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ISIS
INNOVATION

Oxford Invention
Fund

Oxford Invention Fund



“The Oxford Invention Fund provides the opportunity for donors to the University to see their donations used to support innovation and enterprise in Oxford, and to see a return to the University from successful new business ventures”.

**Bernard Taylor, Chairman,
Isis Innovation Ltd
Member, University Council**



Introduction

Visionary benefactors have helped shape the University of Oxford into one of the world's leading centres for academic and scientific excellence. The Oxford Invention Fund provides an opportunity for donors to support the development of technology in Oxford, and help secure the University's innovative infrastructure. The Fund is an integral part of Oxford Thinking, a united Campaign to raise a minimum of £1.25 billion for the collegiate University.

The Oxford Invention Fund will receive donations, made to the University for this specific purpose, and use these donations to invest in the development of new technologies arising within the University, maintaining Oxford at the forefront of global innovation.

The 'dreaming spires of Oxford' are known around the world as a haven for learning. To make the most of this learning, Oxford also endeavours to excel at identifying, protecting and finding commercial partners for ideas that will make a difference in supporting both the excellence of Oxford and helping to improve the health and wealth of society.

The Oxford Invention Fund will fill the gap between current funding support for research and infrastructure in the University and investment from industry and the finance sector, and enable the progression of the most exciting innovations from all departments within the University.

Through this new Fund, Oxford will strive to ensure that smart ideas will be developed to a stage where they can be transferred from the University to business. This can be achieved by setting up new companies, or by licensing technologies to existing innovative businesses with the capability to bring new products to market.

Isis Innovation, the University's technology transfer company, are acknowledged worldwide as experts in protecting, patenting and licensing early-stage technologies, and setting up new 'spin-out'

companies. Its growth over the last 10 years has been core to the University's success in spinning out over 50 new companies based on Oxford intellectual property.

When the Oxford Invention Fund supports a successful project, a share of the returns will be allocated back into the Fund. In this way donations to the Fund can be reused to support future new projects from the returns on earlier successful projects.

Isis Innovation will use its exceptional experience to manage the Oxford Innovation Fund for the University.

How to Donate to the Oxford Invention Fund

The Fund is owned by the University of Oxford and donations to the Fund are made as donations to the University. Donating to the Fund is therefore as straightforward as donating to any other cause in the Oxford Thinking Campaign, in the usual ways to give: online, by post or by phone. Further information on contact details and web addresses is given on Page 18 of this brochure. Your donation to the University's Oxford Invention Fund will support Oxford's innovation and enterprise activities through investment in innovative new technologies.

The Oxford Invention Fund provides an opportunity for benefactors to encourage further innovation at Oxford.

Oxford, Invention and Innovation

Oxford is one of the world's most innovative and entrepreneurial universities. Drawing on an 800-year tradition of discovery and invention, modern Oxford leads the way in generating new ideas that lead on to creating jobs, wealth, and skills for the 21st Century.

Oxford is renowned the world over for its pioneering scientific work on the central nervous system, penicillin, and x-ray crystallography. More recently Oxford researchers have led the world in the fields of DNA microarrays, therapeutic antibodies, and functional magnetic resonance imaging of the brain. Today, new inventions from Oxford are at the forefront of next generation technologies across the spectrum of technology applications in healthcare, diagnostics, drug discovery and development, imaging and sensing, clean technologies and sustainable energy, materials, nanotechnology, electronics, chemical synthesis, bioprocessing, and information technology.

Isis Innovation has played an essential role in transferring technologies from Oxford's research Departments out to the wider world. Innovation can be described as 'the successful exploitation of new ideas' and Isis plays a vital role in connecting the new ideas from Oxford with those able to develop them into new products and services.

In the last ten years Isis has set up 54 new technology spin-out companies, over 90% of which are still in business, and concluded 500 technology licensing transactions. These achievements make Isis one of the leading university technology transfer offices in the world.

The experienced professionals in Isis work closely with University researchers to develop new business opportunities, identifying suitable partners, sourcing investment, management and professional services. Isis currently manages over 750 technology projects, and files on average more

than one new patent application each week in preparation for licensing to companies.

With specialists in patent management, technology marketing, deal negotiation, seed fund management and operations, we have established a broad range of services and extensive portfolios which are constantly growing. From advice on commercial and intellectual property management, to academic consulting, Isis offers a solution to an ever expanding range of complex situations.

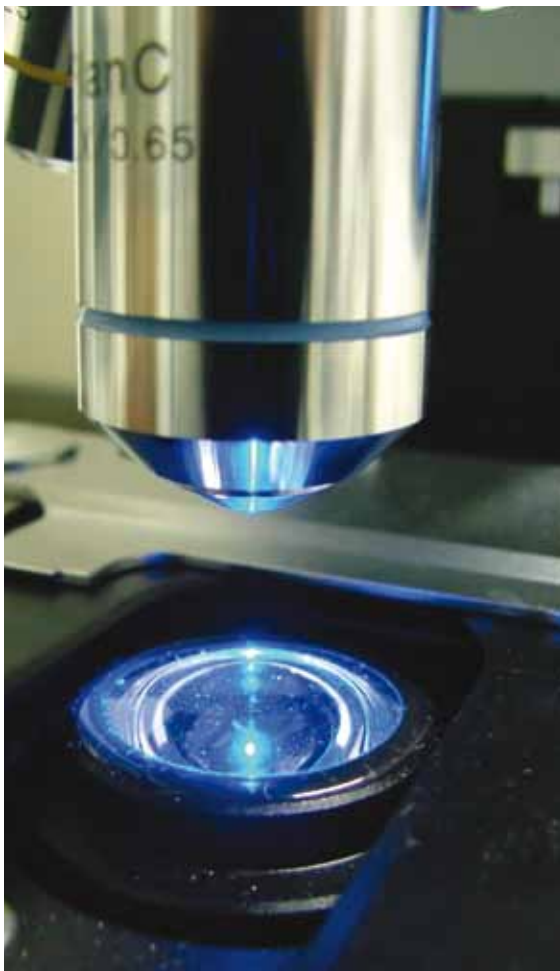
Isis runs two powerful international business networks that help it transfer technologies from Oxford to business. The Oxford Innovation Society is a leading forum for open innovation, bringing together researchers and inventors, Oxford spin-outs, technology transfer professionals, local companies and some of the world's most innovative multinationals. For 20 years, the Society has fostered links between business and the academic community and provided companies with a "window" on Oxford science and technology. The Isis Angels Network (IAN) introduces private investors and seed/venture capitalists interested in investing in spin-out companies from the University of Oxford to investment opportunities. Members of IAN may also be interested in serving as non-executive directors, nominated by the University, on boards of the new spin-out companies.

The Oxford Invention Fund will play a vital role in enabling the next generation of Oxford inventions to reach the market and benefit individuals and societies around the world.



Oxford Thinking
The Campaign for the University of Oxford





The Need for the Oxford Invention Fund

There is a gap between the outputs of University research and its development, supported by commercial and financial investors. The Oxford Invention Fund is needed to provide the resources to enable Oxford technologies to bridge this gap.

Universities have supported free thinkers and nurtured new inventions that lead to life-enhancing or even life-saving products and services. However, even the most promising projects require verification and proof-of-concept work or prototyping, before industry is prepared to shoulder the risk of the next step in development. Although communities continually look to universities for creative solutions to the most challenging problems of our age, the successful evolution of these from idea to reality is only made possible by the finance secured through business investment, government funding and charitable donations.

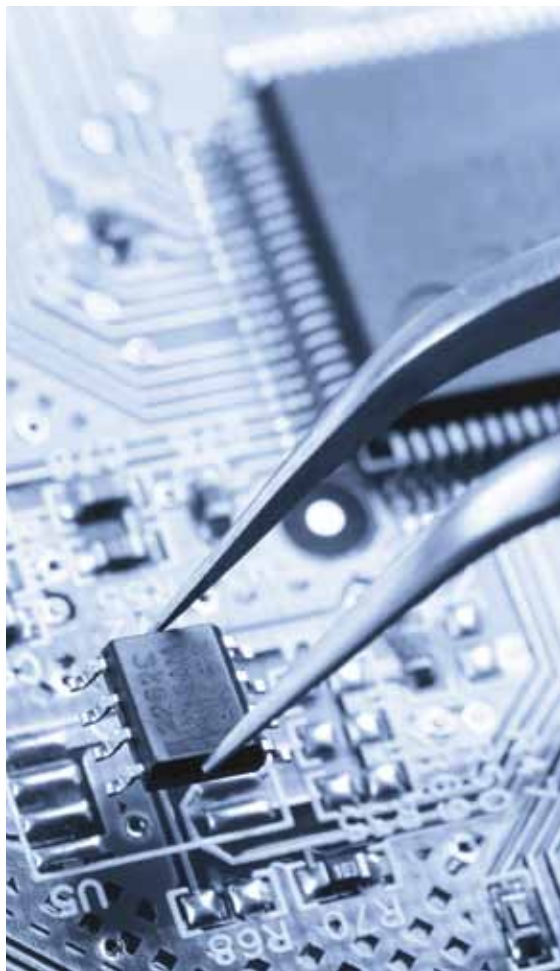
Most university-based inventions lack the further development of product prototypes and experimental data. Proof-of-concept funds for this type of work are generally not available from existing commercial venture capital providers or from research funding bodies.

The issue of early stage funding continues to prove an obstacle in the technology transfer process,

particularly in the current economic climate. Whilst Isis helps to develop problem solving innovations, so an innovative approach also needs to be applied to funding, casting the net wider and further, and actively looking at ways to grow and replenish funds on a regular basis.

The introduction of a self sustaining fund such as the Oxford Invention Fund will provide opportunities to take commercialisation at Oxford to the next level. The result will be a professionally managed in-house source of seed funding to support maturing projects, moving them to licensing or spin-out stage by investing in vital experimental data generation, prototyping or other proof-of-concept work.

The result of the investments made will, it is hoped, be viable and attractive propositions ready for either licensing to an existing company, or for attracting investment from seed and venture capital providers to establish a new spin-out company.



Oxford Thinking
The Campaign for the University of Oxford



Proof-of-Concept and Seed Investment Funds

Oxford University and Isis Innovation have a proven track record in managing proof-of-concept and seed funds. In particular the success of the Oxford University Challenge Seed Fund has shown the important role that these funds play.

Over the last 10 years, Isis has successfully managed the Oxford University Challenge Seed Fund (UCSF). Established in 1999, the Oxford UCSF started with £4m, with £3m in grants from the Wellcome Trust and UK Government, and £1m from the University. The UCSF has been extremely effective in accelerating technology transfer from the University to industry.

The UCSF has made over 100 investments ranging in size from £1,500 to £250,000; it holds shares in 31 spin-outs which have subsequently attracted over £110m in total seed and venture capital investment. Three of these spin-outs have been listed on the AIM market and working together, Isis and the University have utilised the Fund to engineer exits such that the amount that the UCSF has invested totals £5.7m - more than its original size. The UCSF is now close to fully invested. Whilst future returns are expected we do not anticipate these in the current economic conditions for some time. The University has also contributed a further £1m to a similar internal scheme known as the Isis University Investment Fund (IUIF), also managed by Isis in parallel to the UCSF, which has made 33 completed investment deals. The Fund is now fully invested.

There is a clear need for a new, sustainable source of proof-of-concept and seed funding to enable the continued development of Oxford inventions.

The Oxford Invention Fund seeks to attract donations to create a £5m Fund so that it can successfully address the pre-seed funding gap, which exists for both potential spin-out companies and technologies for license. The Fund aims to reach a total size of £5m, but we are confident that we will be able to commence making investments before that full amount has been raised. The Oxford University Seed Challenge Fund is an inspiration and a model for the Oxford Invention Fund.

Donors can take pride in the difference their contribution makes, assured that the capital from successful exits will be retained by the Fund to be reinvested in further projects, again and again. There is no end to innovation, and likewise no limitations to the Oxford Invention Fund.

Supporting the Campaign, contributors have the unique opportunity to be an integral part of developing an evergreen resource with the potential to be self-sustaining for years to come. Working together to keep the wheels of innovation turning, it is hoped that one day substantial money generated by the Fund could even be used to subsidise scholarships and bursaries to pave the way for the next generation of inventors and scientists.



Oxford Emergent TB Consortium

Case Study

The battle against tuberculosis, the world's second leading cause of death from infectious disease in adults, took a step forward in mid-2008 when a joint venture was established to take MVA85A – the world's most clinically advanced TB vaccine candidate – into Phase IIb clinical trials.

The MVA85A vaccine was developed at the University of Oxford by Dr Helen McShane, a Wellcome Trust Senior Clinical Research Fellow, working with Dr Sarah Gilbert and Professor Adrian Hill, a Wellcome Trust Principal Research Fellow. Further funding was provided by the European Community's fifth and sixth Framework Programmes and the Medical Research Council (MRC), a UK organisation dedicated to promoting the balanced development of medical and related biological research in the UK.

Isis filed a patent protecting the intellectual property and by 2007 was negotiating a unique joint-venture arrangement to secure £8m in translational funding from the UK's Wellcome Trust and the Aeras Global TB Vaccine Foundation, a not-for-profit organisation funded by the Bill and Melinda Gates Foundation as well as international government ministries and agencies.

The joint venture arrangement, Oxford-Emergent Tuberculosis Consortium Ltd, was set up as a way

of pooling the resources and expertise of Oxford, Isis, the Wellcome Trust, Aeras, and Emergent Biosolutions – a US-based biopharmaceutical company focused on the development and commercialisation of vaccines and therapeutics. Under agreements with the Consortium, Emergent BioSolutions has the rights to commercialise the MVA85A vaccine.

In April 2009 the Phase IIb proof-of-concept clinical trial commenced in South Africa – an area burdened by one of the highest incidence rates of TB in the world – with the aim of generating safety and immunogenicity data about the vaccine.

The vaccine candidate, MVA85A, has been granted orphan drug designation by the European Medicines Agency (EMA). This was again made possible with help from a seed fund at Isis. If successful, MVA85A would be the first new vaccine licensed to prevent tuberculosis in over 80 years.

Oxford's Jenner Institute, at which all three of the inventors of the vaccine are based, is at the forefront of global vaccine research. Current well-advanced projects include a new malaria vaccine, and a universal flu vaccine, both of which are in Phase I clinical trials.



Intelligent Sustainable Energy

Case Study

Intelligent Sustainable Energy Limited (ISE) was formed in November 2008 having successfully raised £900,000 in equity financing. In order to reach the investment stage the company relied upon support from the UCSF to finance technology proof-of-concept and commercial development activities.

ISE is developing an intelligent energy monitor that delivers electricity use information to consumers so that they can make informed decisions about how they are using electricity. Initially aimed at the domestic market, the technology can provide detailed, by appliance, breakdown of electricity use throughout the building being monitored.

The system analyses the electricity supply at a single point (for example, the building's electricity meter) and calculates the power consumption of each appliance.

The technology was conceived by Dr Malcolm McCulloch, Director of the Electrical Power Group within Engineering at the University of Oxford. The UCSF awarded the project £50,000 in 2007. Dr McCulloch used some of the money to employ a former student, Jim Donaldson, who joined the team as Chief Technology Officer. The funding

enabled the team to build a number of proof-of-principle systems, further develop the core technology and create interface presentation software. The result was an impressive live demonstration system that contributed enormously to securing investment.

The team also used the money to deliver visualisations of what the smart-meter to human interfaces might look like.

In mid 2008 the UCSF agreed to support the project with a further £9,000.

In collaboration with venture capital investors Swarraton Partners, the team identified Navetas Energy Management as ideal partners for the project. Navetas is headed up by Chris Shelley and Chris Saunders who share some 30 years of experience in the smart metering industry.

Ultimately, Swarraton Partners invested in Navetas, who then invested in ISE. Navetas also supplies commercial management to ISE.

The UCSF converted its funding of £59,000 into equity at the first round of investment.



OrganOx

Case Study

Professor Peter Friend of the Nuffield Department of Surgery, and Director of the Oxford Transplant Centre, along with Dr Constantin Coussios, from Oxford's Institute of Biomedical Engineering, developed a device for sustaining organs outside the body using blood at normal body temperatures. The intellectual property associated with the device focuses on enabling an organ to self-regulate its blood flow with respect to time so that minimal harm is caused to the vasculature of the organ.

The major aim of the technology is to increase the number of suitable livers available for organ transplantation.

The device was patented by Isis and in February 2007, the Oxford UCSF awarded the project £32,850 enabling the researchers to compare their prototype device to a modified version that did not allow the organ to self-regulate blood flow. This study both exemplified the patent and provided data to demonstrate the inherent value of the intellectual property to potential investors.

Whilst this work was underway, a potential CEO for the business, Dr Les Russell, joined the project team. In December 2007 the project team reported the success of the initial funding to the board and introduced Dr Russell and a further £10,000 was awarded by the UCSF for him to deliver a business plan.

In February 2008, the business case for OrganOx was presented to the UCSF board, inviting them to co-invest contingent upon a total of £1.5m being raised. The UCSF board awarded the project a further £57,150 - bringing the total investment by the UCSF to £100,000.

In September 2008, Technikos, Oxford Technology Management Ltd and two other investors agreed to invest £1.35m leaving only a £150,000 shortfall to meet the company's £1.5m funding target. An additional £100,000 from the UCSF enabled OrganOx to close the investment round with a consortium of five investors, and the company incorporated in December 2008.



Oxford Catalysts

Case Study

Oxford Catalysts was spun out of Isis in 2005, and listed on the AIM stock exchange four months later with a market capitalisation of £65m.

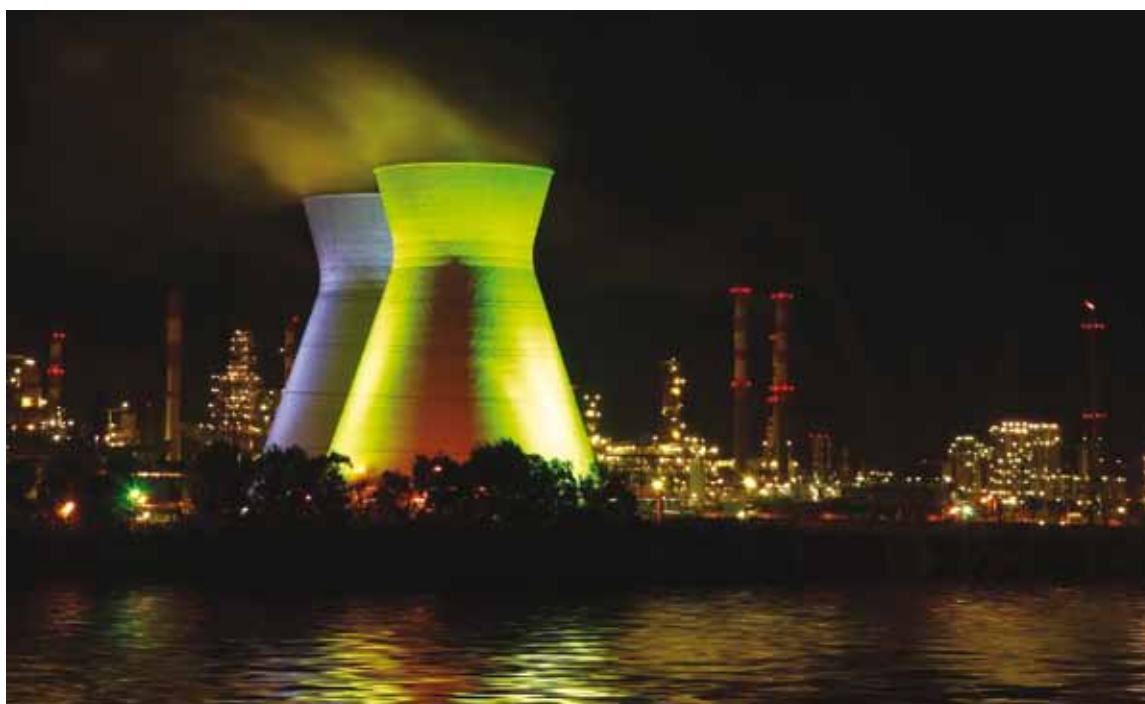
This extraordinary time-line was the culmination of 19 years of research at Oxford's world-leading Wolfson Catalysis Centre, carried out by Professor Malcolm Green and Dr Tiancun Xiao, as well as years of work by Isis Innovation in funding and commercialising the research to the point where the company was able to raise funds.

The UCSF was able to invest £124,500 to fund the work needed to move beyond pure research. The inventor was able to begin optimising the catalysts for key industry processes, such as producing the sulphur-free diesel fuel from waste gas, and removing sulphur contamination. In preparing to

spin-out Oxford Catalysts, Isis Innovation was also supported by the Oxford University Begbroke Science Park, which awarded a Technology Enterprise Fellowship to Dr Xiao funding him to support commercial development.

Oxford Catalysts Group is now a leading catalyst innovator for clean fuels, designing and developing specialty catalysts for the generation of clean fuels from both conventional fossil fuels and certain renewable sources such as bio-waste.

Oxford Catalysts' strategy is to license its catalysts for commercial application by entering into co-development partnerships with leading manufacturers, producers and suppliers in the petroleum, petrochemicals, biogas, steam applications and catalysis markets.



Managing the Oxford Invention Fund

The Oxford Invention Fund will be managed by Isis Innovation Ltd, the University of Oxford's wholly owned technology transfer company. Isis Innovation will build on its success in managing technology transfer and investing seed funds at Oxford over the last 10 years.

Investment Strategy

The investment strategy of the Oxford Invention Fund is to accelerate investment in the University of Oxford's science, by awarding funds across the University, to fill the financial gap between basic research and commercialisation of inventions.

The Fund's investment will assist such projects with the costs of, for example: further development, proof-of-concept, prototype construction and other related activities. If a new spin-out company results from work financed by the Oxford Invention Fund, it is intended that the award will be rolled into an equity investment with the Fund being issued shares in the spin-out company at the same price as the first round cash investors. If a company is spun out without first round cash investors, the intention is that the Fund will agree with the company a mechanism under which shares will be issued to the Fund.

If, rather than a new company, results from work financed by the Invention Fund generate licensing income, then a portion of the net revenue will be allocated to the Fund in accordance with the University of Oxford's Regulations.

At the point where equity is issued to the Fund, Oxford Spin-out Equity Management (OSEM), a unit within the University reporting to the Finance

Director, which manages the University's shareholdings in its spin-out companies and seeks ways of maximising the value of its equity stakes, will take over management of this portfolio.

Investment Criteria

The key criteria for evaluating pre-spin-out projects are:

- Innovation of the science: how novel is the approach compared with other research in the field.
- Background of the key people: who are the key researchers etc.
- Intellectual property: how strong is the IP; what does the backdrop of prior art look like.
- Commercial opportunity: can the research be turned into a sustainable business.
- Products and/or services that offer a potential competitive advantage.
- A strong business leader/entrepreneur.
- Clear growth prospects.

The Fund will invite and support proposals for proof-of-concept funding to be spent inside University Departments, and for equity investments into the first round financing of new spin-out companies. The Fund will receive returns from licensing technology and from shareholdings in Oxford spin-out companies.

Investment Advisory Committee

There is an Investment Advisory Committee already in place for the University Challenge Seed Fund, appointed by the University to advise on all aspects of proof-of-concept investments. It is proposed that this committee will also act as the investment advisor for the Oxford Invention Fund.

The current members of the Investment Advisory Committee are as follows:

Mr Bernard Taylor, Chairman of Isis Innovation Ltd;
Member, University Council

Professor Sir John Bell, Regius Professor of
Medicine, University of Oxford

Professor Sir Mike Brady, Professor of Information
Engineering, University of Oxford

Dr Tim Cook, Technology company non-executive
director

Professor Steve Davies, Chairman of Chemistry,
University of Oxford

Mrs Ann Hacker, Technology company
non-executive director

Mr Nigel Keen, Chairman of Oxford Instruments
plc; Chairman of Laird plc

This committee meets on a regular basis to discuss
the investment proposals that are presented to it

by Isis Innovation. Isis will seek to select opportunities for the Oxford Invention Fund that are close to market, in niche investment sectors that address unmet needs.

Investment Size & Evaluation

The Fund's typical investment is expected to be from £10,000 to £250,000.

Proof-of-concept projects within the University are relatively short term, ranging from six to twelve months, are small scale and are treated as incremental activity for University Departments. So, it is anticipated that the awards from the Fund, as with the UCSF and IUJIF, will not be subject to full economic costing as is the case with all externally funded research to the University.

Offer Letter & Monitoring the Investment

If the proposal is approved, Isis Innovation as the University's Fund Manager, will prepare an Offer Letter on behalf of the Oxford Invention Fund, detailing the amount awarded and the terms of the award. In order to help monitor the success of the project, Isis Innovation will ask to receive a brief report on progress from work financed by the award.

A set of "milestones" will be identified and agreed with the researcher(s) and these milestones will form the basis of the monitoring process.

Fund Manager, Isis Innovation Ltd

Isis Innovation will act as the Fund Manager by making available the necessary resources to select the projects and award the money to the applicants. As Fund Manager, Isis will have authority to draw down funds for investment from the Fund's ring-fenced investment pool held by the University of Oxford.

Biographies

Key personnel at Isis who will be involved in the Fund's management are:

Tom Hockaday – Managing Director

Tom Hockaday became Managing Director of Isis Innovation Ltd in 2006, having joined Isis in 2000. Tom has been involved in university technology transfer since 1989, working at University College London and Bristol University before moving back to Oxford (where he grew up) in 2000. Tom has been closely involved in the management of the Oxford University Challenge Seed Fund since 2000. He is recognised as one of the leading figures in UK university technology transfer.

Linda Naylor – Head of Technology Transfer

Linda Naylor heads up the Technology Transfer Group at Isis Innovation. Linda joined Isis in 2002 as the head of the Life Sciences Group and became Head of Technology Transfer in 2007. Linda has had over 20 years experience in the Life Science industry with Zeneca plc, ICI plc and Monsanto. Linda has an MBA from the Saïd Business School, Oxford.

Andrea Alunni – Seed Investment Manager

Andrea joined Isis Innovation in August 2008 as Seed Investment Manager to facilitate investments at proof-of-concept level and raise finance for

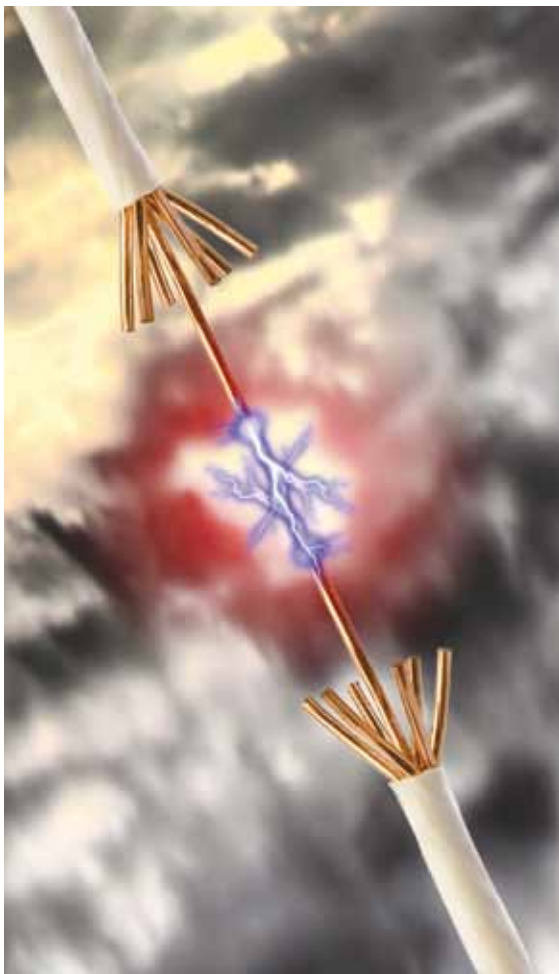
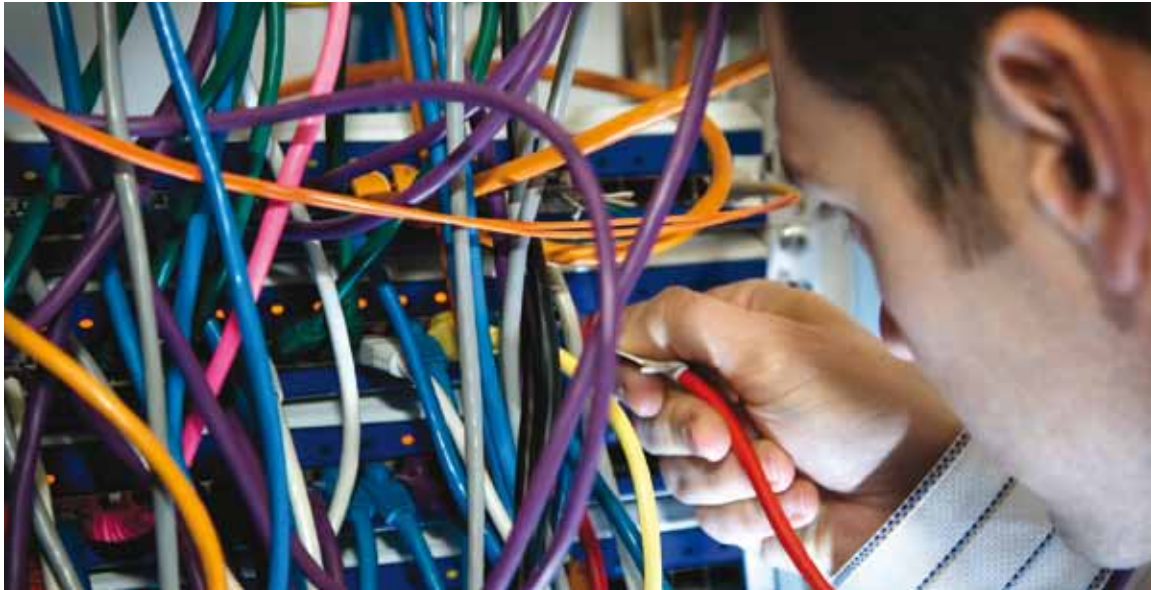
progressing technology spin-outs. His professional experience spans 15 years in financing technology, from corporate finance in Telecom Italia, technology investment banking at Nomura and private equity at CDC Capital Partners. Andrea has an electronics engineering background, an MSc in the field of technology transfer from Strasbourg and an MBA from Rome.

As Fund Manager Isis will draw on the extensive expertise and experience of all its staff.

In particular, the thirty staff in the Technology Transfer Group will be working with Oxford researchers to develop proposals for presenting to the Fund and supporting the commercialisation of projects supported by the Fund. Linda Naylor, Andrea Alunni and the Project Team Managers in the Group will lead this activity.

Fees & Expenses

The Oxford Invention Fund will operate on a low cost management structure, by employing resources already available within Isis Innovation. The fees and operating expenses are designed to cover operating costs only. The management fee per annum for the Fund will be 1.5% of the cash under management.



How to Donate

Oxford welcomes benefactors and anticipates that their involvement in the Oxford Invention Fund will lead to a lasting relationship with the University, the entrepreneurial companies launched by the Invention Fund and also with friends, alumni and the University's dedicated researchers. The Fund is an essential project for Isis Innovation and the Oxford Thinking Campaign and we hope that you will consider joining the visionary benefactors who are already taking part in this unprecedented philanthropic effort.

The aim of the Fund is to trigger a virtuous cycle in which successful investments will refresh the Fund, supporting the next round of innovation.

Please note, you can only make a donation. This is not an investment opportunity. Your donation will not be repayable and you will not receive any return or distribution in respect of your donation.

Online

For more information on the Fund, please visit:

www.campaign.ox.ac.uk/oxford_invention_fund

An online donation facility to the Invention Fund is available at:

www.giving.ox.ac.uk/oxford_invention_fund

By Post

If you would like to donate by post please print off one of the giving forms on the Development Office website depending on your location:

www.campaign.ox.ac.uk/contribute/ways_to_give/give_by_post.html

If you are a UK donor and wish to post a cheque please make the cheque payable to The University of Oxford and send it to:

University of Oxford Development Office
Wellington Square, Oxford OX1 2JD
Tel: +44 (0)1865 611530
Fax: +44 (0)1865 611531

By Phone

If you would like to donate over the telephone, please ring us on:

United Kingdom: +44 (0)1865 611530

USA: +1 212 377 4900

Japan: +81 3 3467 9801

China: +85 2 2151 387

Rest of world: +44 (0)1865 611530

Tax Efficient Giving

A cash gift to the Oxford Invention Fund is a donation to a charitable institution and so carries with it certain tax efficiencies for UK taxpayers and some overseas donors. In addition, donors might be able to have their gift matched by their employers.

Please note, for tax reasons the Fund will be unable to assist any business of the donor, or to which the donor is connected.

Since the University has charitable status under UK law, your donation will be tax-efficient. The University Development Office is available to co-operate with your financial and legal advisers to answer any questions or provide further details.

For more information, please visit: www.campaign.ox.ac.uk/contribute/tax_efficient_giving/index.html

Donor Involvement

Donors to the Fund will receive recognition from the University for their contribution towards supporting innovation within the University of Oxford.

The Annual Report of the Oxford Invention Fund will be sent to all donors to the Fund. The Report will provide details on the investments made by the Fund and the on-going progress of the new technologies supported by the Fund.

Donors will be listed in the Annual Report unless anonymity is requested.

The Fund will pursue an evergreen policy. Returns to the Fund will be generated from the successful commercialisation of new Oxford technologies. This will be achieved through two routes: realisations from equity stakes held in new companies spun out from the University which have benefitted from investments made by the Fund; and royalty income from licensing.

No distribution will be made to donors and apart from the management fee described above, the Fund will reinvest proceeds from income and sale of shares into the pipeline of projects managed by Isis Innovation arising from the research within the University.

In the event of substantial realisations back into the Fund (for example in excess of £10m), the excess realisations will be used to further the charitable interests of the University.

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