A LentiVector® Platform Company, and a leader in gene and cell therapy

Annual General Meeting
23 May 2017

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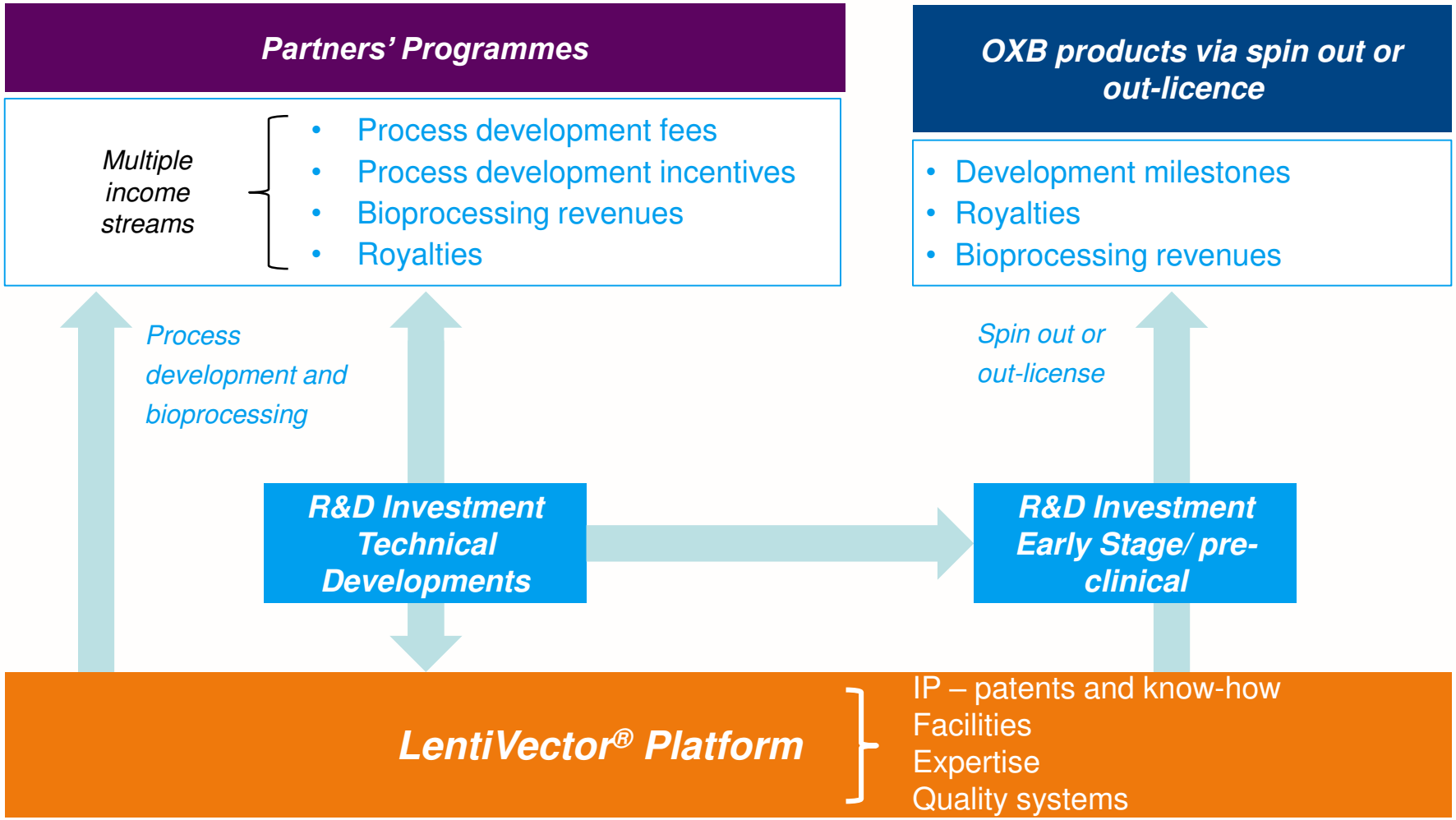
Strategy: Leveraging Our LentiVector® Delivery Platform



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Operational highlights (1 of 2)

- **Strong progress from LentiVector® delivery platform and cell therapy partnerships**
  - Novartis collaboration progressing well with CTL019 close to launch
  - Strategic alliance with Orchard Therapeutics to develop and supply lentiviral vectors for *ex vivo* treatments
  - Immune Design collaboration extended, including licence to use lentiviral vector based products for *in vivo* treatments for cancer
  - New R&D collaboration with Green Cross LabCell focused on gene modified natural killer (NK) cell-based therapies
  - 200 litre bioreactor production process established with potential to increase yield and reduce cost per dose
  - Transgene Repression in Vector Production (TRiP) system developed to enhance production titres of a broad range of gene therapy vectors

NOVARTIS

Orchard therapeutics

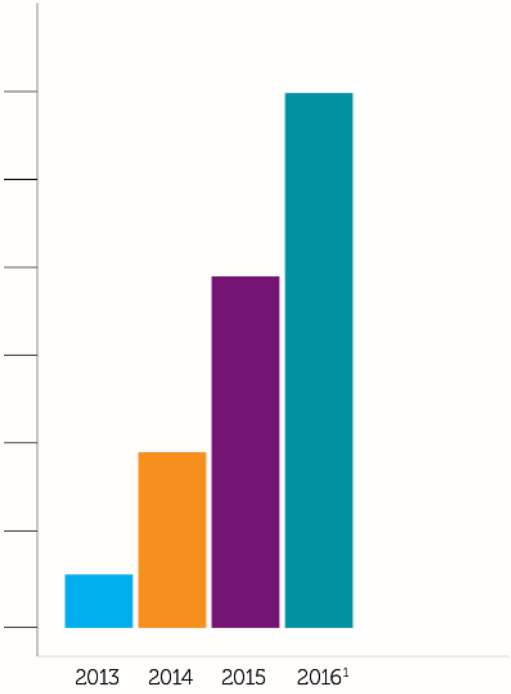
IMMUNE DESIGN

Green Cross LabCell

Operational highlights (2 of 2)

- **State-of-the-art bioprocessing and laboratory facilities**
  - Major capacity expansion completed
  - MHRA approval granted for GMP manufacture
  - Vector bioprocessing volume increased by 54% compared to 2015

- **Progress with proprietary product development**
  - Ground breaking long-term results seen from follow-up studies of patients treated with OXB-101 (Parkinson's disease) and OXB-201 (for wet AMD)
  - OXB-102 (for Parkinson's disease) and OXB-202 (for corneal graft rejection) ready to start Phase I/II studies following out-licensing/spin-out
  - OXB-302 (for solid tumours) pre-clinical proof-of-concept achieved and ready for further development following out-licensing/spin-out
  - SR422459 (licensed to Sanofi for Stargardt disease) in Phase II development



Bioprocessing volumes

[1] 2016 excludes next generation bioreactor output

Partnering

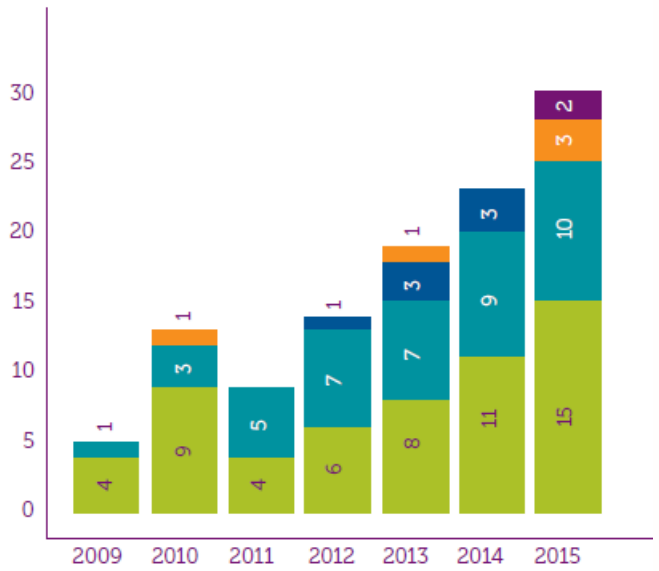
Oxford BioMedica is a leader in lentiviral vector technology

- Gene and cell therapy field set to grow into $ multi-billion sector over next 5-10 years. Several products, particularly *ex vivo*, likely to launch in next few years
- Lentiviral vectors are preferred choice for *ex vivo* therapies because they integrate into DNA of target cells with genetic payload replicating when cells divide
- Increasing number of lentivirus clinical studies initiated during 2015 (30% year-on-year)
- Oxford BioMedica has unique combination of patents, know how, expertise and facilities in lentiviral vectors – the LentiVector® platform – leading to partnerships and collaborations

NOVARTIS Orchard therapeutics

IMMUNE DESIGN Green Cross LabCell

- We expect more such partnerships in the future



Initiated lentiviral vector clinical trials by year and phase

Source: Journal of Gene Medicine, August 2016

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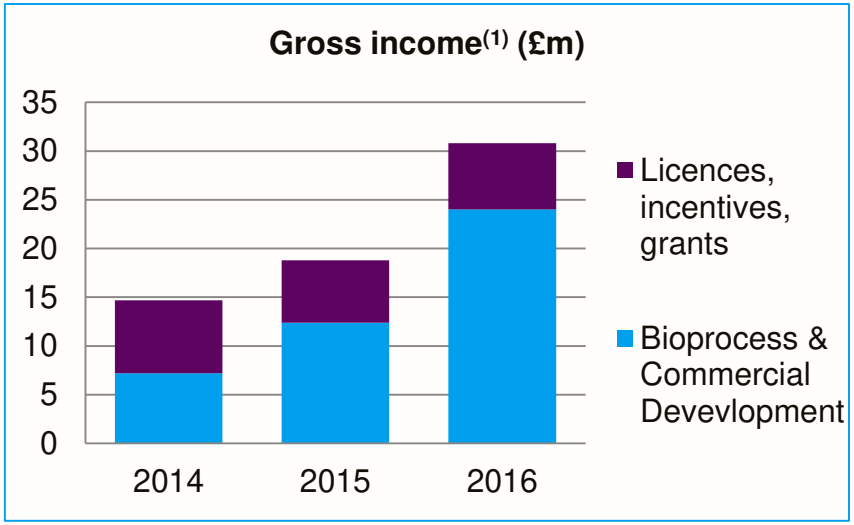
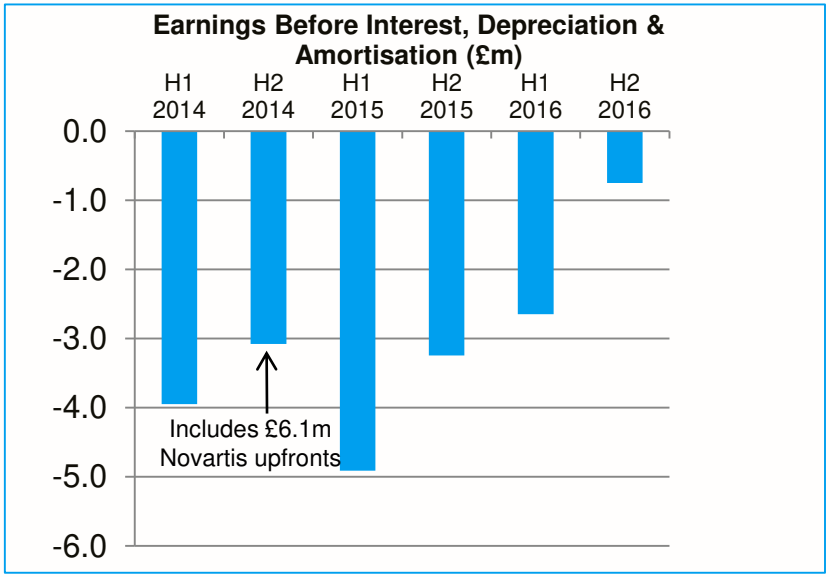
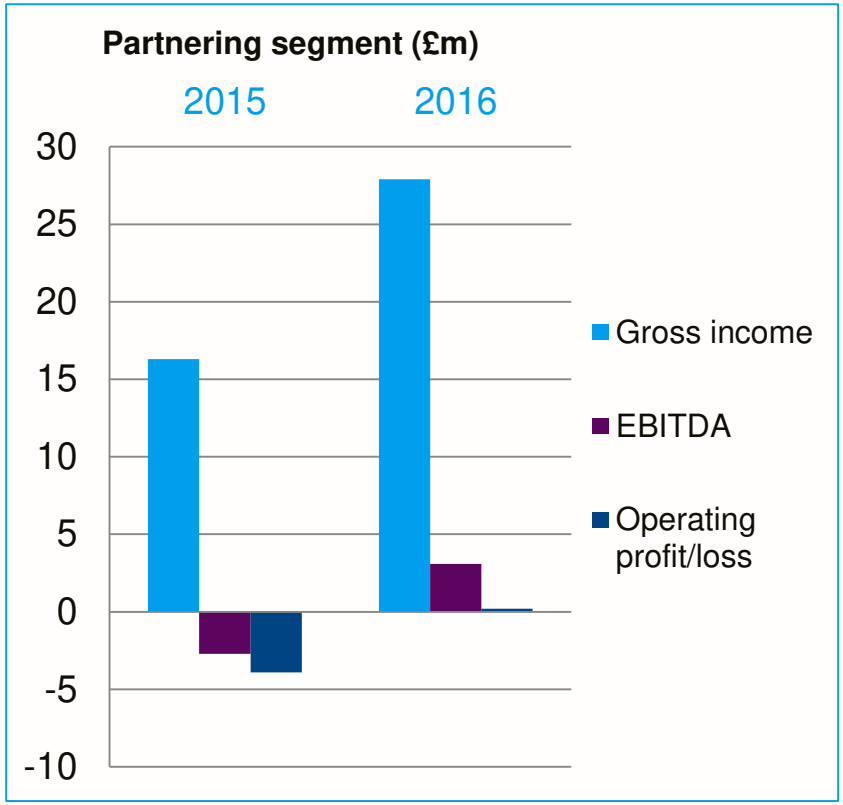
Financial impact of growing Partnership activities







Partnering segment

- Gross income received from partnership arrangements
- Now generating cash (2016 EBITDA £3.1m)
- Infrastructure in place to support further growth

[1] Gross income = aggregate of revenue and other operating income

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Products

Products Pipeline - Proprietary and Partnered

Product	Indication	Pre-Clinical	Phase I	Phase I/II	Phase II	Phase III	Approval	
OXB Proprietary Products								
OXB-102	Parkinson's disease							OxfordBioMedica
OXB-202	Corneal graft rejection							OxfordBioMedica
OXB-302	Cancer, multiple							OxfordBioMedica
OXB-201	Wet AMD							OxfordBioMedica
OXB-301	Cancer (multiple)							OxfordBioMedica
OXB Partnered products								
SAR422459	Stargardt disease							SANOFI
SAR421869	Usher syndrome 1B							SANOFI
Partners' Products								
CTL019	r/r ALL						(Projected H2 2017)	NOVARTIS
CTL019	r/r DLBCL							NOVARTIS
2nd CAR-T	Cancer (multiple)							NOVARTIS
CMB305	Advanced, relapsed or metastatic sarcoma							IMMUNE DESIGN
LV305	NY-ESO-1 expressing cancers							IMMUNE DESIGN
ADA-SCID	ADA severe combined immunodeficiency							Orchard therapeutics
MPS IIIA	Sanfilippo A syndrome							Orchard therapeutics
Undisclosed	Undisclosed							gsk GlaxoSmithKline
Undisclosed	Undisclosed							gsk GlaxoSmithKline

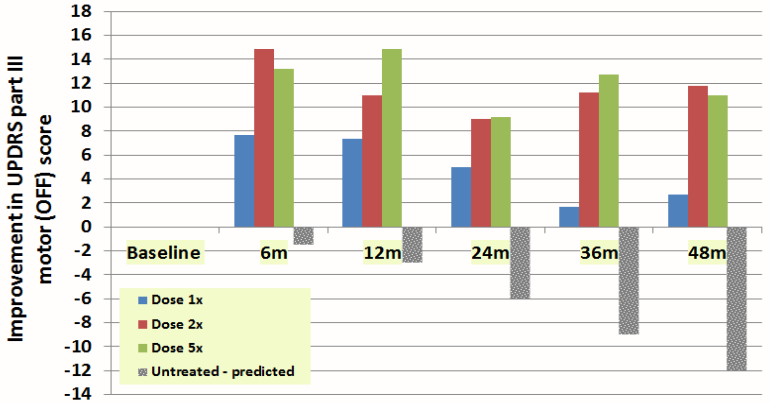
To be spun out or out-licensed

Development milestones and royalties

Process development and bioprocessing revenues, and royalties

In-House Programmes

- OXB-102 (Parkinson's disease)
  - OXB-101 showed encouraging efficacy and long-term duration of benefit
  - OXB-102 in late-stage preparations for Phase I/II clinical study

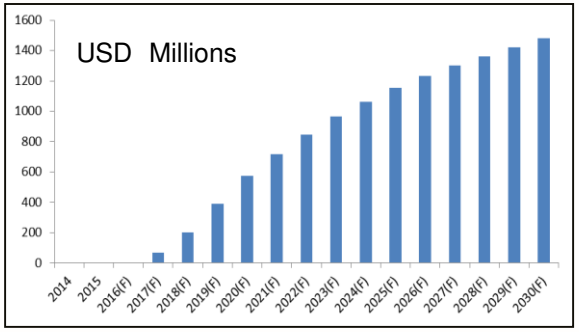


- OXB-202 (prevention of corneal graft rejection)
  - OXB-202 in late-stage preparations for Phase I/II clinical study
  - Tech transfer to clinical site to start once funding secured

- OXB-302 (CAR-T 5T4)
  - Pre-clinical studies completed, demonstrating proof-of-concept
  - Highlights include:
    - CAR-T 5T4 cells can kill tumour cells derived from colorectal cancer and mesothelioma in a "test tube" (*in vitro*)
    - T cells taken from patients with ovarian cancer can be re-programmed with the 5T4 CAR construct and respond (*in vitro*) to their own tumour cells, resulting in tumour cell death
    - In industry standard animal model (*in vivo*) 5T4 CAR-T cells can treat established ovarian cancer
- Out-licensing and spin-out opportunities being explored for priority products

Partners' programmes

- **Novartis CTL019**
  - BLA for r/r ALL accepted by FDA (March 2017),granted priority review
  - Novartis plan to file in EU in late 2017
  - DLBCL granted FDA Breakthrough Therapy designation
  - Submissions for r/r DLBCL in US and EU planned in Q4 2017
  - Analyst CTL019 consensus forecasts – blockbuster product



- **Novartis 2nd CAR-T programme underway**

- **Orchard Therapeutics**
  - Development and supply of lentiviral vectors for ADA-SCID underway
- **Immune Design**
  - LV305 and CMB305 (combination of LV305 and G305 prime boost agent) in Phase I/II studies in cancers expressing NY-ESO-1 antigen
  - LV305 activates the immune system against a tumour by generating cytotoxic T cells (CTLs) against specific tumour-associated antigens
- **Green Cross LabCell**
  - Research collaboration focusing on identifying and developing gene modified natural killer (NK) cell-based therapeutics for treatment of life-threatening diseases such as cancer

R&D

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 bioprocessing
  - 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

Summary

Potential catalysts over next 12 months

- Novartis progress
  - Data from adult r/r DLBCL study (expected Q2 2017)
  - Confirmation of OXB commercial supply agreement for CTL019 vector
  - FDA approval of CTL019 for r/r ALL and product launch
  - Submission of DLBCL for approval
- LentiVector® delivery platform
  - Approval to supply lentiviral vector for commercial use
  - Further contracts with new and existing partners giving us long-term economic interest in partners' product candidates
  - Established 200L bioreactor serum-free suspension platform to produce lentiviral vectors at significantly lower cost per dose
- In-house products
  - Spin out / out-license of in-house product candidates

Summary: A Leading Gene and Cell Therapy Company

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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 unique advantages for cell and gene therapy
3. OXB's sought-after LentiVector® 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 proprietary pipeline assets to be spun out or out-licensed and an economic interest in partners' products

[1] Clive Glover, GE Healthcare "Sales of cell and gene therapy will reach $10 billion by 2021", October 2015.

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