eight apprenticeships in operation including school leavers from the local community which are enrolled on a training scheme in the highly skilled areas of Manufacturing and Analytical testing. The Group is committed to supporting the apprentices through support and training and expanding the scheme in the future.

Charitable Giving

This year the Group setup the Helping Hands Team as part of its commitment to its chosen charity SeeSaw (charity registration 1076321). SeeSaw is an Oxford based charity providing support for bereaved children, young people and their families when they face a death in the family.

The Group's Helping Hands Team and employees organised and participated in a number of events during the year. This included participation in the Oxford half marathon, a Fire walk and Christmas raffle. These activities and a donation from the Group meant that Oxford Biomedica raised £9,500 for SeeSaw in 2019.

Charity	Donation
SeeSaw (Employee donation)	£8,200
SeeSaw (Group donation)	£1,300
Total	**£9,500**



Apprenticeship scheme
The Group has eight apprenticeships in operation including school leavers from the local community which are enrolled on a training scheme in the highly skilled areas of Manufacturing and Analytical testing.

Environment

Environmental policies & initiatives

Oxford Biomedica fully recognises its responsibility to minimise the impact of our activities on the environment, its neighbours and the local community. Much like its Health and Safety Management System, its Environmental Management System continues to evolve and grow with the organisation. The Group is mapping its system against ISO14001 with the aim of having a certifiable system in place by the end of the next reporting year. 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.

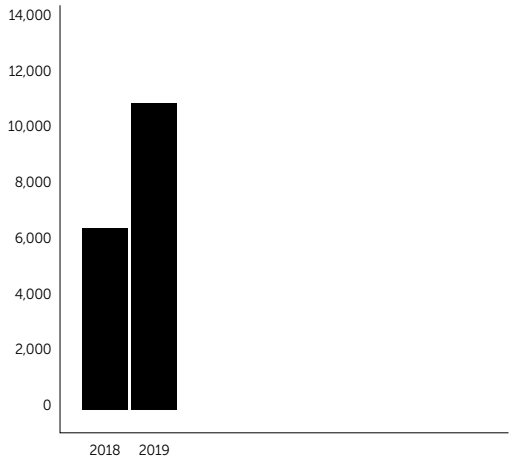
Energy Savings Opportunity Scheme (ESOS)

As an organisation of over 250 employees the Group has engaged with ESOS, in compliance with EU Energy Efficiency Directive (2012/27EU). This has involved an ESOS Phase 2 energy assessment based on 2019 data covering all aspects of its energy usage. The recommendations from that audit will be incorporated into the Environmental section of the Group's Responsible Business policy and will form part of the environmental targets for the coming year.

Greenhouse gas emissions report

The tables below show the Group's usage in 2019 and 2018 of energy and water at its sites in Oxford, UK. The Group has also estimated its total CO_2 emissions and has indicated its "environmental intensity" on a per employee basis, an important indicator of its activity.

2019	Unit	Usage	Usage per employee	CO_2 emission (tonnes)
Electricity	MW hours	4,974	9.6	1,271
Gas	MW hours	3,599	6.9	662
Water supply	Cubic metres	11,799	23.0	4
Other activities (estimated) including waste disposal and travel				778
Total				**2,716**



Water use (cubic metres)

2018	Unit	Usage	Usage per employee	CO_2 emission (tonnes)
Electricity	MW hours	4,169	11.4	1,180
Gas	MW hours	3,225	8.8	593
Water supply	Cubic metres	6,330	17.3	2
Other activities (estimated) including waste disposal and travel				590
Total				**2,365**

Waste and Energy efficiency

The Group is committed to energy efficiency and has a number of policies to decrease energy usage where possible. For instance, when existing lighting needs replacing the Group switches to LED lights which are significantly more energy efficient than traditional lighting systems. The Group is looking at reducing the water usage throughout its sites in its facilities with more efficient system controls. In its Windrush laboratories the Group has passive infrared light sensors in all areas that have been refurbished to ensure lighting is extinguished in areas that are not currently in use.

Waste management

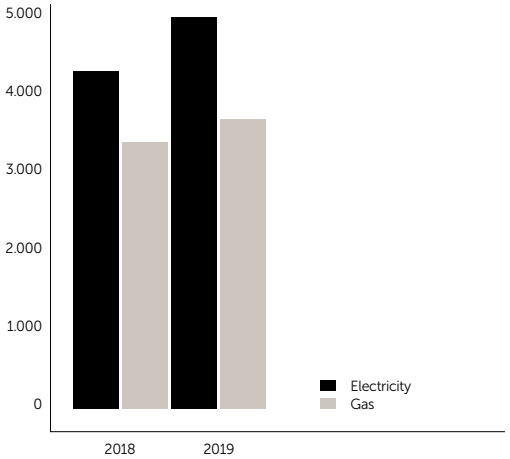
The Group continues to review its waste management systems to manage waste more effectively. This includes:

— recycling all paper and cardboard waste, aluminium cans, glass, plastics and printer toner/cartridges.

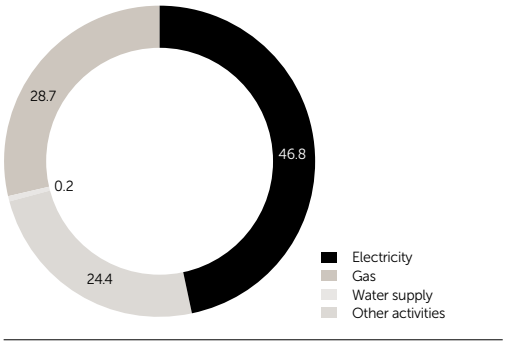
— use of different waste streams to increase processing efficiency.

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.



Electricity and gas use (MWh)



CO_2 emissions 2019 %
Our total CO_2 emissions have reduced slightly from the previous year at 2,716 tonnes in 2019 (2018: 2,365).

Responsible business

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 and all employees receive training in this matter. 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

The Group instils transparency, safety and ethics in all aspects of its responsible business, including the design and conduct of its clinical trials. The Group's 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. The Group also has standard operating procedures in place under a controlled Quality Management System to ensure compliance with appropriate guidelines and legislation.

The Group is also committed to transparency, and the website (www.oxb.com) 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 the Group also discloses its trials on a US government-sponsored website (www.clinicaltrials.gov).

Human rights and anti-slavery

The Group fully respects human rights and conducts its 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 the website www.oxb.com.

The Group's facilities are all located in the UK, where its policies accord with human rights regulations and its 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. The Group is 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.

Strategic report
Non-financial statement

The Group aims to comply with the new non-financial reporting requirements contained in section 414CA and 414CB of the Companies Act 2006. The table below, and information it refers to, is intended to help stakeholders understand the Group's position on key non-financial matters

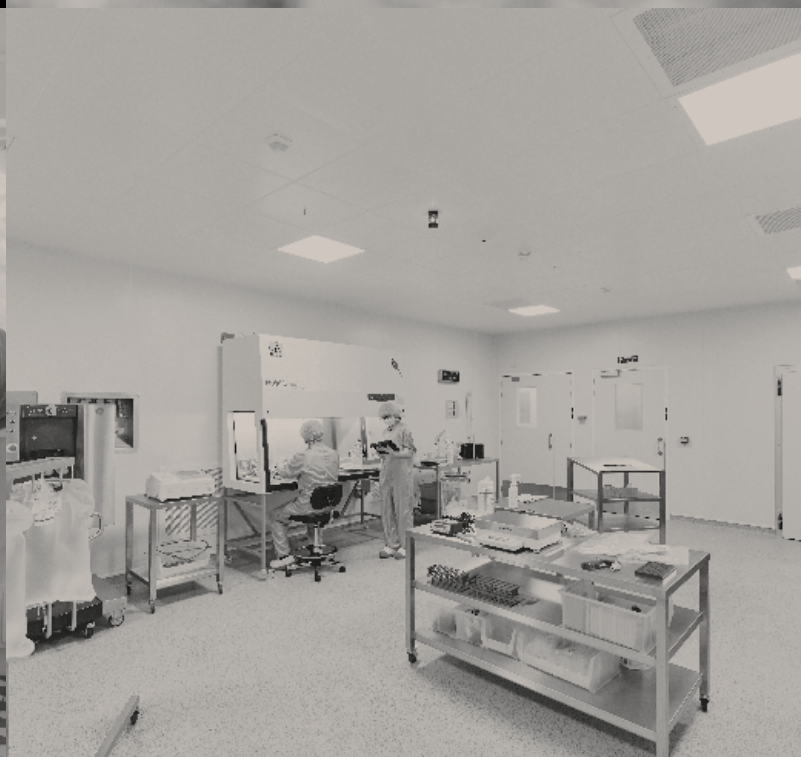
Requirement	Policies and standards which govern the Group's approach	Risk management and additional information
Environment	– Environment statement. – Responsible business policy. – Health, safety policy.	Health and Safety disclosures on page 48; Stakeholders pages 22 and 23; Environment greenhouse gas emissions and electricity usage disclosures on pages 52 and 53.
Employees	– Equal opportunities policy. – Diversity policy.	Stakeholders page 23; People pages 48; Employee numbers by gender pages 49; Board engagement with the business page 96; Diversity page 75; CEO's remuneration comparted to employees page 87; Gender pay gap report page 49 and published on the Group's website.
Human rights	– Data protection policy. – Slavery and human trafficking policy. – Whistleblowing policy. – IT and information security policy.	Review and approval of the Group's modern slavery and human trafficking statement page 54; Stakeholders pages 22 and 23; Whistleblowing page 54.
Social matters	The Group has a responsible business policy, which covers the Group's way of working with employees, customers, patients; the local community and the environment.	Stakeholders pages 22 and 23; engaging with the local community and charitable work page 51; responsible business pages 48 to 54.
Anti-corruption and anti-bribery	– Anti-corruption. – Audit services policy.	Anti-corruption/anti-bribery page 54.
Policy embedding due diligence and outcomes		Governance framework and structure page 67; Board activity during the year page 69; Audit Committee report page 71.
Principle risks and impact on business activity		Principle risks and effective management page 58 to page 62; Audit Committee report page 71; Risk management and regulatory disclosure page 58.
Description of business model		The Group's business model pages 20 to page 21.
Non-financial key performance indicators		The Group at a glance page 16; Operational highlights page 24; Stakeholders page 22 to 23.

The Strategic report on pages 15 to 55 was approved by the Board on 6 May 2020 and signed on its behalf by:

John Dawson
Chief Executive Officer

As more and more commercial gene therapy treatments are approved by regulators in the US and EU come online, the challenge has evolved.

The race is well and truly on to meet growing demand, bring costs down and industrialise the science. The Group is playing a major role in this.



Principal risks, uncertainties and risk management

Oxford Biomedica operates in the gene and cell therapy biotechnology sector which, by its nature, is relatively high risk compared with other industry sectors. During 2019 there have only been a few gene and cell therapy products which have been approved for commercial use. As a consequence 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 at least six annually. However, twice a year in March and September a full presentation to the Board on Risk occurs. The risk management processes are the responsibility of the Senior Executive Team (SET) 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 (SET) – the SET generally met 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 currently has three key management sub-committees which meet monthly and through which much of the day-to-day business is managed. These are the extended Operational Leadership Team (incorporates the Quality and Manufacturing Operations Committee), the Product 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 Committee – Oxford Biomedica has a Risk Management Committee comprising senior managers from each area of the business and chaired by the Chief of Staff. 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 which are required 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 candidate's 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 candidate's 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. In addition, the Group is also bringing in certain processes such as Fill & Finish in house in order to reduce the risk of failure via contracting out the service. 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 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.

Business development

The Group is seeking to out-license 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 the 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.

Attraction and retention of highly skilled employees

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 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 either in Europe and/or 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;

— 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 license 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, but 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. To the extent that the Group's foreign currency assets and potential liabilities 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 that 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.

UK's departure from European Union ("Brexit")

The impact of the UK's departure from 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 the UK's economy and the future growth of its industries, including the pharmaceutical and biotechnology industries.

Depending on the free trade agreement 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 the free trade agreement with 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.

COVID-19

As a result of the COVID-19 pandemic, the Group has conducted an assessment of the potential financial and operational risks to the business. While the Group is yet to experience any significant impact from the virus, there may be an impact on revenue, supply chain and operating facilities if the situation continues or worsens. Management continues to constantly monitor the ongoing situation.

The Group has implemented a daily senior management working group to monitor current COVID-19 developments and GOV.UK guidance, to risk assess the Group's supply chain and to direct the Group's phased response. The Group is working with staff, customers and suppliers to monitor any potential disruption and, so far, the Group has not experienced any, and does not currently expect to experience, significant supply issues or any changes in overall customer demand.

The Group continues to monitor the potential impact on the supply chain, with a particular focus on key manufacturing and process development inventories. To date we have not seen any impact but we are aware there is the potential for shortages in certain inventories globally.

The Group has a duty of care towards all employees, and therefore we expect some of our staff to be required to self-isolate to prevent the possible spread of infection. The Group has taken action to mitigate the spread of infection at our facilities through enhanced cleaning processes, staggering of shifts and the provision of hand sanitiser in common areas. The Group continually assesses the risks for employees, regularly communicates with staff on the ongoing situation, and has implemented steps to contain any spread such as publicising good personal hygiene practices, enforcing a travel management prevention strategy and encouraging people to work from home.

As part of the 2020 strategy, the Group has increased the level of finished goods held in warehouses which will mitigate the risk in the short term against labour shortages and subsequent production delays at our key suppliers.

Corporate governance
Board of Directors

Standing, left to right:
Martin Diggle, Andrew Heath, Stuart Henderson, Heather Preston and John Dawson.

Seated, left to right:
Stuart Paynter, Lorenzo Tallarigo and Robert Ghenchev.

Board of Directors

Dr. Lorenzo Tallarigo

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. From 01 January 2019 Dr Tallarigo joined the Board of Directors at Angelini Holding S.p.A., an Italian company with major business in healthcare and consumer goods.

Appointment:
— Appointed as Non-Executive Director and Chairman in February 2016.

Committee membership:
— Nomination Committee.

Dr. Andrew Heath

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 and held senior positions at Astra AB and Astra USA, including Vice President Marketing & Sales. He is Chairman of TauC3 Biologics Ltd and a Non-Executive Director of Novacyt SA. 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

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.

Appointment:
— Appointed a Director in August 2008 and became Chief Executive Officer in October 2008.

Committee membership:
— None.

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.

Appointment:
— Appointed a Director and Chief Financial Officer in August 2017.

Committee membership:
— None.

Martin Diggle

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. He is a Non-Executive Director of Scancell Holdings plc and Proteome Sciences plc.

Appointment:
— Appointed a Director in October 2012.

Committee membership:
— None.

Stuart Henderson

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 Andersen, where he was Head of Emerging Biotechnology. He is a former Director of the Babraham Institute and Norwich Research Partners LLP and currently sits as a Non-Executive Director on the Boards of One Nucleus (the Life Sciences trade body for Cambridge and London), the Cell and Gene Therapy Catapult and BioCity Group.

Appointment:
— Appointed a Director in June 2016.

Committee membership:
— Audit Committee.
— Remuneration Committee.
— Nomination Committee.

Dr. Heather Preston

Independent Non-Executive Director

Dr. Heather Preston was appointed to Oxford Biomedica's Board in March 2018. Dr. Preston is the Managing Partner of Pivotal BioVentures. She has over 30 years of experience in healthcare, as a scientist, physician and management consultant and she has been an investor in life sciences and biotech for the last 18 years. She holds a degree in Medicine from the University of Oxford.

Appointment:
— Appointed a Director in March 2018.

Committee membership:
— Audit Committee.
— Remuneration Committee.
— Nomination Committee.

Robert Ghenchev

Non-Executive Director

Robert Ghenchev was appointed a Non-Executive Director in June 2019. Robert is currently Senior Partner and Head of Novo Growth at Novo Holdings. Prior to joining Novo Holdings, he was an investment banker at Moelis & Company and Deutsche Bank in London. Robert has deep corporate finance experience advising life science companies on a wide range of issues. He holds a J.Hons. B.A. degree in Finance and Economics from McGill University and a M.Sc. degree in Financial Economics from the University of Oxford. He is also on the Board of Tempus Labs Inc.

Appointment:
— Appointed a Director in June 2019.

Committee membership:
— None.

Corporate governance report

Dear Shareholder

I am pleased to present Oxford Biomedica's corporate governance report for 2019.

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 Executives.

There has been a change to the Board during 2019. In June, Robert Ghenchev joined the Board as a Non-Executive Director, following Novo Holdings' strategic investment of approximately £53.5 million in the Group.

The Group has had a good year, with an increase in the Group's commercial development and bioprocessing revenues during 2019. The Group has continued to grow substantially over the year and the corporate governance framework and committees are in the process of being reviewed in order to understand whether the current structure and committees are fit for a larger company. With this amount of change within the Group 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.

Between December 2018 and February 2019 the Board had Deloitte LLP perform an external evaluation of the Board's performance during 2018/2019. The review process comprised the completion of a questionnaire covering the various aspects of Board activities, interviews with each Director individually by the external evaluator and an active observation of a Board meeting. The independent report was received in first quarter of 2019 and the Board is implementing the appropriate changes based on the recommendations of the report. A review of the 2019 performance in relation to whether the appropriate changes have been successfully implemented via an externally generated questionnaire will occur during 2020.

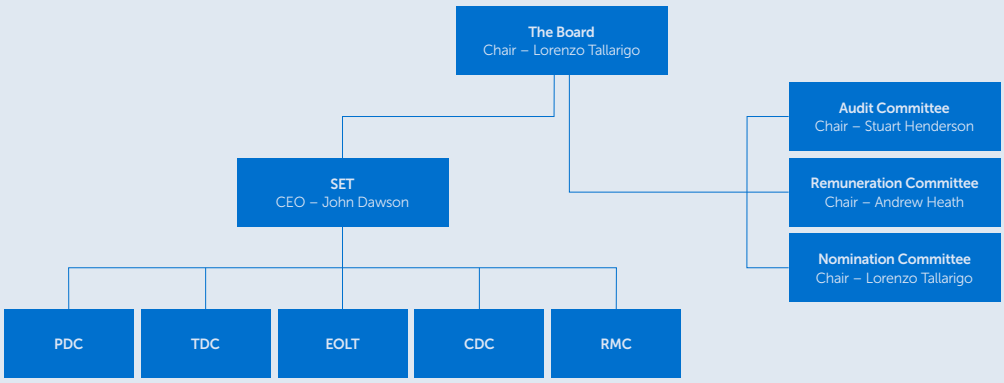
The Financial Reporting Council produced a revised UK Corporate Governance Code in July 2018 (the "2018 Corporate Governance Code"). The Board considers that it has been largely compliant with the 2018 Corporate Governance Code during 2019. The exception being that following the appointment of Robert Ghenchev in June 2019 the Board no longer met the requirement for half the Board to be comprised of independent Non-Executive Directors. The Board has addressed this issue by initiating a search for additional independent Non-Executive Directors. In addition, having served four years as Chairman, I have informed the Group of my intention to retire from Oxford Biomedica's Board. I will continue as Chairman while the Group completes a search for my replacement.

The following pages set out in more detail the activities and major matters considered by the Board in 2019.

Dr. Lorenzo Tallarigo
Chairman

Corporate Governance Framework

As the Group has continued to grow over the year, the corporate governance framework and committees are in the process of being reviewed in order to understand whether the structure and committees are fit for a larger company. The final structure and committees have not yet been finalised, so the current governance framework comprises the Board and the Senior Executive Team and their respective sub-committees is set out below:



SET – Senior Executive Team.
PDC – Product Development Committee.
TDC – Technical Development Committee eOLT – Extended Operations Leadership Team (incorporates the Quality, Manufacturing and Operations Committee).
CDC – Commercial Development Committee RMC – Risk Management Committee.

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 changes during 2019 the Board comprised six Non-Executive Directors and two Executive Directors.

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 also takes a close interest in Quality, Health, Safety & Environment and Risk Management. Each of these areas prepare reports for the Board ahead of each Board meeting.

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 and taking into account section 172 responsibilities items are circulated several days ahead of each meeting. Regular board papers cover Research, Quality, Process R&D, Client Programmes & Alliance, Management, Analytical Services, Clinical Development & Regulatory, Digital Strategy and Business Change Projects, Business Development, Finance, Investor Relations, HR, Operations and Health & Environment and Risk Management.

Corporate governance report

Factoring stakeholder engagement into Board decisions

By thoroughly understanding the Group's key stakeholder groups, the Group can factor their needs and concerns into Boardroom discussions (further information on the Group's stakeholders is on pages 22 to 23. The Board's procedures have been updated to require a stakeholder impact analysis to be completed for all material decisions requiring its approval that could impact on one or more of its stakeholder groups. The stakeholder impact analysis assists the Directors in performing their duties under s172 of the Companies Act 2006 and provides the Board with assurance that the potential impacts on its stakeholders are being carefully considered by management when developing plans for Board approval. The stakeholder impact analysis identifies:

— potential benefits and areas of concern for each stakeholder group;

— the procedures and plans being implemented to mitigate against any areas of concern; and

— who is responsible for ensuring the mitigation plans are being effectively implemented.

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 (www.oxb.com).

Reports from the Audit and Nomination Committees are included in this section and the Directors' Remuneration Report is on pages 76 to 93 incorporating the Remuneration Committee report.

The current Board member biographies are set out on pages 64 to 65.

— 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, was considered to be independent during 2019, however, due to his length of tenure as a Director, he will not be considered independent under the 2018 Corporate Governance Code following his proposed re-appointment at the AGM.

— Stuart Henderson is the chairman of the Audit Committee. He is considered to be independent.

— Heather Preston 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 2018 Corporate Governance Code.

— Robert Ghenchev is Senior Partner and Head of Novo Growth at Novo Holdings which is a 10.1% investor in the Group and as such he is not considered independent under the 2018 Corporate Governance Code.

Since the appointment of Robert Ghenchev in the middle of 2019, the Group has not been in full compliance with 2018 Corporate Governance Code which recommends that half the Board should be consist of independent Non-Executive Directors, excluding the Chairman. The Board is addressing this issue by initiating a search for two independent Non-Executive Directors.

Each Director is provided with an appropriate induction on appointment.

All Directors and the Board and its committees have access to 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 2019 there were six 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	6	6						
Martin Diggle	6	6						
Robert Ghenchev[1]	3	3						
Andrew Heath	6	6	3	3	8	8	1	1
Stuart Henderson	6	6	3	3	8	8	1	1
Stuart Paynter	6	6						
Heather Preston	6	6	3	3	8	8	1	1
Lorenzo Tallarigo	6	6					1	1

1 Robert Ghenchev was appointed in June 2019

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 2018 financial statements and the interim 2019 financial results.

The Chairman holds meetings from time to time with Non-Executive Directors without the Executive Directors in attendance.

Board activity during 2019

Board matters during 2019 included:

— Routinely recurring items such as the approvals of the 2019 financial budget and objectives, the 2018 preliminary results and Annual Report, and the 2019 interim results announcement.

— A review of the Group's strategy, conducted in March and September.

— Monitoring the progress of the Group's priority product development programmes.

— Reviewing business development opportunities including partnering and collaboration transactions.

— The appointment of Robert Ghenchev as a Director.

— Ongoing reviews of the Group's risk management processes and key risks.

— The Group's activities surrounding workforce engagement.

— Review of the Deloitte Report on Board effectiveness.

— Preparedness for the implications of Brexit.

Retirement of Directors

In accordance with the articles of association, at each Annual General Meeting (AGM) any Director who was appointed after the last AGM 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. However, to ensure compliance with the 2018 Corporate Governance Code all Directors will now be subject to annual re-election.

At the AGM in 2020, Robert Ghenchev will stand for appointment having being appointed to the Board in June 2019. In line with the 2018 Corporate Governance Code, Andrew Heath, Stuart Henderson, Martin Diggle, Heather Preston, John Dawson and Stuart Paynter will retire and be subject to re-election at the AGM in 2020. Lorenzo Tallarigo has informed the Group of his intention to retire, however, he will continue as Chairman until the Group completes a search for his replacement. Lorenzo Tallarigo, therefore, intends to stand for re-election at the AGM in 2020. In the event a successor is appointed before the 2020 AGM, Lorenzo Tallarigo will not offer himself up for re-election. The Group notes that since Andrew Heath has been appointed to the Board for more than nine years, in accordance with the 2018 Corporate Governance Code, he will not considered independent following the 2020 AGM.

Corporate governance report

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 Group's largest investor, is represented on the Board by Martin Diggle and Novo Holdings (10.1% shareholder), is represented on the Board by Robert Ghenchev ensuring a clear channel of communication with VLSF and Novo Holdings.

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

Meetings with existing shareholders	John Dawson and Stuart Paynter met with major shareholders during 2019. Lorenzo Tallarigo has also met with major shareholders.
2019 Annual General Meeting	The 2019 AGM was held in London on 29 May 2019. Shareholders were invited to attend the AGM 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 2018 full year performance and financial results in March 2019, and its 2019 half year interim results in September 2019 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.
2018 Annual Report	The Group published its 2018 Annual Report in April 2019.
Website	The Group's website http://www.oxb.com 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@oxb.com
Social media	The Group also uses LinkedIn and Twitter to alert followers to relevant 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 James Miskin, Kyriacos Mitrophanous, Nick Page, Jason Slingsby, Helen Stephenson-Ellis, Natalie Walter and Dmitry Zamoryakhin 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 Safety, Health & 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; and

— Extended Operational Leadership Team (eOLT) – incorporates the Quality and Manufacturing Operations Committee and covers quality, operational and manufacturing matters.

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:

— Commercial Development Committee (CDC) – which covers the external opportunities to out-licence and in-licence technology or product candidates, and also to generate partnership opportunities for manufacturing and product development; and

— Risk Management Committee (RMC) – this committee comprises senior managers from all parts of the business. The committee 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.

The Board's assessment of the prospects of the Board, its expectation that the Group will be able to continue in operation and meet its liabilities as they fall due, and the viability statement, is set out on page 97.

Board committee reports

Audit Committee report

The Audit Committee comprises Stuart Henderson, Heather Preston and Andrew Heath.

Stuart Henderson, Heather Preston and Andrew Heath all have relevant experience which qualifies them for membership of the Audit Committee and, in Mr. Henderson's case, to be Chair of the Audit Committee. Their experience is set out in their brief biographies on pages 64 and 65.

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; and

— review and recommend to the Board the financial statements and associated announcements.

The 2018 Corporate Governance 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 Audit Committee regularly reviews this at its meetings with the external auditors.

The Audit Committee met three times in 2019:

— 05 March 2019 – to review the 2018 audit and approve the auditors' report; review specific accounting issues including revenue recognition, the adoption of IFRS 16, system control procedures around manual journal entries, the impact of uncorrected misstatements, deferred taxation and use of Alternative Performance Measures (APM) in the Annual report. The Audit Committee discussed and agreed the wording for the going concern and viability statement. The auditors' opinion was reviewed and no issues or concerns were raised. The Audit Committee reviewed a number of areas of the quality of the audit and no significant concerns arose;

— 14 March 2019 – to approve the 2018 Annual Report; approve the 2019 preliminary results and review the KPMG LLP management representation letter;

— 29 October 2019 – to review the full 2019 audit strategy; insurance strategy, tax strategy, risk process, treasury policy and financial control assessment. The Audit Committee debated and agreed the 2019 year-end audit strategy. The significant risks in the audit strategy included contract revenue recognition and IFRS 15 (complex customer agreements); revenue recognition – bioprocessing estimate, revenue recognition; management override of controls; IFRS 16 lease arrangements – impact and disclosure. Other noted matters include inventories, taxation, deferred tax and going concern. The updated 2018/2019 insurance strategy was discussed and agreed. The Audit Committee also agreed with the current tax strategy. An update on the risk management process was presented to the Audit Committee, which was as a result of the work the Group commissioned from PricewaterhouseCoopers (PwC) around the risk management process. The Audit Committee approved the current treasury policy and discussed the financial control assessment with the Group. The Audit Committee agreed that a financial control assessment will be performed on an annual basis.

Significant issues

The issues considered by the Audit Committee that are deemed to be significant to the Group are the percentage of completion of bioprocessing and fixed price commercial development revenues, the bioprocessing out of specification estimate and going concern. Due to quantum and value of new customer contracts signed, contract revenue recognition was not deemed by KPMG LLP to be a significant risk in 2019, whilst going concern was identified as being significant due to the impact of COVID-19 as well as turbulence in the financial markets.

Percentage of completion of bioprocessing batch revenues

Bioprocessing of clinical/commercial product for partners is recognised on a percentage of completion basis over time as the processes are carried out. Progress is determined based on the achievement of verifiable stages of the bioprocessing process. Revenues are recognised on a percentage of completion basis and as such require judgement in terms of the assessment of the correct stage of completion including the expected costs of completion for that specific bioprocessing batch. The value of the revenue recognised and the related contract asset raised with regards to the bioprocessing batches which remain in progress at year end is £20,863,000. If the assessed percentage of completion was 10 percentage points higher or lower, revenue recognised in the period would have been £2,863,000 higher or lower.

Upon identification of this judgmental issue management provided to the Audit Committee a detailed update on the nature, reasoning behind, and risk of misstatement of this accounting estimate. Any significant change to the method of calculation of this estimate is flagged to the Audit Committee with regular updates being provided until such time as these are finalised prior to release of the year end or interim results.

The Group's external auditor has reported to the Audit Committee that they have reviewed the assumptions and methods used in calculating the percentage of completion, as well as performing detailed testing of the year end position, and found the percentage of completion to be appropriately accounted for.

Having provided appropriate challenge to management and the external auditor, the Audit Committee has concluded that the percentage of completion of bioprocessing revenues to be appropriately accounted for.

Percentage of completion of fixed price process development revenues

As it satisfies its performance obligations the Group recognises revenue and the related contract asset with regards to fixed price process development work packages. Revenues are recognised on a percentage of completion basis and as such require judgement in terms of the assessment of the correct percentage of completion for that specific process development work package. The value of the revenue recognised and the related contract asset raised with regards to the work packages which remain in progress at year end is £5,447,000. If the assessed percentage of completion was 10 percentage points higher or lower, revenue recognised in the period would have been £540,000 higher or lower.

Upon identification of this judgmental issue management provided to the Audit Committee a detailed update on the nature, reasoning behind and risk of misstatement of this accounting estimate. Any significant change to the method of calculation of this estimate is flagged to the Audit Committee with regular updates being provided until such time as these are finalised prior to release of the year end or interim results.

The Group's external auditor has reported to the Audit Committee that they have reviewed the assumptions and methods used in calculating the percentage of completion, as well as performing detailed testing of the year end position and found the percentage of completion to be appropriately accounted for.

Having provided appropriate challenge to management and the external auditor, the Audit Committee has concluded that the percentage of completion of fixed price commercial development revenues to be appropriately accounted for.

Estimate and judgments: Potential litigation

Subsequent to year end the Group identified an issue regarding an aspect of certain process development work performed on behalf of a customer in 2018 and 2019 which potentially could give rise to a material claim against the Group. The Group has been in communication with the third party but is not yet in a position to verify or validate any information relating to this matter due to the very recent timing of this issue being identified.

The Audit Committee considered the contingent liability referred to in Note 36 to the financial statements and reviewed a paper prepared by the executives on the matter which provided comfort to the Directors that this was an isolated incident and the matter was being handled and disclosed appropriately.

Going concern

Management and the Directors have had to make estimates and important judgements when assessing the going concern status of the Group.

At year-end, management provides to the Audit Committee an accounting paper on the going concern status and future viability of the Group which is assessed by the Audit Committee as a sub-committee of the Board. The paper is based on a detailed cash flow forecast, taking into consideration both a base case and a downside scenario where specific sensitivities are stress tested, and long range plan prepared by management.

The Group has considered the impact of COVID-19 on the adoption of the going concern basis of preparation in these financial statements. In the preparation of the downside scenario detailed cash flow forecast, management assessed the impact of the risk currently facing the business under the COVID-19 pandemic. The Audit Committee also considered further potential downside risks to this forecast, as well as the mitigating actions which could be required if these downside risks were to occur. This was to stress test an aggregation of the worst scenario occurring that would represent the greatest potential financial impact in the short term and over the longer term (currently assessed as three years) considered within the Group's viability statement.

Having provided appropriate challenge to management and the external auditor, the Audit Committee has concluded that the going concern status and future viability of the Group has been appropriately assessed, although it does note a material uncertainty which is further explained in the going concern note on page 96.

The Board concluded on the going concern status and future viability of the business, the outcome of which is detailed in the Directors Report on page 96.

The Group's external Auditor has reported to the Audit Committee that they have reviewed the going concern status and future viability of the Group, as well as performing detailed testing of the cash flow forecast and found the going concern status and future viability of the Group to be appropriately reflected in the Group's disclosures and that it is appropriate for the financial statements to be prepared on a going concern basis.

Provision for out of specification bioprocessing batches

Bioprocessing of clinical/commercial product for partners is recognised on a percentage of completion basis over time as the processes are carried out. Progress is determined based on the achievement of verifiable stages of the process.

As the Group has now been bioprocessing product across a number of years, and also in a commercial capacity, the Group has assessed the need to include an estimate of bioprocessed product for which revenue has previously been recognised and which may be reversed should the product go out of specification during the remaining period over which the product is bioprocessed. In calculating this estimate the Group has looked at historical rates of out of specification batches across the last four years, and has applied the percentage of out of specification batches to total batches produced across the assessed period to the revenue recognised on batches which have not yet completed the bioprocessing process at year end. This estimate, based on the historical percentage, may be significantly higher or lower depending on the number of bioprocessing batches actually going out of specification in future.

Upon identification of this judgmental issue management provided to the Audit Committee a detailed update on the nature, reasoning behind, and risk of misstatement of this accounting estimate. Any significant change to this estimate is flagged to the Audit Committee with regular updates being provided until such time as these are finalised prior to release of the year end or interim results.

The Group's external auditor has reported to the Audit Committee that they have reviewed the assumptions used in preparing the out of specification estimate, as well as performing detailed testing of the historic inputs to the calculation, and found the out of specification estimate to be appropriately accounted for.

Having provided appropriate challenge to management and the external auditor, the Committee has concluded that the out of specification estimate to be appropriately accounted for.

Corporate governance report

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 2019 was prepared by the Chief Financial Officer and the Group Financial Controller and was further reviewed at the October 2019 Audit Committee meeting, where it was determined that certain internal functions will be outsourced in 2020 and that the finance function will be further strengthened to reflect the growth and the complexity of the business.

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 invoices, 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.

COVID-19

As a result of COVID-19, the Group has implemented extensive working from home by its employees. As most of the internal controls implemented by the business are system based, this change has not had a detrimental impact on the control environment. The business did have to implement some changes to the sign-off process for bank payments to ensure adequate availability of supporting documentation during the payment process, but this has been implemented successfully. The Group already had extensive remote working facilities in place including functionally limited access from users' own devices. No major changes were required to enable the significant shift to remote usage. Proactive monitoring of remote usage has been increased as a precaution.

The Group plans to maintain its level of internal control during the period in which the COVID-19 pandemic has a significant impact on the UK, but to continue to seek to improve it internal control environment through the implementation of improved processes and controls, and an increased awareness, emphasis and consideration of control matters throughout the organisation.

Nomination Committee report

The Nomination Committee, which is chaired by the Group's Chairman, leads the process for making appointments to the Board and succession planning, and comprises all of the independent Non-Executive Directors.

The Nomination Committee met several times in 2019 on an ad hoc basis with one meeting held to consider appointment of Robert Ghenchev as a Non-Executive Director member of Board.

During the first half of the year the Board was fully compliant with the 2018 Corporate Governance Code in that half the Board, excluding the Chair, comprised of Non-Executive Directors whom the Board considered to be independent. However, with the appointment of Robert Ghenchev as a Non-Executive Director in June 2019, the Board became non-compliant. The Board recognised the issue at that time and a search for additional independent Non-Executive Directors is in progress.

In compliance with the 2018 Corporate Governance Code, Stuart Henderson was appointed as the nominated Non-Executive Director who will oversee engagement between the Board and the workforce.

Board evaluation

In accordance with the 2018 Corporate Governance Code, between December 2018 and February 2019, Deloitte LLP conducted an independent review of the Board's performance for 2018/2019. Deloitte provides advice to the Group on Directors Remuneration matters and on tax but has no connection with individual Directors.

The Board review process comprised the completion by each Director of a comprehensive questionnaire covering all aspects of a Board's performance, an interview with each Director and an active observation of a Board meeting. The independent report was received in the first quarter of 2019 and the Board is implementing appropriate changes based on the recommendations of the report. A review of the 2019 performance in relation to whether the appropriate changes have been successfully implemented via an externally generated questionnaire will occur during 2020.

Board succession planning

The Board has reviewed the succession plans for both its composition and that of its committees and the continued development of the Board. The Board have initiated a search for additional independent Non-Executive Directors to address the 2018 Corporate Governance Code recommendation that half the Board should consist of independent Non-Executive Directors. In addition, the Board has initiated a search for a new Chair following Lorenzo Tallarigo's decision to retire. Following Andrew Heath's proposed re-appointment at the upcoming AGM, he will no longer be deemed to be independent and accordingly he will step down as the Senior Independent Non-Executive Director and Chair of the Remuneration Committee. Heather Preston will replace Andrew Heath as the Senior Independent Non-Executive Director and Chair of the Remuneration Committee. In addition, Andrew Heath has informed the Board of his decision to retire once the Group has found a suitable independent Non-Executive Director to replace him, or, in any case, by 31 December 2020.

Diversity

The Group recognises the importance of diversity and is committed to encouraging equality and diversity among its workforce. Oxford Biomedica aims to create an inclusive working environment based on merit, fairness and respect to enable it to attract and retain the most talented people from all backgrounds and cultures. The Group is also working to achieve a diverse Board and, just as importantly, diverse management teams. Appointments to the Board are based on merit taking into account suitability for the role, composition and balance of the Board to ensure that the Group has the right mix of skills, experience, independence, knowledge and consideration of the Group's strategic objectives.

The Nomination Committee has a formal and rigorous appointment process involving most if not all Board members and makes recommendations based on the capabilities of individual candidates, having due regard for the benefits of diversity with no restrictions on age, gender, religion, ethnic background whose competencies will enhance the Board.

The Group supports the principles of the Hampton-Alexander report on gender. At present, the Board is comprised of one woman and seven men and therefore does not meet the Hampton-Alexander recommendation that 33% of a FTSE 350 Board be women. Even though Oxford Biomedica plc is not a FTSE 350 company, the Group likes to adhere to the principles as such. The Board is, therefore, aware of this issue and is currently looking to appoint two new independent Non-Executive Director's which, of course, will take diversity into consideration when appointing.

Oxford Biomedica believes that members of the Board and senior management should collectively possess a diverse range of skills, expertise and ethnic and societal backgrounds. In terms of the next level of management, the Senior Executive Team, excluding the Executive Directors, totalled eight, of which there are two female members. In 2019 in the gender pay gap report, (for the full report see our website www.oxb.com) the Group is progressing towards an equal male/female split at the Head of Department level and at the Senior Management level there are more females than males and as such the Group met the 33% requirement. As a Group, its strategy will be to maintain and improve on these both at Board and the Senior Executive Team level, so that the objectives of the Hampton-Alexander Review will hopefully be met during 2020/2021. The Board is aware of the recommendations of the Parker Review on Ethnic Diversity. This is being taken into account in future succession planning activities.

Share capital

The information about the share capital required by the Takeover Directive is in the Directors' report on page 95.

Directors' remuneration report

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. 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 2019 financial year; and

— extracts from the Directors' remuneration policy (the "policy"), which was approved at the 2018 AGM, and took 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 2020 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

Dear Shareholder

I am pleased to introduce our remuneration report for the 2019 financial year. The report is divided into two sections: the annual report on remuneration followed by extracts from our Directors' remuneration policy ("the policy") approved at the 2018 AGM with over 97% of the votes cast in favour of it.

The policy

The Remuneration Committee considers that the policy remains appropriate and, accordingly shareholder approval for a new policy will not be sought at the 2020 AGM. Although the relevant regulations do not require us to include the policy in the Directors' remuneration report, we have included those parts we think shareholders will find most useful. The full policy as approved by shareholders at the 2018 AGM is included in the Company's 2017 Annual report and accounts, which is available at www.oxb.com.

During 2020 the Remuneration Committee will review the policy to ensure it remains fit for purpose, linked to the Group's strategy and appropriately takes account of corporate governance updates since its adoption, in advance of seeking shareholder approval for a new policy at the 2021 AGM.

2019 business performance and incentive impact

In February 2020 the Remuneration Committee met to consider the achievement of 2019 objectives and the annual bonus award for 2019.

The performance of the business in 2019 is set out in detail in the Strategic report from pages 15 to 55 and the performance against corporate objectives is set out on page 81 of this remuneration report. The Remuneration Committee considered overall business performance as part of its assessment of the annual bonus out-turn and concluded the overall bonus payments earned by reference to the annual bonus performance measures to be appropriate and accordingly approved the award to John Dawson of a bonus of 88% of salary and to Stuart Paynter a bonus of 90% of salary. The bonuses will be paid 50% in cash and 50% in deferred share awards. Further details are provided on page 79 with regards to how performance under the annual bonus targets translated into bonus payment.

Vesting of the 2016 LTIP award

LTIP awards were granted on 16 May 2016 to John Dawson, Peter Nolan and Tim Watts when the share price was 274.7p (after adjustment for the 50 to 1 share consolidation in May 2018); the vesting conditions were 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%

The 2016 LTIP awards vested during 2019. The share price was averaged across the 20 business days prior to the end of the assessment period. Details are provided on page 83.

The awards were also subject to a performance underpin, such that the awards would only vest to the extent that the Remuneration Committee considered that the overall performance of the business across the period justified it. The Remuneration Committee reviewed performance against this underpin and concluded the overall LTIP payments to be appropriate. Clawback and malus provisions will apply to the awards.

Implementation of our policy in 2020

Information on the way in which the Group will implement the policy in 2020 is set out on page 89.

Other matters

The Remuneration Committee recognises the expectations of our shareholders on executive pay and we were pleased that the 2018 Directors' remuneration report received votes in favour in excess of 94% at the 2019 AGM. Shareholders will be invited to approve the 2019 Directors' remuneration report at the 2020 AGM.

The Remuneration Committee reported last year that we would introduce a number of changes to the way in which we implement the policy having regard to the 2018 Corporate Governance Code (the introduction of a holding period to the LTIP, enhancement of recovery provisions, an increase to our shareholding guideline and the introduction of a post-employment shareholding guideline). Those changes will continue to apply in 2020, and will be enshrined in the new policy to be proposed to shareholders at the 2021 AGM. The new policy will also confirm that pension provision for any newly appointed Executive Director will be aligned with that available to the wider workforce, and as part of our consideration of the new policy we will also consider our approach to incumbent Executive Directors' pension, having regard to the provisions of the 2018 Corporate Governance Code relating to the alignment of pension provision for Executive Directors with that for the wider workforce.

The Remuneration Committee reviewed the Group's Gender Pay Gap Report for 2019 and was pleased to see the growth of the Group over the year and the progression towards an equal male/female split at the more senior levels of the organisation and that this has had a positive impact on the Group's gender pay gap. For full details of the report please visit our website at www.oxb.com.

Dr. Andrew Heath
Chair, Remuneration Committee

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 (Senior Executive Team). The remuneration of the Non-Executive Directors is a matter for the Chairman;

— approval of individual remuneration packages for Executive Directors and the Senior Executive Team;

— 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 (Senior Executive Team), and awards granted under the plan; and

— approval of options granted to all employees under the Group's share option plan.

The Remuneration Committee members are currently Andrew Heath (Chairman), Heather Preston (appointed 12 March 2019) and Stuart Henderson. Other Directors are invited to attend meetings on an agenda driven basis.

Remuneration Committee activities during 2019

During 2019 the Remuneration Committee met 8 times. The main activities and decisions were as follows:

— 18 February 2019 – the Remuneration Committee considered whether or not bonuses should be paid to the Executive Directors in respect of 2018 in light of the performance against the Group's 2018 objectives, and also whether there should be salary increases for 2019. The outcome of these discussions was reported in the 2018 Annual report.

— 18 April 2019 – the Remuneration Committee considered the granting of options to employees under the Group's Long Term Incentive Plan, Deferred Bonus Plan and Employee Share Option Scheme.

— 16 May 2019 – the Remuneration Committee considered the extent to which the share price performance conditions for the May 2016 LTIP grant of options had been met and whether vesting was appropriate by reference to the performance underpin. The outcome was that 100% of the options granted in 2016 would vest, more information is included on page 83. The Remuneration Committee also approved the vesting of Deferred Bonus Plan (DBP) options granted in 2016, 2017 and 2018. DBP options vest in three equal instalments on the first, second and third anniversaries of the grant.

— 11 September the Remuneration Committee approved an invitation to all employees to participate in the 2019 offer under the Company's Save As You Earn scheme.

Annual report on remuneration

Summary of changes to executive remuneration for 2020

Under the remuneration policy Executive Directors' base salaries are normally reviewed annually. The Remuneration Committee has carried out this review in February 2020 and has awarded the following base salary increases:

	Current salary	Percentage increase	Total of increase	New salary
John Dawson	£410,000	5.0%	£20,500	£430,500
Stuart Paynter	£228,000	5.0%	£11,400	£239,400

The Remuneration Committee recognises that the salaries for the CEO and CFO are significantly below market for companies of similar size and complexity. The 2018 Directors' remuneration report indicated that the Remuneration Committee would look to increase the salaries to achieve a base salary of £450,000 for John Dawson and £260,000 for Stuart Paynter over two to three year period subject to company and individual performance. As a consequence, the Remuneration Committee decided for 2020 to award a 5% increase in salary. The Remuneration Committee granted the wider workforce on average a 9% increase in salary for 2020 due to the implementation of the Group's reward Programme.

Annual bonus

The maximum annual bonus opportunity for the Group' Executive Directors will remain up to 125% of salary in line with the opportunity for 2019. Performance objectives for the Group have been agreed by the Board and the extent to which Executive Directors' bonuses for 2020 are earned will be determined by the Remuneration Committee early in 2021 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 81.

LTIP

The Remuneration Committee has agreed that the Executive Directors will be granted LTIP awards of up to 125% of salary in the case of the CEO and 100% in the case of the CFO. As with the awards granted in 2019, recognising the growth of the business the Remuneration Committee believes that making the awards subject to performance measures equally weighted between share price growth (requiring 10% CAGR for threshold vesting and 17.5% CAGR or greater for maximum vesting) and revenue growth (requiring 15% CAGR for threshold vesting and 24% or greater for maximum vesting) remains appropriate. There will 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. Share price growth will also be averaged across a three month period to avoid rewarding for short term spikes in performance.

As with the 2019 awards, the awards will be subject to a two year holding period following the end of the performance period. Awards will vest following the end of the performance period but will not be released, so that the Executive Director is not entitled to acquire the vested shares until the end of the holding period.

Single total figure of remuneration

(audited)

The following tables show a single total figure of remuneration for 2019 for each Director and comparative.

2019	Salary £'000	Benefits[1] £'000	Bonus £'000	LTIP[2] £'000	Pension[4] £'000	Total £'000
John Dawson	410	11	359	386	54	1,220
Stuart Paynter	228	11	205	-	32	476
Total	**638**	**22**	**564**	**386**	**86**	**1,696**

2018	Salary £'000	Benefits £'000	Bonus £'000	LTIP[3] £'000	Pension[4] £'000	Total £'000
John Dawson	380	4	439	438	50	1,311
Stuart Paynter	214	4	251	-	32	501
Peter Nolan[5]	108	1	127	268	16	520
Total	**702**	**9**	**817**	**706**	**98**	**2,332**

1 Benefits comprise medical insurance and the provision of a car allowance.
2 This comprises the LTIP awards granted in 2016 which vested on 16 May 2019. The relevant performance criteria and the performance against them are set out on page 83. The values are calculated by reference to the share price at the last day of the period over which the share price was averaged to determine the extent of vesting (690.0p).
3 This comprises the LTIP awards granted in 2015 which vested in June 2018. The relevant performance criteria and the performance against them are set out on page 77 of the 2018 Directors' Remuneration Report. The values are calculated by reference to the share price at the last day of the period over which the share price was awarded to determine the extent of vesting (1,000p).
4 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 – John Dawson had elected to receive such a cash allowance.
5 Peter Nolan stepped down from the Board on 1 July 2018. His 2018 remuneration is in respect of the period to his retirement from the Board, including his 2018 bonus.

The following table sets out the amount of the value attributable to the share price at the grant of the awards (274.7p) and the amount that is attributable to the growth in share price to 690p at vesting. No discretion has been exercised in the decision to award the options to the relevant Directors by the Remuneration Committee.

	Total value	Value attributable to share price at grant of 274.7p	Value attributable to growth in share price to 690.0p at vesting
John Dawson	£386,228	£153,763	£232,465

The following table sets out the amount of the value attributable to the share price at the grant of the awards (450p) and the amount that is attributable to the growth in share price to 1,000p at vesting.

	Total value	Value attributable to share price at grant of 450p	Value attributable to growth in share price to 1,000p at vesting
John Dawson	£438,240	£197,208	£241,032
Peter Nolan	£268,169	£120,676	£147,493

In February 2020 the Remuneration Committee met to consider the achievement of the 2019 objectives and the annual bonus award for 2019. The performance of the business 2019 is set out in detail in the Strategic report from pages 15 to 55.

Performance against the Group objectives for 2019, on which the Executives Directors' bonuses are based, was as follows:

Objective	Weighting	Performance assessed	Assessment against objective	% of bonus awarded
Partners/Capacity/Technology Advancement The key here is to service the Group's customers as agreed with them and reach key milestones for Novartis, Orchard Therapeutics and Sanofi (Bioverativ). Aside to that, it is fundamental to the Group's future success that the Group innovates with the creation of the new Windrush Innovation Centre and complete the new manufacturing facility on time and within budget.	25%	The Group had achieved key milestones for Novartis with the conversion to a suspension production process (5%) and expanded the portfolio of products with them (5%). The Group had also progressed the Orchard Therapeutics programme as agreed (5%), along with successful progression of the CF programme (2.5%). In addition, the handover and commissioning of Oxbox was achieved on time (5%).	Mainly met	22.5%
Patent/product advancement and innovation Advance two new platform products into the Group's portfolio, alongside technical (two new patentable inventions) along with data driven innovations in the Group's platform. These goals are essential to keep us ahead of the competition. Valuable pipeline products such as AXO-Lenti-PD, which have been seen bring great value to the Group, move forward in clinical development.	20%	The Group had strengthened the pipeline with two new programmes OXB-203 and OXB-302 progressing through proof of concept to pre-clinical studies (5%), along with two new potential inventions filed for platform process (5%). Digital advancement via the Microsoft collaboration is underway and has only been partially met (2.5%). Axo-Lenti-PD has moved forward in clinical development into cohort 2 (5%).	Mainly met	17.5%
Financial objectives The financial objectives set are to achieve revenue and EBITDA targets. Assumptions in the budget include new manufacturing deals and a product out-licensing deal along with extinguishing or refinancing the loan on more favourable terms.	15%	Overall the financial objectives were not met. The Group did manage to extinguish the loan, however, which was an objective (5%). The Group did not achieve our revenue and EBITDA target as per the budget (0%) or the cash in-flow as per budget (0%). This was due to not completing a product out-licensing deal or a large manufacturing deal.	Partially met	5%
Business development A critical success factor for the budget was to complete new deals. The plan was to out-licence one product, agree three platform deals and start two feasibility studies.	30%	The plan to out-licence one product was not achieved (0%). Of the three platform technology deals only two were signed (Novartis and Santen) by the end of 2019 (10%). The goal of signing two new feasibility studies was achieved, however (5%).	Partially met	15%
Organisational development With the rapid pace of growth for the Group, together with competition for key staff in the field, it is essential the Group builds a culture, competitive rewards/ benefits and staff support systems to ensure a balanced and productive work force for the future. The goal is to enhance our organisational effectiveness programmes and it is essential that the Group innovates with the creation of the new discovery/ innovation centre.	10%	The Reward strategy was successfully developed and communicated to include competitive grading and pay structures and benefits (2.5%). The Group's organisation effectiveness programmes were also rolled out to include annual performance management, management development programme and talent management (2.5%). The creation of the Windrush Innovation Centre, which is the Group's discovery/ innovation hub was also established (5%).	Met in full	10%

John Dawson's bonus is entirely (100%) linked to the achievement of the corporate objectives. The bonus for Stuart Paynter is 80% linked to corporate objectives and 20% linked to personal objectives.

The personal element of the bonus for Stuart Paynter was assessed by reference to the achievement of clear personal objectives and targets which supported the strategic objectives of the business. The objectives and targets are considered by the Group to be commercially sensitive, as they will give the Group's competitors insight into its strategic plans, and so are not fully disclosed below. However, the principal areas of the personal objectives were related to clearance of the debt, optimising the financial strategy for the Group and enhancing the financial function of the Group to support business development activities.

The Remuneration Committee undertook a robust assessment of the achievements of Stuart Paynter with respect to his personal objectives, and based on achievements against those objectives, awarded a bonus equal to 20% of salary.

Accordingly, bonuses earned by the Executive Directors in respect of 2019 were:

— John Dawson: £359,000 (88% of salary); and

— Stuart Paynter: £205,000 (90% of salary).

The bonuses 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. The Remuneration Committee reviewed performance against the annual bonus out-turn and concluded the overall bonus payments to be appropriate.

The single total figures of remuneration for Non-Executive Directors are shown in the table below:

Fees	**2019 £'000**	**2018 £'000**
Lorenzo Tallarigo	**150**	150
Andrew Heath	**65**	65
Stuart Henderson	**65**	65
Heather Preston	**65**	52
Total	**345**	332

Robert Ghenchev was appointed as a Non-Executive Director with effect from 24 June 2019. Both Robert Ghenchev and Martin Diggle have elected to receive no fees for their services as Directors.

Aggregate Directors' emoluments	**2019 £'000**	**2018 £'000**
Salaries	**638**	702
Benefits	**22**	9
Pension/cash alternative	**86**	98
LTIP	**386**	706
Bonuses	**564**	817
Non-Executive Directors fees	**345**	332
Total	**2,041**	2,664

LTIPs vesting during 2019

(audited)

LTIP awards were granted on 16 May 2016 to John Dawson, Peter Nolan and Tim Watts when the share price was 274.7p (after adjustment for the 50 to 1 share consolidation in May 2018), the vesting conditions were 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%

The 2016 LTIP awards vested during 2019. The share price was averaged across the 20 business days prior to the end of the assessment period. Over the three year performance period from the date of grant, the annual compound share price growth was 35.8%.

The outcome was that 100% of the options granted in 2016 vested.

The awards were also subject to a performance underpin, such that they would vest only to the extent that the Remuneration Committee considers that the overall performance of the business across the period justifies it. The Remuneration Committee reviewed performance against this underpin and concluded the overall LTIP payments to be appropriate. Clawback and malus provisions will apply to the awards.

The value of the awards vesting during 2019 are detailed below:

	Number of awards granted that vested[1]	Share price at the date on which the shares vest	Value of awards on vesting[2]
John Dawson	55,975	690p	£386,228
Peter Nolan	34,589	690p	£238,664
Tim Watts	23,949	690p	£165,248

1 Number of shares post 30 May 2018 share consolidation.
2 The values are calculated by reference to the share price of 690p on the last day of the averaging period.

LTIPs awarded during 2019

(audited)

On 18 April 2019, the Executive Directors were awarded the following options under the Group's LTIP scheme:

	Number of options granted	Face value of grant
John Dawson	72,736	£512,500
Stuart Paynter	32,358	£228,000

The number of options awarded in April 2019 was calculated by reference to 125% (John Dawson) and 100% (Stuart Paynter) of salary divided by the average share price of 704.6p in the five business days preceding the award.

The awards are nil cost options and are subject to a three year vesting period. They are subject to the achievement of the performance conditions set out below, which are weighted equally between the share price measure and the revenue measure:

Compound annual growth rate of the company's share price over the three year period starting with the date of grant[1]	Percentage of the options subject to the share price measure that will vest	Compound annual growth rate of the company's revenue between 2018 and 2021[2]	Percentage of the options subject to the revenue measure that will vest
Less than 10%	0%	Less than 15%	0%
10% (i.e. 33% over 3 years)	25%	15% (i.e. 52.1% over 3 years)	25%
Between 10% and 17.5%	Calculated on a straight line basis between 25% and 100%	Between 15% and 24%	Calculated on a straight line basis between 25% and 100%
17.5% or more (i.e. 63% over 3 years)	100%	24% or more (i.e. 90.7% over 3 years)	100%

1 The starting share price is 704.6, 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 18 April 2022.
2 Calculated by comparing the audited revenue figure as of 31 December 2018 of £66.8m with the audited revenue figure as of 31 December 2021.

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.

Although the awards will vest following the assessment of the performance period (subject to satisfaction of the performance conditions), they cannot be exercised until the end of a further holding period of two years.

Statement of Directors' shareholding and share interests

(audited)

The Remuneration Committee has adopted a shareholding guideline for the Executive Directors, which specifies a shareholding equivalent to 200% of base salary with effect from 1 January 2019.

The value of the shares as at 31 December 2019 has been determined based on a share price of 645p (being the prevailing closing share price on 31 December 2019). Under this criteria John Dawson meets the shareholding guideline, with Stuart Paynter working towards meeting this guideline.

The interests in shares of the Directors who served during the year as at 31 December 2019 were as follows:

	Shares held outright		Vested but unexercised options		Unvested deferred bonus plan		Unvested LTIP awards subject to performance conditions	
Executive Directors	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
John Dawson	88,468	88,468	394,516	289,668	52,002	45,455	188,765	172,006
Stuart Paynter	6,770	1,753	–	–	20,723	4,354	121,120	88,762
Non-Executive Directors								
Lorenzo Tallarigo	52,891	47,942						
Martin Diggle[1]	11,668,640	11,640,177						
Andrew Heath	55,000	36,000						
Stuart Henderson	7,925	6,677						
Heather Preston	–	–						
Robert Ghenchev[2]	–	–						

1 Includes the interest of Vulpes Life Science Fund, Vulpes Testudo Fund and other parties connected to Martin Diggle.
2 Robert Ghenchev was appointed to the Board as a Non-Executive Director with effect from 24 June 2019.
Robert Ghenchev is Head of Novo Growth at Novo Holdings which has a holding of 7,750,000 shares.

Reflecting best practice, the Remuneration Committee has adopted, with effect from 1 January 2019, a post-cessation shareholding guideline. This requires that an Executive Director must retain shares with a value (as at cessation) equal to 100% of base salary for two years following cessation. If the Executive Director holds fewer than the required number of shares, he or she must retain the shares held. The guideline does not apply to shares which the Executive Director has purchased. The Remuneration Committee retains discretion to vary the post-cessation shareholding guideline in appropriate circumstances and will continue to review the guideline in light of developing market practice before formally enshrining it in the next policy.

During 2019 the following options have vested and lapsed:

LTIP	Unvested at 1 January 2019	Vesting during 2019	Lapsed during 2019	Awarded during 2019	Unvested at 31 December 2019
John Dawson	172,006	55,975	–	72,736	188,767
Stuart Paynter	88,762	–	–	32,358	121,120

Deferred bonus	Unvested at 1 January 2019	Vesting during 2019	Awarded during 2019	Unvested at 31 December 2019
John Dawson	45,455	24,632	31,179	52,002
Stuart Paynter	4,354	1,451	17,820	20,723

During 2019 John Dawson and Stuart Paynter did not exercise any options.

In 2020 the performance criteria for the LTIP awards granted in respect of 2017 will be assessed. The awards granted to John Dawson in respect of 2017 are subject to a share price growth target by reference to a price of 496.5p and the awards granted to Stuart Paynter in respect of 2017 are subject to a share price growth target by reference to a price of 430.2p, with the difference reflecting the awards having been granted on different dates. The vesting conditions are 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 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%

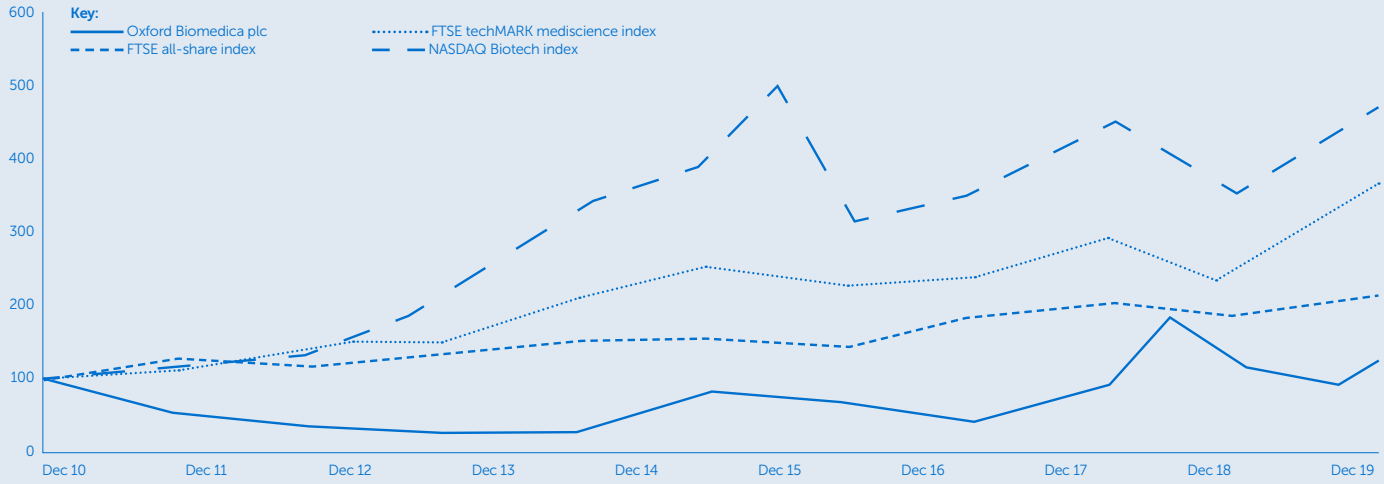
Payment to past Directors and payments for loss of office

(audited)

As previously disclosed, Tim Watts and Peter Nolan retained the benefit of their LTIPs granted in 2016, the vesting of which is disclosed on page 83.

Performance graph and comparison with CEO's remuneration

The chart below illustrates the Company's TSR performance since January 2010 relative to the FTSE all-share index, the FTSE techMARK MediScience index and the NASDAQ Biotech 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 and NASDAQ Biotech index, comprising biotech companies either in the UK (FTSE techMARK MediScience) or in the US (NASDAQ Biotech) market, provide further benchmarks that are more specific comparators.



CEO's remuneration in last ten years

Year		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CEO's total single figure of remuneration	£'000	450	413	401	468	680	732	653	811	1,311	1,220
LTIP vesting	% of maximum	0%	0%	40%	0%	0%	100%	50%	25%	80%	100%
Annual bonus	% of maximum	42%	0%	17%	30%	75%	42%	50%	85%	92%	70%

Percentage change in CEO's remuneration

The table below shows how the percentage change in the CEO's salary, benefits and bonus between 2018 and 2019 compares with the equivalent changes in those components for a group of employees. As 2018 and 2019 have seen significant changes in headcount numbers, the Remuneration Committee has chosen as the comparator group all those employees other than the CEO who were employed throughout the whole of both 2018 and 2019.

	Salary			Benefits			Bonus		
Year	2019	2018	% increase	2019	2018	% increase	2019	2018	% decrease
John Dawson (£'000)	410	380	7.9	11	4	175[1]	359	439	18
Comparator employee group (£'000)	10,521	9,573	9.9	244	114	114	978	1,084	10

1 The increase in benefits is due to the full year impact of the provision of a car allowance.

CEO's pay ratio

The table below sets out the CEO pay ratio at the 25th, median and 75th percentile employee within the organisation. The Group used Option A as defined in The Companies (Miscellaneous Reporting) Regulations 2018, as this calculation methodology for the ratios was considered to be the most accurate method. The 25th, median and 75th percentile pay ratios were calculated using the full time equivalent remuneration for all UK employees as at the end of 2018 and 2019 respectively. 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 also participate in discretionary bonus schemes. The Group aims to provide a competitive remuneration package which is appropriate to promote the long-term success of the Group and to apply this policy fairly and consistently to attract and motivate staff. The Group considers the median pay ratio to be consistent with the Group's wider policies on employee pay, reward and progression.

Financial year	Method	25th percentile pay ratio	Median pay ratio	75th percentile pay ratio
2018	Option A	1:48	1:37	1:27
2019	Option A	1:42	1:32	1:24

Pay details for the individuals are set out below:

2018	CEO	25th percentile	Median	75th percentile
Salary (£'000)	£380	£25	£32	£44
Total remuneration (£'000)	£1,311	£27	£35	£48

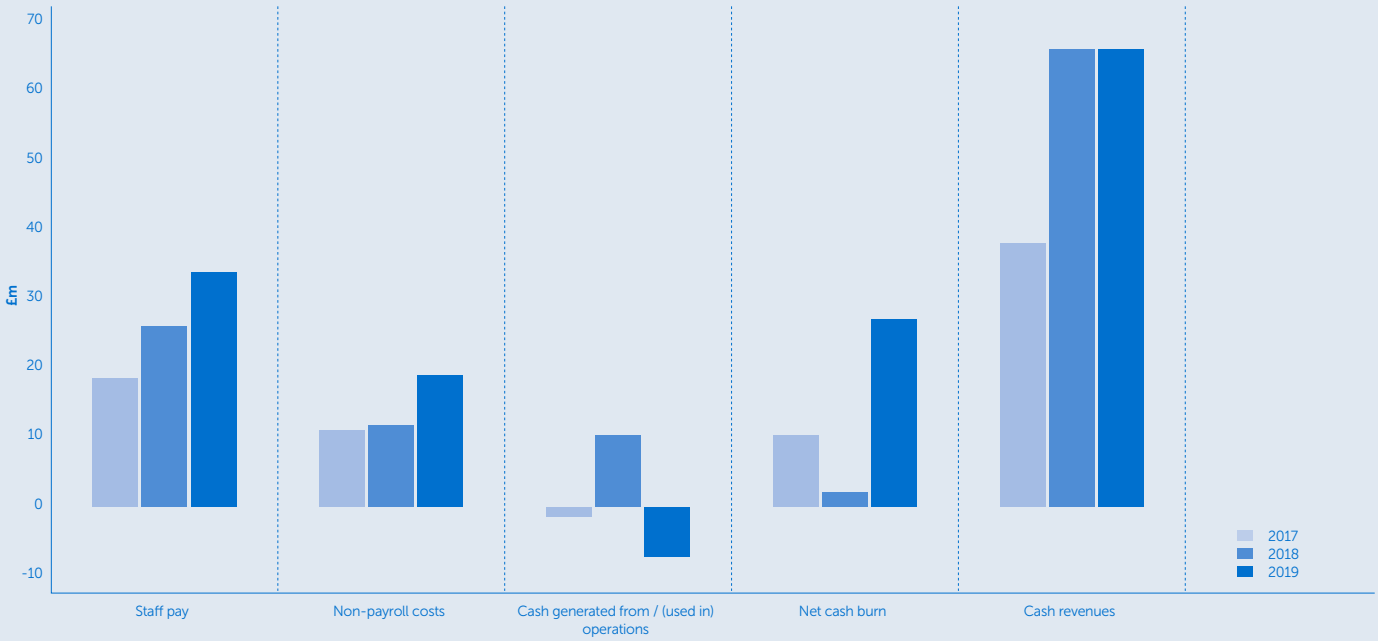
2019	CEO	25th percentile	Median	75th percentile
Salary (£'000)	£410	£26	£35	£45
Total remuneration (£'000)	£1,220	£29	£38	£50

Relative importance of spend on pay

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.

The Group's key cash measures were chosen by the Directors because they illustrate very clearly the importance of employee remuneration as a fundamental element of operational spend and our activities, as well as the continued investment of the business in its people. The key cash measure amounts were identified as being:



Statement of voting at AGM

At the 2019 AGM, the 2018 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	24,818,930*	94.8%	1,365,178*	5.2%	26,184,108*	557*

* The number of votes reflects that the vote took place after the 50 to 1 share consolidation in May 2018.

At the 2018 AGM, the Directors' remuneration policy 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	1,930,039,150	97.2%	56,288,698	2.8%	1,986,327,848	8,903,541

Advisers to the Remuneration Committee

Deloitte LLP acted as adviser to the Remuneration Committee during 2019 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 fees for advice to the Remuneration Committee during 2019 were £5,400 plus VAT. The advice received from Deloitte LLP was both objective and independent. Deloitte also advised the Group on Board remuneration and in relation to the operation of its share plans during 2019.

The Remuneration 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.

Dr. Andrew Heath
Chair, Remuneration Committee

6 May 2020

Directors' remuneration policy

Policy table

Component and purpose	Operation	Maximum potential and payment at threshold	Performance targets and metrics
Executive Directors			
Base salary To provide a base salary which is sufficient to attract and retain executives of a suitable calibre.	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. Base salaries are normally reviewed annually taking into account a number of factors which may include (but are not limited to): – underlying Group performance; – role, experience and individual performance; – competitive salary levels and market forces; and – and conditions elsewhere in the Group. Any changes are normally effective from 1 January.	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. Salary increases above this level may be awarded in certain circumstances, such as, but not limited to: – 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. Such increases may be implemented over such time period as the Remuneration Committee deems appropriate.	While no formal performance conditions apply, an individual's performance in role is taken into account in determining any salary increase.
Benefits To provide benefits on a market competitive basis.	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 Remuneration Committee. Additional benefits may be provided based on individual circumstances. These may include, for example, travel expenses.	There is no predetermined maximum but the totals are reviewed annually by the Remuneration Committee.	Not applicable.
Retirement benefits To provide funding for retirement.	The Group operates a defined contribution scheme for all employees including Executive Directors. 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.	15% of base salary.	Not applicable.
Share ownership guidelines To align Executives with Shareholders and provide an ongoing incentive for continued performance.	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). 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.	Executive Directors are required to build and maintain 200% of salary minimum level of shareholding.	Not applicable.

Component and purpose	Operation	Maximum potential and payment at threshold	Performance targets and metrics
Sharesave Scheme To create alignment with the Group and promote a sense of ownership.	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).	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.	Not subject to performance measures in line with HMRC practice.
Annual bonus To incentivise and reward delivery of the Group's objectives. Delivery of 50% of any bonus payment via deferred shares aligns the incentive package with shareholders' interests.	Annual bonuses are determined by the Committee. 50% of the bonus is delivered as cash. 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 Remuneration Committee's discretion. 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. Recovery provisions apply as summarised at the foot of this table.	The maximum bonus opportunity will not exceed 125% of base salary.	The performance metrics and targets are decided annually by the Remuneration Committee taking into account the strategic needs of the business. Given the nature of the business, these objectives and metrics may change significantly each year. There is no minimum bonus earned if threshold performance is not met.
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.	At the discretion of the Remuneration 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. 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. Awards have been made under an HMRC EMI plan where appropriate. Recovery provisions apply as summarised in the notes to the policy table on the next page.	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.	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. For strategic measures, vesting will be determined between 0% and 100% depending upon the Remuneration Committee's assessment of the extent to which the measure has been achieved.

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 Remuneration 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 Remuneration Committee may require the repayment of some or all of the deferred shares in the relevant circumstances (clawback).

LTIP:

The Remuneration 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 Remuneration 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 Remuneration 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 2019 will be subject to measures based on share price growth and revenue.

The Remuneration 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 Remuneration 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 Remuneration Committee; the Remuneration 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.

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.	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. 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.	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. 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.	Not applicable.

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 2019	Notice period
John Dawson	10 October 2008	N/A	12 months
Stuart Paynter	29 August 2017	N/A	12 months

Letters of appointment	Date of appointment	Unexpired term at 31 December 2019	Notice period
Lorenzo Tallarigo	1 February 2016	N/A	3 months
Martin Diggle	4 October 2012	N/A	3 months
Andrew Heath	1 January 2010	N/A	3 months
Stuart Henderson	1 June 2016	N/A	3 months
Heather Preston	15 March 2018	N/A	3 months
Robert Ghenchev	24 June 2019	N/A	3 months

All Directors are subject to re-election by shareholders on an annual basis in line with the 2018 Corporate Governance Code.

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 Remuneration 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 Remuneration Committee retains discretion to pay the bonus earlier in appropriate circumstances). The Remuneration 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 Remuneration Committee, the Remuneration 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 Remuneration Committee, taking into account, unless the Remuneration 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 Remuneration Committee determines. Awards which have already vested at the date of cessation may be exercised for such period as the Remuneration 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 Remuneration Committee, the Remuneration 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 Remuneration Committee taking into account the extent to which the performance condition is satisfied and, unless the Remuneration 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 Remuneration Committee determines. Awards which have already vested at the date of cessation may be exercised for such period as the Remuneration Committee determines.
Change of control	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. Awards under the Deferred Bonus Plan will vest in full in the event of a takeover, merger or other relevant corporate event. Awards under the LTIP will vest early on a takeover, merger or other relevant corporate event. The Remuneration Committee will determine the level of vesting taking into account the extent to which the performance condition is satisfied and, unless the Remuneration 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.
Other payments	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. In appropriate circumstances, payments may also be made in respect of accrued holiday, outplacement and legal fees. The Remuneration 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.

By order of the Board

Dr. Andrew Heath
Chair, Remuneration Committee

6 May 2020

Corporate governance
Directors' report

for the year ended 31 December 2019

The Directors present their Annual report and audited consolidated financial statements for the year ended 31 December 2019 as set out on pages 110 to 150. This report should be read in conjunction with the Corporate governance report on pages 57 to 100. 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 2020 on page 33, is on pages 15 to 55. 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 2019 audit, and the full Board reviewed the contents of the report at its 24 March 2020 meeting. Since the Board met six times for routine meetings in 2019 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 38 to 47.

Corporate governance

The Group's statement on corporate governance is included in the Corporate governance report on pages 57 to 100.

Risk management

The Group's exposure to risks is set out on pages 58 to 62 (principal risks and uncertainties) and on page 125 (note 3: financial risk management).

Dividends

The Directors do not recommend payment of a dividend (2018: £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 64 and 65 and page 34. 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 2019 are disclosed in the Directors' remuneration report on pages 76 to 93.

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 AGM and may offer himself for re-election. In order to ensure that the Company complies with the 2018 Corporate Governance Code all Directors will retire at each AGM 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 or she is prohibited by law from being a Director; in the event of bankruptcy; if he or she is suffering from specified mental disorders; if he or she 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 2019 and up to the date of approval of the financial statements.

Share capital

Structure of the Company's capital

On 30 May 2018, Oxford Biomedica consolidated its existing ordinary shares of 1 pence each into new consolidated ordinary shares of 50 pence each (each carrying one vote and ranking equally with each other). At 31 December 2019 the Company had 76,859,131 ordinary 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 29 May 2019, authority was given to allot up to 22,053,954 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 22,053,954 shares, solely in a rights issue. Authority was also given, subject to certain conditions, to waive pre-emption rights over up to 6,616,184 shares, being 10% of the shares then in issue. No rights have been granted to the Directors to buy back shares.

Substantial shareholdings

At 15 April 2020, 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	11,668,640	15.1%
M&G Investments	11,563,240	15.0%
Novo Holdings	7,750,000	10.1%
Hargreaves Lansdown PLC	3,243,825	4.2%
Mr. S M H Shah	2,992,000	3.9%
Liontrust Asset Management	2,501,993	3.3%
Aviva plc	2,425,544	3.2%
Interactive Investor Trading	2,372,412	3.1%
Oaktree Capital Management	2,314,054	3.0%

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

In accordance with s172 of the Companies Act 2006, the Group communicates and consults regularly with employees throughout the year. In addition, the Group has designated Non-Executive Director, Stuart Henderson, for gathering the views of the workforce and to oversee employee engagement. Employees' involvement in the Group's performance is encouraged, with all employees eligible to participate in the Group's share option scheme or the LTIP. Certain employees currently participate in discretionary bonus schemes but in the future all employees will be eligible for the bonus scheme.

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 responsible business statement on pages 48 to 54.

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 2013 Deferred Bonus Plan. The EBT currently holds 116,724 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 financial position of the Group, its cash flows and liquidity position are described in the primary statements and notes to these financial statements.

The Group held £16.2 million and £17.2 million of cash at the end of December 2019 and April 2020 respectively. Although in 2019 the Group recorded an operating loss of £14.5 million and did not generate positive operational cash flow, this was largely due to operational scale-up of investments in its people and operational capabilities as part of the strategic decision to increase its bioprocessing capacity.

In assessing the going concern assumptions, the Board has undertaken a rigorous assessment of the forecasts and assessed identified downside risks and mitigating actions. The downside risks include a number of severe but plausible scenarios incorporating underperformance against the business plan, unexpected cash outflows and fewer new customers. Due to the Group's scale-up of investments and strategic decision to increase it's bioprocessing facility, the Group requires additional financing in the form of equity financing, loan financing or other government finance initiatives in order to continue its operations and current capabilities.

Due to volatility in the financial markets created by the impact of the COVID-19 pandemic, fund raising through issuance of equity to the investment community as planned has become very difficult and the Group has not had the opportunity to raise funding in line with the originally planned timeline. Therefore, the Board has undertaken a much more rigorous review of the detailed cash flow forecast prepared as part of the going concern assessment process. The process identified that the Group would not be able to continue its activities for at least 12 months from the date of approval of these financial statements if the Group could not secure the external financing and continue to execute and recover known and expected revenues from existing customers under long term contracts, which are ongoing but still to be delivered or securing the benefit of any upfront receipts from licensing out the Group's intellectual property or win new customer contracts for process development and bioprocessing services.

Whilst it is difficult to estimate the impact of COVID-19 due to the rapidly changing nature of the pandemic, the cash flow forecasts include the Group's current assumptions, taking into account the severe but plausible downsides. The assumptions include a reduction in revenues by almost 30% (fewer new customer, lower demand from existing customers and reduction in milestones), a reduction in associated costs and lower discretionary capital expenditure.

If the Group is unable to the secure the external financing and receipt the revenues described above, it has assessed that it would not be able to generate sufficient cash flows to support its level of activities beyond the third quarter of 2020. The above situation gives rise to a material uncertainty, as defined in auditing and accounting standards, related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern and in such circumstances, it may therefore be unable to realise its assets and discharge its liabilities in the normal course of business.

However, despite the above uncertainties, the Board has the confidence that the accounts should be prepared on a going concern basis for the following reasons:

- the Group has key worker status which allows continuity of providing services to the Group's financially stable customer base throughout the lockdown period.
- the Group's ability to continue to be successful in winning new customers and building its brand as demonstrated by:
  - signing the substantial license, manufacturing and development agreement with Juno (BMS) in March 2020,
  - joining a Consortium led by the Jenner Institute, Oxford University, to rapidly develop, scale-up and manufacture a potential vaccine candidate for COVID-19, with Government support for the funding of the project expected.
- the Group's ability to potentially access the Government Coronavirus Business Interruption Loan Scheme and also external debt finance as required,
- the Group's history of being able to access capital markets and,
- the Group's ability to control capital expenditure costs and lower other operational spend, as necessary.

Therefore the Directors have continued to adopt the going concern basis of preparation in the financial statements.

Although the UK's decision to leave the European Union may significantly affect the fiscal, monetary and regulatory landscape in the UK, the Group has assessed the future impact of Brexit on its operations to be minor. Further details of the Group's contingency planning is provided on page 62.

Viability Statement

Assessment of prospects

In accordance with the 2018 UK Corporate Governance code, the Directors have performed a robust assessment over their prospects for a period, based on their assessment, of three years covering the period from 1 January 2020 to 31 December 2022. They believe three years to be appropriate due to the inherent significant uncertainties of forecasting within and 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 since that time.

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. Prior to the outbreak of the COVID-19 pandemic, the Group was 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. The Group is expected to be significantly impacted over the short term by the COVID-19 pandemic, predominantly by the current difficulties in accessing the capital markets, as is set out in further detail in the going concern assessment on page 96 which looks at the 12-month period from date of signature of the accounts. However, the Directors believe that once the short term funding constraints have been overcome, that revenues from licensing its technology to third parties and from providing process development and bioprocessing services to its partners will continue to grow and will be sufficient to support a sustainable Group.

Assessment of viability

The main area of risk to the viability of the Group within the three-year period to December 2022 is the Group being unable to access the capital markets to obtain the necessary funding required to make the operational and capital investments required to continue its growth strategy. In terms of the short term outlook of the Group, this risk is brought into sharp focus by the COVID-19 pandemic which has caused disruption in the markets and impacted the Group's ability to access the capital markets (refer going concern assessment on page 96 for further detail). Whilst demand for the Group's bioprocessing and process development services is not currently impacted, a protracted economic slowdown and strict isolation measures within the UK will impact the Group's revenue generating capabilities over the short term. The Group is however confident that with its leading position in the fast growing cell and gene therapy industry, its expanding customer base (underpinned by long term contracts and a resilient and financially stable customer base), and with the support of its largest shareholders, that it will be able to access the additional capital required to allow it to continue its operations and ultimately to achieve its long term growth ambitions.

Over the longer term, it is important for the Group to be able to generate sufficient revenues to cover its operational spend, facility expansion commitments and the additional investments required in R&D to maintain its leading position and develop its own products e.g. OXB-302. In particular, the successful development of Axo-Lenti PD is of significant importance due to the large milestones receivable under the terms of our collaboration, which if not achieved would have a materially negative impact on the Group. However, to a large degree the current investments in facilities and internal R&D projects can be managed in line with revenues, and the Group continues its efforts to mitigate its financial risks by expanding and deepening its customer base e.g. the addition of Juno (BMS) and other new customers already conducting feasibility studies, as well as other potential new customers, and by securing a 5-year extension to the Novartis commercial supply agreement. The progression of other major customer programmes such as Sanofi (Hemophilia), UKCFGTC/Boehringer (Cystic Fibrosis), Santen and Orchard also remains important to the Group, but as the number of customer products' increase, the risk from individual product setbacks reduces.

The Directors anticipate that the Group has strong prospects for attracting and fulfilling the demands from more customer programmes, and in doing so ultimately being able to continue the Group's recent growth in customer activity over the longer term. The Group's financial forecasts 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 2022. However, over the short term as outlined in the going concern assessment on page 96 the Group will need to raise funds before the end of the third quarter 2020, and over the longer term, in the event revenues were to fall below the Director's expectations, the Group would need to again 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 of association 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 and Robert Ghenchev have elected to receive no fees for their services as Directors (page 82).
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 27, page 141).

Statement of Directors' responsibilities in respect of the annual report and the financial statements

The Directors are responsible for preparing the Annual report and the Group and parent Company financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare Group and parent Company financial statements for each financial year. Under that law they are required to prepare the Group financial statements in accordance with International Financial Reporting Standards as adopted by the European Union (IFRSs as adopted by the EU) and applicable law and have elected to prepare the parent Company financial statements on the same basis.

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 parent Company and of their profit or loss for that period. In preparing each of the Group and parent Company financial statements, the Directors are required to:

— select suitable accounting policies and then apply them consistently;

— make judgements and estimates that are reasonable, relevant and reliable;

— state whether they have been prepared in accordance with IFRSs as adopted by the EU;

— assess the Group and parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and

— use the going concern basis of accounting unless they either intend to liquidate the Group or the parent Company or to cease operations, or have no realistic alternative but to do so.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the parent Company's transactions and disclose with reasonable accuracy at any time the financial position of the parent Company and enable them to ensure that its financial statements comply with the Companies Act 2006. They are 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, and have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group and to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the Directors are also responsible for preparing a Strategic report, Directors' report, Directors' remuneration report and Corporate governance report that complies with that law and those regulations.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Responsibility statement of the Directors in respect of the annual financial report

We confirm that to the best of our knowledge:

— the financial statements, prepared in accordance with the applicable set of accounting standards, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole; and

— the Strategic report includes a fair review of the development and performance of the business and the position of the issuer and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

We consider 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's position and performance, business model and strategy.

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

The auditors, KPMG LLP, have indicated their willingness to continue in office and a resolution concerning their reappointment will be proposed at the AGM.

Greenhouse gas emissions report

Details on greenhouse gas emissions are set out in the Responsible business section of the Strategic report on page 52.

Annual General Meeting

The AGM will be held at 3p.m. on Tuesday 23 June 2020 at our Windrush Court laboratories and offices but the Group encourages shareholders to attend the AGM by webcast and vote by proxy.

By order of the Board

Stuart Paynter
Chief Financial Officer

6 May 2020

Independent auditors' report
To the members of Oxford Biomedica plc

1. Our opinion is unmodified

We have audited the financial statements of Oxford Biomedica plc ("the Company") for the year ended 31 December 2019 which comprise the consolidated statement of comprehensive income, the Group and parent Company Statement of financial positions, the Group and parent Company statements of cash flows, the Group and parent Company statements of changes in equity attributable to owners of the parent, and the related notes, including the accounting policies in note 1.

In our opinion:

- the financial statements give a true and fair view of the state of the Group's and parent Company's affairs as at 31 December 2019 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards as adopted by the European Union (IFRSs as adopted by the EU);
- and the parent Company financial statements have been properly prepared in accordance with IFRSs as adopted by the EU and as applied in accordance with the provisions of the Companies Act 2006;
- and the financial statements 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.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities are described below. We believe that the audit evidence we have obtained is a sufficient and appropriate basis for our opinion. Our audit opinion is consistent with our report to the audit committee.

We were first appointed as auditor by the shareholders on 29 May 2018. The period of total uninterrupted engagement is for the two financial years ended 31 December 2019. We have fulfilled our ethical responsibilities under, and we remain independent of the Group in accordance with, UK ethical requirements including the FRC Ethical Standard as applied to listed public interest entities. No non-audit services prohibited by that standard were provided.

Overview

Materiality: Group financial statements as a whole £520k (2018: £570k) 0.81% of revenue (2018: 0.85%).

Coverage: 100.0% of Group revenue (2018: 100%).

Key audit matters vs 2018 (New and recurring risks):
New: Going concern material uncertainty and the impact of uncertainties due to the COVID-19 pandemic (2018: ▲).
New: Bioprocessing revenue recognition (2018: ▲).
New: Uncertain outcome of customer claim (2018: ▲).
Recurring: Recoverability of parent Company's investment in and loans due from subsidiaries (2018: ◄►).

Independent auditors' report
To the members of Oxford Biomedica plc

2. Material uncertainty related to going concern

	The risk	Our response
Going concern – material uncertainty in relation to going concern, including the impact of the uncertainties of COVID-19 pandemic We draw attention to note 1 to the financial statements which indicates that the Group's and the parent company's ability to continue as a going concern is dependent on additional funding in the form of equity financing, loan financing or other government finance initiatives. These events and conditions, along with the other matters explained in note 1, constitute a material uncertainty that may cast significant doubt on the group's and the parent company's ability to continue as a going concern. Our opinion is not modified in respect of this matter.	**Disclosure quality** The financial statements explain how management has formed a judgement that it is appropriate to adopt the going concern basis of preparation for the Group and Parent company. Their judgement is based on the evaluation of the inherent risks to the Group and parent company's access to funding, including the impact of the uncertainties of COVID-19 pandemic, and how those risks might affect the Group's and the Company's financial resources or ability to continue operations over a period of at least a year from the approval of the financial statements. The risk for our audit is whether or not those risks are such that they amount to a material uncertainty that may cast significant doubt about their ability to continue as a going concern. If so that fact is required to be disclosed (as has been done) and, along with a description of the circumstances, is a key financial statements disclosure.	Our procedures included: — **Evaluating management's intent:** Evaluating the intent of the management and the timing and achievability of funding options and cost saving actions they consider would improve the position should risks materialise. — **Historical comparisons:** Assessing cashflow forecasts against actual cash flows achieved in the year and in previous years to assess historical reliability of data. — **Sensitivity analysis:** — Considering key inputs into the cash flow forecasts and assessing the company's sensitivity analysis on reasonably possible (but not unrealistic) adverse effects that could arise from these risks individually and collectively whilst considering the effect on the level of available financial resources. — Challenged management on the appropriateness of expected revenue volumes, growth rates, and expected costs by comparing to historical trends and our knowledge of the business and sector it operates in. — **Assessing transparency:** Assessing the completeness and accuracy of the matters covered in the going concern disclosures with reference to the outcome of the procedures detailed above. **Our results:** We found the disclosure quality of the material uncertainty to be acceptable.

We are required to report to you if the directors' going concern statement under the Listing Rules set out on page 96 is materially inconsistent with our audit knowledge. We have nothing to report in this respect.

3. Other key audit matters: including our assessment of risks of material misstatement

Other key audit matters are those matters that, in our professional judgment, were of most significance in the audit of the financial statements and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by us, 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. Going concern is a significant key audit matter and is described in section 2 of our report. We summarise below the key audit matters, in decreasing order of audit significance, in arriving at our audit opinion above, together with our key audit procedures to address those matters and, as required for public interest entities, our results from those procedures. These matters were addressed, and our results are based on procedures undertaken, in the context of, and solely for the purpose of, our audit of the financial statements as a whole, and in forming our opinion thereon, and consequently are incidental to that opinion, and we do not provide a separate opinion on these matters.

	The risk	Our response
Bioprocessing revenue recognition and related contract liabilities Contract liabilities: £(13.8m) including the £1.8m relating to bioprocessing contract liabilities. (2018: £(18.4m) including £nil relating to contract liabilities) Refer to page 121 Contract liabilities and deferred income (accounting policy) and page 72 of audit committee report Refer to note 20, page 136 contract balances disclosures (financial disclosures).	**Subjective estimate** Bioprocessing revenue relates to the manufacture of lentiviral vectors and is recognised over time. Bioprocessing of lentiviral vectors is complex, such that batches may fail to meet the required specifications due to contamination or inadequate yield. Therefore, there is a risk that amounts recognised as revenue overtime will subsequently be reversed. Management uses historical data to estimate a refund liability (bioprocessing contract liability) for future batch failures at the Statement of financial position date. The effect of this matter is that, as part of our risk assessment, we determined that the value of the refund liability has a high degree of estimation uncertainty, with a potential range of reasonable outcomes greater than our materiality for the financial statements as a whole	Our procedures included: — **Accounting analysis:** Assessing the assumptions made by the Group in determining their estimate of future batch failures. — **Personnel interviews:** Corroborating reasonableness of assumptions with individuals in the technical team, including the Qualified Person, who holds the regulatory license for releasing finished products. — **Historical comparisons:** Evaluating the accuracy of the failure rate as previously recognised, based on developments through the second half of the year. — **Sensitivity analysis:** Performing sensitivity analysis to assess the reasonable range of potential outcomes. — **Assessing transparency:** Assessing the adequacy of the Group's disclosures about the estimation uncertainty involved in the recognition of the bioprocessing contract liability. **Our results:** We found the Group's estimate of the Bioprocessing refund liability and related disclosures of the estimation uncertainty to be acceptable.
Uncertain outcome of customer claim We draw attention to note 36 of the Financial Statements concerning the uncertain outcome of a potential claim against the Group. The claim is in respect of a certain process development work performed on behalf of the customer in 2018 and 2019.	**Disclosure Quality** The financial statements explain how management have formed a judgement based on the evaluation of the inherent risks to the Group and the Parent company of the level of uncertainty in estimating the quantum and timing (if any) on account balances relating to a potential claim from a third party. The risk for our audit is whether or not the circumstances, risks, significant judgements, and estimation uncertainties, which are key financial statement disclosures, are disclosed.	Our procedures included: — **Enquiry of lawyers:** Inspecting correspondence with the Group's external counsel accompanied by formal confirmations from that counsel. — **Accounting analysis:** Challenging the Group's judgement and estimates on the appropriate accounting treatment and assessing conclusions reached, in particular the revenue reversal and the likelihood of a claim for external costs from the customer, against known facts and circumstances. — **Assessing transparency:** Assessing whether the disclosures provide a clear and sufficient description of the nature of the contingent liability of the Group and of the Parent Company and the inherently subjective nature of the judgements and accounting estimates on the timing and quantum of any outflows. **Our Results:** We found the disclosure quality of the matter to be acceptable.
Recoverability of parent Company's investment in and intercompany loans due from subsidiaries Investments: Group £15.2m (2018:£15.2m). Loans to group undertakings £122.1m (2018: 68.7m) Refer to page 120 investment in subsidiaries (accounting policy) and page 133 note 15 Investments: Group (financial disclosures).	**Low risk, high value** The carrying amount of the parent Company's investment in and intercompany loans to the sole trading subsidiary represents (99.7%) of the Company's total assets. Their recoverability is not at high risk of significant misstatement or subject to significant judgements. However, due to their materiality in the context of the parent Company financial statements, this is considered to be the areas that had the greatest effect on our overall parent Company audit.	Our procedures included: — **Test of details:** Confirming the mathematical integrity of the company's value in use model — Comparing the carrying amount of the investment and loans owed by Group undertakings with the expected value of the business based on the Group's market capitalisation as adjusted by the trade and monetary assets and liabilities held by the parent Company. — Comparing the carrying amount of the investment to the value in use of the Group's assets, being an indication of its recoverable amount to assess whether there are any indicators of impairment of the investment's and the loans owed by group undertakings. — **Historical comparisons:** Assessing cashflow forecasts against historical results achieved in the year and in previous years to assess historical reliability of the forecasts. — **Sensitivity analysis:** Performing sensitivity analysis to evaluate the impact of reasonably possible changes to key assumptions. **Our results:** We found the Parent's assessment of the recoverability of the investment in and loans due from its subsidiaries to be acceptable (2018: acceptable)

We continue to perform procedures over contract revenue recognition. However, based on the contracts signed in the year we have not assessed these to be the most significant risks in our current year audit and, therefore, it is not separately identified in our report this year.

Independent auditors' report
To the members of Oxford Biomedica plc

4. Our application of materiality and an overview of the scope of our audit

Materiality for the Group financial statements as a whole was set at £520k (2018: £570k), determined with reference to a benchmark of revenue of which it represents 0.81% (2018: 0.85%).

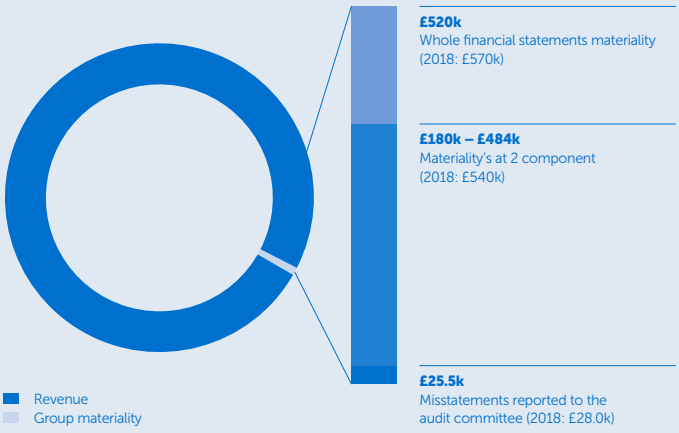
We consider total revenue to be the most appropriate benchmark as it provides a more stable measure year on year than group profit before tax.

Materiality for the parent Company financial statements as a whole was set at £180k (2018: £540k), determined with reference to a benchmark of Company total assets, of which it represents 0.26% (2018: 0.58%).

We agreed to report to the Audit Committee any corrected or uncorrected identified misstatements exceeding £25.5k (2018: £28.0k), in addition to other identified misstatements that warranted reporting on qualitative grounds.

Of the group's 4 components, we subjected 2 to full scope audits for group purposes. The components within the scope of our work accounted for 100% of group revenue, profit before tax and total assets (2018: 100% of group revenue, profit before tax and total assets).

The Group team approved the component materialities, which were set at £484k and £180k for both in-scope components (2018: £540k for both). The work on all of the components, including the audit of the parent Company, was performed by the Group team.



Revenue
£64.1m (2018: £66.8m)

Group Materiality
£520k (2018: £570k)

5. We have nothing to report on the other information in the Annual report

The directors are responsible for the other information presented in the Annual report together with the financial statements. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except as explicitly stated below, any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether, based on our financial statements audit work, the information therein is materially misstated or inconsistent with the financial statements or our audit knowledge. Based solely on that work we have not identified material misstatements in the other information.

Strategic report and directors' report

Based solely on our work on the other information:

— we have not identified material misstatements in the strategic report and the directors' report;

— in our opinion the information given in those reports for the financial year is consistent with the financial statements; and

— in our opinion those reports have been prepared in accordance with the Companies Act 2006.

Directors' remuneration report

In our opinion the part of the directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

Disclosures of principal risks and longer-term viability

Based on the knowledge we acquired during our financial statements audit, other than the material uncertainty related to going concern referred to above, we have nothing further material to add or draw attention to in relation to:

- the directors' confirmation within the viability statement on page 97 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 and liquidity;
- the Principal risks facing the business disclosures describing these risks and explaining how they are being managed and mitigated; and
- the directors' explanation in the viability statement of how they have assessed the prospects of the Group, over what period they have done so and why they considered 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.

Under the Listing Rules we are required to review the viability statement. We have nothing to report in this respect.

Our work is limited to assessing these matters in the context of only the knowledge acquired during our financial statements audit. As we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgments that were reasonable at the time they were made, the absence of anything to report on these statements is not a guarantee as to the Group's and Company's longer-term viability.

Corporate governance disclosures

We are required to report to you if:

- we have identified material inconsistencies between the knowledge we acquired during our financial statements audit and the directors' statement that they consider that the annual report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy; or
- the section of the annual report describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee.

We have nothing to report on the other matters on which we are required to report by exception

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

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

We have nothing to report in these respects.

Independent auditors' report
To the members of Oxford Biomedica plc

6. Respective responsibilities

Directors' responsibilities

As explained more fully in their statement set out on page 99, the directors are responsible for: the preparation of the financial statements including being satisfied that they give a true and fair view; 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; assessing the parent Group and parent 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 they either intend to liquidate the parent Company or Group or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities

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 other irregularities (see below), or error, and to issue our opinion in an auditor's report. Reasonable assurance is a high level of assurance, but does not guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud, other irregularities or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

A fuller description of our responsibilities is provided on the FRC's website at www.frc.org.uk/auditorsresponsibilities.

Irregularities – ability to detect

We identified areas of laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general commercial and sector experience and through discussion with the directors and other management (as required by auditing standards), and discussed with the directors and other management the policies and procedures regarding compliance with laws and regulations. We communicated identified laws and regulations throughout our team and remained alert to any indications of non-compliance throughout the audit.

The potential effect of these laws and regulations on the financial statements varies considerably.

Firstly, the group is subject to laws and regulations that directly affect the financial statements including financial reporting legislation (including related companies legislation), distributable profits legislation and taxation legislation

We assessed the extent of compliance with these laws and regulations as part of our procedures on the related financial statement items.

Secondly, the group is subject to many other laws and regulations where the consequences of non-compliance could have a material effect on amounts or disclosures in the financial statements, for instance through the imposition of fines or litigation or the loss of the group's licence to operate. We identified the following areas as those most likely to have such an effect: those related to the pharmaceutical industry imposed by the Food and Drug Administration (FDA) and Medicines and Healthcare products Regulatory Agency (MHRA) recognising the regulated nature of the Group's activities. Auditing standards limit the required audit procedures to identify non-compliance with these laws and regulations to enquiry of the directors and other management and inspection of regulatory and legal correspondence, if any.

These limited procedures did not identify actual or suspected non-compliance.

Owing to the inherent limitations of an audit, there is an unavoidable risk that we may not have detected some material misstatements in the financial statements, even though we have properly planned and performed our audit in accordance with auditing standards. For example, the further removed non-compliance with laws and regulations (irregularities) is from the events and transactions reflected in the financial statements, the less likely the inherently limited procedures required by auditing standards would identify it. In addition, as with any audit, there remained a higher risk of non-detection of irregularities, as these may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls. We are not responsible for preventing non-compliance and cannot be expected to detect non-compliance with all laws and regulations.

7. The purpose of our audit work and to whom we owe our responsibilities

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members, as a body, for our audit work, for this report, or for the opinions we have formed.

William Smith (Senior Statutory Auditor)
for and on behalf of KPMG LLP, Statutory Auditor

Chartered Accountants

2 Forbury Place
33 Forbury Road
Reading
RG1 3AD

6 May 2020

The Group has pioneered this science from the beginning.

The Group must now maintain momentum, seize opportunity and remain front and centre as gene therapies become commonly used healthcare solutions for millions of people everywhere.

It's going mainstream. Fast.

Consolidated statement of comprehensive income

for the year ended 31 December 2019

Continuing operations	Note	2019 £'000	2018 £'000
Revenue	4	**64,060**	66,778
Cost of sales		**(35,723)**	(33,261)
Gross profit		**28,337**	33,517
Research and development costs	4	**(22,546)**	(17,973)
Bioprocessing costs		**(7,378)**	(1,243)
Administrative expenses		**(11,881)**	(7,433)
Other operating income	4	**884**	1,064
Revaluation of investments		**–**	5,983
Change in fair asset held at fair value through profit and loss		**(1,883)**	–
Operating (loss)/profit	4	**(14,467)**	13,915
Finance income	6	**104**	71
Finance costs	6	**(6,526)**	(8,972)
(Loss)/profit before tax		**(20,889)**	5,014
Taxation	8	**4,823**	2,527
(Loss)/ profit and total comprehensive (expense)/income for the year	29	**(16,066)**	7,541
Basic (loss)/earnings per ordinary share	9	**(22.10p)**	11.57p
Diluted (loss)/earnings per ordinary share	9	**(22.10p)**	10.89p

There was no other comprehensive income or loss in either year.

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

Group financial statements

Statement of financial positions

as at 31 December 2019

	Note	Group 2019 £'000	Group 2018 £'000	Company 2019 £'000	Company 2018 £'000
Assets					
Non-current assets					
Intangible assets	11	**95**	117	**–**	–
Property, plant and equipment	12	**61,932**	31,791	**–**	–
Investment at fair value through profit and loss	14	**–**	10,966	**–**	–
Investments and loans in subsidiary	15	**–**	–	**146,761**	91,786
Trade and other receivables	17	**3,605**	4,000	**–**	–
Deferred tax assets	24	**359**	–	**359**	1,129
		65,991	46,874	**147,120**	92,915
Current assets					
Inventories	16	**2,579**	4,251	**–**	–
Assets at fair value through profit and loss	13	**2,719**	–	**–**	–
Trade and other receivables	17	**30,045**	26,585	**–**	–
Current tax assets	8	**5,351**	2,446	**–**	–
Cash and cash equivalents	18	**16,243**	32,244	**2**	11
		56,937	65,526	**2**	11
Current liabilities					
Trade and other payables	19	**14,297**	11,422	**109**	164
Contract liabilities	20	**13,156**	17,084	**–**	–
Deferred income	20	**1,006**	–	**–**	–
Lease liabilities	33	**482**	–	**–**	–
Provisions	22	**–**	–	**–**	–
		28,941	28,506	**109**	164
Net current assets/(liabilities)		**27,996**	37,020	**(107)**	(153)
Non-current liabilities					
Loans	21	**–**	41,153	**–**	–
Provisions	22	**5,086**	1,287	**–**	–
Contract Liabilities	20	**1,695**	1,401	**–**	–
Deferred income	20	**3,310**	5,033	**–**	–
Lease liabilities	33	**7,907**	–	**–**	–
Deferred tax liabilities	24	**359**	279	**–**	–
		18,357	49,153	**–**	–
Net assets		**75,630**	34,741	**147,013**	92,762
Equity attributable to owners of the parent					
Ordinary shares	25	**38,416**	33,034	**38,416**	33,034
Share premium account	26	**222,618**	172,074	**222,618**	172,074
Other reserves	30	**2,291**	3,509	**11,072**	10,731
Accumulated losses	29	**(187,695)**	(173,876)	**(125,093)**	(123,077)
Total equity		**75,630**	34,741	**147,013**	92,762

The Company's registered number is 03252665.

The Company made a loss for the year of £2,016,000 (2018: £446,000).

The financial statements on pages 110 to 150 were approved by the Board of Directors on 6 May 2020 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 2019

	Note	Group 2019 £'000	Group 2018 £'000	Company 2019 £'000	Company 2018 £'000
Cash flows from operating activities					
Cash (used in)/generated from operations	31	**(6,636)**	9,214	**(1,301)**	(1,483)
Tax credit received		**3,128**	3,654	**–**	–
Net cash (used in)/generated from operating activities		**(3,508)**	12,868	**(1,301)**	(1,483)
Cash flows from investing activities					
Purchases of property, plant and equipment	12	**(25,774)**	(10,103)	**–**	–
Purchases of intangible assets	11	**–**	(45)	**–**	–
Proceeds on disposal of property, plant and equipment		**2**	–	**–**	–
Proceeds on disposal of investment assets		**6,270**	–	**–**	–
Interest received		**104**	52	**–**	–
Net cash used in investing activities		**(19,398)**	(10,096)	**–**	–
Cash flows from financing activities					
Proceeds from issue of ordinary share capital	25, 26	**54,132**	21,184	**54,132**	21,143
Costs of share issues	26	**(769)**	(1,376)	**(769)**	(1,376)
Proceeds from the exercise of warrants	25	**1,345**		**1,345**	–
Loan to subsidiary		**–**	–	**(53,416)**	(18,304)
Interest paid		**(2,513)**	(4,665)	**–**	–
Redemption fee		**(866)**	–	**–**	–
Payment of lease liabilities		**(835)**	–	**–**	–
Loans repaid	21	**(43,589)**	–	**–**	–
Net cash generated from financing activities		**6,905**	15,143	**1,292**	1,463
Net (decrease)/increase in cash in cash and cash equivalents		**(16,001)**	17,915	**(9)**	(20)
Cash and cash equivalents at 1 January		**32,244**	14,329	**11**	31
Cash and cash equivalents at 31 December	18	**16,243**	32,244	**2**	11

Group financial statements

Statements of changes in equity attributable to owners of the parent

for the year ended 31 December 2019

Group	Notes	Ordinary shares £'000	Share premium account £'000	Reserves: Merger £'000	Reserves: Treasury £'000	Reserves: Warrant £'000	Accumulated losses £'000	Total equity £'000
At 1 January 2018		31,076	154,224	2,291	–	1,218	(182,663)	6,146
Year ended 31 December 2018								
Income for the year		–	–	–	–	–	7,541	7,541
Total comprehensive income for the year		–	–	–	–	–	7,541	7,541
Transactions with owners:								
Share options								
Proceeds from shares issued	25, 26	246	478	–	–	–	–	724
Value of employee services	28, 29	–	–	–	–	–	1,246	1,246
Issue of shares excluding options	25, 26	1,712	18,748	–	–	–	–	20,460
Cost Of Share Issues	26	–	(1,376)	–	–	–	–	(1,376)
At 31 December 2018		**33,034**	**172,074**	**2,291**	**–**	**1,218**	**(173,876)**	**34,741**
Year ended 31 December 2019:								
Loss for the year		**–**	**–**	**–**	**–**	**–**	**(16,066)**	**(16,066)**
Total comprehensive expense for the year		**–**	**–**	**–**	**–**	**–**	**(16,066)**	**(16,066)**
Transactions with owners:								
Share options								
Proceeds from shares issued	25, 26	**162**	**495**	**–**	**–**	**–**	**–**	**657**
Value of employee services	28, 29	**–**	**–**	**–**	**–**	**–**	**2,247**	**2,247**
Issue of shares excluding options	25, 26	**3,875**	**49,600**	**–**	**–**	**–**	**–**	**53,475**
Exercise of warrants		**1,345**	**1,218**	**–**	**–**	**(1,218)**	**–**	**1,345**
Cost of share issues	26	**–**	**(769)**	**–**	**–**	**–**	**–**	**(769)**
At 31 December 2019		**38,416**	**222,618**	**2,291**	**–**	**–**	**(187,695)**	**75,630**

Company	Notes	Ordinary shares £'000	Share premium account £'000	Reserves: Merger £'000	Reserves: Warrant £'000	Reserves: Other £'000	Accumulated losses £'000	Total equity £'000
At 1 January 2018		31,076	154,224	1,580	1,218	6,801	(122,590)	72,309
Year ended 31 December 2018:								
Loss for the year		–	–	–	–	–	(446)	(446)
Total comprehensive expense for the year	10	–	–	–	–	–	(446)	(446)
Transactions with owners:								
Share options								
Proceeds from shares issued	25, 26	246	478	–	–	–	–	724
Credit in relation to employee share schemes	26, 28	–	–	–	–	1,132	(41)	1,091
Issue of shares excluding options	28	1,712	18,748	–	–	–	–	20,460
Cost of share issues	26	–	(1,376)	–	–	–	–	(1,376)
At 31 December 2018		**33,034**	**172,074**	**1,580**	**1,218**	**7,933**	**(123,077)**	**92,762**
Year ended 31 December 2019:								
Loss for the year		**–**	**–**	**–**	**–**	**–**	**(2,016)**	**(2,016)**
Total comprehensive expense for the year	10	**–**	**–**	**–**	**–**	**–**	**(2,016)**	**(2,016)**
Share options								
Proceeds from shares issued	25, 26	**162**	**495**	**–**	**–**	**–**	**–**	**657**
Credit in relation to employee share schemes	28, 29	**–**	**–**	**–**	**–**	**1,559**	**–**	**1,559**
Issue of shares excluding options	25. 26	**3,875**	**49,600**	**–**	**–**	**–**	**–**	**53,475**
Exercise of warrants		**1,345**	**1,218**	**–**	**(1,218)**	**–**	**–**	**1,345**
Cost of share issues	26	**–**	**(769)**	**–**	**–**		**–**	**(769)**
At 31 December 2019		**38,416**	**222,618**	**1,580**	**–**	**9,492**	**(125,093)**	**147,013**

Notes to the consolidated financial statements

for the year ended 31 December 2019

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 2019 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 76 to 93 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 financial position of the Group, its cash flows and liquidity position are described in the primary statements and notes to these financial statements.

The Group held £16.2 million and £17.2 million of cash at the end of December 2019 and April 2020 respectively. Although in 2019 the Group recorded an operating loss of £14.5 million and did not generate positive operational cash flow, this was largely due to operational scale-up of investments in its people and operational capabilities as part of the strategic decision to increase its bioprocessing capacity.

In assessing the going concern assumptions, the Board has undertaken a rigorous assessment of the forecasts and assessed identified downside risks and mitigating actions. The downside risks include a number of severe but plausible scenarios incorporating underperformance against the business plan, unexpected cash outflows and fewer new customers. Due to the Group's scale-up of investments and strategic decision to increase it's bioprocessing facility, the Group requires additional financing in the form of equity financing, loan financing or other government finance initiatives in order to continue its operations and current capabilities.

Due to volatility in the financial markets created by the impact of the COVID-19 pandemic, fund raising through issuance of equity to the investment community as planned has become very difficult and the Group has not had the opportunity to raise funding in line with the originally planned timeline. Therefore, the Board has undertaken a much more rigorous review of the detailed cash flow forecast prepared as part of the going concern assessment process. The process identified that the Group would not be able to continue its activities for at least 12 months from the date of approval of these financial statements if the Group could not secure the external financing and continue to execute and recover known and expected revenues from existing customers under long term contracts, which are ongoing but still to be delivered or securing the benefit of any upfront receipts from licensing out the Group's intellectual property or win new customer contracts for process development and bioprocessing services.

Whilst it is difficult to estimate the impact of COVID-19 due to the rapidly changing nature of the pandemic, the cash flow forecasts include the Group's current assumptions, taking into account the severe but plausible downsides. The assumptions include a reduction in revenues by almost 30% (fewer new customers, lower demand from existing customers and reduction in milestones), a reduction in associated costs and lower discretionary capital expenditure.

If the Group is unable to the secure the external financing and receipt the revenues described above, it has assessed that it would not be able to generate sufficient cash flows to support its level of activities beyond the third quarter of 2020. The above situation gives rise to a material uncertainty, as defined in auditing and accounting standards, related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern and in such circumstances, it may therefore be unable to realise its assets and discharge its liabilities in the normal course of business.

However, despite the above uncertainties, the Board has the confidence that the accounts should be prepared on a going concern basis for the following reasons:

— the Group has key worker status which allows continuity of providing services to the Group's financially stable customer base throughout the lockdown period.

— the Group's ability to continue to be successful in winning new customers and building its brand as demonstrated by:

  — signing the substantial license, manufacturing and development agreement with Juno (BMS) in March 2020,

  — joining a Consortium led by the Jenner Institute, Oxford University, to rapidly develop, scale-up and manufacture a potential vaccine candidate for COVID-19, with Government support for the funding of the project expected.

— the Group's ability to potentially access the Government Coronavirus Business Interruption Loan Scheme and also external debt finance as required,

— the Group's history of being able to access capital markets and,

— the Group's ability to control capital expenditure costs and lower other operational spend, as necessary.

Therefore the Directors have continued to adopt the going concern basis of preparation in the financial statements.

Although the UK's decision to leave the European Union may significantly affect the fiscal, monetary and regulatory landscape in the UK, the Group has assessed the future impact of Brexit on its operations to be minor. Further details of the Group's contingency planning is provided on page 62.

Accounting developments

The Group has adopted the following IFRSs in these financial statements.

— IFRS 16: Leases. See note 2. This has been adopted using the modified retrospective method and as a result the comparatives have not been restated and are reported under IAS 17.

— IFRIC 23: Uncertainty over Income Tax Treatments.

— Amendments to IAS 19: Plan Amendment, Curtailment or Settlement.

— Amendments to IAS 28: Long-term Interests in Associates and Joint Ventures.

— Amendments to IFRS 9: Prepayments Features with Negative Compensation.

— Annual Improvements to IFRS Standards 2015-2017 Cycle.

Of these standards that became effective from 1 January 2019, only IFRS 16 had a material impact on the Group financial statements.

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.

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 Statement of financial position 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, royalties, options, and funded research and development programmes.

Platform

Bioprocessing of clinical/commercial product for partners is recognised on a percentage of completion basis over time as the processes are carried out. Progress is determined based on the achievement of verifiable stages of the process. The gross amount due from customers on all partnerships in progress for which costs incurred plus recognised profits exceed progress billings is presented as a contract asset separately on the Statement of financial position.

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.

Technology licences that have been established by the group have all been determined as "right to use" licences, rather than "right to access" licences. As such, the revenue from these licences is recognised at the point in time at which the licence transfers to the customer.

The granting of the technology licences to the Group's background intellectual property and know-how constitutes a "right to use" licence as our customers are able to conduct development work on the licence independent of Oxford Biomedica. Oxford Biomedica is incentivised separately for its performance obligations in relation to development work and milestone payments. The criteria for recognising these technology licences as "right to access" licences has therefore not been met.

Milestones relating to bioprocessing or process development activities have been identified as separate performance obligations as they involve the transfer of a distinct good or service, determined with reference to conditions stipulated in the relevant agreements or contracts. Each milestone is determined as either binary or non-binary.

Milestones that are considered to be binary relate to the achievement of specific events rather than the provision of, for example, support. Incentives related to the achievement of specific deliverables are considered to be binary incentives and will be recognised in full once it is deemed highly probable that the obligation will be met.

Milestones related to the provision of support services are considered to be non-binary incentives and are recognised on a percentage of completion basis, but taking into account the likelihood of achievement of the deliverable. Amounts receivable on delivery of a milestone performance obligation represents variable consideration and have been allocated to the relevant performance obligation.

Options to technology licences are recognised when the customer exercises the option to obtain that licence.

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

Product

Product licences that have been established by the Group have all been determined as "right to use" licences, rather than "right to access" licences. As such, the revenue from these licences is recognised at the point in time at which the licence transfers to the customer.

The granting of the product licences to the Group's background intellectual property and know-how constitutes a "right to use" licence as our customers are able to conduct development work on the licence independent of Oxford Biomedica. Oxford Biomedica is incentivised separately for its performance obligations in relation to development work and milestone payments. The criteria for recognising these technology licences as "right to access" licences has therefore not been met.

Amounts receivable in respect of milestone payments are considered to be separate performance obligations which are binary and will be recognised in full once it is deemed highly probable that the specific performance obligations 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.

Non-binary milestones are recognised on a percentage of completion basis 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. Amounts receivable on delivery of a milestone performance obligation represents variable consideration and have been allocated to the relevant performance obligation.

Royalty revenue is recognised as the underlying sales occur.

Research and development revenue and associated costs are recognised over time. Progress is determined based on the cost-to-cost method.

Cost of sales

Cost of sales comprises the cost of bioprocessing clinical product for partners, the cost of customer development project activities, and royalties arising on partners' licences.

The cost of customer development project activities includes the labour costs, overheads and other directly attributable material and third party 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 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.

Leases

The Group has applied IFRS 16 using the modified retrospective approach and therefore the comparative information has not been restated and continues to be reported under IAS 17 and IFRIC 4. The details of accounting policies under IAS 17 and IFRIC 4 are disclosed separately if they are different from those under IFRS 16 and the impact of changes is disclosed in Note 3.

This policy is applied to contract entered into on or after 1 January 2019.

As a lessee

At commencement or on modification of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease component on the basis of its relative stand-alone prices. However, for the leases of property the Group has elected to separate non-lease components and account for the lease and non-lease components as a single lease component.

The Group recognises a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or site on which it is located less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term or the cost of the right-of-use asset reflects that the Group will exercise a purchase option. In that case the right-of-use asset will depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain re-measurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. Generally, the Group uses its incremental borrowing rate as the discount rate.

The Group determines its incremental borrowing rate by obtaining interest rate form external financing sources and makes certain adjustments to reflect the terms of the lease and the type of the asset leased.

Lease payments included in the measurement of the lease liability comprise fixed payments.

The lease liability is measured at amortised cost using the effective interest method. It is re-measured if:

— there is a change in the Group's estimate of the amount expected to be payable under a residual future lease payments;

— the Group changes its assessment of whether it will exercise a purchase, extension or termination options; or

— there is a revised in-substance fixed lease payment.

If a lease liability is re-measured, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in the Profit or Loss if the carrying amount of the right-of-use asset has been reduced to zero.

The Group presents right-of-use assets in 'property, plant and equipment' and lease liabilities as a category on the face of the Statement of Financial Position.

Short-term or low-value leases

The Group has elected not to recognise right-of-use assets and lease liabilities of short-term and low-value lease. The Group recognises lease payments associated with these leases as an expense 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 Statement of financial position, whilst where grant income recognised exceeds grant income received, it is included within accrued income on the Statement of financial position.

Revaluation of equity instruments

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

Change in fair value of investment asset

The change in fair value of investment assets 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 Statement of financial position until such time as it is received.

The Group also receives a Research and Development Expenditure Credit ('RDEC') which is accounted for as a reduction in research, development and bioprocessing costs in the statement of comprehensive income, and within trade and other receivables in the Statement of financial position,

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 Statement of financial position date.

Deferred tax is calculated in respect of all temporary differences identified at the Statement of financial position 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 Statement of financial position 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.

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. Residual values are set at zero and will be reassessed should the asset's selling price exceed its net book value.

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

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 Group's 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

Assets at fair value through profit and loss

Assets at fair value through profit and loss by the Group are classified as fair value through profit and loss.

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 valued at amortised cost.

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 the transaction price as these assets do not have significant financing components and are subsequently measured at amortised cost. The Group recognises loss allowances for receivables under the expected credit loss model as established by 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.

Deposits

Deposits consist of amounts held in escrow and is included within other receivables within the Statement of financial position until such time as the restrictions relating to those amounts have been lifted.

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.

Contract liabilities and deferred income

Contract liabilities primarily relate to the advance consideration received from customers for commercial development work and bioprocessing batches, as well as options and funded research and development activities.

Deferred income

Deferred income primarily relates to the advance consideration received for grants and lease incentives.

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.

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 Statement of financial position.

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 IFRS9, 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 a finance cost.

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.

Key accounting matters

IFRS 16 Leases

The Group applied IFRS 16 using the modified retrospective approach, under which the cumulative effect of the initial application is recognised in retained earnings at 1 January 2019. Accordingly, the comparative information presented in 2018 is not restated – i.e. it is presented, as previously reported, under IAS 17 and related interpretations. The details of the change in accounting policies are disclosed below. Additionally, the disclosure requirements in IFRS 16 have generally been applied to comparative information.

Definition of a lease

Previously, the Group determined at contract inception whether an arrangement was or contained a lease under IFRIC 4 'Determining whether an Arrangement contains a Lease'. The Group now assesses whether a contract is or contains a lease based on the definition of a lease as explained in Note 2.

On transition to IFRS 16, the Group elected to apply the practical expedient to grandfather the assessment of which transactions are leases. The Group applied IFRS 16 only to contracts that were previously identified as leases. Contracts that were not identified as leases under IAS 17 and IFRIC 4 were not reassessed for whether there is a lease under IFRS 16. Therefore, the definition of a lease under IFRS 16 was applied only to contracts entered into or changed in or after 1 January 2019.

As a lessee

As a lessee, the Group leases property and IT equipment. The Group previously classified leases as operating or finance leases based on its assessment of whether the lease transferred significantly all of the risks and reward incidental to ownership of the underlying asset to the Group. Under IFRS 16, the Group recognises right-of-use assets and lease liabilities for most of these leases.

At the commencement or on modification of a contract that contain a lease component, the Group allocates the consideration in the contract to each lease component on the basis of its relative stand-alone price. However, for leases of property the Group has elected not to separate non-lease components and account for the lease and associated non-lease components as a single lease component.

Leases classified as operating leases under IAS 17

Previously, the Group classified property and IT equipment leases as operating leases under IAS 17. On transition, for these leases, lease liabilities were measured at the present value of the remaining lease payments, discounted at the Group's incremental borrowing rate as at 1 January 2019. Right-of-use assets are measured at an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments and lease incentives.

The Group tested its right-of-use assets for impairment on the date of transition and has concluded that there is no indication that the right-of-use assets are impaired.

The Group used the following practical expedients when applying IFRS 16 to leases previously classified as operating leases under IAS 17:

— Applied a single discount rate to a portfolio of leases with similar characteristics.

— Applied the exemption not to recognise right-of-use assets and liabilities for leases with less than 12 months of lease term.

— Excluded initial direct costs from measuring the right-of-use asset at the date of initial application.

Leases classified as finance leases under IAS 17

The Group had no leases that were previously classified as finance leases.

Impact on transition

On transition to IFRS 16, the Group recognised additional right-of-use assets and lease liabilities. The difference is due to adjustments related to any prepaid or accrued lease payments and lease incentives. The impact on transition is summarised below:

	Total £'000
Right-of-use assets	6,355
Prepayments	4
Accruals	7
Deferred income	2,250
Lease liabilities	8,616

When measuring lease liabilities for lease that were classified as operating lease, the Group discounted lease payments using a weighted-average rate of 8%:

	Total £'000
Operating lease commitments at 31 December 2018 as disclosed under IAS 17 in the Group's consolidated financial statements	13,906
Discounted using the incremental borrowing rates at 1 January 2019	8,616

Judgments

Going concern

Management and the directors have had to make estimates and important judgments when assessing the going concern status of the Group. The conclusions of these estimates and judgments are reported in several places in this annual report including the Directors Report (page 96) and Note 1 to the financial statements (page 114).

Estimations

The key assumptions concerning the future, and other key sources of estimation uncertainty at the reporting date, 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. The nature of estimation means that actual outcomes could differ from those estimates.

Lease liability discount rate

Since the rates implicit in our leases are not readily determinable, we use the Group's incremental borrowing rates (the rate of interest that we would have to pay to borrow on a collateralised basis over a similar term for an amount equal to the lease payments in a similar economic environment) based on the information available at commencement date in determining the discount rate used to calculate the present value of lease payments. The rates have been determined using previously available information on borrowing rates as well as indicative borrowing rates that would be available to us based on the value, currency and borrowing term provided by financial institutions, adjusted for company and market specific factors. Although we do not expect our estimates of the incremental borrowing rates to generate material differences within a reasonable range of sensitivities, judgement is involved in selecting an appropriate rate, and the rate selected for each lease will have an impact on the value of the lease liability and corresponding right-of-use (ROU) asset in the Consolidated Statement of financial positions.

Percentage of completion of bioprocessing batch revenues

Bioprocessing of clinical/commercial product for partners is recognised on a percentage of completion basis over time as the processes are carried out. Progress is determined based on the achievement of verifiable stages of the bioprocessing process. Revenues are recognised on a percentage of completion basis and as such require judgement in terms of the assessment of the correct stage of completion including the expected costs of completion for that specific bioprocessing batch. The value of the revenue recognised and the related contract asset raised with regards to the bioprocessing batches which remain in progress at year end is £20,863,000. If the assessed percentage of completion was 10 percentage points higher or lower, revenue recognised in the period would have been £2,086,300 higher or lower.

Percentage of completion of fixed price process development revenues

As it satisfies its performance obligations the Group recognizes revenue and the related contract asset with regards to fixed price process development work packages. Revenues are recognised on a percentage of completion basis and as such require judgement in terms of the assessment of the correct percentage of completion for that specific process development work package. The value of the revenue recognised and the related contract asset raised with regards to the work packages which remain in progress at year end is £5,447,000. If the assessed percentage of completion was 10 percentage points higher or lower, revenue recognised in the period would have been £540,000 higher or lower.

Provision for out of specification bioprocessing batches

Bioprocessing of clinical/commercial product for partners is recognised on a percentage of completion basis over time as the processes are carried out. Progress is determined based on the achievement of verifiable stages of the process.

As the Group has now been bioprocessing product across a number of years, and also in a commercial capacity, the Group has assessed the need to include an estimate of bioprocessed product for which revenue has previously been recognised and which may be reversed should the product go out of specification during the remaining period over which the product is bioprocessed. In calculating this estimate the Group has looked at historical rates of out of specification batches across the last four years, and has applied the percentage of out of specification batches to total batches produced across the assessed period to the revenue recognised on batches which have not yet completed the bioprocessing process at year end. This estimate, based on the historical percentage, may be significantly higher or lower depending on the number of bioprocessing batches actually going out of specification in future. If the historical percentage had been 10% higher or lower, the estimate would be £180,000 higher or lower.

The estimate will increase or decrease based on the number of bioprocessing batches which go out of specification over the historic assessment period, but also the number of bioprocessing batches which have not yet completed the bioprocessing process at year end.

Consequently, bioprocessing revenue of £1.8 million (2018: nil) has not been recognised during 2019 (2018: Nil) with the corresponding credit to contract liabilities (note 20). This unrecognised revenue will be recognised as the batches complete bioprocessing, although batches bioprocessed in 2020 and beyond will be included in the estimate as they progress through the bioprocessing process.

Estimate and judgments: Potential litigation

The Group are currently aware of a potential claim and are assessing the facts and circumstances surrounding the possible outcomes, with the assistance of internal technical experts and external counsel, to determine the likelihood of the Group incurring a liability and to evaluate the extent to which a reliable estimate of any liability can be made. Considering the nature of the matter, there is an inherent judgement and a level of uncertainty in the revenue reversal and the quantum and timing of any cash outflows. The likely cost to the group of any litigation which may potentially be brought against the Group is subject to a number of significant uncertainties and these cannot be estimated reliably. Accordingly, no provision has been made in respect of this matter.

The Group have insurance cover, which they intend to use, however the Group cannot be confident to a highly probable level that the full extent of any potential claim would be covered, therefore no contingent asset has been recognised. Further detail is provided in Note 36.

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 2019 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 loan finance costs and the capital repayment which took place in June 2019 were 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 £1,373,000 (2018: £3,054,000) over the year and would lead to an unrealised foreign exchange gain/loss of £4.3 million (2018: £4.1 million) on any outstanding loan balance.

The Group also has exposure to the £/€ exchange rate due to the need to fund certain expenditure denominated in Euros. Had the £/€ exchange rate been 10% different, the impact on cost in 2019 would have been approximately £343,000 (2018: £156,000). 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

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 2019 was just £104,000 (2018: £71,000).

On 28 June 2019 the Group repaid its $55 million (£43.6 million) loan facility with Oaktree Capital Management ("Oaktree") financed through £53.5 million of equity issued to Novo Holdings in May 2019. The loan facility was fully repaid at a cost of £43.6 million plus a redemption fee of £0.9 million, and the security over the assets of the Group was removed.

If interest rates had been 1% higher in 2019 the impact on cash interest paid would have been £215,000 (2018: £555,000).

(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 17).

Derivative financial instruments and hedging

There were no material derivatives at 31 December 2019 or 31 December 2018 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 agreement during 2019 in the period prior to repayment of the loan in June 2020 (2018: No breaches).

Group	**2019 £'000**	2018 £'000
Net debt	**(16,243)[1]**	8,909
Equity	**75,630**	34,741
Debt/equity	**21%**	26%

Note 1: Represents Cash balance only as no debt.

4. Segmental analysis

Segmental reporting

The chief operating decision-maker has been identified as the Senior Executive Team (SET), comprising the Executive Directors, Chief Medical Officer, Chief Technical Officer, Chief Scientific Officer, Chief Business Officer, Chief Operations Officer and Chief People 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 (i.e the partner programmes CDMO business). It also includes internal technology developments and technical intellectual property within the LentiVector® platform.

(ii) Product – this segment consists of the clinical and pre-clinical development of *in vivo* and *ex vivo* gene and cell therapy products (gene therapeutics) which are owned by the Group.

Revenues, other operating income and operating loss by segment

Revenues, Operating 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.

2019	**Platform £'000**	**Product £'000**	**Total £'000**
Revenue	50,997	13,063	64,060
Other operating income	884	–	884
Operating EBITDA[1]	(11,699)	6,458	(5,241)
Depreciation, amortisation and share based payment	(6,584)	(759)	(7,343)
Change in fair value of asset held at fair value through profit and loss	(1,883)	–	(1,883)
Operating (loss)/profit	(20,166)	5,699	(14,467)
Net finance cost	–	–	(6,422)
Loss before tax	–	–	(20,889)

2018	Platform £'000	Product £'000	Total £'000
Revenue	55,004	11,774	66,778
Other operating income	645	419	1,064
Operating EBITDA[1]	9,743	3,637	13,380
Depreciation, amortisation and share based payment	(4,358)	(1,090)	(5,448)
Revaluation of investments	5,983	–	5,983
Operating profit	11,368	2,547	13,915
Net finance cost			(8,901)
Profit before tax			5,014

1 Operating EBITDA (Earnings Before Interest, Tax, Depreciation, Amortisation, revaluation of investments and Assets at fair value through profit & loss, 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 based payments options. A reconciliation to GAAP measures is provided on page 42.

Other operating income of £0.9 million (2018: £1.1 million) includes grant income of £nil (2018: £0.4 million) which is used to fund clinical and pre-clinical development and is included within the Product segment. Grant income to develop our supply chain capabilities of £0.9 million (2018: £0.5 million) is included within the Platform segment. 2019 includes £nil (2018: £0.2 million) of partially funded development income.

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. In 2019 a more detailed apportionment of these costs was made leading to a greater proportion of the costs being allocated to the Platform segment. If the same apportionment was applied retrospectively to 2018, £1.5 million of additional costs would have been allocated to the Platform segment instead of the Product segment.

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.

Disaggregation of revenue

Revenue is disaggregated by the type of revenue which is generated by the commercial arrangement. Revenue shown in the table below is denominated in GBP and is generated in the UK.

2019	Platform £'000	Product £'000	Total £'000
Bioprocessing/Commercial development	45,715	1,553	47,268
Licence fees & Incentives	5,282	11,510	16,792
Total	**50,997**	**13,063**	**64,060**

2018	Platform £'000	Product £'000	Total £'000
Bioprocessing/Commercial development	39,034	1,470	40,504
Licence fees & Incentives	15,970	10,304	26,274
Total	**55,004**	**11,774**	**66,778**

Revenue by geographical location

The Group's revenue derives wholly from assets located in the United Kingdom. Analysed by location the Group's revenues derive predominantly from Europe:

Revenue by customer location	2019 £'000	2018 £'000
Europe	**46,602**	41,542
Rest of world	**17,458**	25,236
Total revenue	**64,060**	66,778

In 2019 Novartis, Axovant and Orchard Therapeutics each generated more than 10% of the Group's revenues. In 2018 Novartis, Axovant, Sanofi (Bioverativ) and Orchard Therapeutics each generated more than 10% of the Group's revenues.

5. Employees and directors

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

By activity	2019 Number	2018 Number
Office and management	**38**	27
Research, development and bioprocessing	**462**	350
Total	**500**	377

Employee benefit costs	2019 £'000	2018 £'000
Wages and salaries	**27,438**	20,444
Social security costs	**2,861**	2,411
Other pension costs (note 32)	**1,769**	1,278
Share based payments (note 28)	**1,559**	1,132
Total employee benefit costs	**33,627**	25,265

Key management compensation	2019 £'000	2018 £'000
Wages and salaries	**3,417**	3,267
Social security costs	**512**	788
Other pension costs	**186**	186
Share based payments	**869**	572
Total	**4,984**	4,813

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 80 which forms part of these financial statements.

The Company had no employees during the year (2018: zero).

6. Finance income and costs

Group	2019 £'000	2018 £'000
Finance income:		
Bank interest receivable	**104**	71
Total finance income	**104**	71
Finance costs:		
Unwinding of discount in provisions (note 22)	**(57)**	(8)
Revaluation of liabilities in foreign currency	**(969)**	(2,744)
Interest payable	**(5,500)**	(6,220)
Total finance costs	**(6,526)**	(8,972)
Net finance costs	**(6,422)**	(8,901)

On 28 June 2019 the Group repaid its $55 million (£43.6 million) loan facility with Oaktree Capital Management ("Oaktree") financed through £53.5 million of equity issued to Novo Holdings in May 2019. The loan facility was fully repaid at a cost of £43.6 million plus a redemption fee of £0.9 million, and the security over the assets of the Group was removed.

Up to 29 June 2019, interest payable consisted of the cash interest paid on the Oaktree loan facility at 9.0% plus US$ three month LIBOR, subject to a minimum of 1%.

7. Expenses by nature

	Notes	Group 2019 £'000	Group 2018 £'000	Company 2019 £'000	Company 2018 £'000
Employee benefit costs	5	**33,627**	25,265	**345**	365
Depreciation of property, plant and equipment	12	**5,765**	4,332	**–**	–
Amortisation	11	**22**	25	**–**	–
Impairment of intangible assets		**–**	–	**–**	–
Raw materials and consumables used in bioprocessing		**13,374**	9,825	**–**	–
Operating lease payments		**104**	30	**–**	–
Net loss on foreign exchange		**(255)**	(1,305)	**–**	–

Company employee benefit costs of £382,000 (2018: £365,000) relates to non-executive costs paid by Oxford Biomedica UK Ltd and recharged to the Company.

Depreciation is charged to cost of goods, research and 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 2019 £'000	Group 2018 £'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	**165**	125
Additional fees relating to prior year audit	**26**	–
Review of interim results	**20**	20
Audit related assurance services and grant income audits	**94**	8
Total	**330**	178

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 2019 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 Statement of financial position.

The amounts for 2019 have not yet been agreed with the relevant tax authorities.

	Group	
Current tax	**2019 £'000**	2018 £'000
United Kingdom corporation tax research and development credit	**(5,018)**	(2,278)
Overseas taxation	**–**	–
	(5,018)	(2,278)
Adjustments in respect of prior periods:		
United Kingdom corporation tax research and development credit	**473**	(528)
Current tax	**(4,545)**	(2,806)
Deferred tax		
Relating to the origination of timing allowances	**(278)**	(312)
Adjustments in respect of prior periods	**–**	(33)
Deferred Tax (note 24)	**(278)**	279
Taxation Credit	**(4,823)**	(2,527)

The adjustment of current tax in respect of prior year of £473,000 (2018: £528,000) relates to a lower than anticipated tax receipt (£363,000), and an expected tax repayment relating to prior years (£110,000).

The Company has no tax liability, nor is it entitled to tax credits (2018: £nil).

The tax credit for the year is higher (2018: higher) than the standard rate of corporation tax in the UK. The differences are explained below:

	Group		Company	
	2019 £'000	2018 £'000	**2019 £'000**	2018 £'000
(Loss)/profit on ordinary activities before tax	**(20,889)**	5,014	**(1,246)**	(1,575)
(Loss)/profit on ordinary activities before tax multiplied by the standard rate of corporation tax in the UK of 19% (2018: 19%)	**(3,969)**	953	**(237)**	(299)
Effects of:				
Expenses not deductible for tax purposes	**464**	264	**–**	–
R&D relief mark-up on expenses	**(2,434)**	(1,880)	**–**	–
Income not taxable	**–**	(32)	**–**	–
Tax deduction for share options less than share option accounting charge	**20**	(387)	**–**	–
Recognition of previously unrecognised tax losses	**(682)**	(963)	**–**	(963)
Tax rate changes	**33**	(33)	**(90)**	133
Deferred tax not recognised	**288**	(358)	**–**	–
Chargeable gains	**937**	–	**(937)**	–
Tax losses carried forward to future periods	**47**	–	**160**	–
Adjustments in respect of prior periods	**473**	(91)	**–**	–
Total tax credit for the year	**(4,823)**	(2,527)	**770**	(1,129)

At 31 December 2019, the Group had tax losses to be carried forward of approximately £84.2 million (2018: £85.7 million).

Of the Group tax losses, £84.2 million (2018: £85.7 million) arose in the United Kingdom.

9. Basic earnings/(loss) and diluted earnings per ordinary share

The basic loss per share of 22.10p (2018: earnings of 11.57p) has been calculated by dividing the (loss)/earnings for the period by the weighted average number of shares in issue during the year ended 31 December 2019 (72,709,944; 2018: 65,188,414).

The Group made a loss for the period ended 31 December 2019. There is therefore no difference between the basic loss per ordinary share and the diluted loss per ordinary share in the period.

The diluted earnings per share in the prior period of 10.89p has been calculated by dividing the earnings for the period by the weighted average number of shares in issue during the period after adjusting for the dilutive effect of the share options and warrants outstanding at 31 December 2018 (69,242,901).

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 £2,016,000 (2018: £446,000).

11. Intangible assets

Intangible assets comprise intellectual property rights.

	2019 £'000	2018 £'000
Cost at 1 January	**5,636**	5,591
Additions	**–**	45
Cost at 31 December	**5,636**	5,636
Accumulated amortisation and impairment		
At 1 January	**5,519**	5,494
Amortisation charge for the year	**22**	25
Impairment charge for the year	**–**	–
At 31 December	**5,541**	5,519
Net book amount at 31 December	**95**	117

The Company had no intangibles at 31 December 2019 or 31 December 2018.

12. Property, plant and equipment

	Freehold property £'000	Leasehold[1] improvements £'000	Office equipment and computers £'000	Bioprocessing and Laboratory equipment £'000	Right of use asset[2] £'000	Total £'000
Cost						
At 1 January 2019	21,283	7,735	5,088	12,337	–	46,443
Adoption of IFRS 16 (Leases)	–	(1,263)	–	–	7,618	6,355
Additions at cost	144	15,436	2,681	7,513	3,782	29,556
Reclassification	–	–	(374)	374	–	–
Disposals				(50)	–	(50)
At 31 December 2019	**21,427**	**21,908**	**7,395**	**20,174**	**11,400**	**82,304**
Accumulated depreciation						
At 1 January 2019	6,324	1,450	2,416	4,462	–	14,652
Adoption of IFRS 16 (Leases)	–	188	–	–	188	–
Charge for the year	2,036	417	877	1,784	651	5,765
Reclassification	–	–	(239)	239	–	–
Disposals	–	–	–	(45)	–	(45)
At 31 December 2019	**8,360**	**1,679**	**3,054**	**6,440**	**839**	**20,372**
Net book amount at 31 December 2019	**13,067**	**20,229**	**4,341**	**13,734**	**10,561**	**61,932**

	Freehold property £'000	Leasehold improvements £'000	Office equipment and computers £'000	Bioprocessing and Laboratory equipment £'000	Total £'000
Cost					
At 1 January 2018	21,171	4,689	3,179	6,651	35,690
Additions at cost	112	3,046[1]	1,909	5,686	10,753
Disposals	–	–	–	–	–
At 31 December 2018	**21,283**	**7,735**	**5,088**	**12,337**	**46,443**
Accumulated depreciation					
At 1 January 2018	4,306	978	1,862	3,174	10,320
Charge for the year	2,018	472	554	1,288	4,332
Disposals	–	–	–	–	–
At 31 December 2018	**6,324**	**1,450**	**2,416**	**4,462**	**14,652**
Net book amount at 31 December 2018	**14,959**	**6,285**	**2,672**	**7,875**	**31,791**

1. Included within Leasehold improvements are Assets-under-construction of £17,590,000 (2018: £2,396,000), representing ongoing construction works at the Oxbox bioprocessing facility.

2. The adoption of IFRS 16 (Leases) at the start of 2019 required the restoration provision to be reclassified as a right of use asset. Refer note 22 for further information on the nature of the restoration provision.

Leasehold improvements are capital improvements to buildings which we lease. Bioprocessing and Laboratory equipment is equipment we purchase for our laboratory and bioprocessing processes and are generally movable from one facility to another.

The Company had no property, plant and equipment at 31 December 2019 or 31 December 2018.

13. Assets at fair value through profit and loss

Assets at fair value through profit and loss: Group	2019 £'000	2018 £'000
At 1 January	**–**	–
Reclassification of investment as asset at fair value through profit and loss (note 14)	**10,966**	–
Costs to sell asset at fair value through profit and loss	**(94)**	–
Sale of shares	**(6,270)**	–
Change in fair value of available-for-sale asset	**(1,883)**	–
At 31 December	**2,719**	–

14. Investments held at fair value through profit and loss

During the first half of 2019 the Group determined that the equity held in Orchard Therapeutics met the definition of an Asset at fair value through profit & loss under IFRS 5. As such, the equity investment was reclassified from Investments held at fair value through profit and loss (non-current assets) to Assets at fair value through profit & loss (current assets).

	2019 £'000	2018 £'000
At 1 January	**10,966**	2,954
Reclassification of investment as asset held at fair value through profit and loss (note 13)	**(10,966)**	–
Recognition of milestones	**–**	2,029
Revaluation of investments	**–**	5,983
At 31 December	**–**	10,966

15. Investments and loans in subsidiaries

	2019 £'000	2018 £'000
Shares in group undertakings		
At 1 January and 31 December	**15,182**	15,182
Loans to group undertakings		
At 1 January	**194,736**	176,432
Loan advanced in the year	**53,416**	18,304
At 31 December	**248,152**	194,736
Total investments in shares and loans to group undertakings	**263,334**	209,918
Accumulated impairment		
At 1 January and 31 December	**126,065**	126,065
Net book amount at 31 December	**137,269**	83,853
Capital contribution in respect of employee share schemes		
At 1 January	**7,933**	6,801
Additions in the year (note 26)	**1,559**	1,132
At 31 December	**9,492**	7,933
Total investments	**146,761**	91,786

The application of the expected credit loss model has had no significant impact on the level of impairment of the loan to group undertakings as the market value of the Group, of which OxfordBiomedica (UK) Ltd. as the operational company makes up almost all of the value, considerably exceeds the value of the loan and investment made by the parent company.

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.

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, 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 27).

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 2018 no impairment charge was assessed to be required. Cumulative impairment of £126.0 million has been recognised up to 31 December 2019.

16. Inventories

Group	**2019 £'000**	2018 £'000
Raw Materials	**2,579**	2,422
Work-in-progress	**–**	1,829
Total inventory	**2,579**	4,251

Inventories constitute raw materials held for commercial bioprocessing purposes, and work-in-progress inventory related to contractual bioprocessing obligations. The Group has no Work-in-progress at the end of 2019 due to the fact that during 2019 the Group changed its method of calculating the percentage of completion on bioprocessing batches to more accurately be measured, leading to the Work-in-progress balance being recognised as cost of sales in the statement of comprehensive income.

During the year, the Group wrote down £171,000 (2018: £288,000) of inventory which is not expected to be used in production or sold onwards. The Company holds no inventories.

17. Trade and other receivables

	Group		Company	
Current	**2019 £'000**	2018 £'000	**2019 £'000**	2018 £'000
Trade receivables	**12,766**	15,408	**–**	–
Contract assets	**13,406**	8,886	**–**	–
Other receivables	**563**	307	**–**	–
Other tax receivable	**1,537**	1,144	**–**	–
Prepayments	**1,773**	840	**–**	–
Total trade and other receivables	**30,045**	26,585	**–**	–

The fair value of trade and other receivables are the current book values. We have performed an impairment assessment under IFRS 9 and have concluded that the application of the expected credit loss model has had an immaterial impact on the level of impairment of receivables.

Included in the Group's trade receivable balance are debtors with a carrying amount of £7,472,000 (2018: £1,768,000) which were past due at the reporting date and of which £5,450,000 has been received after the reporting date.

Contract assets relates to the Group's rights to consideration for work completed but not billed at the reporting date for Commercial Development work and Bioprocessing batches. The contract assets are transferred to receivables when the rights become unconditional. This usually occurs when the Group issues an invoice to the customer.

A portion of contract assets relates to fixed price process development work packages which are recognised on a percentage of completion basis and as such requires estimation in terms of assessment of the correct percentage of completion for that specific work package. The value of the contract asset raised with regards to these work packages is £5,447,000. If the assessed percentage of completion was 1 percentage point higher or lower, revenue recognised in the period would have been £54,000 higher or lower.

Non-current trade and other receivables constitute other receivables of £3,605,000 (2018: £4,000,000) which consists of deposits held in escrow as part of the Windrush Innovation Centre and Oxbox lease arrangements.

Ageing of past due but not impaired trade receivables:

	2019 £'000	2018 £'000
0–30 days	**1,142**	–
30–60 days	**–**	–
60+ days	**6,330**	1,768
	7,472	1,768

Contract assets of £13.4 million (2018: £8.9 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:

	2019 £'000	2018 £'000
Sterling	**25,939**	28,098
US Dollar	**7,711**	2,487
	33,650	30,585

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.

18. Cash and cash equivalents

	Group		Company	
	2019 £'000	2018 £'000	**2019 £'000**	2018 £'000
Cash at bank and in hand	**16,243**	32,244	**2**	11

19. Trade and other payables

	Group		Company	
	2019 £'000	2018 £'000	**2019 £'000**	2018 £'000
Trade payables	**7,311**	3,746	**–**	–
Other taxation and social security	**1,042**	770	**–**	–
Accruals	**5,944**	6,906	**109**	164
Total trade and other payables	**14,297**	11,422	**109**	164

20. Contract liabilities and deferred income

Contract liabilities and deferred income arise when the Group has received payment for services in excess of the stage of completion of the services being provided.

Contract liabilities and deferred income have decreased from £18.5 million at the end of 2018 to £14.9 million at the end of 2019 due to the recognition of process development income and capacity reservation revenues as the performance obligation was satisfied and the batches manufactured.

Contract liabilities consists primarily of deferred bioprocessing and process development revenue, and are expected to be released as the related performance obligations are satisfied over the period as described below:

Years	0–1 £'000	1–3 £'000	3–5 £'000	5–10 £'000	**Total**
Contract liabilities	13,156	707	928	60	**14,851**
Bioprocessing income	8,380	675	–	–	**9,055**
Process development income	4,760	–	–	–	**4,760**
Licence fees and incentives	16	32	928	60	**1,036**
Deferred Income	1,006	1,992	1,318	–	**4,316**
Lease incentives	–	–	–	–	**–**
Grant	1,006	1,992	1,318	–	**4,316**

Included within bioprocessing contract liabilities is revenue £1.8 million which has not been recognised during 2019 (2018: Nil) relating to the estimate of out of specification batches (refer note 2: 'Estimates' for additional information).

Deferred income relates to grant funding received from the UK Government for capital equipment purchased as part of the Oxbox bioprocessing facility expansion. The income will recognised over the period over which the purchased assets are depreciated.

The Company had no contract liabilities or deferred income in 2019 or 2018.

21. Loans

On 28 June 2019 the Group repaid its $55 million (£43.6 million) loan facility with Oaktree Capital Management ("Oaktree") financed through £53.5 million of equity issued to Novo Holdings in May 2019. The loan facility was fully repaid at a cost of £43.6 million plus a redemption fee of £0.9 million which forms part of interest payable within finance costs in the statement of comprehensive income, and the security over the assets of the Group was removed.

Prior to repayment the loan carried 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 have reduced 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 2,689,686 (post consolidation) warrants to Oaktree (note 30). The terms also included financial covenants relating to the achievement of revenue targets and a requirement to hold a minimum of $2.5 million cash at all times. The Oaktree facility was secured by a pledge over substantially all of the Group's assets.

22. Provisions

	2019 £'000	2018 £'000
At 1 January	**1,287**	630
Unwinding of discount	**58**	8
New provision	**3,741**	–
Additional provision recognised	**–**	649
At 31 December	**5,086**	1,287

	2019 £'000	2018 £'000
Current	**–**	–
Non-current	**5,086**	1,,287
Total provisions	**5,086**	1,287

The dilapidations provisions relate to anticipated costs of restoring the leasehold Yarnton, Oxbox and Windrush Innovation Centre properties in Oxford, UK to their original condition at the end of the lease terms in 2024, 2033 and 2028 respectively, discounted using the rate per the Bank of England nominal yield curve. The equivalent rate was used in 2018. The provisions will be utilised at the end of the leases if they are not renewed.

In 2018 the Group signed the lease on its Oxbox bioprocessing facility in Oxford near to its Windrush laboratories in Oxford, UK. The new facility is 84,000 sq. ft (7,800 sqm). The Group's Phase I and planned Phase 2 expansion will fit out around 45,000 sq. ft (4,200 sqm) for four GMP clean room suites and two fill and finish suites as well as offices, warehousing and quality control laboratories, with space available for future expansion. A provision of £3,741, 000 was recognised at the end of 2019 for the cost of restoring this property to its original condition at the end of the lease term.

The Company had no provisions at 31 December 2019 or 31 December 2018.

23. 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		Cash & receivables		Amortised costs, loans & other liabilities	
	2019 £'000	2018 £'000	**2019 £'000**	2018 £'000	**2019 £'000**	2018 £'000
Cash and cash equivalents (note 18)	**–**	–	**16,243**	32,244	**–**	–
Trade receivables and other receivables (note 17)	**–**	–	**31,877**	29,281	**–**	–
Investments at fair value through profit and loss (note 15)	**–**	10,966	**–**	–	**–**	–
Assets at fair value through profit and loss (note 13)	**2,719**	–	**–**	–	**–**	–
Trade and other payables excluding tax (note 19)	**–**	–	**–**	–	**13,255**	10,652
Loans (note 21)	**–**	–	**–**	–	**–**	41,153
	2,719	10,966	**48,120**	61,525	**13,255**	51,805

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

	2019 Year average **Weighted average rate**	2018 Year average Weighted average rate
Sterling	**0.55%**	0.48%
US Dollars	**1.62%**	1.45%

Assessment of financial assets by credit risk rating:

Cash and cash equivalents are held with reputable banks with a low assessed risk of default.

All trade receivables are assessed as having a low credit risk rating as the debt is owed by blue chip pharmaceutical groups in the top 10 in the world by market capitalisation, and by Biotechnology companies with sufficient cash reserves to satisfy their obligations. There has been no change in the determined risk during 2019, therefore no reconciliation between the 2018 and 2019 closing debtor balance assessed by risk of default has been provided. The opening and closing position was low (2018: low).

Other receivables are rent deposits to held in separately administered bank accounts with covenants limiting their use and are as such assessed as having a low risk of default.

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:

	2019 £'000	2018 £'000
Sterling	**5,454**	3,560
US Dollar	**10,789**	28,684
	16,243	32,244

Financial assets classified as level 1 in hierarchy

The investment asset represented by ordinary shares in Orchard Therapeutics is classified as at fair value through profit and loss. Please refer to note 13 (2018: note 14) for further information.

Reconciliation in liabilities from financing activities

	2019 £'000	2018 £'000
At 1 January	**41,153**	36,864
Interest payable	**4,819**	6,210
Foreign exchange movement	**969**	2,744
Cash interest paid	**(2,486)**	(4,665)
Redemption fee	**(866)**	–
Oaktree loan repayment	**(43,589)**	–
At 31 December (note 19)	**–**	41,153

24. Deferred taxation

The Company and the Group have recognised deferred tax assets and liabilities at 31 December 2019 and 31 December 2018. In light of the Group's history of losses, recovery of the whole deferred tax asset is not sufficiently certain, and therefore a deferred tax asset has been recognised only to the extent that there is a deferred tax liability in the form of a future taxable gain on the sale of the Orchard investment asset.

A reduction in the UK corporation tax rate from 19% to 17% (effective 1 April 2020) was substantively enacted on 6 September 2016, and the UK deferred tax asset/(liability) as at 31 December 2019 has been calculated based on this rate.

The March 2020 Budget announced that a rate of 19% would continue to apply with effect from 1 April 2020, and this change was substantively enacted on 17 March 2020. This will increase the company's future current tax charge accordingly and increase the recognised deferred tax asset and liability by £42,000 respectively.

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 – recognised Deferred tax (assets)/liabilities – recognised	Tax losses £'000	Revaluation of investments £'000	Total £'000
At 1 January 2019	(1,129)	1,408	279
Origination and reversal of temporary differences	770	(1,049)	(279)
At 31 December 2019	**(359)**	**359**	**–**
At 1 January 2018	–	–	–
Origination and reversal of temporary differences	(1,129)	1,408	279
At 31 December 2018	**(1,129)**	**1,408**	**279**

Company – recognised Deferred tax (assets)/liabilities – not recognised	Tax losses £'000	Revaluation of investments £'000	Total £'000
At 1 January 2019	(1,129)	–	(1,129)
Origination and reversal of temporary differences	770	–	770
At 31 December 2019	**(359)**	**–**	**(359)**
At 1 January 2018	–	–	–
Origination and reversal of temporary differences	(1,129)	–	(1,129)
At 31 December 2018	**(1,129)**	**–**	**(1,129)**

Group – not recognised Deferred tax (assets)/liabilities – not recognised	Tax depreciation £'000	Provisions £'000	Tax losses £'000	Share options £'000	Total £'000
At 1 January 2019	(786)	(138)	(16,528)	(1,712)	(19,164)
Origination and reversal of temporary differences	724	(303)	(564)	48	(95)
At 31 December 2019	**(62)**	**(441)**	**(17,092)**	**(1,664)**	**(19,259)**
At 1 January 2018	(1,071)	(133)	(16,378)	(148)	(17,730)
Origination and reversal of temporary differences	285	(5)	(150)	(1,564)	(1,434)
At 31 December 2018	**(786)**	**(138)**	**(16,528)**	**(1,712)**	**(19,164)**

25. Ordinary shares

Group and Company Issued and fully paid	**2019 £'000**	2018 £'000
Ordinary shares of 50p each		
At 1 January – 66,103,528 (2018: 62,154,084 post consolidation) shares	**33,034**	31,076
Allotted for cash in placing and subscription – 7,750,000 (2018: 3,486,936) shares	**3,875**	1,712
Allotted on exercise of warrants – 2,689,686 (2018:Nil) shares	**1,345**	–
Allotted on exercise of share options – 315,917 (2018: 462,507 adjusted for consolidation) shares	**162**	246
At 31 December – 76,859,131 (2018: 66,103,528) shares	**38,416**	33,034

In April 2019, Oaktree exercised its warrants which were then converted into 2,689,686 ordinary shares of 50p each. Proceeds from the shares issued were £1.3 million.

On 28 May 2019, the Group announced that Novo Holdings had subscribed to 6,568,024 new ordinary shares at a price of £6.90. Novo Holdings also exercised in full its option to subscribe to a further 1,181,976 new ordinary shares at a price of £6.90 on 29 May 2019. Gross proceeds from the placing were £53.5 million; net proceeds were £52.8 million.

On 30 May 2018, Oxford Biomedica consolidated its existing ordinary shares of 1 pence each to 65,701,073 new consolidated ordinary shares of 50 pence each.

26. Share premium account

Group and Company	**2019 £'000**	2018 £'000
At 1 January	**172,074**	154,224
Premium on shares issued for cash in placing and subscription	**49,600**	18,748
Premium on exercise of warrants	**1,218**	–
Premium on exercise of share options	**495**	478
Costs associated with the issue of shares	**(769)**	(1,376)
At 31 December	**222,618**	172,074

27. 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 and Save As You Earn Scheme. 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 both revenue and 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.

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 2018 have the following expiry date and exercise prices:

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

2019 Number of shares	2018 Number of shares	Exercise price per share	Date from which exercisable	Expiry date
–	–	290p	Vested	13/10/18
–	–	305p	Vested	25/03/19
9,718	12,211	270p to 290p	Vested	15/03/21 to 04/10/21
13,608	22,406	115p to 155p	Vested	08/05/22 to 21/12/22
24,525	40,314	80p to 140p	Vested	22/05/23 to 19/11/23
34,302	47,114	100p to 200p	Vested	03/06/24 to 17/10/24
69,768[1]	101,757[1]	490p	Vested	13/03/25 to 10/06/25
130,794[1]	221,256[1]	275p	Vested	16/05/26 to 13/10/26
305,360[1]	340,995[1]	495p	13/07/20	13/07/27
237,104[1]	271,506[1]	502 to 904p	15/02/2018 to 07/08/2021	15/02/2028 to 07/08/2028
459,586[1]	–	618p to 705p	04/01/2022 to 12/9/2022	04/01/2022 to 12/09/2029
1,284,765	1,057,559			

Note 1 – Options granted under the 2015 Executive share option scheme.

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

2019 Number of shares	2018 Number of share	Exercise price per share	Date from which exercisable	Expiry date
–	27,078	310p	01/10/18	01/04/19
66,864	144,466	145p	13/10/19	12/04/20
73,443	77,283	330p	12/10/20	12/04/21
75,845	114,731	725p	10/10/21	10/04/22
268,781	–	422p	09/10/22	09/04/23
484,933	363,558			

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

2019 Number of shares	2018 Number of shares	Exercise price per share	Date from which exercisable	Expiry date
–	–	50p	Vested	13/10/18
142,000	142,000	50p	Vested	30/06/22
66,679	72,679	50p	Vested	12/06/23
89,082	93,349	50p	Vested	20/6/24 to 17/10/24
113,158	113,158	0p	Vested	10/01/25
122,344[2]	178,909[2]	0p	Vested	16/05/26
218,181[1,2]	231,256[1,2]	0p	17/07/20 to 25/09/20	17/07/27 to 25/09/27
191,195[1,2]	196,912[1,2]	0p	15/02/2021 to 7/8/2021	15/02/2021 to 7/8/2021
298,323[1,2]	–	0p	18/04/2022 to 12/9/2022	18/04/2029 to 12/09/2029
1,240,962	1,028,263			
3,010,660	2,449,380			

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 £385,000 vested during 2019 (2018: £267,000).

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 2019, all shares held by the EBT had vested. The EBT is consolidated at year end with the shares held in trust until the exercise of the option. During the year no shares (2018: nil) 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.

Options granted to employees under the Oxford Biomedica 2013 and 2015 Deferred Bonus Plan

2019 Number of shares	2018 Number of shares	Exercise price per share	Date from which exercisable	Expiry date
93,725	116,723	0p	Vested	15/06/24&14/10/24
78,907	78,907	0p	Vested	04/05/25
66,592	81,257	0p	Vested	14/05/26
53,900	53,900	0p	11/07/18 to 11/07/20	11/07/27
48,422	48,422	0p	07/08/19 to 07/08/21	07/08/28
86,320	–	0p	18/04/20 to 18/04/22	18/04/29
427,866	379,209			

National insurance liability

Certain options granted to UK employees could give rise to a national insurance (NI) liability on exercise. A liability of £529,000 (2018: £437,000) 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 645p (2018: 707p) per share.

28. Share based payments

Save As You Earn scheme awards (Model used: Black Scholes)	Options awarded 09 Oct 2019
Share price at grant date	515.00p
Exercise price	421.68p
Vesting period (years)	3
Total number of shares under option	270,915
Expected volatility (weighted average)	50.56%
Expected life (years)	3
Risk free rate (weighted average)	0.27%
Fair value per option	210.48p

Share options (Model used: Black Scholes)	Options awarded 04 Jan 2019	Options awarded 18 Apr 2019	Options awarded 12 Sep 2019
Share price at grant date	645p	665p	552.00p
Exercise price	659.24p	704.6p	617.86p
Vesting period (years)	3	3	3
Total number of shares under option	19,113	469,710	10,561
Expected volatility (weighted average)	54.73%	53.60%	50.71%
Expected life (years)	3	3	3
Risk free rate (weighted average)	0.77%	0.77%	0.46%
Fair value per option	235.38p	230.37p	169.62

LTIP awards (Model used: Monte Carlo)	LTIPs awarded 18 Apr 2019	LTIPs awarded 01 May 2019	LTIPs awarded 12 Sep 2019
Share price at grant date	665p	696p	552p
Exercise price	0p	0p	0p
Vesting period (years)	3	3	3
Total number of shares under option	262,031	20,647	30,751
Expected volatility (weighted average)	53.36%	53.60%	50.71%
Expected life (years)	3	3	3
Risk free rate (weighted average)	0.76%	0.77%	0.46%
Fair value per option	516.87p	539.52p	421.80p

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 and Deferred Bonus awards which are exercisable at par/nil value, the weighted average exercise price for options granted during the year was 597.8p (2018: 850.1p).

315,917 options were exercised in 2019 (2018: 462,507), including 14,664 of deferred bonus options (2017: 53,174). The total charge for the year relating to employee share-based payment plans was £1,559,000 (2018: £1,132,000), all of which related to equity-settled share based payment transactions.

	2019		2018	
Share options excluding LTIP	**Number**	**Weighted average exercise price**	Number	Weighted average exercise price
Outstanding at 1 January	**1,421,117**	**419.2p**	65,260,044	6.7p
Forfeited	**–**	**–**	(2,174,134)	8.0p
Granted	**–**	**–**	166,857	10.5p
Cancelled	**–**	**–**	(180,674)	5.8p
Exercised	**–**	**–**	(2,056,185)	3.3p
Share consolidation	**–**	**–**	(59,795,959)	6.8p
Granted	**770,299**	**602.8**	386,029	633.4p
Forfeited	**(125,373)**	**654.9**	(28,985)	474.9p
Exercised	**(253,718)**	**243.0**	(149,191)	337.7p
Cancelled	**(42,627)**	**673.8**	(6,685)	156.1p
Outstanding at 31 December	**1,769,698**	**548.7**	1,421,117	419.2p
Exercisable at 31 December	**349,579**	**263.1**	250,880	299.7p
Exercisable and where market price exceeds exercise price at 31 December	**349,579**	**263.1**	250,880	299.7p

LTIP awards (options exercisable at par value 1p or nil cost)	**2019 Number**	2018 Number
Outstanding at 1 January	**1,028,263**	54,297,969
Exercised		(300,000)
Share consolidation		(52,918,024)
Granted	**313,429**	204,147
Expired	**(45,874)**	(42,811)
Exercised	**(54,856)**	(213,018)
Outstanding at 31 December	**1,240,962**	1,028,263
Exercisable at 31 December	**533,263**	421,186

	2019			2018		
Range of exercise prices	**Weighted average exercise price**	**Number of shares**	**Weighted average remaining life (years) Contractual**	Weighted average exercise price	Number of shares[1]	Weighted average remaining life (years) Contractual
LTIP:						
Exercisable at par or at nil cost	**12p**	**1,240,962**	**6.8**	15p	1,028,263	8.1
Deferred bonus:						
Exercisable at par or at nil cost	**0p**	**427,866**	**6.6**	0p	379,209	6.9
Options:						
50p to 150p	**129p**	**111,418**	**5.6**	132p	215,881	6.8
150p to 250p	**180p**	**27,881**	**3.7**	175p	38,419	4.4
250p to 350p	**293p**	**213,955**	**6.6**	290p	337,828	7.5
350p+	**628p**	**1,416,444**	**8.7**	659p	828,989	8.8
		3,438,526			2,828,589	

29. Accumulated losses

	Group		Company	
	2019 £'000	2018 £'000	**2019 £'000**	2018 £'000
At 1 January	**(173,876)**	(182,663)	**(123,077)**	(122,590)
Profit/(Loss) for the year	**(16,066)**	7,541	**(2,016)**	(446)
Share based payments	**2,247**	1,246	**–**	(41)
Vesting of deferred share award	**–**	–	**–**	–
At 31 December	**(187,695)**	(173,876)	**(125,093)**	(123,077)

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 £1,559,000 (2018: £1,132,000) (note 28), £688,000 (2018: £267,000) related to the vesting of deferred share awards made to executive directors and senior managers, less £nil (2018: £153,000) in relation to the exercise of none (2018: 53,174) of these deferred share awards (note 27).

Neither the Company nor its subsidiary undertakings had reserves available for distribution at 31 December 2019 or 31 December 2018.

30. Other reserves

Group	Warrant reserve £'000	Merger reserve £'000	Total £'000
At 1 January 2019	1,218	2,291	3,509
Exercise of warrants	(1,218)	–	(1,218)
At 31 December 2019	**–**	**2,291**	**2,291**

Group	Warrant reserve £'000	Merger reserve £'000	Total £'000
At 1 January 2018	1,218	2,291	3,509
Issue of warrants	–	–	–
At 31 December 2018	**1,218**	**2,291**	**3,509**

The Group merger reserve at 31 December 2019 and 2018 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.

Under the Oaktree loan agreement the Company issued 134,351,226 warrants to Oaktree, equivalent to 4.4% of the enlarged Group's share capital. The warrants were exercisable at the nominal share price of 1p and could be exercised at any time over the following ten years. The warrants were fair valued at £1.2 million net of related expenses and this amount was credited to the warrant reserve. A further 2,661 warrants were issued to Oaktree since then due to equity fundraisings by the Company.

On 18 April 2019, Oaktree exercised its warrants representing 2,689,686 ordinary shares of 50p each for total consideration of £1,344,843. The exercise price of the warrants was 50p per warrant. Upon exercise the warrant reserve was released to share premium.

Company	Warrant reserve £'000	Merger reserve £'000	Share Scheme Reserve £'000	Total £'000
At 1 January 2019	1,218	1,580	7,933	10,731
Credit in relation to employee share schemes	(1,218)	–	1,559	341
At 31 December 2019	**–**	**1,580**	**9,492**	**11,072**
At 1 January 2018	1,218	1,580	6,801	9,599
Credit in relation to employee share schemes	–	–	1,132	1,132
Issue of warrants	–	–	–	–
At 31 December 2018	**1,218**	**1,580**	**7,933**	**10,731**

Options over the Company's shares have been awarded to employees of Oxford Biomedica (UK) Ltd. In accordance with IFRS 2 'Share-based Payment' the expense in respect of these awards is recognised in the subsidiaries' financial statements (see note 28). 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 £1,559,000 (2018: £1,132,000) (see note 15) and a corresponding credit to reserves.

31. Cash flows from operating activities

Reconciliation of loss before tax to net cash used in operations:

	Group		Company	
	2019 £'000	2018 £'000	**2019 £'000**	2018 £'000
Continuing operations				
Operating loss	**(14,467)**	13,915	**(1,246)**	(1,575)
Adjustment for:				
Depreciation	**5,765**	4,332	**–**	–
Amortisation of intangible assets	**22**	25	**–**	–
Loss on disposal of property plant and equipment	**3**		**–**	–
Charge for impairment	**–**	–	**–**	–
Charge in relation to employee share schemes	**2,247**	1,246	**–**	–
Non-cash loss/(gains)	**1,883**	(8,012)	**–**	–
Changes in working capital:				
Increase in trade and other receivables	**(4,586)**	(14,559)	**–**	9
Increase in trade and other payables	**2,868**	2,732	**(55)**	83
Increase in deferred income	**1,533**	5,046	**–**	–
(Increase)/decrease in contract liabilities	**(3,634)**	5,400	**–**	–
Increase in provisions	**58**	8	**–**	–
Decrease/(increase) in inventory	**1,672**	(919)	**–**	–
Net cash used in/(generated from) operations	**(6,636)**	9,214	**(1,301)**	(1,483)

32. 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 £1,769,000 (2018: £1,278,000) represents amounts payable by the Group to the scheme. Contributions of £253,000 (2018: £186,000), included in accruals, were payable to the scheme at the year-end.

33. Leases

The Group leases land and buildings and IT equipment. Information about leases for which the Group is a lessee is presented below:

Group	Property £'000	IT equipment £'000	Total £'000
Balance at 1 January 2019	6,211	144	6,355
Reclassified balances at 1 January 2019	1,075	–	1,075
Additions	3,741	41	3,782
Depreciation charge for the period	(608)	(43)	(651)
Balance at 31 December 2019	**10,419**	**142**	**10,561**

Right-of-use assets:

	31 December 2019 £'000
Maturity analysis – contractual undiscounted cash flows	
Less than one year	1,117
One to five years	4,490
More than five year	7,222
Total undiscounted cash flows at 30 June 2019	**12,829**

Lease liabilities:

Lease liabilities included in the Statement of Financial Position	31 December 2019 £'000
Current	482
Non-current	7,907
Total lease liabilities at 30 June 2019	**8,389**

Amounts recognised in the profit or loss	31 December 2019 £'000
2019 – Leases under IFRS 16	
Interest on lease liabilities	654
Expense relating to short-term leases	137
2018 – Operating leases under IAS 17	
Lease expense	**385**

Amounts recognised in the statement of cash flows	31 December 2019 £'000
Total cash outflow for leases	**835**

34. Contingent liabilities and capital commitments

The Group had commitments of £1,946,000 for capital expenditure for leasehold improvements, plant and equipment not provided for in the financial statements at 31 December 2019 (2018: £15,723,000). These relate to contracts entered into for the construction of the Oxbox bioprocessing facility and also equipment required for the fill/finish process in the new facility.

35. 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.

During the prior year, OcQuila (UK) Ltd was incorporated as a wholly-owned subsidiary of the parent company. It remained dormant since being incorporated and in November 2018 was sold for no consideration. It remained dormant from incorporation to date of sale.

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	**2019 £'000**	2018 £'000
Purchases:		
Parent company expenses paid by subsidiary	**(1,413)**	(1,370)
Warrants:		
Issue of warrants for shares as part of consideration for loan obtained by subsidiary	**–**	–
Cash management:		
Cash loaned by parent to subsidiary	**54,829**	19,674

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	**2019 £'000**	2018 £'000
Loan to subsidiary	**248,152**	194,736

The investment in the subsidiary, of which the loan forms part, has been impaired by £126 million (note 15) 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 £9,492,000 (2018: £7,933,000).

There were no transactions (2018: none) with Oxxon Therapeutics Limited.

Company: transactions with related parties

There is an outstanding balance of £5,417 (2018: £10,767) owed to Lorenzo Tallarigo at year end. This was paid in January. There were no other outstanding balances in respect of transactions with directors and connected persons at 31 December 2019 (2018: none). Key person remuneration can be seen in note 5 of the financial statements.

36. Events after the Statement of financial position date

COVID-19

In early 2020, the existence of a new coronavirus (COVID-19) was confirmed, which has since spread across a significant number of countries, leading to disruption to businesses and economic activity that has been reflected in recent fluctuations in global stock markets. The Group considers the emergence and spread of COVID-19 to be a non-adjusting post Statement of financial position event and given the inherent uncertainties, it is not practicable at this time to determine the exact impact of COVID-19 on the Group or to provide a quantitative estimate of the impact. The broader political and economic uncertainty coupled with the potential future impact on the Group of the recent COVID-19 outbreak has been factored into the scenarios considered as part of the Group's adoption of the going concern basis in the preparation of the Group's financial statements (refer note 1 on page 114).

Contingent Liability

The Group routinely enters into a range of contractual arrangements in the ordinary course of business which may give rise to claims or potential litigation against the Group.

Subsequent to year end the Group identified an issue regarding an aspect of certain process development work performed on behalf of a customer in 2018 and 2019 which potentially could give rise to a material claim against the Group. The Group has been in communication with the third party but is not yet in a position to verify or validate any information relating to this matter due to the very recent timing of this issue being identified.

As at 31 December 2019, the Group regards this matter as an adjusting post Statement of financial position event (IAS10) and has assessed the performance obligations for which the revenue has been recognised and reversed all potentially affected revenues relating to the work packages with the liability recognised within Contract liabilities due within one year.

In addition, the Group expects that the potential liability arising with regards to the affected work packages will be extinguished either through re-performance of the affected work packages, or ultimately form part of any potential claim. If a claim were to materialise, the Group estimates the range of all potential costs could be between £250,000 and £1,000,000. However, as there is no such claim to date and given the early stage of the investigation into the cause, no liability has been recognised at the Statement of financial position date, as in management's opinion it is too early to consider the above estimate sufficiently reliable to recognise a provision (if any) in respect of this matter. The assessment required is inherently judgemental, and there is a risk that the final settlements are materially different to the range provided above or do not include all claims and therefore the amounts may be understated.

A contingent asset could potentially exist within the financial statements for the insurance cover that the group maintains, however the Group cannot determine the extent of any cover until further investigation is undertaken as necessary. On this basis it is too early to assess the likelihood of an asset arising, therefore no contingent asset has been recognised.

No other amounts have been provided for in respect of this matter.

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.

AXO-Lenti-PD (formerly OXB-102: Parkinson's disease)

Axo-Lenti-PD (formerly 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.

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 Group'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 (MY07A), 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 Group'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-302 (CAR-T 5T4): 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.

Glossary

Terminology not specific to Oxford Biomedica

AAV

Adeno-associated viruses (AAV) is a small virus which infects humans and some other primate species.

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.

EMA

European Medicines Agency (EMA) is an agency of the European Union in charge of the evaluation and supervision of medicinal products.

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.

Lentiviral vectors

Gene delivery vector based on lentiviruses.

MHRA

Medicines and Healthcare products Regulatory Agency (MHRA) is an executive agency of the Department of Health and Social Care in the United Kingdom which is responsible for ensuring that medicines and medical devices work and are acceptably safe.

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.

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

Operating EBITDA

(Earnings before Interest, Tax, Depreciation, Amortisation, revaluation of investments and share base payments) is a non-GAAP measure and is often used as a surrogate for operational Cash flow.

Operating EBIDA

Operating EBIDA is an internal measure used by the Group, defined as Operating EBITDA with the R&D tax credit included.

Gross income

Gross income is the aggregate of Revenue and Other operating income.

Adjusted Operating expenses

Being Operating espenses before Depreciation, Amortisation and Share based payments and the revaluation of investments.

Cash burn

Cash burn is net cash generated from operations plus net interest paid plus capital expenditure.

Other matters
Advisers and contact details

Advisers

Financial adviser and broker

Peel Hunt

Moor House
120 London Wall
London EC2Y 5ET
United Kingdom

Financial adviser and joint broker

WG Partners

85 Gresham Street
London EC2V 7NQ
United Kingdom

Financial and corporate communications

Consilium Strategic Communications

41 Lothbury
London EC2R 7HG
United Kingdom

Registered independent auditors

KPMG LLP

2 Forbury Place
33 Forbury Road
Reading
RG1 3AD
United Kingdom

Solicitors

Covington & Burling LLP

265 Strand
London WC2R 1BH
United Kingdom

Registrars

Link Asset Services

The Registry
34 Beckenham Road
Beckenham
Kent BR3 4TU
United Kingdom

Company secretary and registered office

Natalie Walter

Windrush Court
Transport Way
Oxford OX4 6LT
United Kingdom

Contact details

Oxford Biomedica plc Headquarters:

Windrush Court

Transport Way
Oxford OX4 6LT
United Kingdom

Tel: +44 (0) 1865 783 000

Other locations:

Harrow House

County Trading Estate
Transport Way
Cowley
Oxford OX4 6LX
United Kingdom

Unit 5

Oxford Industrial Park
Yarnton
Oxford OX5 1QU
United Kingdom

Oxbox

Unit A, Plot 7000
Alec Issigonis Way
Oxford Business Park North
Oxford OX4 2JZ
United Kingdom

enquiries@oxb.com
www.oxb.com

This report and its messaging has been designed and produced by scientific branding specialists thinkerdoer.

www.thinkerdoer.com

thinker/doer

Credits:
Facilities and portrait photography by thinkerdoer with Philip Gatward.

www.philipgatward.com

Printed by thinkerdoer with Pureprint Group using their pureprint environmental print technology, a guaranteed, low carbon, low waste, independently audited process that reduces the environmental impact of the printing process. Pureprint Group is a CarbonNeutral company and is certified to Environmental Management System, ISO 14001 and registered to EMAS, the Eco Management and Audit Scheme.

www.pureprint.com

The papers used for the production of this 2019 report are certified by the Forest Stewardship Council.

www.fsc-uk.org

MIX
From responsible sources
FSC® C022913

Oxford Biomedica plc
Windrush Court, Transport Way
Oxford OX4 6LT, United Kingdom

Tel: +44 (0) 1865 783 000
enquiries@oxb.com

www.oxb.com

Oxford Biomedica