OXFORD UNIVERSITY INNOVATION

UNIVERSITY OF OXFORD

Spinout Equity Management

Oxford Spinout Equity Management

Research commercialisation at Oxford University

The University of Oxford is one of the world's most innovative and entrepreneurial universities. As a leading UK university for knowledge transfer and commercialisation of innovative technologies and services, it was one of the first to develop an intellectual property policy.

Oxford University Innovation Ltd, a subsidiary company, manages the commercialisation of IP developed in Oxford through licensing, spinout creation and material sales. Creation of new spinouts is overseen by the New Venture Support & Funding team. During the creation of a spinout the University acquires an equity stake in the company, which the Oxford Spinout Equity Management (OSEM) team subsequently manages.

The OSEM team also manages an investment fund, established by the University in 2008 to invest selectively in promising new technologies. Within Oxford University Innovation, the Licensing & Ventures and Spinout Equity Management teams work closely over the lives of the spinouts to support continued access to University-generated IP and key human and financial resources.

At an operational level, OSEM's support for spinout companies includes:

- Managing formal consent rights
- Participating in development of growth and exit strategies
- Facilitating access to funding and people
- Investing on behalf of Oxford University

The OSEM team is supported by an Investment Advisory Board.

The OSEM Team

Director - James Mallinson MA MBA
James read Engineering Science at the University of Oxford, and took his MBA at Cranfield. He has over 20 years' experience as a venture capital adviser and investor. He joined Oxford University Innovation in 2003, and OSEM at its inception in 2008. He has overall responsibility for the University's portfolio of spinout shareholdings, and among many investments he led the University's participation in NaturalMotion which resulted in a return of over £36m.

Office Manager - Jaz Jandor BA Hons
Jaz has previously worked for Oxford Brookes University and the Oxfordshire Bioscience Network. Jaz is experienced in Project Management, Events Management, Office Management and Financial Administration. Jaz joined OSEM in 2010.

The New Ventures Team

New Venture Support & Funding Manager - Zoë Reich
Zoë is a New Venture Support & Funding Manager at Oxford University Innovation. She manages the Oxford Proof of Concept Funds, the Oxford Angels Network, and the Oxford University Innovation portfolio. Previously, Zoë worked as a management consultant in the Financial Management department of KPMG.

Research and Technology Transfer at Oxford

The scale of research at Oxford is substantial, driven by four academic divisions, libraries, museums and hospitals, 1799 academic staff (research and teaching), 4536 research and research support staff and over 10173 postgraduate research students. Not surprisingly, Oxford is widely recognised as one of the leading research-based universities in the world and is consistently ranked in the top 5 Universities in the world for its overall quality of teaching and research. With over £740m of Annual funding for its research activities, the University succeeds in producing a continuous stream of innovative technologies and, through Oxford University Innovation, ranks in the top 5 organisations in the UK in terms of patent filings.

The University encourages commercialisation of its research and inventions wherever these can lead to benefits to society. Consulting, direct licensing and new spinout company formation are all features of this commercialisation.

Some notable successes of company creation include:

Oxford Instruments
Founded in 1959 by Sir Martin and Lady Audrey Wood. World leader in analytical superconductivity instruments. First technology spinout of the University of Oxford, out of the Clarendon Lab, Dept of Physics, listed on the London Stock Exchange.

Oxford Immunotec
Medical diagnostics based on innovative, patented T cell measurement technology. IPO on NASDAQ in November 2013 raising $65m. Major product is the T-SPOT®.TB test, a cellular blood test for the detection of active and latent TB infection.

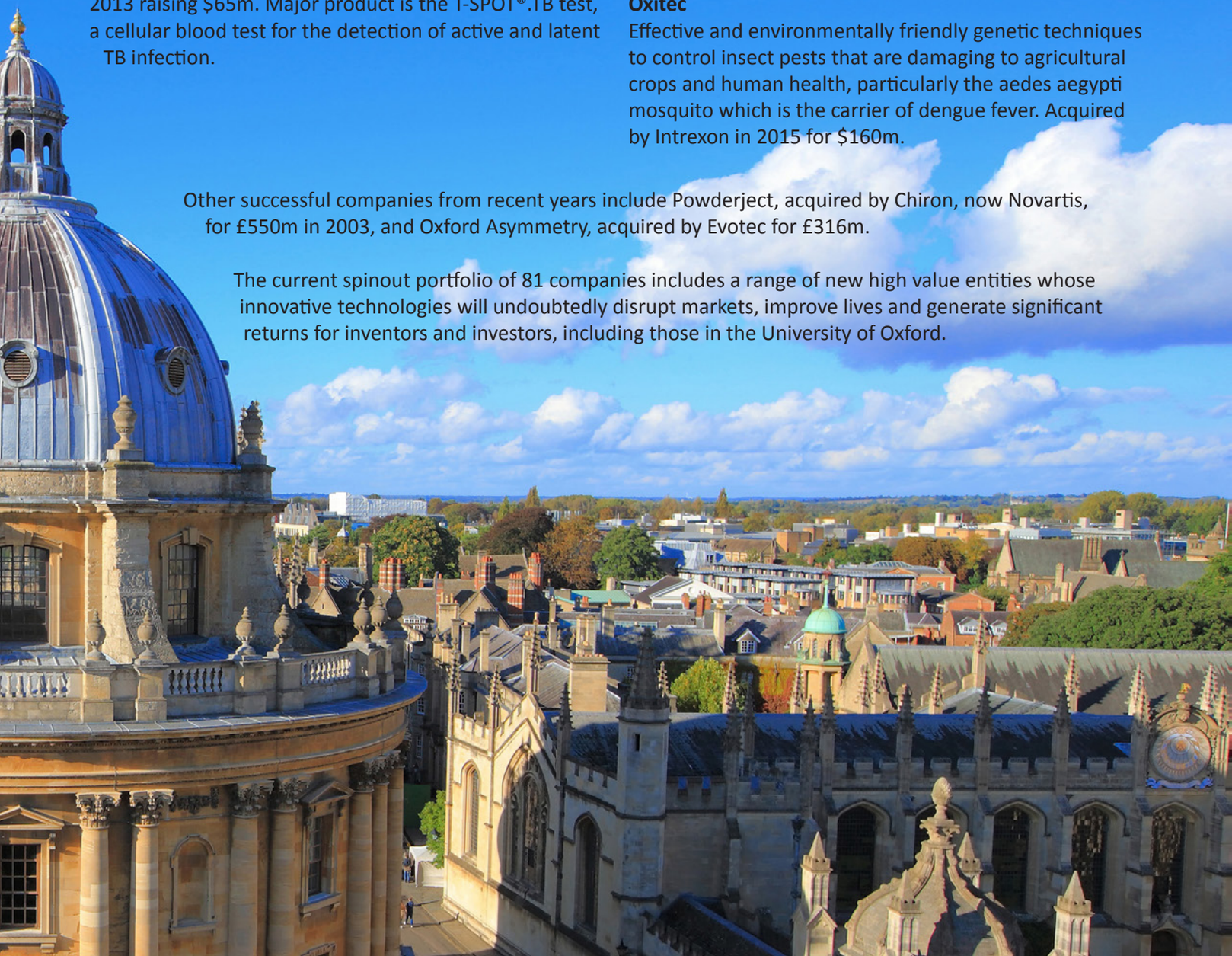
NaturalMotion
A leading mobile games and technology company based in Oxford, London, Brighton, and San Francisco. Acquired by Zynga in 2014 for over $527m.

Adaptimmune
Developer of affinity enhanced T cell receptors for use in autologous T cell therapy. IPO on NASDAQ in May 2015 raising $191m.

Oxitec
Effective and environmentally friendly genetic techniques to control insect pests that are damaging to agricultural crops and human health, particularly the aedes aegypti mosquito which is the carrier of dengue fever. Acquired by Intrexon in 2015 for $160m.

Other successful companies from recent years include Powderject, acquired by Chiron, now Novartis, for £550m in 2003, and Oxford Asymmetry, acquired by Evotec for £316m.

The current spinout portfolio of 81 companies includes a range of new high value entities whose innovative technologies will undoubtedly disrupt markets, improve lives and generate significant returns for inventors and investors, including those in the University of Oxford.



The Spinout Portfolio: July 2016

Diagnostics	Cytox	Oxford Impedance Diagnostics
	Oxford Biodynamics	Oxford Medistress
	Oxford Cancer Biomarkers	Perspectum Diagnostics
Med Tech	Intelligent Ultrasound	Oxsight
	OrganOx	OxSonics
	Orthox	OxSyBio
	Oxehealth	Oxtex
	OxEML	Particle Therapeutics
	Oxford Biomaterials	Xerion Healthcare
	Oxford Endovascular	
Pharma Tools and Services	Aurox	Oxford Gene Technology
	CN Bio Innovations	Oxford NanoImaging
	Crysalin	Oxford Nanopore
	Inhibox	Technologies
Drug Discovery	Argonaut Therapeutics	Oxagen
	Atopix Therapeutics	Oxford Vacmedix
	Celleron Therapeutics	Oxstem
	Chronos Therapeutics	Pharminox
	EvOx Therapeutics	ReOx
	Immunocore	Riotech
	iOx Therapeutics	Sibelius
	NightStaRx	Vaccitech
	Orbit Discovery	
Other Healthcare	C-med	OBS Medical
	Deontics	Run 3D
	Genomics	TdeltaS
Industrial applications	Bodle Technologies	Oxford Flow
	Designer Carbon Materials	Oxford Imaging Detectors
	Oxbotica	Oxford Multi-Spectral
	Oxbridge Pulsars	Oxonica
	Oxford Advanced Surfaces	Salunda
	Oxford Biotrans	
Environment / Clean Tech	First Light Fusion	OXEMS
	Kepler Energy	Oxford PhotoVoltaics
	Navetas	Yasa Motors
Other Technologies (incl. software)	Animal Dynamics	Oxford Ancestors
	Diffblue	Oxford Consultants for Social Inclusion
	Fuel 3D	Oxford MESTAR
	Mind Foundry	Oxford Risk
	Minervation	Semmle
	Mixergy	Wrapidity
	Navenio	Zegami
	OMass	
	OxCept	

6 Listed on AIM/LSE/NASDAQ:

Adaptimmune	Oxford Biomedica plc	Summit plc
Avacta plc	Oxford Immunotec plc	Velocys plc

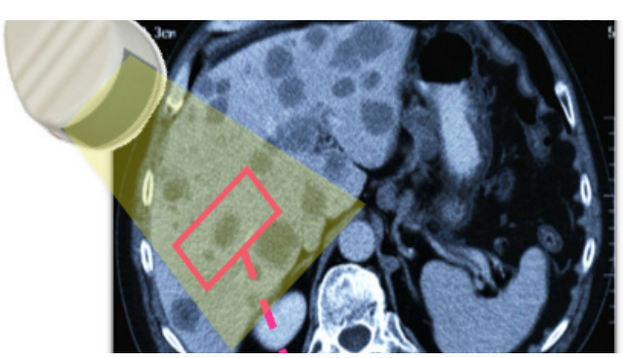

Adaptimmune
ATOPIX
AUROX
PERSONAL CONFOCAL
BODLE
celleron therapeutics
CHRONOS THERAPEUTICS
CRYSALIN LIMITED
CYTOX
diffblue
FUEL3D
IMMUNOCORE
IU
Intelligent Ultrasound
Kepler Energy
LiverChip
NAVETAS
Energy Management
NightstaRx
OBS
Medical
OCSI
ogt
OrganOx
living organs for life
OXBOTICA
OxCEPT
Oxehealth
OXEMS
oxford advanced surfaces
oxford ancestors
EXPLORE YOUR GENETIC ROOTS
Oxford Biomaterials Limited
OxfordBioMedica
OXFORD BIOTRANS
Oxford Cancer Biomarkers
OXFORD ENDOVASCULAR
Oxford Flow
Oxford Immunotec
Oxford NANOPORE Technologies
OXFORD PHOTOVOLTAICS
Solar Power Glazing
OxfordRisk
OxSyBio
oxtex
Perspectum Diagnostics
Run3D
saluda
semmle
SIBELIUS
summit plc
TAS delta
vaccitech
VELOCYS
Xerion HEALTHCARE
YASA MOTORS
zegami

Examples: Life Sciences/Medical Technology

Adaptimmune and Immunocore
Diseased cells, including cancer and virally infected cells, express an array of antigens which are not expressed by normal cells and these are then recognised by circulating T cells via the t-cell receptor (TCR). Adaptimmune and Immunocore are using two different approaches to engineering TCRs as starting points for discovery of novel drugs/therapeutic approaches. Initial clinical trials results are very promising.

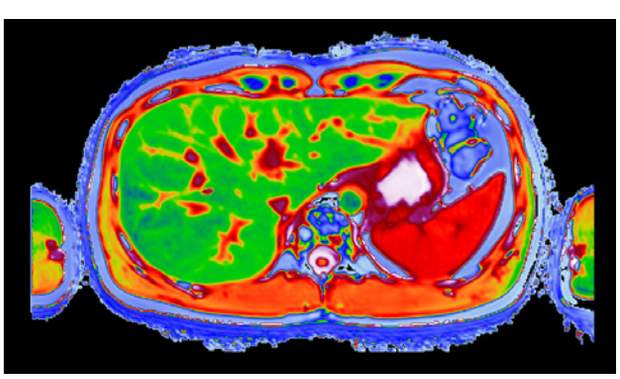
Oxford Nanopore Technologies
Oxford Nanopore Technologies is developing a new generation of technology that uses engineered nanopores for the direct, electronic analysis of single molecules including DNA, RNA, proteins and other molecules. The system, called GridION, has broad applications including personalised medicine, scientific research, crop science and security/defence. The Mk 1 MinION and promethION are now commercially available since May 2015.

OrganOx
Organox has developed a medical device that will increase the availability of suitable livers by enabling successful transplantation of organs from non-heart-beating donors and reducing the number of discarded livers. The device operates by maintaining the organ in a fully functioning state during transport and storage, by managing blood flow, oxygen, nutrients and temperature within physiological limits. This not only enables the liver to be stored safely for a longer period (up to 24 hours) but also provides the surgeon with real-time and cumulative data with which to assess viability and make a decision whether to transplant. OrganOx is performing an extensive program of clinical trials, in the UK, Europe, US & Canada to assess the advantages of normothermic liver perfusion using the OrganOx metra.



OxSonics
Scalable life-changing treatments to solid tumour cancer patients. OxSonics' drug delivery platform, SonoTran, has the capability to overcome one of the greatest limitations facing solid tumour cancer therapy: delivering drugs throughout tumour volumes including to those areas that lie farthest from blood vessels.

Perspectum Diagnostics
The founders of Perspectum are world experts in MRI and have developed and patented an assessment method based on MR imaging that does not require contrast. Perspectum's initial software product, LiverMultiScan, is expected to transform diagnostic hepatology by providing objective, quantitative and accurate information about patients' livers in one 20-minute visit, with no need for intravenous contrast.



Examples: Technology

YASA Motors

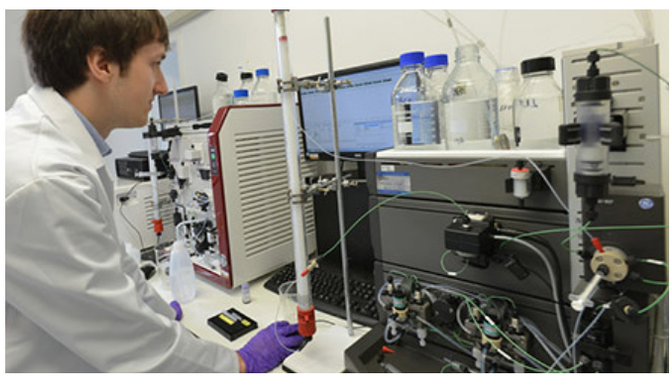
YASA Motors develops, manufactures and sells very high power and torque density axial flux electric motors. The company has secured its first development and production contracts with major automotive OEMs. Torque density of 30Nm/kg has been achieved (up to 40Nm/kg is possible), and further products are currently being developed with power densities of up to 10kW/kg. Motors have been installed in track and road vehicles as well as marine and industrial settings.

Oxford Flow

Oxford Flow's industrial pressure regulators use innovative technology to provide new levels of performance for natural gas transmission, water distribution and process industries. Smaller and lighter than competing products, Oxford Flow's gas and fluid pressure regulators can significantly reduce installation costs. Along with improved performance and accuracy, the patented designs have just one moving part, increasing reliability and service life.

Crysalin

Crysalins offer a ground breaking protein-based nanotechnology for protein structure determination. Crysalins demonstrate significant advantages over other methodologies since they are able to impose order on macromolecular targets to enable X-ray and EM instruments to resolve 3-D molecular structure where current technologies have failed (for instance in the case of membrane proteins).



Oxford Biotrans

Oxford Biotrans is commercialising enzymatic process technologies, avoiding harsh reagents, that yield high-value natural grade chemical compounds from readily available feedstocks. The first product will be nootkatone, the flavour and scent of grapefruit.

Oxford Photovoltaics (Oxford PV)

Oxford PV is developing solid state low cost perovskite solar cells which can be optimised to drive a paradigm shift in the aesthetics, performance and cost of photovoltaic systems. The cells can be transparent, enabling cost effective photovoltaic glazing for buildings, known as Building Integrated Photovoltaics (BIPV).

Oxford Spinout Equity Management
Buxton Court
3 West Way, Oxford OX2 0JB
Tel. +44 (0)1865 614452
osem.ox.ac.uk
sem.innovation.ox.ac.uk

James Mallinson, Director
james.mallinson@osem.ox.ac.uk
Tel. +44 (0)1865 614451

Jaz Jandor, Office Manager
jaz.jandor@osem.ox.ac.uk
Tel. +44 (0)1865 614452

Zoë Reich, New Venture Support & Funding Manager
zoe.reich@innovation.ox.ac.uk
Tel. +44 (0)1865 280858

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