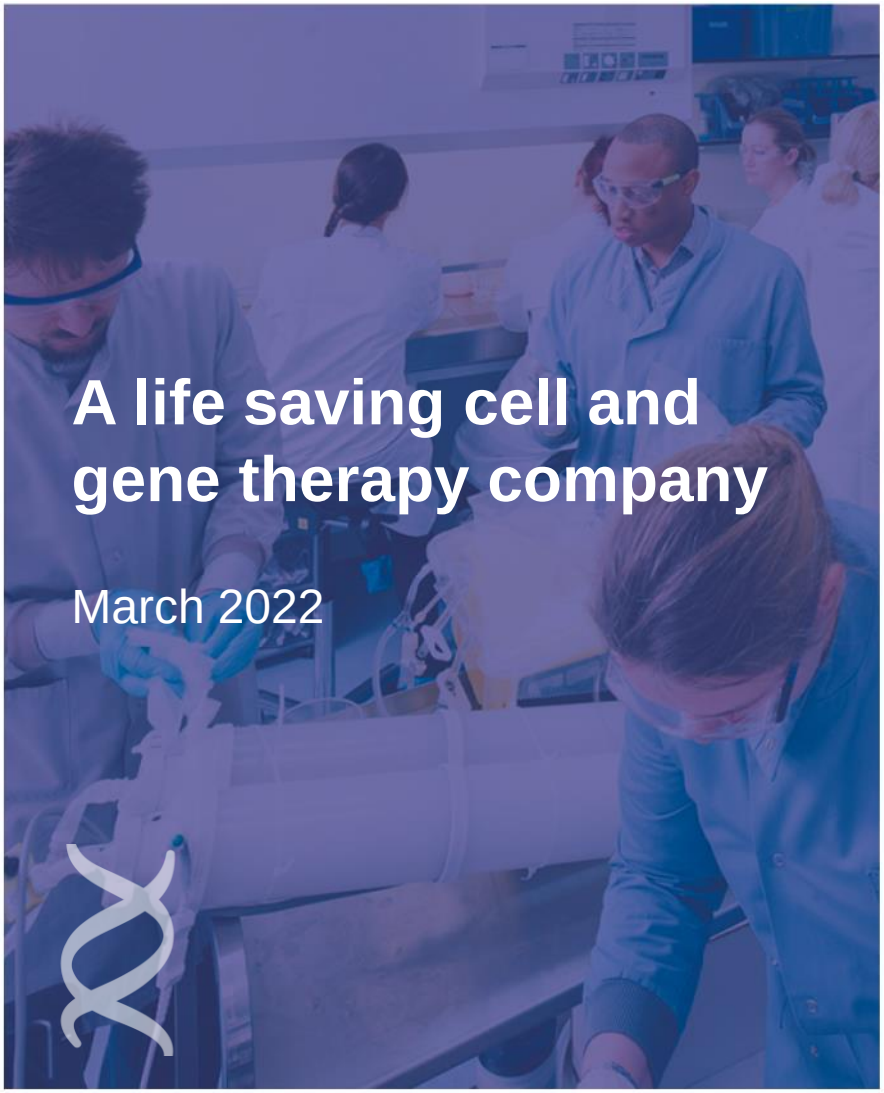
Oxford Biomedica



A life saving cell and gene therapy company

March 2022

Forward Looking Statements

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Science Based Innovative CDMO with a Proprietary Pipeline

1

A leader in viral vectors within the fast-growing cell and gene therapy industry

First FDA approved lentiviral vector-based gene delivery system through our collaboration with Novartis on Kymriah®

Multiple partnerships with leading companies

AstraZeneca · Bristol Myers Squibb · NOVARTIS · Boehringer Ingelheim

2

Diversified business with CDMO revenues and upside from our proprietary pipeline

CDMO operations and regulatory approved facilities provide multiple revenue streams

Leveraging expertise to deliver innovative therapies through our proprietary pipeline

3

Established operational infrastructure and proven commercial supply capabilities

Proven commercial supply capability in 30 countries

Over 740 staff located at 6 UK-based facilities covering in excess of 200,000 sqft[1]

FDA · Pmda · MHRA · European Medicines Agency

Oxford Biomedica

A Leading Viral Vector Specialist Using Science to Save Lives

Delivering on Our Strategy to Become a Global Fully Integrated Viral Vector Platform

Proprietary platform

IP: patents and know-how

Quality Systems

Expertise

Facilities

Process development and manufacturing provides multiple revenue streams

Commercial Stage Viral Vector CDMO with >25 years Experience

18 **Partner Programmes**

Gene Therapeutics

Delivering innovative therapies

5 **Proprietary Products**

AstraZeneca · Bristol Myers Squibb · Boehringer Ingelheim · Orchard therapeutics · ARCELLX · NOVARTIS · Santen · UK Cystic Fibrosis Gene Therapy Consortium · Beam Therapeutics · Cabaletta Bio

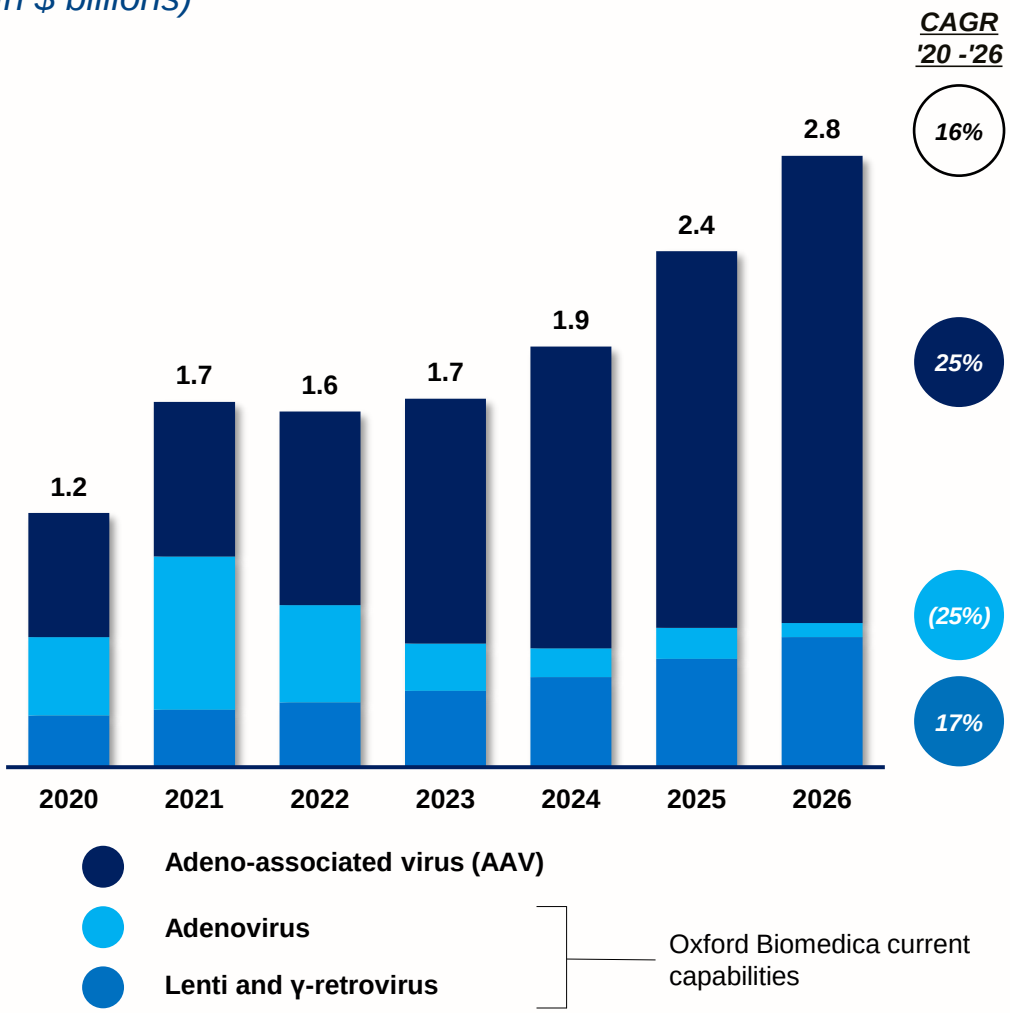
Oxford Biomedica

Oxford Biomedica

Viral Vector Manufacturing to Continue its Growth Trajectory

Global Viral Vector Supply (Outsourced)[1]

(In $ billions)



Oxford Biomedica's goal is to become a global viral vector champion – offering customers expertise and manufacturing capabilities across key vector types

1. Source: Company estimates and third party research

Oxford Biomedica

Oxford Biomedica AAV Manufacturing and Innovation Business: A High Performing Process Development and Manufacturing Platform

- In January 2022, Oxford Biomedica announced it was broadening 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[1]

Location

Boston, Massachusetts, United States

Employees

Team of c.125 with AAV manufacturing expertise

Manufacturing Capabilities

Process / Analytical Development & early stage clinical manufacturing at 500L, proven scalability to 2,000L for commercial supply

25,000 sq.ft

Manufacturing Capacity & Facility

State-of-the-art GMP facility

10 – 15 500L batches
10 – 15 1,000L batches
annually at steady state[1]

Platform & IP

Proprietary 'plug and play' manufacturing process and platform

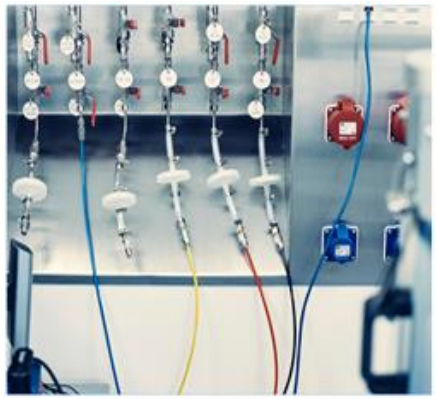
c.$25m (£19m)

Contracted Revenues

Minimum contracted revenues in the first full twelve months of operation

Profitability

Break-even expected by year 3 with gold standard long term target margins



1. The transaction is expected to close in Q1 2022, subject to the satisfaction of certain closing conditions including the requirements of the Hart-Scott-Rodino Antitrust Improvements Act of 1976
2. Company estimates

GBP:USD = 1.33726

Oxford Biomedica + AAV Manufacturing and Innovation Business: A Global Viral Vector Champion

1. **Creates a leading partner of choice with advanced capabilities across key vector types**
2. **Track record, skills and expertise in a significantly larger total addressable market**
3. **Addressing the increasing market requirements for efficacy, safety and affordability in C&GT**
4. **Technologies and IP to continue innovation to further enhance platform and customer offering**
5. **Strong synergy opportunities from combination of technical capabilities and cross-selling to existing customers in attractive end markets**

CDMO

Customer-centric

Leading provider of scale up solutions and commercial supply

CDMO: 2021-22 Highlights

COVID-19 Vaccine and Agreement with AstraZeneca

- Oxford Biomedica continues large-scale commercial manufacture of AZ COVID-19 vaccine
- In May 2021, AZ committed to an increase in the number of batches required resulting in the Group raising its expectation for cumulative revenues from the contract to be > £100 million by end of 2021
- In the period, the Group agreed to purchase equipment provided to Oxford Biomedica by VMIC to enable longer term use

Boehringer Ingelheim

- In April 2021, Oxford Biomedica announced a new three-year Development and Supply agreement with Boehringer Ingelheim for the manufacture and supply of various types of viral vectors
- Under the terms of the agreement, Oxford Biomedica intends to manufacture GMP batches for Boehringer Ingelheim to support the development of viral vectors
- In October 2021, Boehringer Ingelheim exercised its option to license Oxford Biomedica's lentiviral vector technology for BI 3720931, a lentiviral vector-based gene therapy for the treatment of cystic fibrosis (in an inhaled formulation)

Novartis

- In December 2021, Oxford Biomedica announced an extension and update to its commercial supply agreement with Novartis, now extended to the end of 2028
- Under the terms of the updated agreement, Oxford Biomedica also regained the rights to its LentiVector® platform relating to three CAR-T targets, including CD19 targeted therapies
- Novartis was granted additional flexibility in ordering of GMP batches across Oxford Biomedica's multiple GMP facilities but will no longer have a minimum order commitment

CDMO: 2021-22 Highlights

Partner Programmes Update

- In December 2021, Oxford Biomedica announced a Licence and Supply Agreement and a three-year Clinical Supply Agreement with Arcellx for select CAR-T programmes
- In January 2022, Oxford Biomedica announced a Licence and Supply Agreement with Cabaletta Bio for their DSG3-CAART programme (now in Phase I)
- In January 2022, Sio Bio announced its intention to return the rights for AXO-Lenti-PD; Oxford Biomedica plans to out-license the programme in due course

Building the Future

- Conversion of office space into GMP grade laboratories at Windrush Court completed in Q4 2021; laboratories now in use to meet expected near-term demand in commercial development and analytics
- Fill / finish A has progressed well, with regulatory submission planned for Q1 2022

Expansion into US and AAV

- In January 2022, Oxford Biomedica announced it was broadening 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[1]

1. The transaction is expected to close in Q1 2022, subject to the satisfaction of certain closing conditions including the requirements of the Hart-Scott-Rodino Antitrust Improvements Act of 1976

CDMO Pipeline – Page 1 of 2

Product	Indication	Pre-Clinical	Phase I	Phase I/II	Phase II	Phase III	Approval
LentiVector® platform							
Kymriah®[1]	r/r ALL / r/r DLBCL						
2nd CAR-T	Cancer (multiple)						
3rd CAR-T	Cancer (multiple)						
4th CAR-T	Cancer (multiple)						
5th CAR-T	Cancer (multiple)						
6th CAR-T	Cancer (multiple)						
1st CAR-T / TCR-T	Undisclosed						
2nd CAR-T / TCR-T	Undisclosed						
3rd CAR-T / TCR-T	Undisclosed						
4th CAR-T / TCR-T	Undisclosed						

Process development and bioprocessing revenues, and royalties

NOVARTIS

Bristol Myers Squibb

[1] USAN name is tisagenlecleucel

In vivo programmes *Ex vivo programmes*

Oxford Biomedica

CDMO Pipeline – Page 2 of 2

Product	Indication	Pre-Clinical	Phase I	Phase I/II	Phase II	Phase III	Approval
LentiVector® platform							
OTL-201	MPS-IIIA						
Other	undisclosed						
CAR-T	Cancer (multiple)						
CAR-T	Undisclosed						
CAAR-T	mPV (autoimmune)						
CFTR gene	Cystic Fibrosis						
Ocular gene	Inherited retinal disease						
AZD1222	COVID-19 Vaccine						

Process development and bioprocessing revenues, and royalties

Orchard therapeutics

Beam Therapeutics

ARCELLX

Cabaletta Bio

Boehringer Ingelheim

gtx UK Cystic Fibrosis Gene Therapy Consortium

Santen

AstraZeneca **Note 1**

Note 1: Scale up and vaccine manufacturing revenues

In vivo programmes *Ex vivo programmes*

Oxford Biomedica

COVID-19 Vaccine Partnership

AstraZeneca COVID-19 clinical & commercial supply signed in May-20, extended in Sept-20 for up to 3 years

18 month supply agreement under a 3 year master services agreement to GMP manufacture adenoviral vector based COVID-19 Vaccine candidate

Follows 1 year supply agreement signed in May for multiple batches at 200L scale

Production will be from up to 3 GMP suites at the new Oxbox manufacturing facility

£15m upfront payment as a capacity reservation fee and potentially in excess of £85m plus certain materials costs for large scale vaccine manufacture at 1000L scale

AstraZeneca

Press release (21 May 2020)
***Pascal Soriot, Chief Executive Officer of AstraZeneca said**:*

"This pandemic is a global tragedy and it is a challenge for all of humanity. We need to defeat the virus together or it will continue to inflict huge personal suffering and leave long-lasting economic and social scars in every country around the world. We are so proud to be collaborating with Oxford University to turn their ground-breaking work into a medicine that can be produced on a global scale"

Timelines and current status

- **April 20:** OXB joined consortium led by the Jenner Institute, Oxford University
- **May 20:** OXB signs initial 1 year clinical and commercial supply agreement with AstraZeneca at 200L scale
- **June 20:** OXB signs five year agreement with VMIC; VMIC provides equipment for two GMP suites in Oxbox
- **September 20**: OXB signs 18 month supply agreement under a 3 year master services agreement with AstraZeneca
- **December 20:** MHRA authorises the Oxford AstraZeneca Vaccine for emergency supply in the UK
- **May 2021:** Following successful manufacturing of 1000L batches and commitment from AZ for additional batches, financial guidance for the September 2020 supply agreement increased to cumulative revenues in excess of £100 million by year end 2021

Novartis CAR-T Partnership

Novartis partnership in place since 2014. 1st commercial supply agreement signed in 2017 and extension signed Dec 2021 to the end of 2028; OXB also regained rights to all CAR-T targets (including CD19 targeted therapies)

- Clinical and commercial supply of vector
- Kymriah® (tisagenlecleucel)/CTL019 and five additional lentiviral vectors for CAR-T programmes
- IP licence
- Vector manufacturing revenues
- Undisclosed process development fees
- OXB receives royalties on sales

NHS England

News release (05 Sept 2018)
Simon Stevens, Chief Executive NHS England said:

"CAR-T therapy is a true game changer, and NHS cancer patients are now going to be amongst the first in the world to benefit. Today's approval is proof-positive that, in our 70th year, the NHS is leading from the front on innovative new treatments. This constructive fast-track negotiation also shows how responsible and flexible life sciences companies can succeed - in partnership with the NHS - to make revolutionary treatments available to patients."

Current status and expectations

- Kymriah® approved for r/r ALL & r/r DLBCL indications in US, EU, JP, AU, CA
- Kymriah® the only CAR-T available in Asia
- In April 2020, FDA granted Regenerative Medicine Advanced Therapy (RMAT) designation to Kymriah®, for an investigational new indication to treat patients with relapsed or refractory (r/r) follicular lymphoma (FL). Novartis expects US regulatory filing for Kymriah® in r/r follicular lymphoma in 2021
- Over 350 qualified treatment centres and 30 countries worldwide have coverage for Kymriah® for at least one indication
- Sales estimate **>$1.2bn[1]** by 2025

[1] Global Data Pharma eTrack Product Sales/Analyst consensus, extracted Feb 2020

Boehringer Ingelheim/UK CFGTC/IP Group

Oct 21 BI exercises option for CF treatment, following earlier partnership agreement signed Aug-18

Exclusive option & licence agreement with BI, option exercised Oct 21

Process development agreement with BI/UK CFGTC/IP Group

Follows 3 year Development and Supply agreement with BI for the manufacture and supply of various types of viral vectors, signed Apr 21

With BI for lentiviral vector technology to manufacture, register and commercialise the lentiviral gene therapy for the treatment of CF

Responsible for process & analytical development, scale up of manufacture and generation of material for toxicology studies

Boehringer Ingelheim

Dr Clive Wood, Senior Corporate Vice President Discovery Research said:

"Through this collaboration, we are joining forces with some of the top talents in this disease space to propel treatment advances forward. Bringing together our existing expertise as a leader for nearly a century in the discovery and development of therapies that have advanced patient care in respiratory diseases with the gene therapy knowledge of our partners, we aim to unlock unprecedented opportunities for patients with this devastating disease, who are desperately waiting for better treatment options"

Current status and expectations

- Currently the CF gene therapy product is in pre-clinical development with plans to manufacture material for toxicology studies
- Sales of products to treat Cystic Fibrosis in the 7 major markets reached **$2.2bn** in 2015 and is forecast to reach **$8.6bn** by 2025[1]

[1] OpportunityAnalyzer: Cystic Fibrosis. Opportunity Analysis and Forecast to 2025. Published by Global Data April 2017

Platform

Innovation-centric
Driving industrialisation of viral vectors

Platform Update

Industrialisation of viral vector manufacturing

- Our expertise, IP and investment make us a world leading producer of Lentiviral vectors
- Multiple elements of IP and innovation is relevant across all viral vector classes

Innovation

- Process C is up and running, giving better quantity and quality (includes perfusion and U1)
  - ➢ Process C general roll out first half of 2022
- Process D coming on stream a year later
- Ongoing investment in high-throughput automation and robotics to reduce costs by enabling faster screening, analytical testing and streamlining production
- *In vivo* CAR-T generation for greater patient access and superior efficacy. Off- the-shelf, reduced COGs – direct reprogramming of patient's cells

Building the future

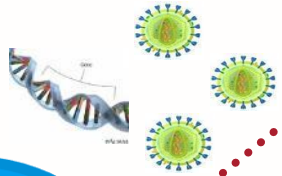
- Windrush Innovation Centre on course for occupancy 2023 – to provide next generation laboratory facilities

Proprietary Platform Innovation

Maximising data integration and analysis

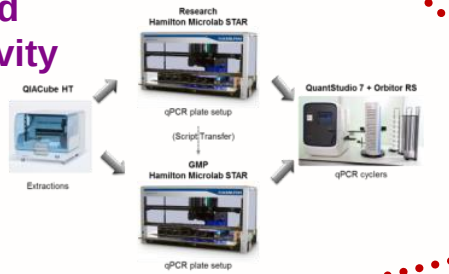
AI and machine learning

Targeted vectors with optimal/regulated expression

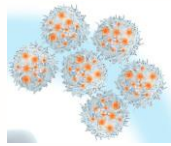


Cell and vector engineering to increase capability and productivity

Automation for increased productivity



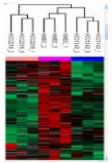
Therapeutic vectors with tailored attributes



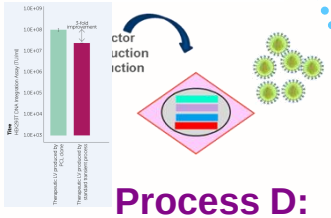
Proteomics/ transcriptomics

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

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



LentiStable™



SecNuc™

TRiPSystem™

Process D: Producer cell lines

Large scale bioprocessing: Increase yield and improve purity

Oxford Biomedica


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

Gene Therapeutics Update

AXO-Lenti-PD – Parkinson's Disease

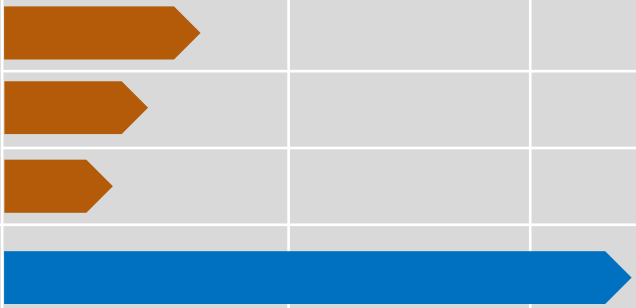
- On 31st January 2022, Oxford Biomedica was informed by Sio Gene of their intention to return the rights for AXO-Lenti-PD
- Oxford Biomedica plans to out-license the programme again in due course to a suitable partner with resource capabilities and funding to further develop this asset

Proprietary in-house product development

- Internal review realigning priority preclinical targets completed and worked initiated on new liver indications
- Lead programme: OXB-302 – Acute Myeloid Leukaemia, CAR-T therapy for AML targeting 5T4 – clinical trial initiation 2023
- Liver gene therapy – liver is an attractive target for Lentiviral vectors due to potential one-off therapy to give life-long benefit
- Deprioritising OXB-203, OXB-204 and OXB-103

Gene Therapeutics Pipeline

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



Oxford Biomedica

In vivo programmes *Ex vivo programmes*

[1] Axo-Lenti-PD formerly known as OXB-102, which OXB out-licensed to Sio Gene Therapies. All rights will be returned to OXB on 31st March 2022. Available for out-licencing

Oxford Biomedica

OXB-302 – CAR-T therapy for Acute Myeloid Leukaemia (AML)

Tumour Target Antigen: 5T4

- 5T4 is an oncofoetal antigen specifically expressed on the cell surface of most cancers including AML
- The restricted expression profile of 5T4 on normal tissues combined with its broad expression on tumour cells (including cancer stem cells) make 5T4 an attractive target

CAR-T Cells Targeting 5T4

- OXB-302 is a 2nd generation CAR-T product generated via an optimised lentiviral vector transduction protocol and expansion process to generate more potent cells
- OXB-302 has demonstrated potent *in vitro* and *in vivo* activity against a panel of human solid and liquid tumour cells lines
- OXB-302 has high commercial potential for the treatment of multiple liquid and solid tumours

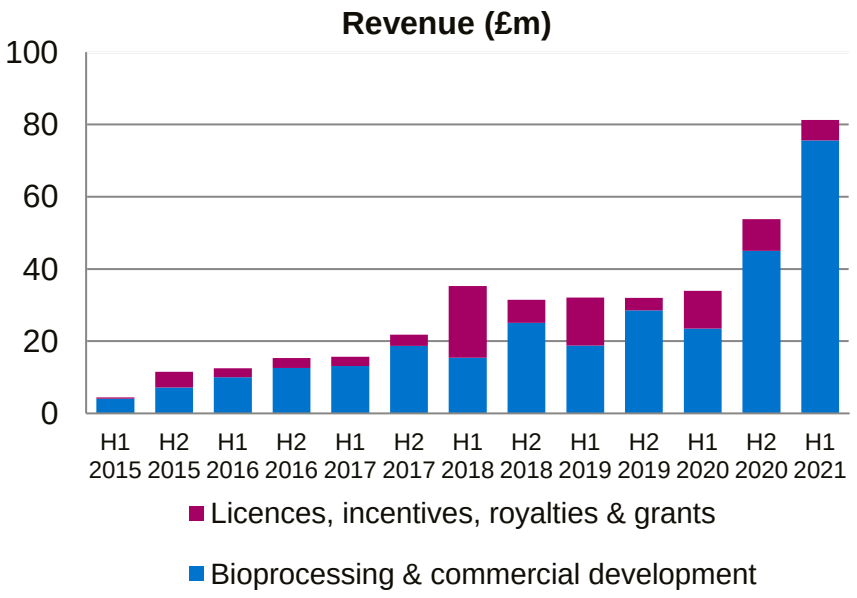
Factor	Critical Parameter / USP	
5T4 Expression Profile	5T4 is expressed on AML primary patient samples	✓
	5T4 is expressed on AML Leukaemic Stem Cells (LSCs)	✓
Efficacy	OXB-302 cells kill human AML tumour cell lines	✓
	OXB-302 cells kill human AML Leukaemic Stem Cells	✓
	OXB-302 are more sensitive than flow cytometry at detecting 5T4 target antigen expression	✓
Safety	OXB-302 showed no impact on haematopoiesis using an industry-standard in vitro model of colony formation	✓

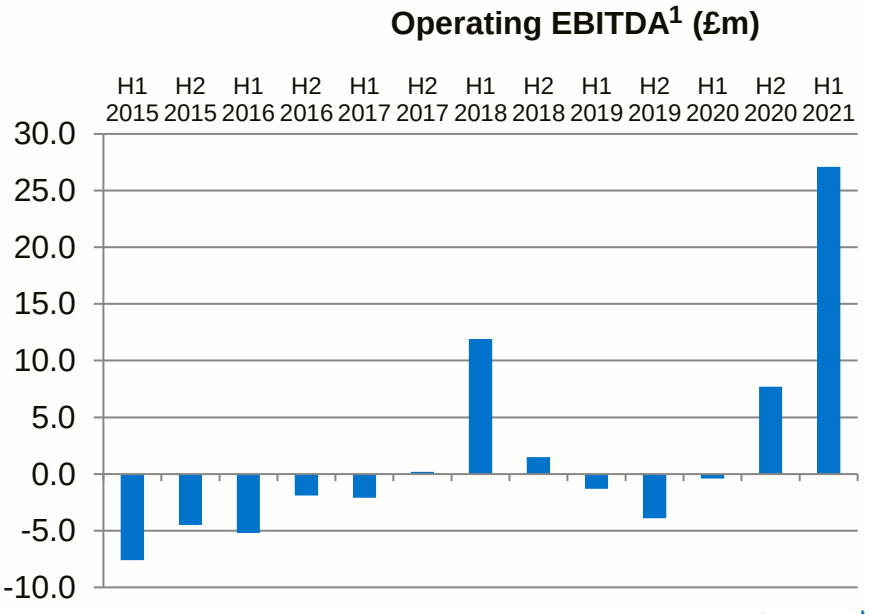
Oxford Biomedica

Financials, News Flow and Summary

H1 2021 Financial Highlights

- Total revenues increased by 139% to £81.3 million (H1 2020: £34.0 million)
- Exceptional growth was seen in bioprocessing and commercial development, where revenues increased by 223% to £75.6 million (H1 2020: £23.4 million) largely driven by the highly successful COVID-19 vaccine agreement with AstraZeneca
- Operating EBITDA[1] and operating profit were £27.1 million and £19.7 million respectively (H1 2020 losses of £0.4 million and £5.8 million respectively)
- Cash at 30 June 2021 was £61.3 million (31 December 2020: £46.7 million), an increase of £14.6 million due to operational cash flow generated
- In September, Serum Life Sciences (a subsidiary of Serum Institute of India) made an investment of £50 million in the Group in return for new ordinary shares representing 4% of the outstanding shares





[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)

Oxford Biomedica

Positive Outlook for 2021

- FY'21 Group revenues expected to be in line with consensus[1], closing cash position at 31st December 2021 of c.£109 million (unaudited)
- The Group expects total cumulative revenues from manufacture of the AstraZeneca COVID-19 vaccine to be in excess of £100 million by the end of 2021
- Operating EBITDA for H2 2021 is expected to be below H1 2021 as a result of an increase in R&D, administrative and bioprocessing cost lines
- Capex will accelerate in H2 2021 due to commencement of redevelopment work at Windrush Innovation Centre as well as continued laboratory expansion at Windrush Court
- With the Group's strong financial position and continued broader market growth, Oxford Biomedica is well positioned to maximise the opportunities ahead

A life saving cell and gene therapy company

1. Bloomberg consensus FY21 revenues: c.£160m (as of 28 January 2022)

Oxford Biomedica

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Appendix

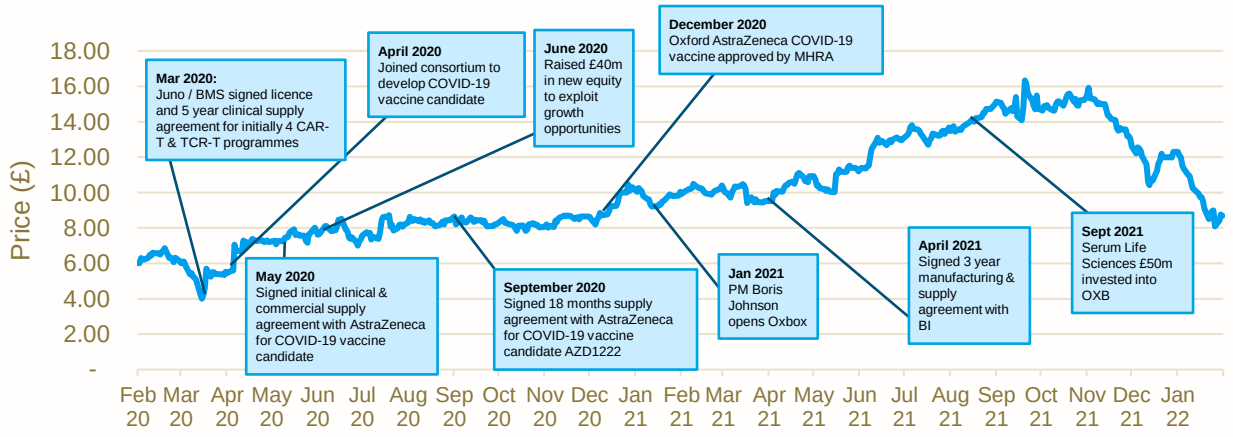
Corporate and Market Information

Company Facts

- IPO on Main list LSE in April 2001 (OXB.L)
- FTSE250 Constituent from 22 June 2020
- £310 million (approx. $388 million) raised to date
- At 24 March 2022
  - Share price £6.81 ($8.98)
  - Market cap: £654 million / $862 million

Major/significant Shareholders (1)	Share
Novo Holdings A/S	10.1%
Vulpes Investment Management	9.7%
Liontrust Asset Management	7.9%
M&G Investments	5.5%
Serum Life Sciences	3.5%
Nine Ten Capital Management	3.5%
Vitruvian Partners	3.1%
Mr Shah	3.0%
Other	53.7%

Last 2-Year Share Price Performance



[1] As of 15 March 2022

Oxford Biomedica

Building the Future – Capacity Expansion to 226,000 sqft

WINDRUSH COURT

State of the art laboratories

HARROW HOUSE & CHANCERY GATE

FDA and MHRA approved facilities

YARNTON

FDA & MHRA approved GMP manufacturing facility

110,000 sqft

Current

OXBOX (2020)

4x cGMP production (MHRA Approved) & 2x filling construction completed

WINDRUSH INNOVATION CENTRE (2021-23)

Dedicated innovation and product development hub

+ 84,000 sqft* **+ 32,000 sqft**

Future

* Initial phase 45,000 sqft, option to expand into 39,000 sqft fallow area as needed

Oxford Biomedica

Juno Therapeutics / BMS CAR-T & TCR-T Partnership

Juno Therapeutics / Bristol Myers Squibb agreement signed in Mar-20

Licence to the platform for CAR-T and TCR-T programmes in the field of oncology and other indications

Non-exclusive licence

OXB to receive sales royalties

$10m upfront and potential to receive up to $217m in development, regulatory and sales related milestones

Five-year clinical supply agreement where OXB will receive undisclosed process development and batch revenues

Bristol Myers Squibb

Press release (03 Jan 2019)
***Giovanni Caforio, M.D. Chairman and Chief Executive Officer of Bristol-Myers Squibb said**:*

"Together with Celgene, we are creating an innovative biopharma leader, with leading franchises and a deep and broad pipeline that will drive sustainable growth and deliver new options for patients across a range of serious diseases,"

Current status and expectations

- Currently working on four active projects – First licence to TCR-T products
- As part of the agreement Juno / BMS will have access to Oxford Biomedica's new 84,000 sqft commercial manufacturing centre, Oxbox
- Juno / BMS are able to initiate additional projects in the future
- The Group is eligible to receive up to $86m in development & regulatory related milestones and up to $131m in sales related milestones

Significant Clinical Experience with Lentiviral Based Products

OXB's lentiviral vector administered in 6 *in vivo* and *ex vivo* programmes (by OXB / partners)

In Vivo

Parkinson's Disease

ProSavin® and its successor OXB-102 (Axo-Lenti-PD)

18 patients treated via stereotactic delivery[1]

- **First lentiviral vector-based ATMP[2] in Man**
- Safe and well tolerated, cohort 1 out to 10 years
- OXB-102: 4 patients now treated

Wet AMD

OXB-201

21 patients treated via subretinal delivery

- Safe and well tolerated, cohort 1 out to 6 years
- Protein expression from transgenes observed at latest time point (6yr)

Inherited Retinal Diseases

SAR422459/SAR421869

Over 20 patients treated via subretinal delivery

- Safe and well tolerated with SAR421869/SAR422459, cohort 1 out to 4 or 5 years[3,4]

Ex Vivo

Cancer (r/r ALL & r/r DLCBL)

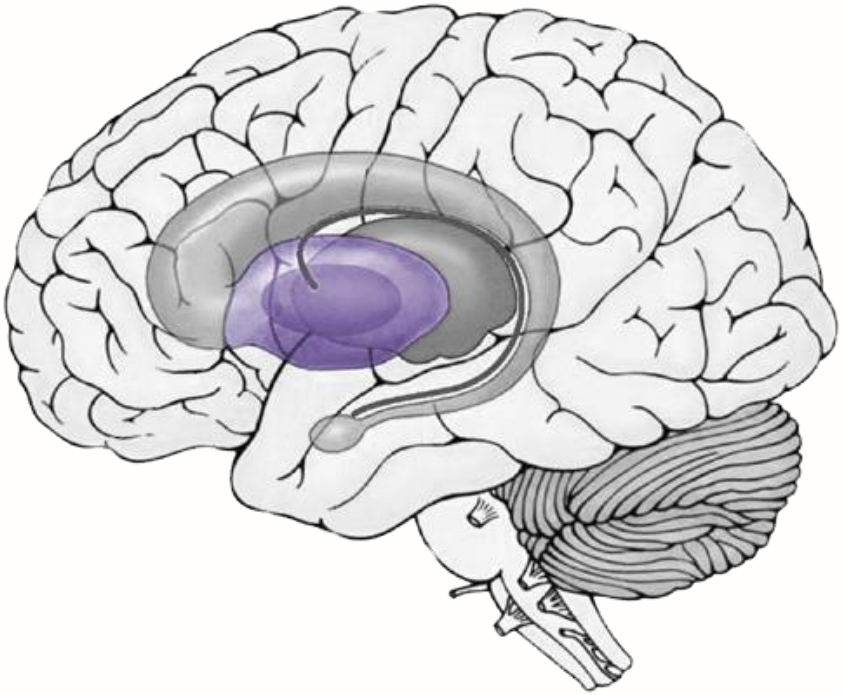
Kymriah® (CD19-directed CAR T cell therapy)

- **First approved lentiviral vector-based ATMP, first ATMP approved in US and EU**
- Ongoing safety profile is very well tolerated
- No transgene related immune responses observed

Oxford Biomedica

Parkinson's Disease Remains an Area of High Unmet Medical Need

- Parkinson's disease (PD) is a progressive neurodegenerative disorder resulting in the loss of dopamine in the striatum
- Motor symptoms can include tremor, rigidity, and bradykinesia
- PD affects approximately 1% of adults over the age of 60, or 7-10 million patients worldwide[1]
- Current standard of care is primarily oral L-dopa. However, significant unmet need exists in treated patients:
  - Waning efficacy over time
  - Fluctuations between ON and OFF states
  - Dyskinesias

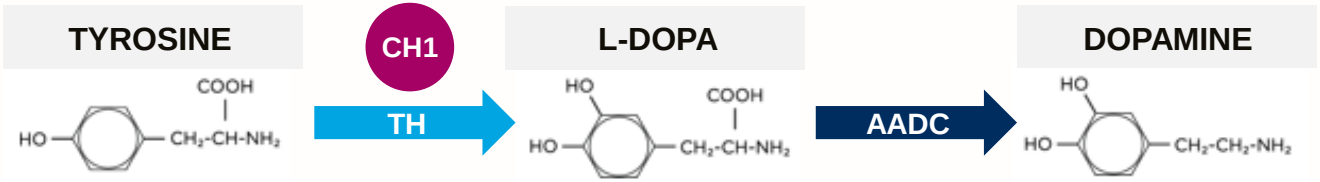


AXO-Lenti-PD (formerly OXB-102)

Novel gene therapy for Parkinson's disease

AXO-Lenti-PD contains three genes that encode the critical enzymes required for dopamine synthesis

1. **Tyrosine hydroxylase (TH):** converts tyrosine to L-dopa
2. **Cyclohydrolase 1 (CH1):** rate-limiting enzyme for synthesis of critical cofactor in TH activity
3. **Aromatic L-amino acid decarboxylase (AADC):** converts L-dopa to dopamine



Lentiviral vector system with large gene packaging capacity

Permits delivery of multiple transgenes at once

One-time MRI-guided stereotactic delivery into the putamen

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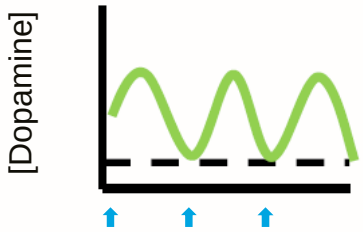
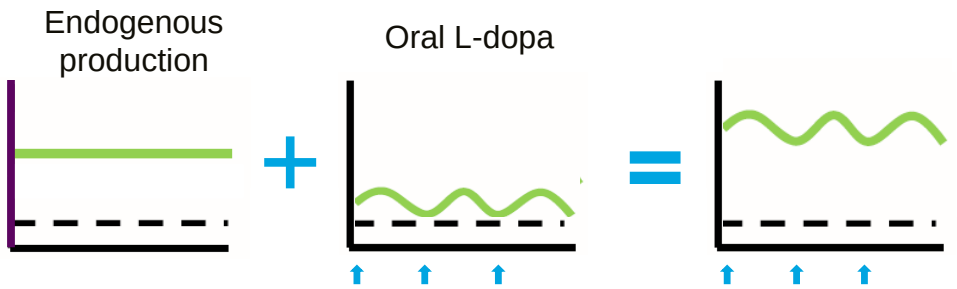
AXO-Lenti-PD (formerly OXB-102)

Designed to reduce motor fluctuations in Parkinson's disease

Oral L-dopa



AXO-Lenti-PD*



AXO-Lenti-PD's novel 3-gene therapy approach is designed to (1) increase basal dopamine production and (2) reduce dopamine variability

GOALS OF THERAPY:

- Less troublesome dyskinesia
- Less OFF time
- More ON time
- Lower requirement for exogenous L-dopa

* Theoretical benefits based on postulated mechanism of action (not data from investigational studies)

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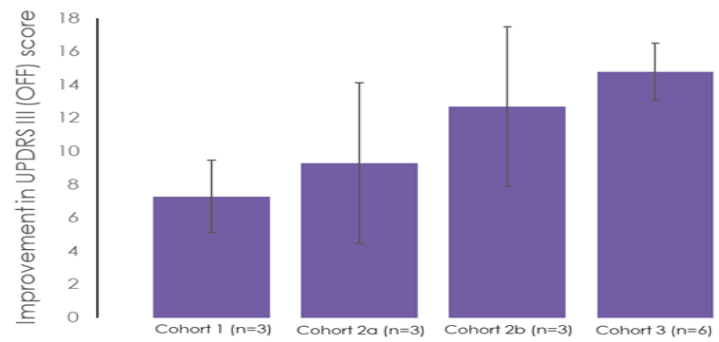
ProSavin® (OXB-101)

Multiple doses evaluated in Phase I/II study with durable response observed years after administration

Mean Improvement in UPDRS-III (OFF) Score at 12 Months



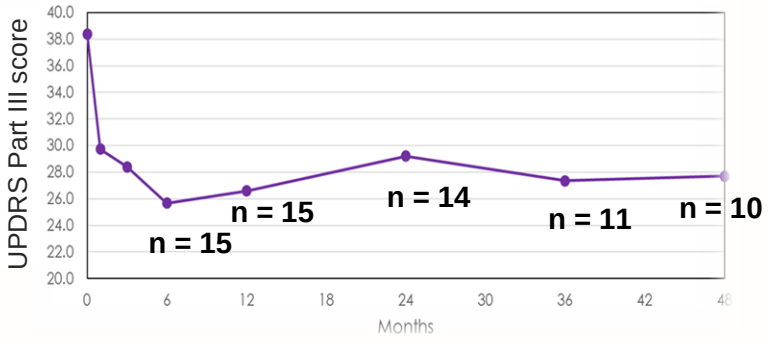
All patients (N=15)
Mean improvement from baseline of 11.8 points at 12 months (p=0.0001)

Cohort 1 (low dose): 1.9 x 10^7 TU

Cohort 2a and 2b (mid dose): 4.0 x 10^7 TU

Cohort 3 (high dose): 1.0 x 10^8 TU

Mean UPDRS-III (OFF) Score



- Durable effects seen through 4 years after one-time administration of ProSavin®
- UPDRS-III (OFF) scores are typically expected to worsen by 3-4 points/year* in this population

Figure shows mean change in UPDRS III score OFF medication relative to baseline at 12 month for each cohort. Error bars show standard error. UPDRS = Unified Parkinson's Disease Rating Scale. Wilcoxon signed-rank paired test is used to compare the difference of UPDRS scores at 6 or 12 months versus baseline.
Source: Palfi S, Gurruchaga JM, et al. Long-term safety and tolerability of ProSavin, a lentiviral vector-based gene therapy for Parkinson's disease: a dose escalation, open-label, phase 1/2 trial. The Lancet. January 2014. http://dx.doi.org/10.1016/S0140-6736(13)61939-X

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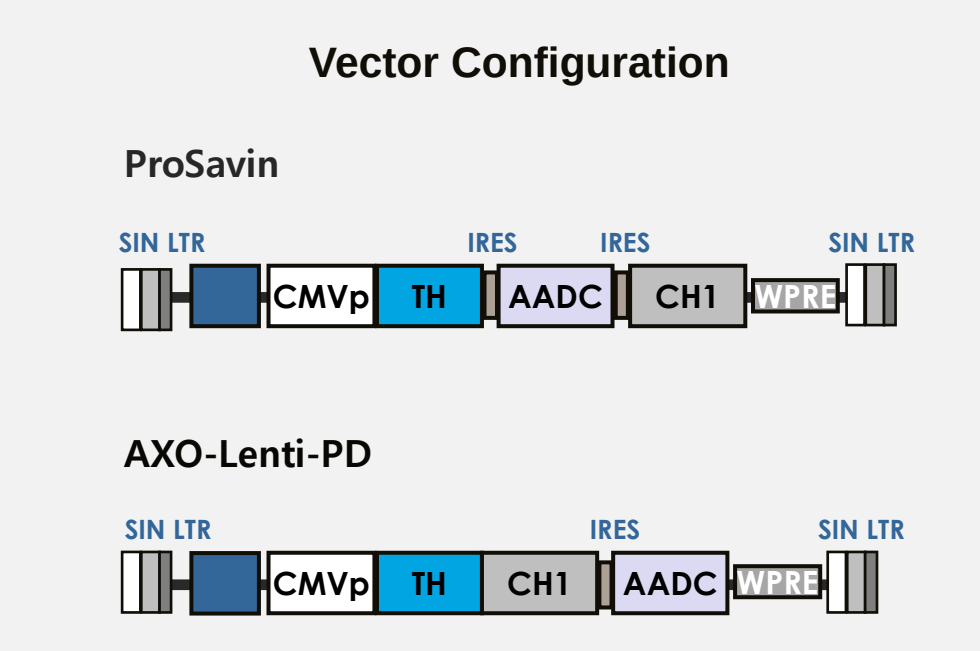
AXO-Lenti-PD (formerly OXB-102)

A re-engineered gene therapy product

AXO-Lenti-PD achieves up to 10-fold increases in dopamine + L-dopa production compared to ProSavin (OXB-101), without impacting infusion volume or rate of administration

AXO-Lenti-PD was the product of multifactorial experimentation to modify the genetic payload to improve dopamine production

- Different ordering of transgenes
- Balanced stoichiometry of gene expression to ensure consistent 1:1 production of TH and CH1
- Fusion of TH and CH1 with flexible linker



Source: Palfi S, Gurruchaga JM, et al. Long-term safety and tolerability of ProSavin, a lentiviral vector-based gene therapy for Parkinson's disease: a dose escalation, open-label, phase 1/2 trial. The Lancet. January 2014. http://dx.doi.org/10.1016/S0140-6736(13)61939-X

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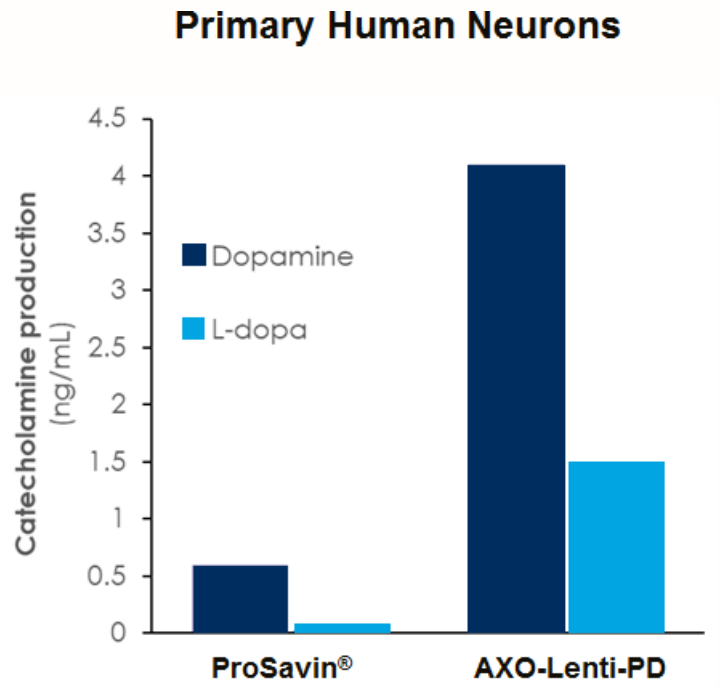
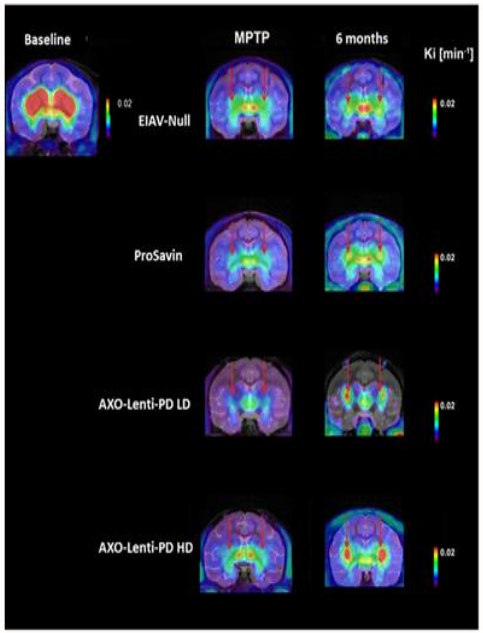
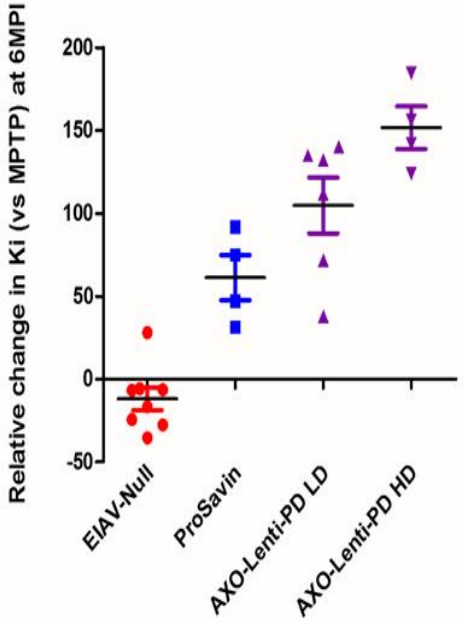
AXO-Lenti-PD (formerly OXB-102)

Increases in catecholamine production compared to ProSavin® (OXB-101)



Change in AADC[1] activity (measured by ^{18}F-FMT or Ki) at six months in non-human primate model





AXO-Lenti-PD achieved up to 10-fold increases in dopamine + L-Dopa production and increased AADC activity compared to ProSavin ® (OXB-101)

[1] AADC = Aromatic L-amino acid decarboxylase

Parametric images from 18F-FMT (Ki) PET scans showing commissural coronal. Images are presented with scale bars for tracer binding intensity (red=highest; violet=lowest).

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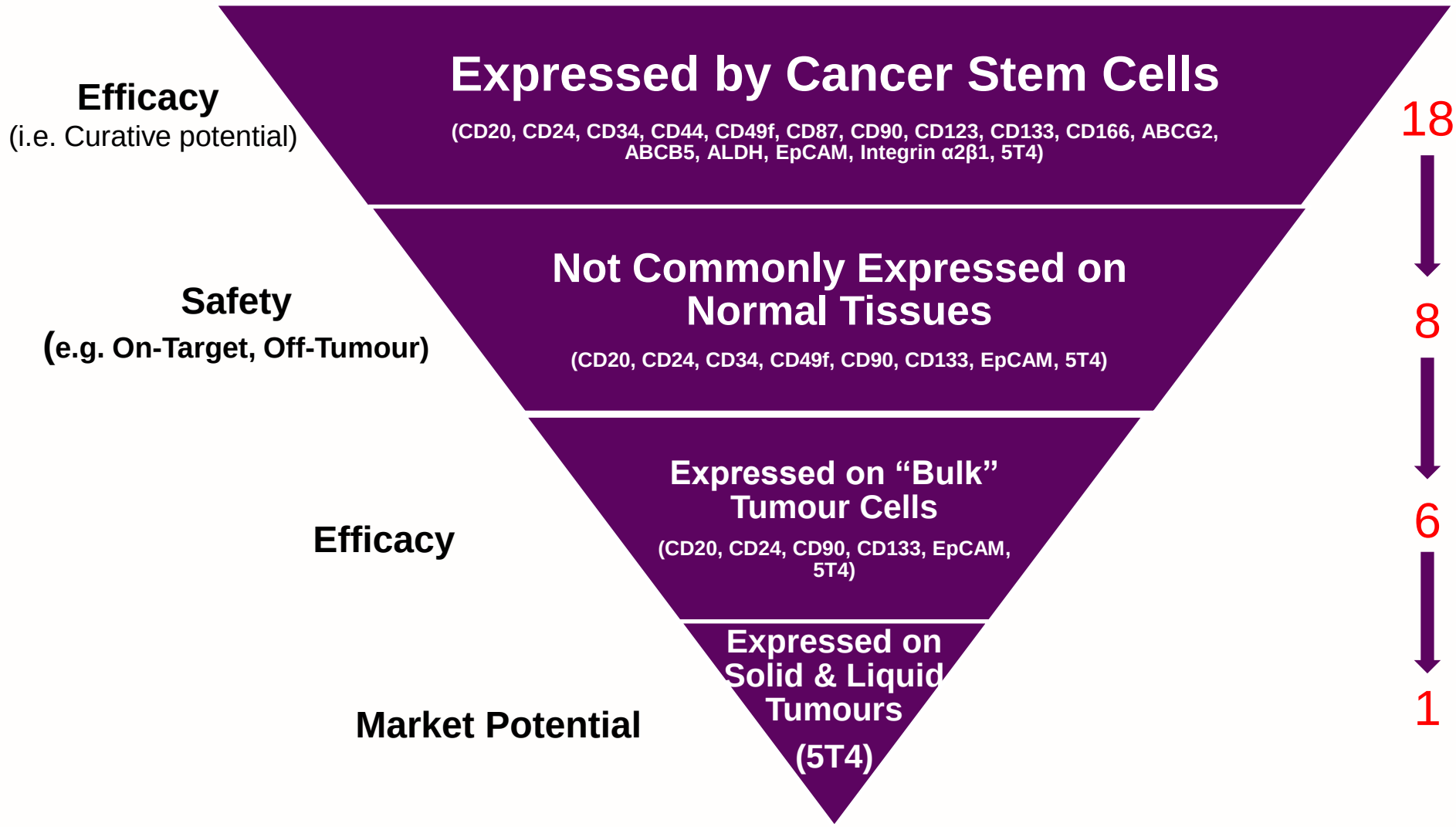
5T4 is an Attractive Target for Therapeutic Interventions[1]



[1] Blount et al ECGCT 2019

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Targeting Haematological Tumours with OXB-302 (CAR-T 5T4)[1]

Overview

- OXB-302 is a CAR-T therapy in which patients T cells are genetically modified *ex vivo* using a lentiviral vector to express a 5T4-specific chimeric antigen receptor (CAR)
- OXB-302 targets 5T4, an oncofoetal antigen which is expressed on the surface of some haematological malignancies and most solid tumours
- The restricted expression profile of 5T4 on normal tissues combined with its broad expression on tumour cells (including cancer stem cells) make 5T4 an attractive target for therapeutic intervention

Pre-clinical Data

- The tumour antigen 5T4 has been shown to be expressed on Acute Myeloid Leukaemia (AML) and Multiple Myeloma (MM) cell lines
- 5T4 is expressed on AML patient tumour cells as well as on the leukaemic stem cell population
- OXB-302 CART cells generated via an optimised lentiviral vector transduction and expansion process to generate more efficacious cells
- Functional testing of OXB-302 transduced human T-cells demonstrates potent cytokine secretion following co-culture with 5T4 positive tumour cells as well as cell killing of both AML blast cells and leukaemic stem cells, but not of haematopoietic stem cells from healthy donors

Results

Figure 1: Expression of 5T4 in primary patient AML samples

- 5T4 is expressed in ~50% AML samples
- 5T4 is often more highly expressed on the leukaemic stem cells which are responsible for disease spread and relapse

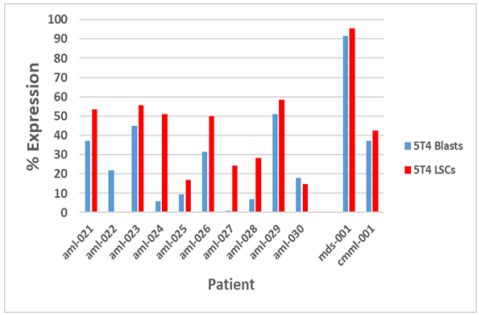


Figure 2: 5T4 CAR-T cells are active against liquid tumours *in vitro*

- *Fig 2A*: IFNɣ is secreted by activated CAR-T-cells upon engagement with 5T4-positive tumour cell lines derived from multiple cancer types
- *Fig 2B*: 5T4 CAR-T cells efficiently kill human AML cells (THP-1 cell line) at low effector to target ratios

Fig. 2A: IFNɣ Secretion

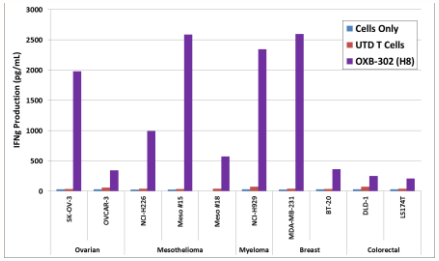
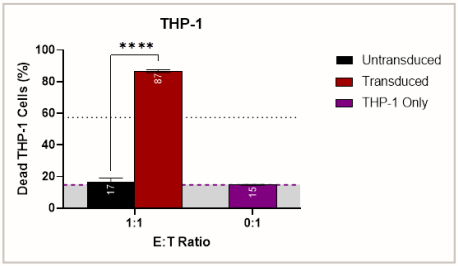


Fig. 2B: Cell Killing



Programme Status

- Further pre-clinical efficacy studies ongoing
- GMP CAR-T process development ongoing and toxicology studies planned

[1] Blount et al ECGCT 2019

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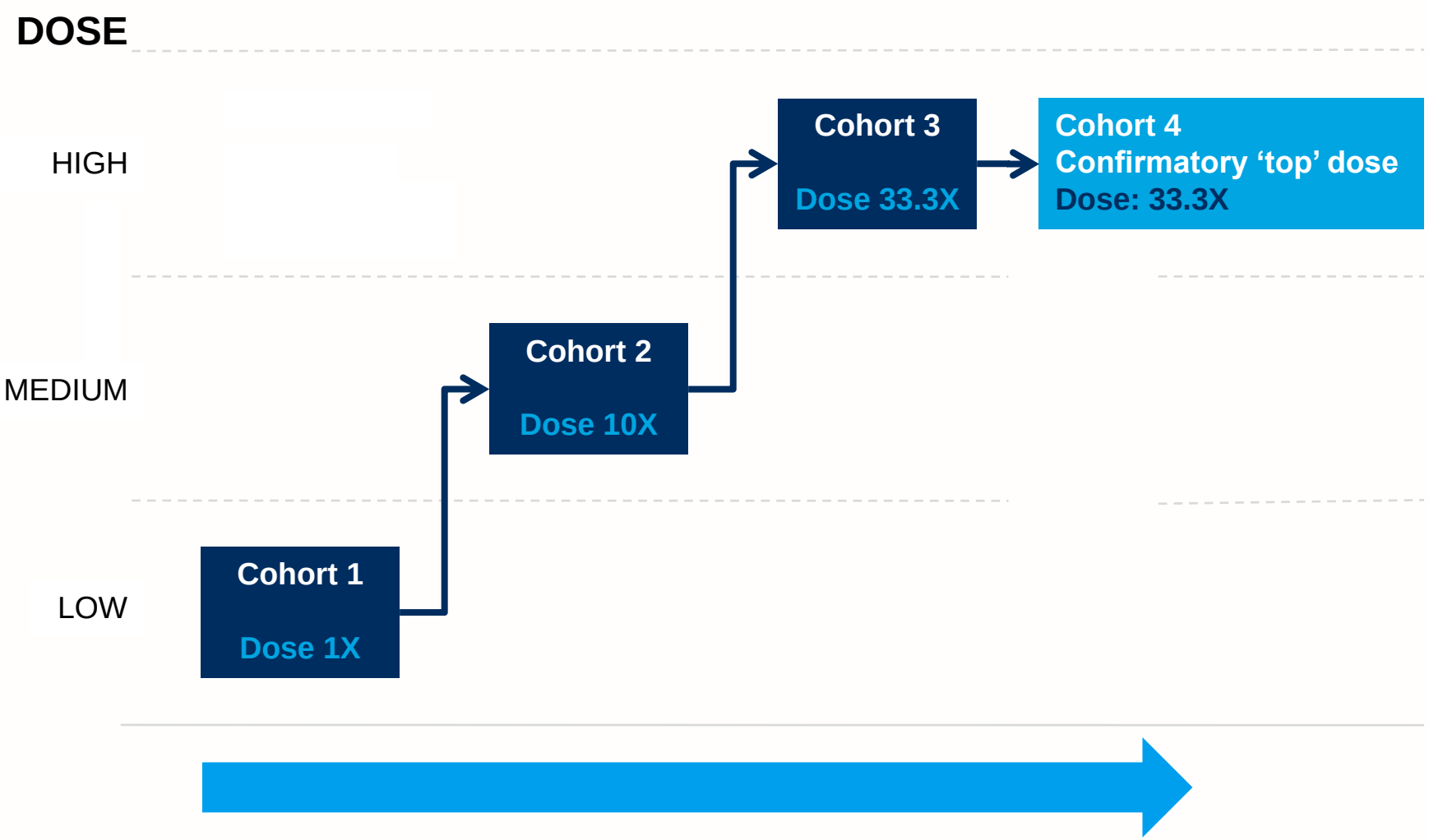
OXB-201 Phase I Study Design – GEM Study[1]



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

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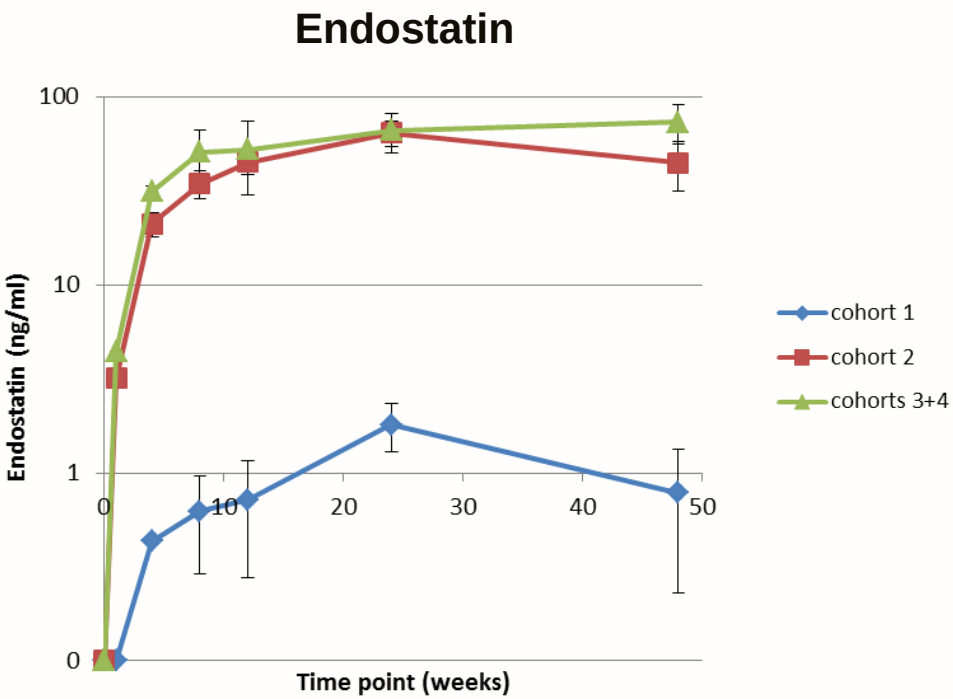
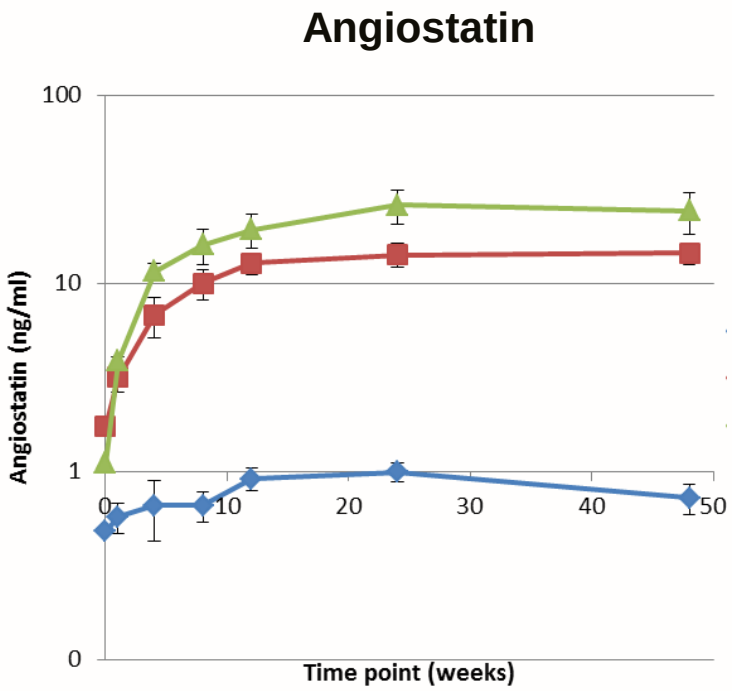
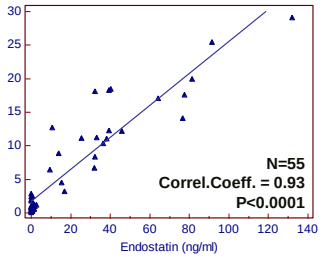
LentiVector® Platform Evidence of Long-term Duration[1]





- Significant levels of transgene expression that are persistent
- Clear dose response between cohorts
- Relatively consistent within the cohort



[1] Campochiaro PA, et al. "Lentiviral vector gene transfer of endostatin/angiostatin for macular degeneration (GEM) study". Hum Gene Ther. 28 (1) 99-111, 2016

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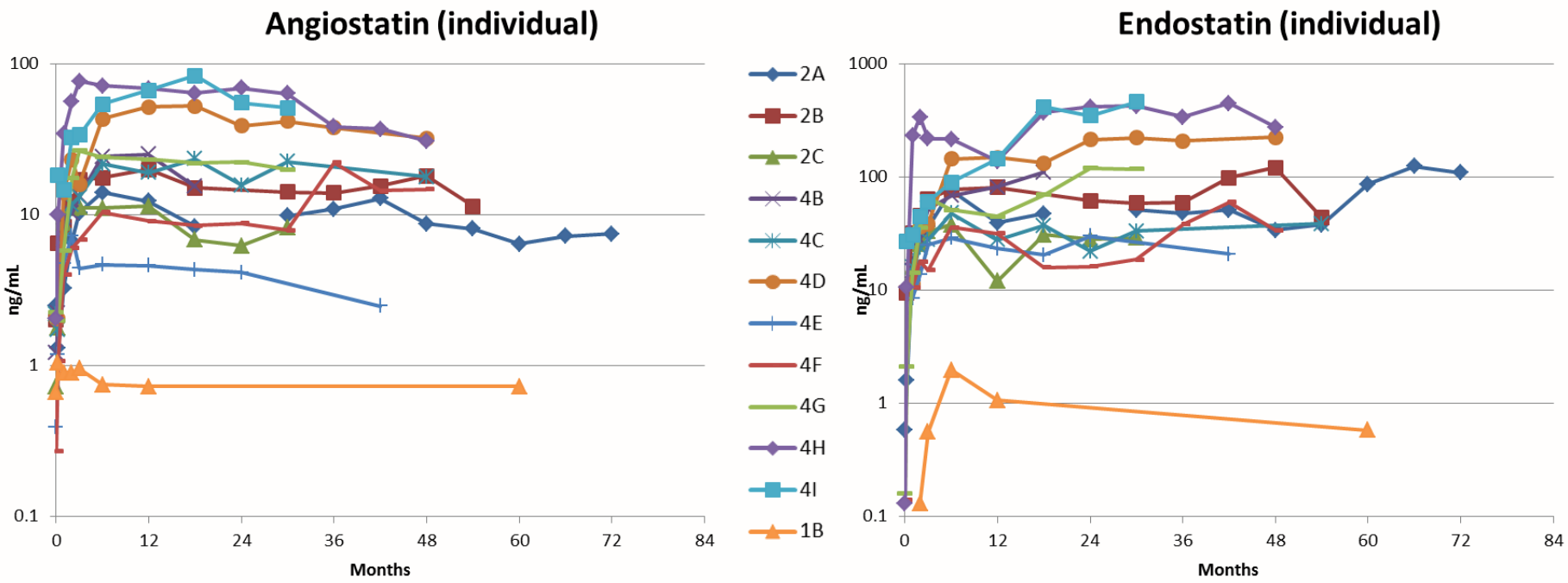
LentiVector® Platform Evidence of Long-term Duration[1]



- Clear dose response between cohorts
- Relatively consistent within the cohort
- Significant levels of transgene expression
- **Expression is stable - data out to 6yrs so far (ongoing)**

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

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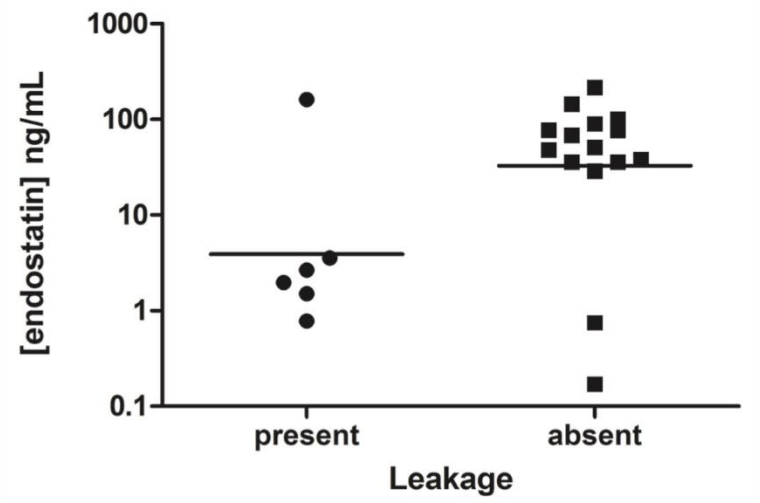
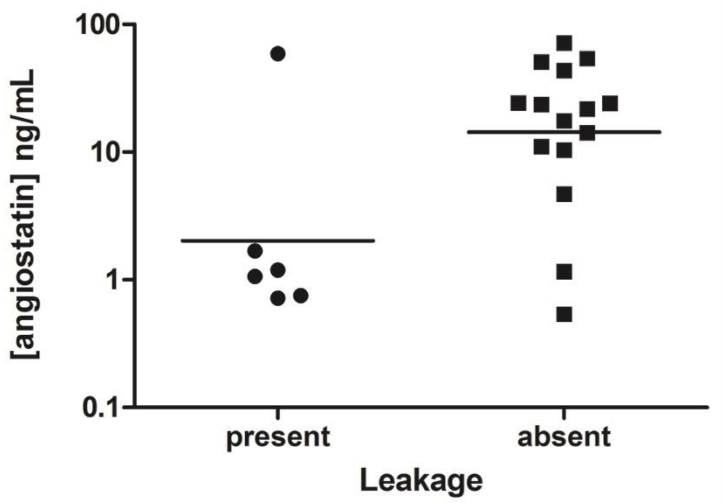
OXB-201: Biological Activity (Suppression of Vascular Leakage)[1]

Endostatin vs leakage (wk 24)



Angiostatin vs leakage (wk 24)



- **Baseline:** Leakage is present in all patients at baseline
- **Week 24:** Leakage is present in only 6/21 patients (<30%) all but one with low expression of Endostatin and Angiostatin, and absent in 15/21 patients (>70%) all but 2 with high expression of these proteins
- **There is a clear correlation between presence/absence of leakage and expression of cargo genes**

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

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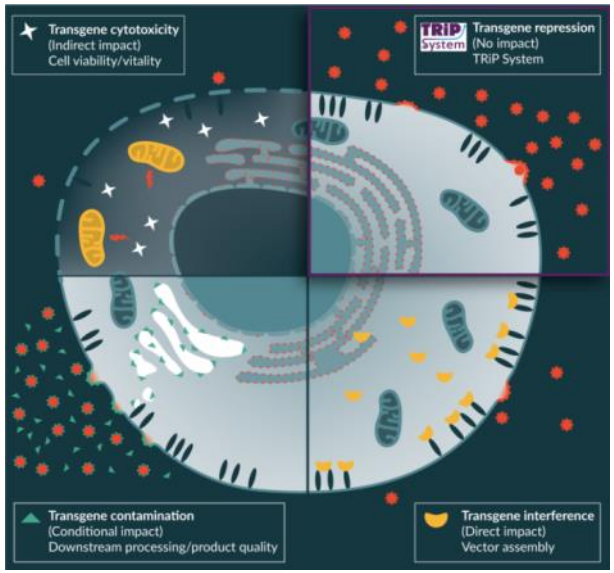
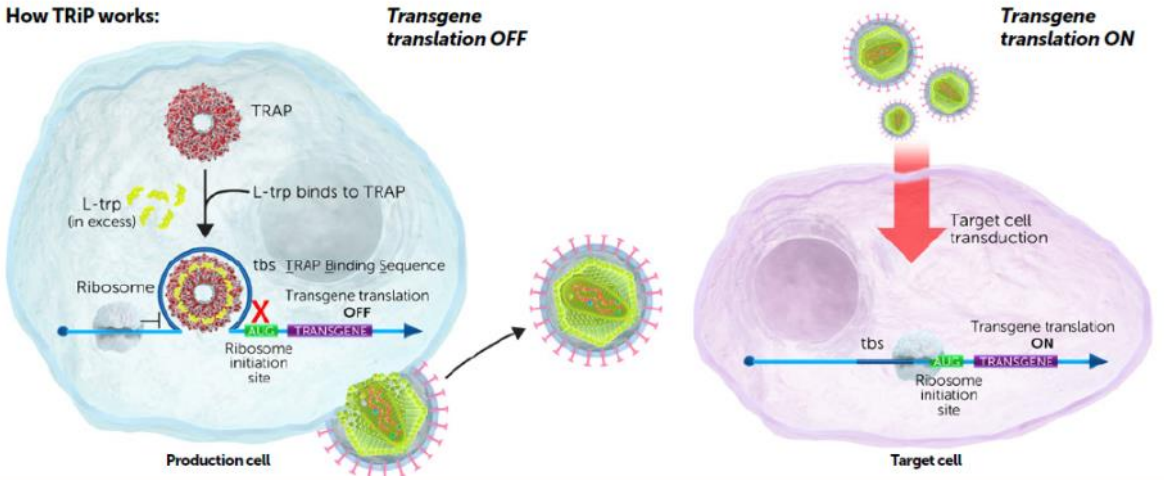
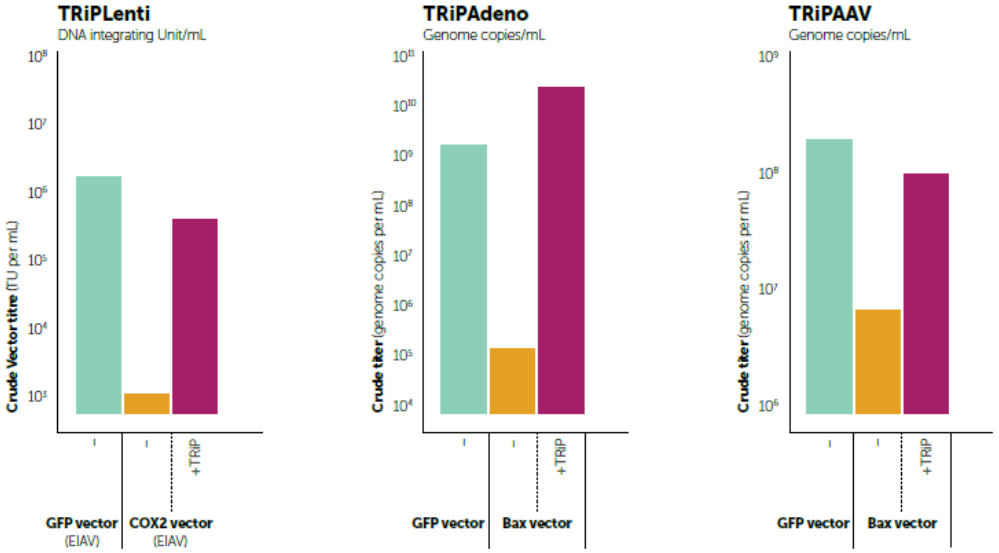
Improving Yields of Vectors That Contain Toxic Transgenes





TRiP System™

The TRiP System™ enables production of toxic transgenes – returning titre to marker gene levels



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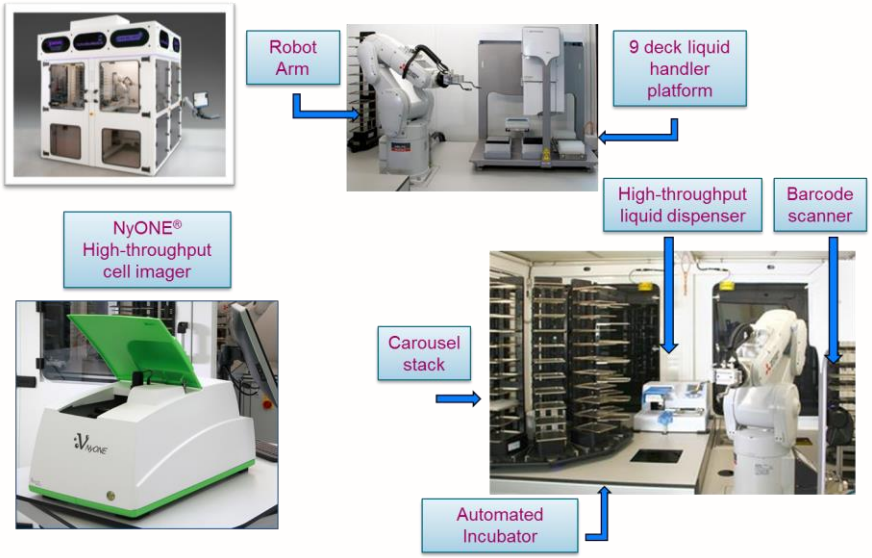
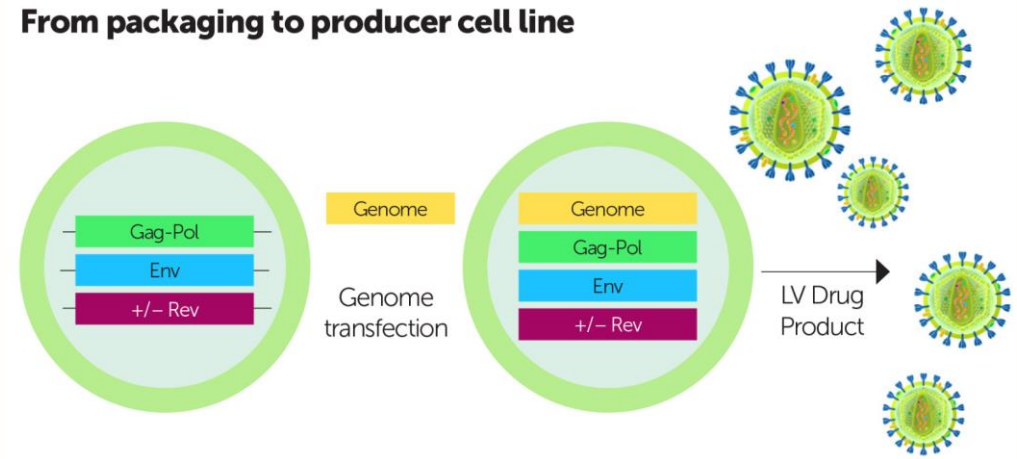
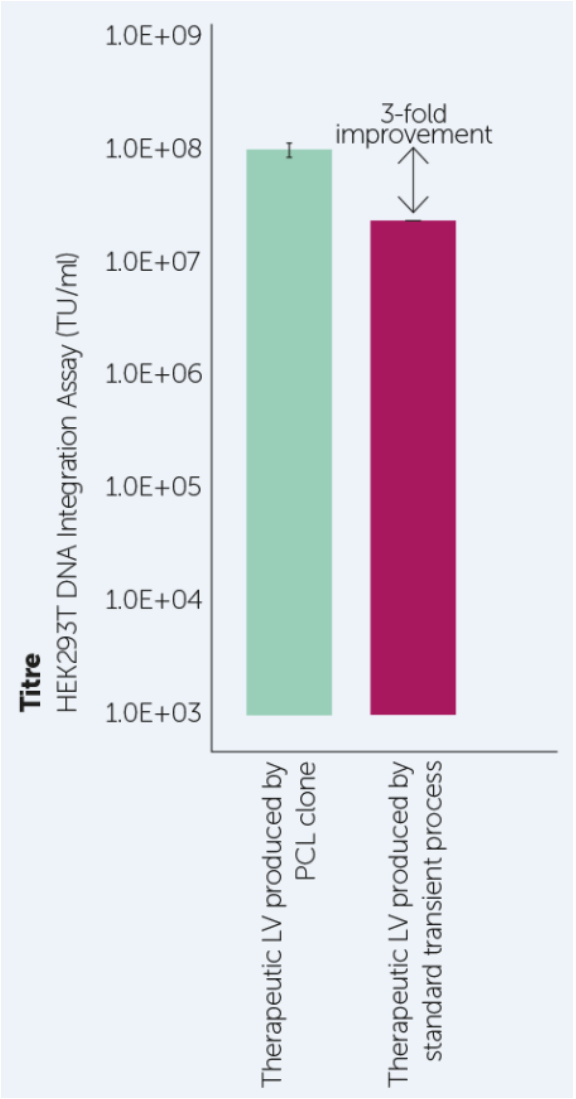
High Throughput Automation







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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 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

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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

Dave Backer
Chief Commercial Officer

Joined OXB in 2021

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

Tim Kelly

Chief Executive Officer of Oxford Biomedica Solutions

Joined OXB in 2022

Senior Executive Team (3/3)

Helen Stephenson-Ellis
Chief People Officer
Joined OXB in 2018

AstraZeneca Vernalis

Natalie Walter
General Counsel
Joined OXB in 2019

COVINGTON

Matthew Treagus
Chief Information Officer
Joined OXB in 2021

TRIGENIT Baringa Brighter together

Oxford Biomedica