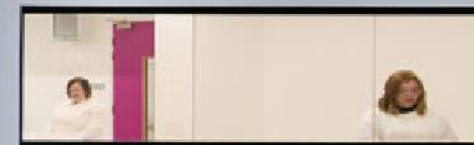


# The LentiVector<sup>®</sup> Company and a leader in gene and cell therapy

Interim results for the six months ended 30 June 2016  
September 2016



# Forward-looking Statements

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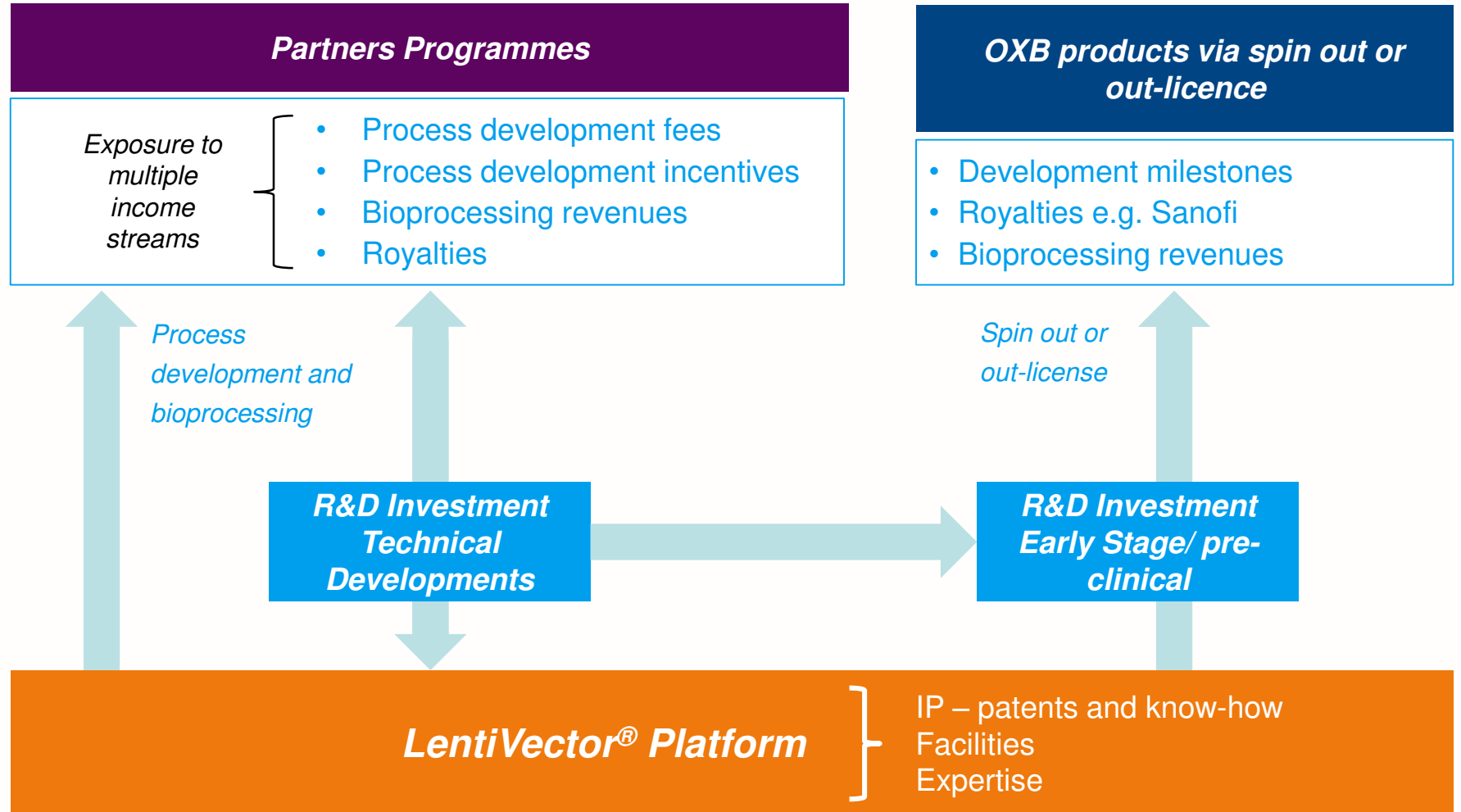
This presentation may contain forward-looking statements that reflect the Company's current expectations regarding future events, its liquidity and results of operations and its future working capital requirements. Forward-looking statements involve risks and uncertainties. Actual events could differ 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.

# Operational Highlights

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- State-of-the-art bioprocessing facilities
  - Capacity expansion of bioprocessing and laboratory facilities now complete and approved for GMP vector manufacture
- Partnering activities continuing to build
  - Novartis contract progressing well, contributing to 184% growth in first half Group revenues - multiple confirmed purchase orders through to Q2 2017
  - Second CAR-T programme for undisclosed indication underway with Novartis
  - New IP licence and expanded collaboration agreement signed with Immune Design
  - R&D collaboration signed with Green Cross LabCell to identify and develop gene modified natural killer (NK) cell-based therapeutics
- Good progress across product development programmes
  - OXB to capture value of clinical products via out-licensing or spin out approach
  - OXB-102 and OXB-202 will be ready to start Phase I/II studies within next 6-9 months, subject to successfully out-licensing or spinning out these products
  - OXB-302 pre-clinical studies expected to complete by end of 2016
  - SAR422459 (for Stargardt Disease), licensed to Sanofi, has entered Phase IIa development
  - Novartis still on course to file CTL019 BLA in early 2017, with approval expected mid-2017 due to Breakthrough Therapy designation
- OXB will advance the priority clinical products and capture value via an out-licensing or spin out approach

# Leveraging Our LentiVector® Delivery Platform



# In-house development pipeline

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- **Good progress made across the Group's priority programmes during the period**
- **Substantial investment required on three programmes over next 2-3 years**
- **Balance of risk and reward assessed**
- **Optimal path – spin out into SPVs or out-license**
- **OXB to capture value via upfront payments, equity stakes, development milestones and royalties PLUS contracted-back bioprocessing**
- **Initial discussions have started**
- **Continue to invest in high quality early-stage and pre-clinical pipeline to generate new high value product candidates**

## Overview

- Non-exclusive licence to OXB's IP:
  - Up fronts (2014) and future royalties
- Lentiviral Vector bioprocessing:
  - Initial three year contract to manufacture CTL019 for clinical studies; extendable
- Process Improvements:
  - Contract to develop next generation vector processing, switch from adherent cell factories (Process "A") to single-use, serum-free, suspension process (Process "B")
  - Milestones paid on achievement of targets

## Achievements to date

- Multiple Process A CTL019 batches supplied to Novartis since October 2014 for use in clinical studies – and multiple confirmed purchase orders through to Q2 2017
- Successful development of Process B - 200 litre validation batches underway in H2 2016 – pilot studies suggest significant productivity improvement
- Novartis on course to file CTL019 BLA in early 2017, with approval expected mid-2017 due to Breakthrough Therapy designation

## Forward Looking

- BLA CMC section based on OXB's Process A, so OXB will be sole manufacturer for commercial launch expected in H2 2017
- Royalty flow expected to start in H2 2017
- Work on second CAR-T programme (undisclosed indication) set to expand

# Products Pipeline

Oxford BioMedica has an interest in many gene and cell therapy projects and our integrated platform technology is instrumental in the following wholly-owned and partnered / royalty-bearing programmes

Product	Indication	Research/ Pre-Clinical	Phase I	Phase I/II	Phase II	Phase III	Approval		
OXB-102	Parkinson's disease (Central Nervous System)	[Progress bar]						To be spun out or out-licensed	OxfordBioMedica
OXB-202	Corneal graft rejection (Ophthalmology)	[Progress bar]					OxfordBioMedica		
OXB-302	Cancer (multiple) (Oncology)	[Progress bar]					OxfordBioMedica		
OXB-201	Wet AMD (Ophthalmology)	[Progress bar]					OxfordBioMedica		
OXB-301	Cancer (multiple) (Oncology)	[Progress bar]							OxfordBioMedica

## OXB Partnered products

SAR422459	Stargardt disease (Ophthalmology)	[Progress bar]					Development milestones and royalties	SANOFI
SAR421869	Usher syndrome type 1B (Ophthalmology)	[Progress bar]				SANOFI		

## IP enabled & royalty bearing products

CTL019	Cancer (multiple) (Oncology)	[Progress bar]					Process development and bioprocessing revenues, and royalties	NOVARTIS
Undisclosed CAR-T	Cancer (multiple) (Oncology)	[Progress bar]						NOVARTIS
LV305	Cancer (multiple) (Oncology)	[Progress bar]						IMMUNE DESIGN
Undisclosed	Undisclosed	[Progress bar]						gsk GlaxoSmithKline
Undisclosed	Undisclosed	[Progress bar]						gsk GlaxoSmithKline

# Proprietary R&D Activity

## In-house Product Discovery/Research – providing a flow of new product opportunities

- Several ocular orphan diseases programmes
- CNS orphan disease programme
- Respiratory orphan disease programme
- Gene-modified NK cell therapeutics with Green Cross LabCell for cancer

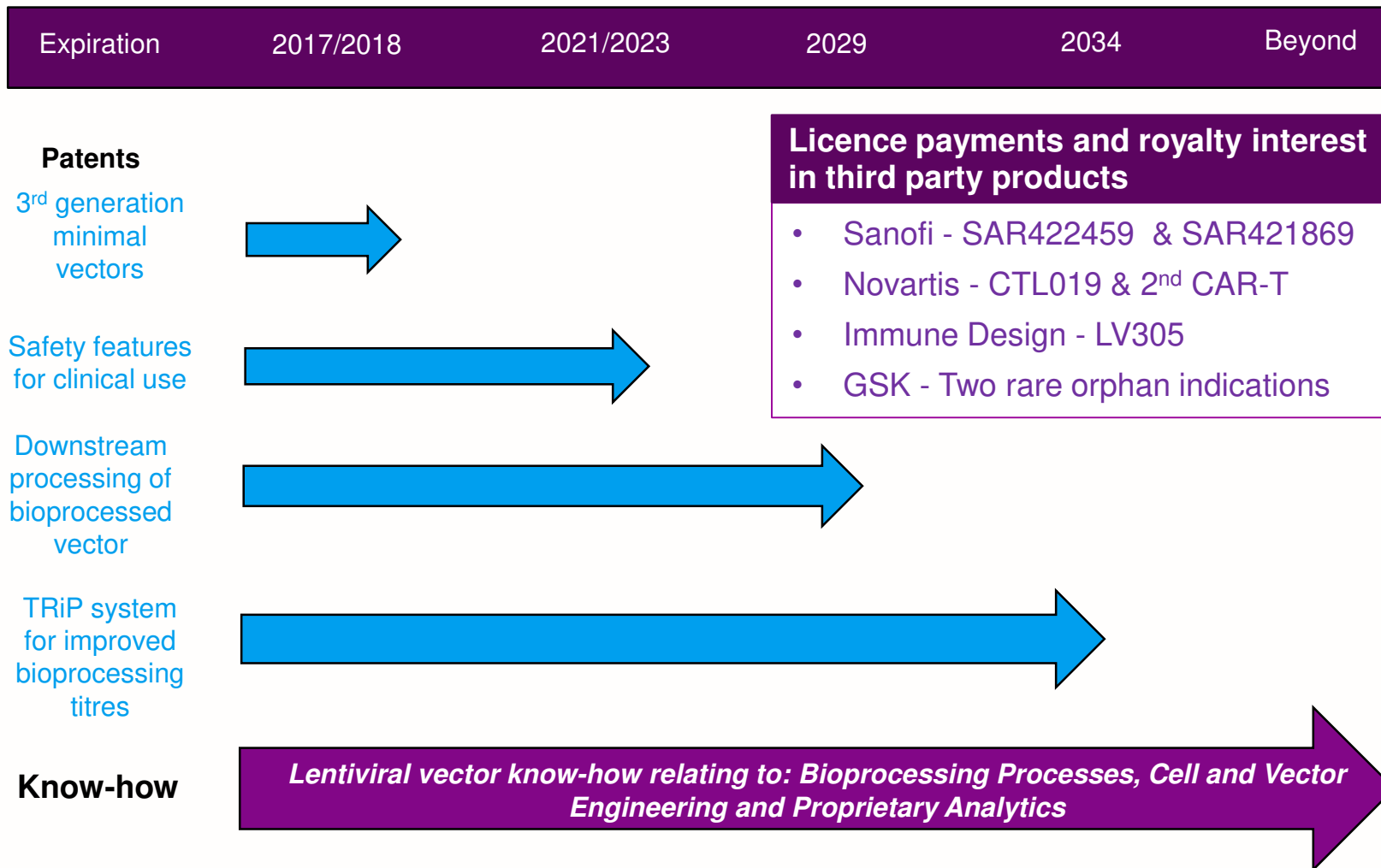
## Technical developments – continuous improvement of the LentiVector® platform

- Cell and vector engineering projects to improve bioprocessing yield – for example:
  - TRiP system development
  - Packaging & producer cell lines
- Analytical methods improvements to improve efficiency and effectiveness of testing
- Scale-up manufacturing
  - Serum free
  - Suspension
  - 200 L bioreactor

***Innovation and optimisation to build long-term value – a key competitive advantage to durably maintain leadership in the field***



# LentiVector® Platform IP & Key Intellectual Property



# State-of-the-art Bioprocessing Facilities (all located in Oxford, UK)

Two separate bioprocessing sites  
(total clean rooms 1,200m<sup>2</sup>/12,917ft<sup>2</sup>)

Laboratories (2,136m<sup>2</sup>/22,992ft<sup>2</sup>)

## Harrow House

Two independent GMP clean room suites (GMP1 and GMP2) totalling 640m<sup>2</sup>/6,889ft<sup>2</sup>

GMP2 facility designed for up to two 200L single use bioreactors

Potential for further expansion

## Yarnton

One independent GMP clean room suite (GMP4) of 560m<sup>2</sup>/6,028ft<sup>2</sup>

Potential for use with 200L single use bioreactors

## Windrush Court Laboratories

Nine Tissue Culture Laboratories with 24 Microsafety Cabinets

Two Analytical Services Group (ASG) Laboratories

Cell Engineering Laboratory

Three Bio Safety Category 3 (BSL-C3) Laboratories

Two Process Research and Development (PR&D) Laboratories

One PCR suite

Separate QC Chemistry and Microbiology Laboratories

Clinical Analysis Laboratory

Separate HPLC and FACS Suites

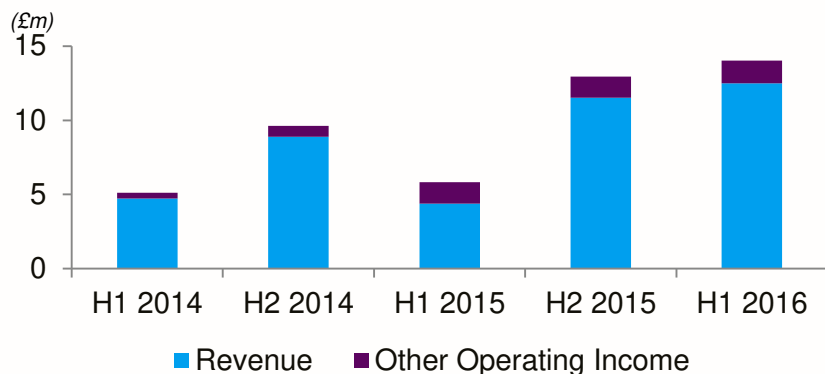
# Financial Highlights

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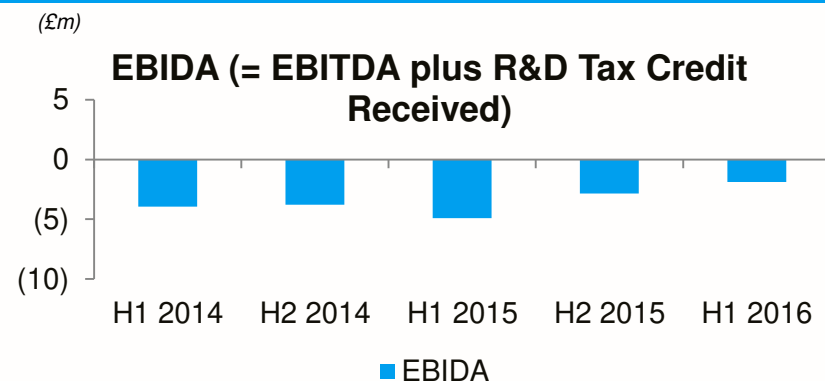
- Revenue increased by 184% to £12.5 million (H1 2015: £4.4 million) due in large part to Novartis contract
  - Since the period end, the Group has received a number of firm purchase orders for bioprocessing batches of lentiviral vector later this year and in the first half of 2017
- R&D, bioprocessing and administrative costs of £16.1 million (H1 2015: £11.7 million)
- Operating loss of £6.9 million (H1 2015: £8.3 million)
- Capital expenditure £6.0 million (H1 2015: £4.6 million)
- Cash of £11.9 million (31 December 2015: £9.4 million) which includes the \$10m (£7.6 million) ring-fenced under the Oberland loan agreement
- Fundraising of £10.0 million net of expenses announced separately today. In February 2016, the Group also raised a net £7.5 million through a 5% placing

# Current Trading Trends

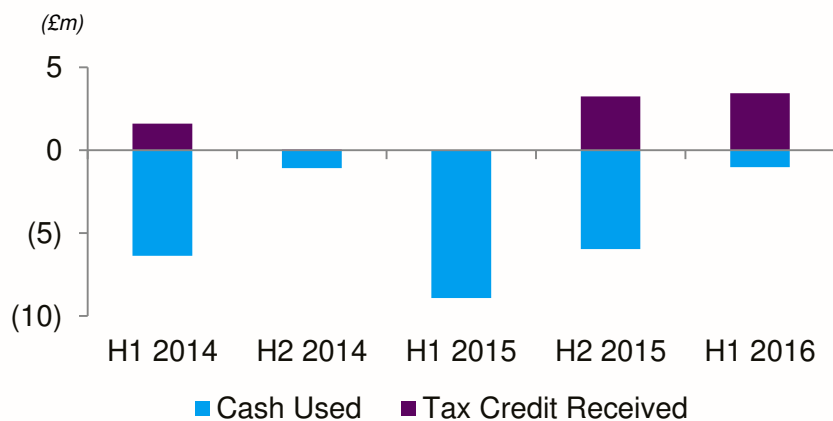
## Gross Income<sup>1</sup>



## EBITDA loss net of R&D Tax Credit Received



## Cash Used in Operations (offset by Tax Credit Received)



Segmental EBITDA	H1 2016 £m	Cash and debt <sup>(2)</sup>	H1 2016 £m
Partnering	0.0	Cash	11.9
R&D investment	(5.5)	Debt (\$40m)	(31.3)
Group EBITDA	(5.5)	Net debt	(19.4)

- In H1 2016, gross income<sup>1</sup> amounted to £14.0m, up 141%<sup>2</sup> on the same period in 2015
- H2 2016 gross income likely to be similar to or slightly above H1 2016
- Investment in R&D in 2016 expected to be broadly similar to 2015
- Capacity expansion expenditure completed in H1 2016

<sup>1</sup> Gross income is the aggregate of revenue and other operating income

<sup>2</sup> As of 30 June 2016. Unaudited, Source: Management Accounts

# Potential Near-term Catalysts (Next 12 Months)

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- Novartis catalysts
  - Novartis CTL-019 study results
  - Novartis CTL-019 BLA submission
  - Milestones and royalties
- LentiVector® delivery platform
  - Further contracts with new and existing partners giving us long-term economic interest in partners' product candidates
  - Successful development of 200L bioreactor serum-free suspension process to produce lentiviral vectors at significantly lower cost per dose
- In-house products
  - Successful spin out / out-license of in-house product candidates, delivering potential up-fronts, bioprocessing revenues, development milestones and royalties
  - First patients dosed in OXB-102 and OXB-202 Phase I/ II clinical studies with appropriate partner

# Vision of Oxford BioMedica – by end 2018

## Core LentiVector® R&D

New product candidates emerging from research/discovery using the LentiVector® platform

Lead gene-modified NK cell therapeutic candidate emerging from the GCLC research collaboration

Technical developments – continuous improvement of the LentiVector® platform

Feeds further partnership / monetisation opportunities

## Partnerships and Licences

### Novartis

- CTL019 launched
- Oxford BioMedica supplying commercial material
- Royalties from CTL019
- Second CAR-T product into clinical development
- Further CAR-T programmes assumed

### Sanofi

- SAR422459 to be in a pivotal trial (Phase IIb/Phase III)

### Immune Design

- LV305 progressing well in clinical development

### OXB Products with Partners

- OXB-102 - Phase I/II first three cohort data
- OXB-202 - Phase I/II first two cohort data
- OXB-302 - In Phase I/II clinical study

### Multiple further partnerships

Which give Oxford BioMedica economic interests in a range of gene and cell therapy products and process development revenue / income opportunities

## Bioprocessing

Facilities operating at, or very, near capacity



# Summary: A Leading Gene and Cell Therapy Company



1

- Gene and cell therapy is predicted to grow into a multi-billion US\$ sector over the next 5-10 years

2

- Lentiviral vectors have advantages over other vector types

3

- OXB's sought-after LentiVector<sup>®</sup> gene delivery platform for both *in vivo* and *ex vivo* lentiviral vector products

4

- OXB has world-class bioprocessing facilities and collaboration track-record in the field

5

- OXB's product interests include own clinical and preclinical pipeline either spun out or out-licensed and an economic interest in partners' products

<sup>1</sup> Clive Glover, GE Healthcare "Sales of cell and gene therapy will reach \$10 billion by 2021", October 2015.

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