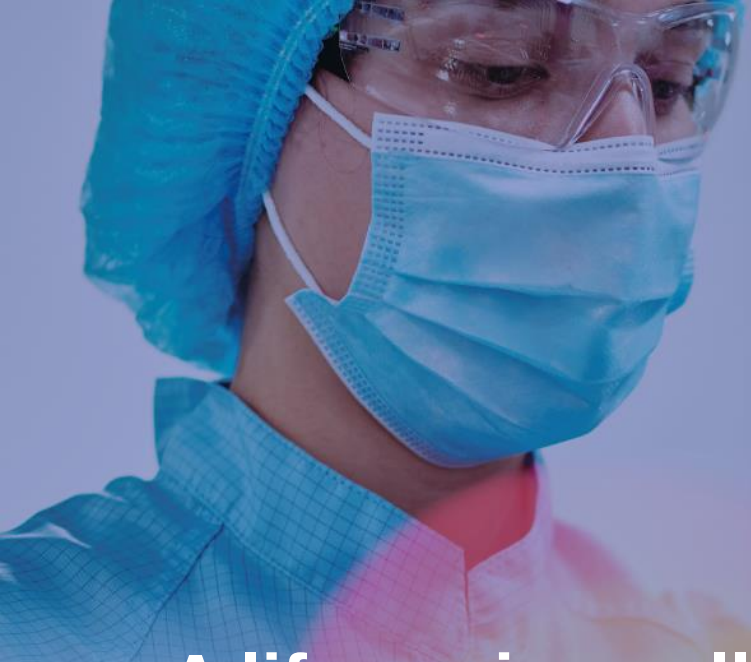


# A life saving cell and gene therapy company

November 2022

# Forward Looking Statements

This presentation does not constitute an offer to sell or a solicitation of offers to buy Ordinary Shares (the "Securities"). Although reasonable care has been taken to ensure that the facts stated in this presentation are accurate and that the opinions expressed are fair and reasonable, the contents of this presentation have not been formally verified by Oxford Biomedica plc (the "Company") or any other person. Accordingly, no representation or warranty, expressed or implied, is made as to the fairness, accuracy, completeness or correctness of the information and opinions contained in this presentation, and no reliance should be placed on such information or opinions. Further, the information in this presentation is not complete and may be changed. Neither the Company nor any of its respective members, directors, officers or employees nor any other person accepts any liability whatsoever for any loss howsoever arising from any use of such information or opinions or otherwise arising in connection with this presentation.

This presentation may contain forward-looking statements that reflect the Company's current expectations regarding future events, its liquidity and results of operations and its future working capital requirements. Forward-looking statements involve risks and uncertainties. Actual events could differ materially from those projected herein and depend on a number of factors, including the success of the Company's development strategies, the successful and timely completion of clinical studies, securing satisfactory licensing agreements for products, the ability of the Company to obtain additional financing for its operations and the market conditions affecting the availability and terms of such financing.

# Oxford Biomedica: Becoming a leading innovative-led global viral vector partner for cell and gene therapy companies

1. **Cell and gene therapy will bring the next wave of breakthroughs in medicine**
   - *Over 500 biotechs and majority of Big Pharma active in the space[1]*
2. **Viral vectors play a critical role in cell and gene therapy**
   - *Strong double digit growth forecasted for both the AAV and Lentiviral Vector outsourced supply market[2]*
   - *Still many more gains to be realised by increasing scale, purity and capability*
3. **OXB is well positioned to solve our customer's manufacturing challenges**
   - *Through proprietary technologies and continuous innovation in viral vectors*
4. **Track record of high quality vector manufactured at pace**
   - *Large-scale commercial manufacture of the adenovirus-based Oxford AstraZeneca COVID-19 vaccine*
   - *Long-term relationship with Novartis as its sole global supplier of lentiviral vector for Kymriah®*
5. **OXB has capabilities across all key vector types**
   - *Both lentiviral vector and AAV platform (through Oxford Biomedica Solutions)*

[1] McKinsey & Company, 2020
[2] Source: Company data and third party research. Lentiviral and γ-retrovirus global vector supply market (outsourced) expected to grow at 17% CAGR and AAV at 25% CAGR ('20-'26).

# A business at the heart of cell and gene therapy

**1 A leader in viral vectors enabling the delivery of life-saving cell and gene therapies**

- First FDA approved CAR-T cell therapy with Novartis for Kymriah®
- 20+ programmes with big pharma and innovative biotech companies across all key vector types
- Industrialising viral vectors → Driving treatment cost down through innovation

**2 Established global operational infrastructure and proven commercial supply capabilities**

- Proven commercial supply capability in 30 countries
- Facilities spanning more than 200,000 sq ft[1]
- Seven facilities across Oxford, UK and Boston, US

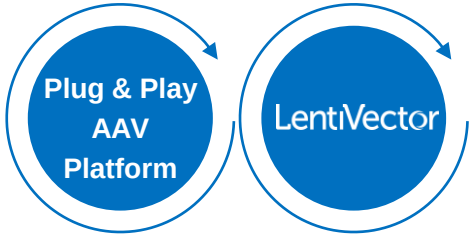
**3 A high growth business with a diversified customer base**

- Vector agnostic with innovative capabilities spanning lentivirus, adenovirus and AAV
- The outsourced supply market for adenoviral, AAV and integrating vectors is estimated to be worth c.$2.8 billion by 2026 growing to c.$4.8 billion by 2030[2]
- Proprietary platform technology protected by IP, patents and know-how

[1] Includes manufacturing, laboratory and office space
[2] Source: Company data

# A global leader across all key vector types

Oxford Biomedica




Proprietary platform

IP: patents & know-how

Quality Systems

Expertise

Facilities

**Multiple revenue streams through process development and manufacturing**

Commercial stage viral vector innovative service provider with over 25 years of experience

UK (Oxford) and US (Boston) manufacturing facilities

**>70%**

**Growth in Number of Customers[1]**

**20+**

**Partner Programmes**

Gene Therapeutics

Delivering innovative therapies

5

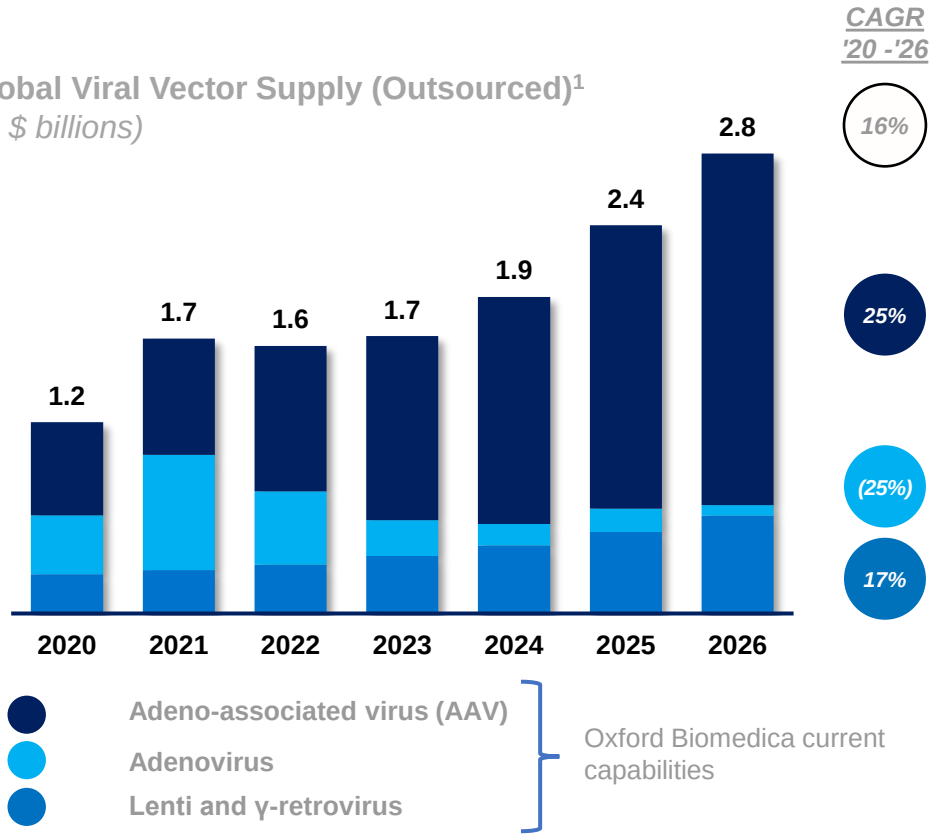
Proprietary Products

Expected to be externally funded in 2023

AstraZeneca · Bristol Myers Squibb · Boehringer Ingelheim · Orchard therapeutics · ARCELLX · NOVARTIS · immatics · Beam THERAPEUTICS · Cabaletta Bio · HOMOLOGY Medicines, Inc.

[1] Since H1 2021

# Viral Vector Manufacturing to Continue its Growth Trajectory




**Entire market now fully addressable with multi-site, multi-technology capable labs & manufacturing**

[1]Source: Company estimates and third party research

# AAV Manufacturing and Innovation Business

In March 2022, Oxford Biomedica broadened its leading viral vector offerings by incorporating Homology Medicines' established AAV capabilities into a newly formed AAV Manufacturing and Innovation Business in the US with Homology Medicines as 20% owner

**Employees**

Team of c.125 with AAV manufacturing expertise

**Manufacturing Capabilities**

Clinical manufacturing at 500L, proven scalability to 2,000L for commercial supply

**25,000 sq.ft Manufacturing Capacity[1]**

State-of-the-art GMP facility

**Platform & IP**

Proprietary 'plug and play' manufacturing process and platform

**c.$25m (£21m) Contracted Revenues**

Minimum contracted revenues in the first full twelve months from Homology Medicines

**Profitability**

Break-even EBITDA expected by H1 2025 with gold standard long term target margins

- Robust business development pipeline
- New deal announced in H1 with at least one additional deal targeted for H2 2022
- Additional c.23,000 sq ft of fallow area is being developed for analytical, office, warehouse and GMP space

GBP:USD = 1.2159

[1]Total facility size 91,000 sq. ft

## Innovative CDMO Services

## Customer-centric

Leading provider of scale up solutions and commercial supply

# 2022 Innovative Services Update


## January

Announced an LSA with **Cabaletta Bio** for their DSG3-CAART programme

## July

Amended and expanded the License and Clinical Supply Agreement with **Juno/BMS** to include two new viral vector programmes

Announced a LSA with an **undisclosed partner** for their lead CAR-T programme.

Signed a new three-year MSDA to facilitate potential future manufacturing opportunities with **AstraZeneca**. Oxford Biomedica expects to recognise aggregate revenues of approx. £30m from AZ in 2022

## August

**Oxbox**, OXB's largest manufacturing facility spanning 84,000 sq. ft **received MHRA approval for the fill finish suite**, bringing this previously outsourced function in-house

## September

Announced a LSA with an **undisclosed late-stage cell and gene therapy company** for their lead programme, a cell-based therapy targeting a rare indication

Signed an agreement with a **new partner** granting the new customer access to the Oxford Biomedica Solution's **AAV** platform

Oxford Biomedica

# Platform

## Innovation-centric

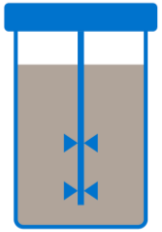
Driving industrialisation of viral vectors

# Evolution of the OXB platform process – upstream

## PROCESS A

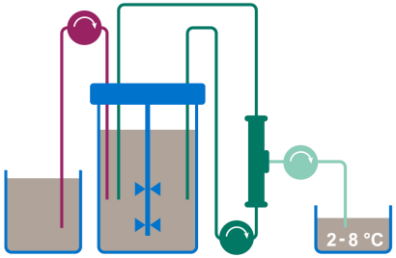
- Adherent process – fixed volume
- Limited number of cells
- Low vector stability at 37 °C
- Serum containing

## PROCESS B



- Batch process – fixed volume
- Limited number of cells
- Low vector stability at 37 °C
- Serum & animal component free

## PROCESS C



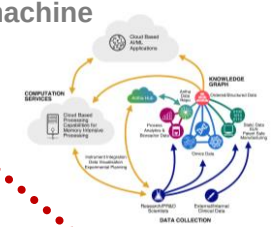

- Perfusion system - replenish nutrients & remove impurities
- Higher cell density – increased vector production
- Continuous transfer of vector to 2-8 °C – improved stability
- Higher yields and improved vector quality
- Serum & animal component free
- Use of enhancers (U1) – improved P:I ratio

# Proprietary Platform Innovation

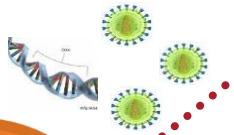
Oxford Biomedica

**Maximising data integration and analysis**

AI and machine learning

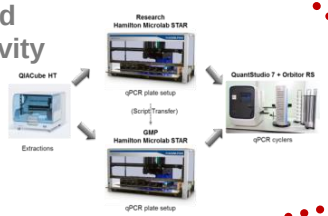


Targeted vectors with optimal/regulated expression



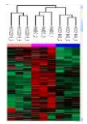
**Cell and vector engineering to increase capability and productivity**

Automation for increased productivity

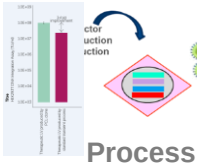



Therapeutic vectors with tailored attributes

Proteomics/ transcriptomics



**Analytical dev. to characterise vectors (purity) and achieve rapid batch release**



Process D: Producer cell lines



Process C: Higher titre and superior quality – Includes Perfusion, U1 (RNA) & U2

LentiStable™


SecNuc™

TRiP System™

**Large scale bioprocessing: Increase yield and improve purity**

# Recent innovations

- Process C successfully transferred to GMP
  - Improved productivity
  - Increased purity
  - Superior quality of vector (P:I ratio)
- Exemplification of novel Dual plasmid AAV system at 2000L scale
- 4th generation Lentiviral vectors to launch in 2023 with additional capabilities
- GMP qualification of routine automated cell based assays (Titre and RCL)

Oxford Biomedica

## Gene Therapeutics

**Patient-centric**
Leveraging expertise to deliver lentiviral vector based gene therapies

# Gene Therapeutics Pipeline

| Product | Indication | Pre-Clinical | Phase I | Phase I/II | Phase II | Phase III | Approval |
|---|---|---|---|---|---|---|---|
| **OXB Proprietary Unencumbered Products** | | | | | | | |
| OXB-302 | Acute Myeloid Leukaemia | | | | | | |
| OXB-401 | Undisclosed liver indications | | | | | | |
| OXB-40Y | | | | | | | |
| OXB-40Z | | | | | | | |
| Axo-Lenti-PD[1] | Parkinson's disease | | | | | | |

*Ex vivo programmes* *In vivo programmes*

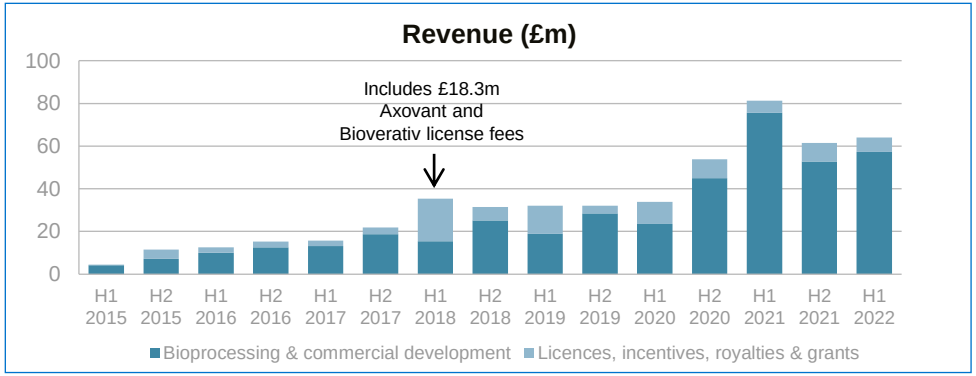
- Review of therapeutic product strategy led by new CMO, Dr. Ravi Rao (joined in April 2022)
- Ongoing review of **strategic options to externally fund** an appropriate future pipeline of products and other novel opportunities → to be executed in **2023**
- Aim to maintain a **long term economic interest** in a number of therapeutic products with a potential material **reduction in annual operating expenditure**

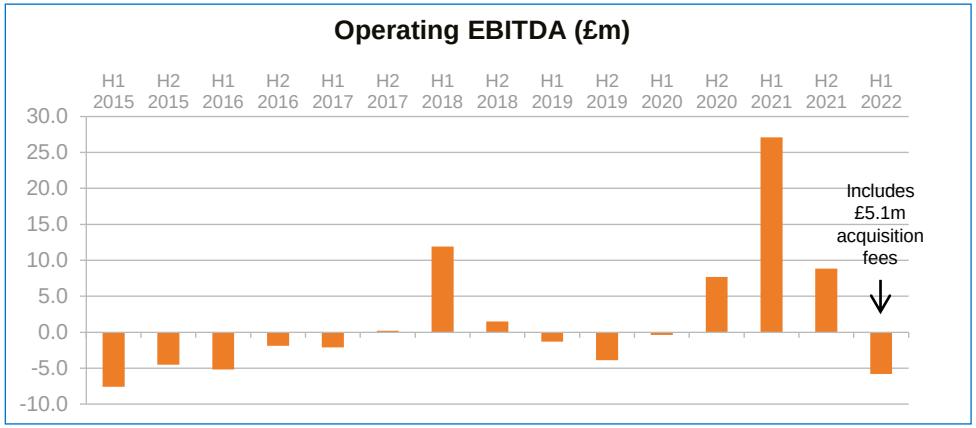
1 Axo-Lenti-PD formerly known as OXB-102, which OXB out-licensed to Sio Gene Therapies. On 31st January 2022, Oxford Biomedica was informed by Sio Gene Therapies of their intention to return the rights for AXO-Lenti-PD. We plan to out-license the programme again to a suitable partner

# Financials & Outlook

# H1 2022: Double digit growth in core business

1. Double digit revenue growth in the core business[1] offset by the decrease in COVID-19 vaccine manufacturing; total revenue decreased by 21% to £64.0 million (H1 2021: £81.3 million)
2. Operating EBITDA loss of £5.8 million[2] (H1 2021 EBITDA profit of £27.1 million)
3. Launch of Oxford Biomedica Solutions drove an increase in operating expenses to £56.2 million[2] (H1 2021: £23.6 million)
4. Cash used in operations was £24.5 million compared to £22.2 million generated in H1 2021
5. Capital expenditure of £6.0 million (H1 2021: £3.5 million)




[1] Excluding COVID-19 vaccine manufacturing. Compared to H1 2021

[2] Included one-off acquisition-related due diligence costs of £5.1 million relating to the Homology Medicines transaction

Operating EBITDA (Earnings Before Net Finance Costs, Tax, Depreciation, Amortisation, fair value adjustments of assets at fair value through profit and 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.

# Strong cash position with active cost management

**Cash** at 30 June 2022 was £118.5 million and £115.8 million at 31 August 2022

12-month $85 million **Oaktree loan facility taken** out in March 2022 was part repaid and part-refinanced with a new $50m loan facility from Oaktree in October 2022

Ongoing process for the **sale and leaseback** of the Group's 36,000 sq ft Windrush Court facility; seeking offers in excess of £55m

A review of the **gene therapeutics pipeline** is underway, including strategic options to externally fund an appropriate future pipeline of products and other novel opportunities → To be executed in **2023**

**Cost-control initiatives** are in place, including right-sizing of headcount as the pandemic eases and taking a cautious approach to planning significant new projects

# Financial Outlook

- Similar levels of revenues expected in H2 2022 as those in H1 2022; more than 90% of forecasted revenues for the second half of the year covered by existing binding purchase orders and rolling customer forecasts
- Continued growth in lentiviral vector and AAV manufacturing volumes, with lower vaccine volumes anticipated
- Aggregate revenues of c.£30m from AstraZeneca for FY 2022, with the bulk of revenues having been recognised in H1 2022
- Broadly break-even operating EBITDA[1] expected in H2 2022
- Capex expected to be similar in H2 2022 to H1 2022

**Long term target: A market leading position in the viral vector outsourced supply market across all key vector types, with long term revenue growth rates exceeding the broader market**

[1]Operating EBITDA (Earnings Before Net Finance Costs, Tax, Depreciation, Amortisation, fair value adjustments of assets at fair value through profit and 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.

# Expected Catalysts H2 2022

- **New deals** anticipated for H2 2022 and through 2023

  → Additional AAV deals through 2022-23; revenue ramp up from OXB Solutions

- Therapeutics **product strategy to be executed** in 2023

  → Maintaining a long term economic interest with a potential material reduction in annual operating expenditure

- Conclusion on **part-repayment and refinancing** of Oaktree loan facility

- Completion of **sale and leaseback** process for Windrush Court

# Oxford Biomedica: Becoming a leading innovation-led global viral vector partner for cell and gene therapy companies

1. **Cell and gene therapy will bring the next wave of breakthroughs in medicine**
   - *Over 500 biotechs and majority of Big Pharma active in the space[1]*
2. **Viral vectors play a critical role in cell and gene therapy**
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[1] McKinsey & Company, 2020
[2] Source: Company data and third party research. Lentiviral and γ-retrovirus global vector supply market (outsourced) expected to grow at 17% CAGR and AAV at 25% CAGR ('20-'26).

# Contact Us

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**Taylor Boyd** VP, Head of IR
**Sophia Bolhassan** VP, Corporate Affairs & IR

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# Appendix

# Corporate and Market Information

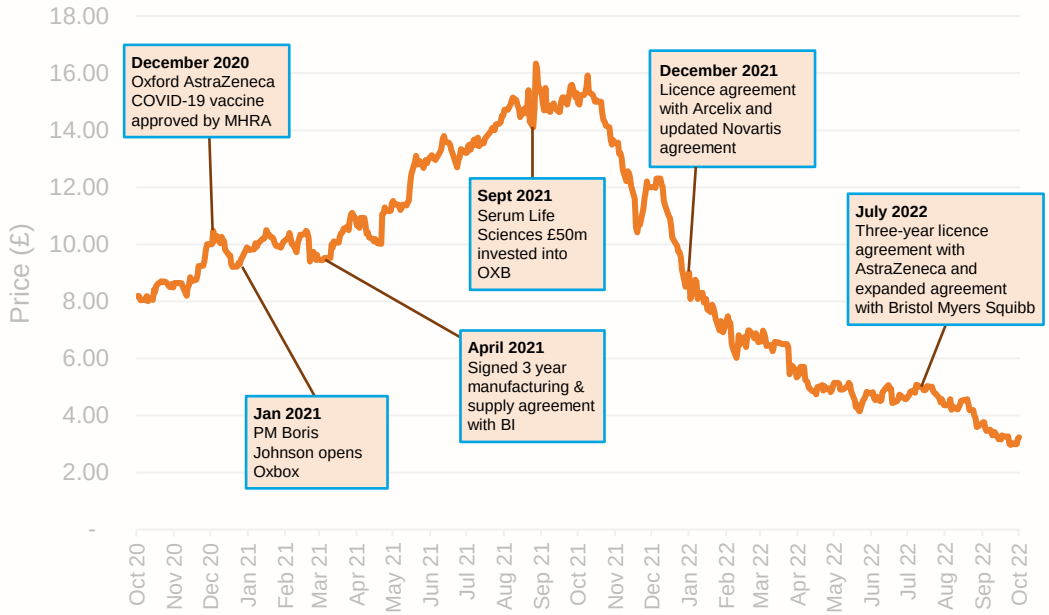
## Company Facts

- IPO on Main list LSE in April 2001 (OXB.L)
- £310 million (approx. $358 million) raised to date
- At 27 October 2022
  - Share price £3.23 ($3.74)
  - Market cap: £311 million / $360 million

| Major/significant Shareholders [1] | Share |
|---|---|
| Novo Holdings A/S | 10.4% |
| Vulpes Investment Management | 9.7% |
| Liontrust Asset Management | 8.4% |
| M&G Investments | 5.8% |
| Serum Life Sciences | 3.5% |
| Nine Ten Capital Management | 3.5% |
| Vitruvian Partners | 3.1% |
| Hargreaves Lansdown Asset Management | 3.1% |
| Mr Shah | 3.0% |
| Other | 49.5% |

[1]As of 14 Oct 2022

## Last 2-Year Share Price Performance



# ESG H1 2022 Achievements

Oxford Biomedica's ESG strategy is focused on five pillars: People; Community; Environment; Innovation and Supply Chain.

## People

A working group was formed applying Equality, Diversity & Inclusion principles across OXB

16 representatives were elected to our Workforce Engagement Panel raising issues that are important to employees

New mental health and wellbeing initiatives were introduced

## Community

35 apprenticeships enrolled in different programmes across OXB.

Community volunteering scheme allowing employees to request 7 hours of paid time off for volunteering each year

Fundraising efforts for Oxfordshire Mind and Homeless Oxfordshire continued

## Environment

Engaged with waste operators to increase levels of recycling

Onsite waste awareness day

External programme to improve energy efficiency in laboratory cold storage

Tree planting schemes have been investigated to offset paper use

## Innovation

Continued to support PhD studentships through ABViP, a multidisciplinary training programme for next-generation bioscience leaders

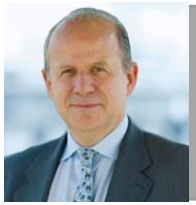
## Supply Chain

A supplier code of conduct has been rolled out and published on the Group's website

# LentiVector® Platform and OXB 302 Patent Families (Published)

| Patent Family (publication no.) | What is covered |
|---|---|
| **US 7,419,829** | WPRE variant – key safety feature |
| **WO 03/064665** | Rev-less vectors – key safety feature for clinical use |
| **WO 2009/153563** | Downstream processing of manufactured vector to maximise yield |
| **WO 2015/092440** | TRiP system – improved manufacturing, particularly vector titre |
| **EP3502260; EP3633040; EP3696272; US 2019-0211358** | Vector production methods – modular plasmids and stable cell lines |
| **WO 2019/175600** | Vector production methods – secreted nuclease |
| **WO 2021/014157** | Vector production methods (U1) |
| **WO2018/167486** | Anti-5T4 methods for treating/preventing haematological malignancies<br>Anti-5T4 CARs with specific sequences |
| **WO2021/094752** | Improved TRiP system |
| **WO2021/181108** | Automated RCL assay |
| **WO 2021/160993** | MSD-KO – improved safety profile of vectors |
| **WO2021/181108** | Lentiviral vector genome modifications – improved capacity and safety profile |
| **WO2021/229242** | U2 – an additive to increase titre |
| **WO2022/101617** | Transfection method and upstream process C |

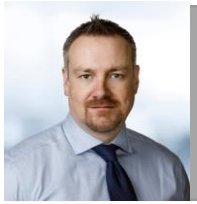
# Senior Executive Team (1/3)



**Roch Doliveux**
**Chair and Interim CEO**

Joined OXB as Non-Executive Chair in 2020, then appointed Interim-CEO in 2022

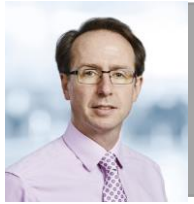
- CEO
- President



**Stuart Paynter**
**Chief Financial Officer**

Joined OXB in 2017

- EU Finance Director
- Head of Global Audit



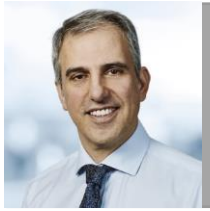
**Jason Slingsby, PhD**
**Chief Business and Corporate Development Officer**

Joined OXB in 2015

**Tim Kelly**
**Chief Executive Officer of Oxford Biomedica Solutions**

Joined OXB in 2022

# Senior Executive Team (2/3)



**Kyriacos Mitrophanous, PhD**
**Chief Scientific Officer**
Joined OXB in 1996

PhD in Molecular Biology from UCL; postdoctoral research at Oxford University

Recognised expert in lentiviral vectors with key publications (*Lancet*, *Human Gene Therapy*) and inventor on numerous patents

**James Miskin, PhD**
**Chief Technical Officer**
Joined OXB in 2000

**Nick Page**
**Chief Operations Officer**
Joined OXB in 2018

**Ravi Rao, PhD**
**Chief Medical Officer**
Joined OXB in 2022

# Senior Executive Team (3/3)

**Lisa James**
**Chief People Officer**
Joined OXB in 2016

**Natalie Walter**
**General Counsel**
Joined OXB in 2019

**Matthew Treagus**
**Chief Information Officer**
Joined OXB in 2021

# Oxford Biomedica Facilities Overview

We've dedicated facilities to support innovation from conception to commercial reality

**Research**

## WINDRUSH INNOVATION CENTRE

Future dedicated innovation hub. Currently office space with project to generate 2,970 $m^2$ *(32,000 $ft^2$)* of new research laboratories pending

**Research and Analytics**

## WINDRUSH COURT

State of the art laboratories totalling 2,970 $m^2$ *(32,000 $ft^2$)*. Home to the analytical services group and Process Research & Development

**Bioprocessing**

## HARROW HOUSE & CHANCERY GATE

370 $m^2$ *(4,000 $ft^2$)* of commercial (FDA/MHRA) manufacturing space
2 x GMP production suites
Microbiology QC laboratory

## YARNTON

1,700 $m^2$ *(18,300 $ft^2$)* of commercial (FDA/MHRA) manufacturing space
1 x GMP production suite, Satellite warehouse and microbiology QC laboratory

## OXBOX

4,180 $m^2$ *(45,000 $ft^2$)*
4 x GMP production suites
2 x fill finish suites
- warehousing
- cold chain
- QC laboratories

**Bioprocessing**
**Research and Analytics**

## PATRIOTS PARK (BOSTON)

2,320 $m^2$ (25,000 $ft^2$)[1]
3 x GMP 500L Bioreactors
Additional c.23,000 sq ft being developed for analytical, office, warehouse and GMP space

[1]Total facility size 91,000 sq. ft

# Collaborative and complementary AAV and lentiviral vector-based approach

| | Transfection | Upstream & Downstream | Analytical Testing | Cell Technology |
|---|---|---|---|---|
| AAV Manufacturing and Innovation | Triple and dual plasmid system | Scaled to 500L & 2,000L<br>Sector leading AAV vector quality | Full suite of methods established | HEK293 cells transient production |
| Oxford Biomedica Technology | More stable transfection mix | Perfusion technology<br>TRiPSystem™<br>SecNuc™ | Assay automation<br>Advanced analytics (mass spectrometry) | HEK293, HEK293T cells for transient production &<br>LentiStable™ |
| Technical Synergies | Lower material costs<br>Improved quality<br>Easier scale up to >500L | Higher yields with superior quality attributes | Faster more efficient testing<br>Leading in vector characterisation | Opportunity for better transient and stable cell lines for LV and AAV production |



**Collaborative and complementary AAV and lentiviral vector-based approach has the potential to accelerate the mission to improve patients' lives worldwide**