Oxfordshire life sciences and healthcare

Invest in a world-beating innovation ecosystem

OxLEP
driving economic growth

Invest in a dynamic ecosystem with unlimited potential

10 reasons to choose Oxfordshire

1. One of the world's leading innovation hubs and the crucible of vaccine development
2. Within the UK's 'Golden Triangle' of economic growth and innovation
3. Access to leading experts working at some of world's greatest research centres
4. Opportunity to collaborate with exciting spinouts from the University of Oxford
5. Life sciences ecosystem facilitating exchange of knowledge and access to facilities
6. Grade A office and lab space for businesses of all sizes, offering scalability
7. Infrastructure to support delivery of clinical trials at world recognised centres of excellence
8. Skilled, highly-educated workforce, provided by universities and other educational institutions with a focus on health and life sciences
9. World-leading hospitals (OU Hospitals Trust) and opportunities to collaborate with the NHS.
10. Excellent connectivity to London and beyond by rail and road, plus easy access to major airports

The Rosalind Franklin Institute at Harwell

Vaccine pioneers

Oxfordshire has long been a key centre of expertise in vaccines, with a long and distinguished history and an exciting future. The Jenner Institute, named after the English physician and immunisation pioneer Edward Jenner (1749–1823), is based within the Nuffield Department of Medicine at the University of Oxford. Today, the Institute develops vaccines and carries out clinical trials for diseases including malaria, tuberculosis (vaccine MVA85A), Ebola, and MERS-CoV.

In 2020, it developed the UK's leading Covid-19 vaccine in a partnership with AstraZeneca. Around 800 people in the region worked on different aspects of the pandemic, from leading trials to developing novel therapies.

The Jenner Institute's malaria vaccine programme has led to significant advances in the field of vectored vaccines. In 2023, the R21/Matrix-M™ malaria vaccine received WHO recommendation for use, paving the way for global roll-out and marking the culmination of 30 years of malaria vaccine research at the Jenner Institute. The easily deployable and modest-cost vaccine, developed in conjunction with the Serum Institute of India and leveraging Novavax's adjuvant, will be critical to reducing over half a million malaria-related deaths annually. It is already capable of being produced at 100 million doses per annum.

Oxford-based company Oxitec has received $18 million from the Bill & Melinda Gates Foundation to help it advance its Friendly™ mosquito platform to combat two malaria-spreading mosquitoes in Africa

Barinthus Biotherapeutics, a spinout company from the Jenner Institute, is focused on the development of novel T-cell immunotherapeutics, with the aim of helping patients' immune systems navigate their way to overcoming chronic infectious diseases, autoimmunity and cancer. It is backed by investors including M&G, Tencent, Gilead Sciences, GV (formerly Google Ventures), Sequoia Capital China, Liontrust (formerly Neptune), Korea Investment Partners and Oxford Science Enterprises.

Moderna, a biotech pioneer in messenger RNA (mRNA) therapeutics and vaccines, selected Harwell as the location for its Moderna Innovation and Technology Centre (MITC). Expected to be operational in 2025, the centre will encompass a research, development and manufacturing facility as well as a clinical biomarker laboratory.

In 2023, a new Future Vaccines Hub, funded by a £12 million investment through the Engineering and Physical Sciences Research Council (EPSRC), part of UK Research and Innovation (UKRI), was announced, with the aim of making the UK the global centre for discovering and manufacturing next-generation vaccines. The Hub is led by the University of Oxford and University College London (UCL).

A global hub of life sciences innovation

Oxfordshire is one of Europe's most successful life sciences clusters, with a track record in establishing and attracting world-leading life sciences businesses.

- Home to the University of Oxford and Oxford Brookes University, Oxfordshire is part of the UK's 'Golden Triangle', forming an area of significant economic growth and expertise in life sciences and health, alongside Cambridge and London.
- The cluster of life sciences and health companies in Oxfordshire provides a critical mass that spurs innovation through extensive multidisciplinary collaboration.
- Oxfordshire's world-leading science and technology cluster gives the region unlimited potential to be a pioneer for the UK through its emerging transformative technologies and sectors.
- The Oxford to Cambridge Pan-Regional Partnership will leverage the opportunity for collaboration between the two key economic areas, drawing on their scientific expertise to deliver growth and prosperity.
- Foreign owned companies who have expanded or established operations in Oxfordshire in recent years include Moderna, Novo Nordisk, Intuitive Surgical, Ipsen, Abbott Diabetes Care, Oxitec (part of Precigen), Evotec, Sysmex, Agilent and Vertex.

Our life sciences community includes

Abbott Diabetes Care
Adaptimmune
Agilent
Barinthus Biotherapeutics
evotec
Immunocore
Intuitive
Ipsen
moderna
New England Biolabs
novo nordisk
Owen Mumford
Oxford Biomedica
Oxford Immunotec
Oxford Nanopore Technologies
Oxitec
Penlon
ResMed
Serum Institute of India
Siemens
sysmex
Vertex

World-leading science and innovation centres

Oxfordshire has the key ingredients that make up a world-class innovation ecosystem: a flourishing environment for innovation and business creation; world-leading experts in knowledge and technology development; and a dynamic, agile, and skilled workforce. By 2026, over half a million square metres of new office and laboratory space will be added.

Over 225 research and technology companies in health sciences, med tech, space applications and energy operate on **Harwell Campus**. The site houses the UK's largest space cluster of over 100 growth companies. Critical assets include the Diamond Light Source, the Rosalind Franklin Institute, Faraday Institution, UK Space Agency, European Space Agency, Rutherford Appleton Laboratory, and the National Quantum Computing Centre.

Culham Science Centre hosts over 2,000 scientists carrying out world-leading research into areas such as fusion power and autonomous vehicles. Critical assets include the Culham Centre for Fusion Energy, which will design and build the world's first compact fusion reactor by 2040, RACE (Remote Applications in Challenging Environments), and the Culham Innovation Centre.

Within the **Oxford City Science Area**, key development work is ongoing in sectors such as life sciences, digital health, AI technologies and quantum computing. Key assets include the Oxford BioEscalator, the Jenner Institute, the John Radcliffe, Nuffield, and Churchill Hospitals, and the Centre for Applied Superconductivity alongside innovation hubs including the Wood Centre for Innovation and the Oxford Centre for Innovation. Also in the city centre are the Clarendon Centre and Inventa and Spires.

The **Oxford Science Park** is home to more than 100 companies, from start-ups to multinationals, working in areas such as drug and device development and AI within a vibrant R&D and commercial community. It offers a variety of design-and-build office and laboratory accommodation, the latest being the Iversen Building and the Ellison Institute of Technology.

The University of Oxford's **Begbroke Science Park** focuses on advanced engineering and medical tech for 30+ world leading research & technology companies. By 2032, a £2 billion programme will co-locate engineering, physical and life sciences research to Begbroke's global innovation campus, to work directly with industry.

Oxford Technology Park is a new science and technology park that offers flexible office and R&D space to the north of Oxford. The site is adjacent to London Oxford Airport, with nearby rail access to London.

Oxford North is the city's new innovation district. The 64-acre site to the north of the city will provide 300,000 square metres of laboratories workspace, 480 new homes and provide 4,500 new jobs.

Heyford Park provides a range of commercial accommodation including warehousing, workshops, lab space and offices and is already home to over 100 businesses.

ARC Oxford is an innovation based community close to the city centre and hosts over 60 science, technology and service companies. It offers workspace to suit all sizes of businesses and an amenity rich environment.

The **Bicester Motion Innovation Quarter** will establish a world-leading automotive engineering centre of excellence and offer new accommodation for international technology businesses.

Howbery Business Park is the UK's first solar-powered park. It offers specialist research capabilities to spinouts and start-ups in the water and environment sector.

Abingdon Science Park is home to scientific, research, and high technology businesses. It currently has lab and office space development opportunities.

Milton Park is a science and technology park that is home to 250 companies and 9,000 people and forms one of the largest science clusters in the UK. In 2024 it began to build a £40 million development with flexible R&D spaces.

Wootton Science Park
New and growing development with laboratories and workspaces.

Grove Business Park offers office, R&D and industrial buildings, strategically located between the M4 and the A34 roads.

Innovation clusters across Oxfordshire

Western Europe's highest concentration of science research facilities

Antimicrobial resistance

The issue of antimicrobial resistance (AMR) is one of the greatest global health challenges, causing 1.5 million excess deaths every year – set to rise to 10 million excess annually by 2050. The new Ineos Oxford Institute will provide the funding and impetus to conduct cutting edge research into understanding and addressing the global scale of the antibiotic resistance problem. In addition, a five-year Beyond Antibiotics programme is being led by the University of Oxford's Professor Eleanor Stride. Many other AMR research groups are using the Diamond Light Source's facilities to explore ways of tackling this vital issue.

Leading advances in...

Drug discovery and development

Therapeutics R&D is at the heart of Oxfordshire's life science industry, supported by a group of world-class contract research and manufacturing organisations.

International biopharma companies with a long-standing presence in the region include Amgen, Evotec, and Jazz Pharmaceuticals.

Vertex, a global biotechnology company committed to furthering scientific innovation in the UK since 1998, has its UK research site in Milton Park. Vertex invests in scientific innovation to create transformative medicines for people with serious diseases. It discovered and developed the first medicines to treat the underlying cause of cystic fibrosis, and has a pipeline of small molecule medicines and cell and genetic therapies.

French pharma company Ipsen has its UK R&D functions with about 100 employees at Milton Park, including researchers devoted to neuroscience alongside other R&D professionals.

The University of Oxford has world-class drug discovery capabilities with particular specialisms in antibiotics, cancer and cardiovascular disease. The Target Discovery Institute is a major cross-discipline collaborative initiative that draws together the expertise of research staff across the university.

Moderna is building its Moderna Innovation and Technology Centre (MITC) at Harwell, as a research, development and manufacturing facility as well as a clinical biomarker laboratory.

The Rosalind Franklin Institute is a new national institute, funded by the UK government through UK Research and Innovation (UKRI). Focused on six complementary themes, new technologies will produce insight that will speed up drug design and development, and push forward understanding of human health and disease. The Institute has chosen Harwell Campus, a Life Sciences Opportunity Zone, as its central hub to house a unique portfolio of scientific tools and researchers from both industry and academia. Catalent, recently acquired by Novo Nordisk, is developing the 150,000 sq ft site of the Vaccines Manufacturing Innovation Centre (VMIC) at Harwell Campus to equip it with state-of-the-art manufacturing capabilities.

Key contract research and contract manufacturing operations (CROs and CMOs) operating in Oxfordshire include Evotec, Eurofins, Ludger and Patheon. They benefit from Oxfordshire's easy access to lab personnel and proximity to key transport hubs.

New England Biolabs® – a US global leader in the discovery and production of enzymes for molecular biology applications – chose Milton Park to establish its first overseas product development and manufacturing site, enabling its subsidiary NEB Lyophilization Sciences™ to broaden its offering of ambient lyophilized reagents.

Global medical products company Convatec acquired Milton Park-based 30Technology's wound care division with its proprietary nitric oxide technology for £176 million in 2023.

The Rosalind Franklin Institute

Leading advances in...

Precision medicine and genomics

Oxfordshire is at the forefront of developments in the rapidly-evolving fields of precision medicine and genomics.

The Nucleic Acid Therapies Accelerator (NATA) is a recent national research initiative based at Harwell Campus. Its mission is to unlock the potential of precision genetic medicines and accelerate the development of nucleic acid (NA) therapies. The initiative will capitalise on the UK's industrial and academic base to accelerate new therapies, within a state-of-the-art facility.

The University of Oxford is leading global efforts to define, classify and understand disease at the molecular level. It is home to world-renowned academic centres and institutes investigating genomic medicine and clinical genetics such as the Wellcome Trust Centre for Human Genetics and the Big Data Institute.

The strength of this research – together with the exceptional data resource available from initiatives such as the Oxford Radcliffe Biobank, UK Biobank, 100,000 Genomes and Dementias Platform UK – is attracting intense interest from the biopharma and healthcare sectors, and has given rise to a number of prominent spinout companies.

Oxford BioTherapeutics (OBT) is a clinical stage oncology company committed to the discovery and development of novel therapies for various cancer types. With its global headquarters in Milton Park, and US operations in New Jersey and San Jose, its team of international immuno-oncology experts has built one of the world's largest integrated oncology immune cell surface protein libraries and it has proprietary immune-oncology and antibody-drug conjugate pipelines. It has completed a number of successful investment rounds, and is supported by a syndicate of leading specialist investors.

Oxford Gene Technology (OGT), acquired by Japanese-owned company Sysmex, provides genetics research solutions to leading clinical and academic research institutions. Based at Oxford University's Begbroke Science Park, OGT has developed a class-leading product portfolio in molecular genetics and next-generation sequencing (NGS) sample preparation. The company has customers in over 60 countries.

Other companies include Oxford Cancer Biomarkers and Adaptimmune, which is focused on the use of T cell therapy to treat cancer and Cellmark Forensic Services (a genotyping and DNA analysis company).

Opened in 2021, the Institute of Developmental and Regenerative Medicine is sited in a new building at the Old Road Medical Campus in Headington. It brings together existing research groups studying development and regeneration from across Oxford and enables further recruitment of world-leading scientists. The building provides a multidisciplinary, vibrant and nurturing scientific environment.

Leading advances in...

Medical devices and diagnostics

Abbott Diabetes Care FreeStyle Libre reader & sensor

There is outstanding capability in the medical devices and diagnostics sector in Oxfordshire. This provides excellent opportunities for investors to access the necessary skill and research base available and is reflected in the number of medical device companies with operations across a range of R&D, sales and service, and manufacturing activities.

Diagnostic imaging has a considerable presence in the area. Siemens, the leading global engineering and technology services company, has its Siemens Healthineers manufacturing base in Eynsham, where it designs and manufactures the superconducting magnets for all Siemens magnetic resonance imaging (MRI) scanners worldwide.

Owen Mumford specialises in self-injection and blood sampling devices. Headquartered in Woodstock and employing over 500 people, the company exports over 90% of its products. Other companies manufacturing in the region include AM Healthcare Group and Penlon, a medical device company which develops, manufactures and exports anaesthesia and other medical products to over 90 countries and was acquired by Chinese-based global medical technology firm Medcaptain in 2022.

Abbott Diabetes Care, part of US owned medical company Abbott, has its Global Centre of Excellence for Medical Devices in Witney, where it employs over 1,000 people. In 2023 it announced a further £85 million investment in the site. (see case study, page 20).

Image courtesy of Hutano Diagnostics

Oxford Nanopore Technologies, headquartered in Oxford Science Park with global operations in China and the USA, is developing portable devices for real-time molecular analysis and has launched a mobile phone-sized DNA sequencer – the MinION. Oxford Nanopore worked with a number of public health laboratories, in China and elsewhere, to support the rapid sequencing of the novel coronavirus (Covid-19). In 2023 it announced a partnership with bioMérieux SA, a world leader in the field of in vitro diagnostics, to improve health outcomes globally by bringing nanopore sequencing to the infectious disease diagnostics market.

Intuitive Surgical, a global pioneer of robotic-assisted surgery has UK headquarters at Oxford Science Park, providing educational and training programmes on minimally invasive care.

Adaptix, based at Begbroke Science Park and Harwell Campus, is developing the next generation of 3D X-ray imaging. They are aiming to reduce the cost of introducing the technology, increasing adoption across the world and improving portability.

Oxfordshire has considerable capability in the field of complex sensor technology, with companies including Bartington Instruments, which, along with other markets, serves the medical sector with its measuring instruments used to monitor magnetic fields surrounding sensitive instrumentation used in medical equipment.

Diagnostics/therapeutics

SMEs, CDMO and biotechnology companies working on diagnostics and therapeutics in Oxfordshire include Agilent, Arctoris, Barithus Biotherapeutics, Blue Earth Diagnostics, Continuum Life Sciences, Etcembly, Moderna, NanoVation Therapeutics and NeoVac.

Leading advances in...

Artificial intelligence

Oxfordshire is a global driver of artificial intelligence (AI) research, driving innovation in drug discovery, diagnostics and precision medicine.

Innovate UK and industry are investing more than £17.5 million in developing AI healthcare applications with the University of Oxford[1]. Led from Oxford's Big Data Institute, the National Consortium of Intelligent Medical Imaging (NCIMI) is funded by the UK Government's Industrial Strategy Challenge Fund to drive innovation in the use of artificial intelligence for improved diagnosis and delivery of precision treatments for cancer, heart disease, genetic disorders and other conditions. NCIMI aims to build a pipeline for innovation to allow new clinical imaging AI tools to be developed.

AI companies focused on healthcare that have successfully spunout from Oxford University include Brainomix, Caristo Diagnostics, Mirada Medical, Optellum and Perspectum Diagnostics.

Ultromics, another Oxford University spinout, has developed a unique AI-based ultrasonic diagnostic support solution for coronary artery disease. With support from Oxford Science Enterprises, the company has raised £10 million in funding and its AI platform is now being trialled in 20 NHS hospitals.

The Rosalind Franklin Institute at Harwell Campus is pioneering disruptive technologies including AI and robotics to accelerate drug discovery and develop new diagnostics. The centre is the base for the world's first automated discovery facility to produce drugs up to ten times faster, transforming the UK's pharmaceutical industry.

Arctoris, a tech-enabled biopharma company, has its new global headquarters and state-of-the-art research and development facility at Milton Park. Originating from Oxford University in 2016, Arctoris has established the world's first fully automated, robotic laboratory dedicated to accelerating drug discovery and generating datasets for AI modelling.

Oxford Science Park-based firm Exscientia, combines the latest AI technique with experimental innovation to engineer a new set of processes for drug discovery. It was the first company to automate drug design and the first to have an AI-designed molecule enter clinical trials.

Leading advances in...

Digital health

Oxfordshire and its hinterland has over 160 digital health companies and 430 stakeholder organisations[2] across industry, academia, the National Health Service (NHS) and the third sector. The region is a potential major growth cluster for developing and demonstrating high income, technology-based healthcare solutions.

Digital technologies can transform healthcare, from prevention through diagnosis and intervention, to ongoing monitoring. The UK market for digital health was worth around $13 billion in 2024, and is expected to reach $31 billion by 2029, growing at a CAGR of 18.96% (Source: www.mordorintelligence.com), driven primarily by high growth in cloud-based services and delivery models.

Oxfordshire's digital health space is supported by a number of networks including Digital Oxford, and specifically the Oxford Institute of Digital Health.

TheHill is a digital health innovation community working in Oxford with NHS Trusts, universities, digital developers, innovators and investors to catalyse commercial and impactful technological solutions in healthcare. Its in-house team provides a bespoke programme of support interventions for SMEs developing a healthcare innovation with a digital component.

Oxfordshire is being developed as a living laboratory to help solve the UK's Grand Challenges for all Places. Working with industry partners, pioneer communities are being developed across the county that act as living labs, focusing on health and wellbeing while also preparing for changes in technology and the environment, including the advent of connected and autonomous travel, all electric energy, smart homes and sustainable living.

Cognitant has developed methods of displaying visual and interactive health information in 3D for patients to view on their own smartphones, tablets, computers or using virtual reality headsets. This enables health practitioners to convey complex information clearly and effectively through visuals.

Over 9,000 students are enrolled at the University of Oxford and the Nuffield Department of Primary Care Health Sciences has research teams investigating and evaluating the effectiveness of digital tools.

Healthy ageing

Oxfordshire is a centre for the study of healthy ageing. Professor Lynne Cox of the Department of Biochemistry, University of Oxford, one of the UK's leading experts on ageing, is a director of the BLAST network (Building Links in Ageing Science and Translation) funded by the Biotechnology and Biological Sciences Research Council (BBSRC) and the Medical Research Council (MRC).

The Oxford Institute of Population Ageing is a multi-disciplinary group undertaking research into the implications of population change.

The UK Space Agency and Kayser Space Ltd, based at Harwell's Space Cluster, are carrying out experiments within the International Space Station into the understanding of ageing.

Isansys, based at Milton Park, is a world-leading digital healthcare company which has developed the Patient Status Engine, a complete, scalable and simple-to-use advanced patient monitoring platform.

[1] http://www.ox.ac.uk/news/2018-11-06-oxford-secures-%C2%A3175-million-lead-national-ai-healthcare-programmes

[2] Oxfordshire Science and Innovation Audit 2017

Accessing opportunities to collaborate with the NHS

Oxford University Hospitals NHS Foundation Trust is a world-renowned centre of clinical excellence and one of the largest NHS teaching trusts in the UK. The Trust is made up of four hospitals - John Radcliffe Hospital, the Churchill Hospital and the Nuffield Orthopaedic Centre, all located in Oxford, and the Horton General Hospital in Banbury.

Oxford University Hospitals is open to collaborating with industry on research projects which aim to improve patient care. The partnership between Oxford University Hospitals and the University of Oxford allows industry-led commercial trials to be undertaken with the input of clinicians, academics, patients. Through the streamlined services provided within the Joint Research Office, companies can access world-leading facilities, resources and expertise.

The Oxford Health NHS Foundation Trust manages community hospitals and clinics across Oxfordshire, Wiltshire, Buckinghamshire and North East Somerset, serving a population of approximately 2.5 million people.

The Trust's R&D department runs on average 100 research studies at one time, including highly complex clinical trials. The NIHR Biomedical Research Centre is a partnership between Oxford Health NHS Foundation Trust and the University of Oxford and is committed to translating innovative research into better treatments for mental health disorders and dementia.

A key source of business support for companies wishing to access research and clinical expertise is the Health Innovation Oxford & Thames Valley, one of 15 Academic Health Science Networks covering the country. It covers a population of 3.3 million and is a partnership bringing together universities, industry and the NHS.

Led by teams of specialist clinicians, Health Innovation Oxford & Thames Valley can help companies set up in the area and build connections between the NHS, research and business to enable companies to get their product to market more quickly and effectively. It can help develop businesses develop links with key NHS and research assets in the county.

Forging partnerships between industry and academia

Oxford University Innovation is a technology transfer and consultancy company created to manage the research and development of Oxford University's spinouts. OUI offers investors the opportunity to invest in new companies and has created over 200 spinouts to date. Its consulting services team provides businesses access to over 5,000 academic and research staff and the state-of-the-art testing and analysis facilities that underpin Oxford's world-class research.

Oxfordshire has a successful record in securing investment to promote growth. Oxford Science Enterprises is an £850 million fund designed to help Oxford's outstanding scientists build and grow great businesses that can improve the world. Investors have provided seed and follow-on funding ranging from £100,000 to £10 million.

LAB282 is a groundbreaking £13 million collaboration formed in 2017 between Oxford University, the global drug discovery company Evotec, and Oxford Science Enterprises. The partnership provides industrial expertise and funding to help translate innovative, world class, biomedical discoveries at Oxford University into next generation drug discovery programmes that can be commercialised for patient benefit.

Oxford Innovation Finance hosts a business angels network for investors and private companies interested in investing in spinout companies from the University of Oxford. Members receive business proposals from spinouts looking for funding and invitations to events where private individuals and companies can meet, discuss and invest in the early stages of a Oxford University spinout company.

Oxford University's Innovation and Business Partnerships Team and Medical Sciences Business Development Team work together to establish, build and support strong research collaborations between industry partners and academia.

Oxford Brookes' Faculty of Health and Life Sciences welcomes businesses as researcher collaborators and access to specialist services through its Innovation and Knowledge Exchange. The Bioinnovation Hub offers facilities and resources for startup biotech companies.

Oxford Biomedica, formed in 1995, is one of the University of Oxford's notable spinouts. A specialist in the development and commercialisation of innovative gene-based medicines, it employs more than 430 and has developed a series of international partnerships, including with Serum Life Sciences, Novartis, Axovant Gene Therapies, Microsoft and Boehringer Ingelheim. It has seven facilities in Oxford, providing manufacturing, laboratory, warehousing, cold-chain and office space. In 2020 it manufactured the Astra Zeneca Covid-19 vaccine at its OxBox site.

Our innovation powerhouses...

Old Road Campus

The University of Oxford's Old Road Campus is home to much of the institution's world-leading clinical medical research and is close to Oxford's hospitals. The campus provides a powerful mix of state-of-the-art research, innovative start-ups and pharma.

The Old Road Campus is home to the Churchill Hospital including its £100 million cancer hospital, The Wellcome Trust Centre for Human Genetics, the Richard Doll Building (housing epidemiological studies and clinical trials services), the Nuffield Department of Medicine Research Building, the Oxford Bioescalator, Target Discovery Institute and Big Data Institute.

The University's Old Road Campus Research Building (ORCRB) facilitates collaboration between renowned specialists in cancer and is at the heart of the University of Oxford's world-leading biomedical research. The University's long-standing partnership with local hospitals enables the close integration of science and medical care.

In addition to the Ludwig Institute for Cancer Research, units within the ORCRB include:

- Structural Genomics Consortium
- Department of Oncology
- Jenner Institute
- Institute for Biomedical Engineering

The campus also has close links and convenient access to Oxford's science area, the Weatherall Institute for Molecular Medicine and the John Radcliffe Hospital.

Oxford BioEscalator

The BioEscalator provides lab space and support for early-stage high-potential medical science companies emerging from the University's medical research groups and other startups attracted by the proximity to world-leading researchers and facilities.

Located on University of Oxford's Old Road Campus, the BioEscalator is funded by the Government's City Deal and the University of Oxford, and shares the Innovation Building with Novo Nordisk's Research Centre Oxford.

It offers dedicated labs for startups with shared facilities, knowledgeable staff and a burgeoning entrepreneurial community. Designed for small and growing medical science businesses, it places an emphasis on flexibility and support. Entrepreneurs can start with just one lab bench in a shared lab and move to a private lab as they grow. It has become a hub for entrepreneurial biosciences through organising and hosting events that increase the collaboration between researchers at the university, companies of all sizes and the wider innovation ecosystem.

The facility opened its doors in September 2018. Since then, 30 companies have started their journey there. In its first five years, its resident companies have collectively attracted £1.6 billion in funding. The steadily growing community has matured to a diverse mix of biotech SMEs, working on novel diagnostics, therapeutics and platform technologies applicable to a wide range of diseases, including cancer, autoimmune disorders, infectious diseases and metabolic disorders. Seven companies have graduated from the BioEscalator, thanks to successful fundraising. Overall, the BioEscalator has generated over 180 jobs so far.

Building on the success of the BioEscalator, the University of Oxford's Medical Sciences Division is now starting to plan a second, larger facility to support additional startups over a longer period of growth.

Health Tech at Harwell

Harwell Campus brings together UK's strengths in the physical sciences, engineering and life sciences, industry, academia and Government, to create a truly cross disciplinary and collaborative environment.

Harwell Health Tech cluster is home to 78 innovative, thriving companies employing 1,700 people working across a broad spectrum of emerging pharmaceutical/biotech, medtech, diagnostic, digital health, as well as organisations that research and inform on public health. Harwell Campus is a Life Sciences Opportunities Zone.

Businesses in the Health Tech cluster can leverage the Harwell Campus ecosystem, including a comprehensive suite of open access facilities, for example X-ray and Electron Microscopy imaging at the Diamond Light Source, novel fluorescence imaging at Central Laser Facility and 'super microscopes' ISIS Neutron and Muon Source.

The 300 hectare science, innovation and business campus boasts Grade A office and laboratory spaces from 300 to 20,000 sq ft in comprehensively remodelled buildings, complemented by amenities including nurseries, sports facilities and attractive public spaces.

Harwell's community of experts is pioneering advances in Energy, Space, Health and Quantum Computing, using world-leading facilities representing a £3 billion investment in scientific infrastructure.

Recent developments include the Rosalind Franklin Institute, Agilent Spectroscopy R&D facility, Nucleic Acid Therapies Accelerator (NATA), Extreme Photonics Applications Centre (EPAC), Oxford Nanopore's R&D and manufacturing facility and the formation of the National Mouse Genetics Network at the Advance training centre by Medical Research Council.

Over 25,000 people in life sciences and healthcare

Employees in these sectors represent 5.6% of the population[1]

A skilled and experienced workforce

Investing in Oxford brings with it access to a wide pool of skilled employees, including the products of Oxfordshire's higher and further education institutions.

The Medical Sciences Division at the University of Oxford is an internationally recognised centre of excellence for biomedical and clinical research and consists of over 5,600 academics, researchers, clinicians, general practitioners and administrative staff, 1,600 graduates and 1,700 undergraduate students.

Oxford Brookes University runs foundation and degree courses including in Biomedical Science, Medical Science and Life Sciences Foundation as well as postgraduate courses in Medical Genetics and Genomics.

MRC Advance, a purpose-built scientific training centre located at MRC Harwell, is tasked with delivering world-class practical and theoretical training courses.

Abingdon and Witney Further Education College offers a Life Sciences Foundation degree and a Medical Sciences extended Diploma.

UTC Oxfordshire (ages 14-19) has specialisms in science, including life sciences and engineering. Its industry partners include Vertex and OBN.

Potential investors can access further labour market reports and insights and explore their specific skill requirements by contacting the OxLEP Inward Investment team.

[1] Business Register and Employment Survey 2018, ONS

Nurturing the scientists of the future

Oxford Biomedica develops gene and cell therapies that aim to change the lives of patients around the world. Its development pipeline includes investigational treatments for cancer, Parkinson's disease and retinopathy.

Based at several sites in Oxford, with manufacturing in Oxford Business Park, it employs over 700 people in the city and continues to grow quickly.

Developing its own strong pipeline of talent is crucial to the company's ability to innovate and grow. The trailblazing biotech's apprenticeship programmes are core to its strategy of developing emerging talent and growing the next generation of leaders. It uses the programmes both to develop existing employees and to attract new talent into the company.

Apprenticeship opportunities are wide-ranging, encompassing lab technicians and HR support, training for advanced therapies technician scientists and plant engineers, and those studying for senior leadership master's degrees.

The skills developed by the company's apprentices are highly sought after. Oxford Biomedica is a founding member of the Advanced Therapies Apprenticeship Community (ATAC), which was initiated to address the projected shortfall of skilled workers in the UK cell and gene therapy industry. Working closely with the ATAC and training providers, the company has developed its training materials to deliver the skills and knowledge the apprentices, company and wider industry need in order to be successful.

Nathan Jarvis (below) is one of 31 apprentices currently at Oxford Biomedica. As a biotechnologist apprentice, he combines invaluable on-the-job learning with studying for an Applied Biosciences degree. His responsibilities have included the production of a platform of 'lentiviral vectors' (vehicles for gene delivery used as a method in gene therapy), which enable customers to bring next-generation treatments for serious diseases to market.

Case studies

Samsara Therapeutics

Room for growth at the Wood Centre for Innovation

Biotech start-up Samsara Therapeutics, an early-stage drug discovery company, doubled the size of its workspace – and its team – within 18 months of being located at the Wood Centre for Innovation.

The company took a 1,000 sq ft the centre in March 2021. By December 2022 it had grown its team from eight to 16 people and expanded its lab and office space to 2,960 sq ft. The new CL2 lab space will allow it to increase its drug discovery and validation capabilities in key neuro disease areas.

Founded in 2018 with backing from Berlin-based Apollo Ventures, Samsara Therapeutics is working on new therapies for extending healthy ageing and treating age-related and genetic diseases, including Parkinson's, Amyotrophic Lateral Sclerosis and Charcot-Marie Tooth disease (CMT).

Its unique Lysoseeker™ platform identifies potent autophagy modulators: molecules that induce the cellular process of autophagy, which decreases as people age and is dysfunctional in many illnesses. Currently there are no autophagy-inducing drugs on the market. Samsara aims to be the first.

Peter Hamley, the company's chief scientific officer says: "The Oxford Trust's Wood Centre for Innovation has allowed us to expand our research and grow organically, which is incredibly valuable for a biotech startup."

Moderna

Investing in the UK's hub for mRNA

Darius Hughes, UK General Manager at Moderna, is looking forward to joining the Harwell Campus health tech cluster: "We are delighted to contributing to the UK's science and innovation community through investments in R&D," he commented when making the announcement in March 2023 that the company had chosen Harwell for its Moderna Innovation and Technology Centre (MITC). The facility is expected to become operational in 2025.

US company Moderna is a pioneer in messenger RNA (mRNA) therapeutics and vaccines. MITC will be a research, development and manufacturing facility, providing cutting-edge mRNA vaccines for a wide range of respiratory diseases, pending regulatory assessment and licensure. It will also include a clinical biomarker laboratory.

Moderna's £150 million investment in the MITC will comprise two buildings totalling 145,000 sq ft. It will be the next development to start at Harwell and is in addition to the three million square feet of development already planned at the campus. It cements Harwell Campus as a national health tech hub for the pioneering research and development of mRNA and other nucleic acid therapeutics. It joins a health tec cluster that has grown to over 70 life science organisations in seven years.

Stuart Grant, Chief Executive of Harwell Campus said: "We're entering a new era of medicine, so it's important that we have cutting-edge facilities to reflect this, promote innovation and encourage collaboration."

Abbott Diabetes Care

Growing to meet demand

The number of people diagnosed with diabetes is rising. More than 4.9 million people in the UK are living with diabetes, and this is expected to increase to 5.5 million by 2030. A similar pattern can be found in other countries and is reflected in rising demand for products such as Abbot's FreeStyle Libre flash system, which measures sugar levels in diabetics.

The American global healthcare company is investing £85 million into expanding its manufacturing facility in Witney, near Oxford. Abbot's investment will create hundreds more new jobs by 2028 at the site where staff numbers grew from 650 in 2016 to 1,000 in 2023.

Abbot FreeStyle Libre systems are now used by 65 per cent of people with type 1 diabetes in the UK and by over 4.5 million people across more than 60 countries. A small sensor on their body checks their sugar levels day and night, and sends the information to their mobile phone or other device.

Abbott's Witney site also manufactures glucose and ketone strips which change colour to indicate the levels of glucose and ketones in the blood.

Site Director Shaun Smith says: "Our Witney site was the original home of FreeStyle Libre manufacturing and is pivotal in bringing this life-changing technology to millions worldwide. This further investment will ensure it continues to be a centre of excellence for high-end STEM manufacturing and R&D, in the heart of Oxfordshire."

NanoVation

UK hub is critical for strategic growth

NanoVation Therapeutics is a Canadian gene therapy company which is developing next-generation platform technologies utilising lipid nanoparticles to enable nucleic acid delivery to a variety of tissues. Focused on translating personalised gene therapies to the clinic, NanoVation aims to treat and prevent multiple diseases while improving the safety, cost-effectiveness and scalability of current and future drug therapies.

In March 2022 it announced that it had chosen Oxfordshire as the base for its first GENErator technology hub, from where it aims to generate spinoff companies focusing on specific diseases using its platform technology.

The company says it made the move in order to leverage the UK's outstanding environment for scientific innovation and collaboration, while also enabling it to bring its decades of experience in creating nucleic acid therapeutics utilising lipid nanoparticles to the UK.

Based at Harwell Campus, the team is led by Professor Molly Stevens, Arpan Desai and Frederick Campbell, who bring their commercial and academic expertise to an organisation which is rapidly expanding its discovery research team, while also establishing partnerships to explore new therapeutic applications.

"The addition of NanoVation Therapeutics UK is a critical strategic step in our growth," says Dominik Witzigmann, Co-Founder and CEO of NanoVation Therapeutics.

10 things you will love about Oxfordshire

Communities steeped in history: The UNESCO World Heritage site at Blenheim Palace, Oxford's dreaming spires, and Banbury Cross are just a few of the county's landmarks.

Beautiful outdoor spaces: Many towns and villages sit within the Cotswolds, North Wessex Downs and Chilterns Areas of Outstanding Natural Beauty. Rivers and canals add to the landscape and offer many water-based activities.

Supremely well connected: The city of Oxford is an hour's drive from London and 45 minutes from London Heathrow, the UK's largest airport. Trains run frequently from Oxford's two mainline stations, linking it to London in less than an hour as well as to Birmingham, and the north and the south coast.

A fusion of traditional and modern living: The historic streets of Oxford and thatched cottages in rural hamlets don't mean you have to live in the past - nearly 99% of properties benefit from fibre broadband.

Museums and culture: A wide range of museums, galleries and theatres means you are never short of cultural opportunities to explore, including the Ashmolean Museum in Oxford and several National Trust properties.

Retail opportunities: The Westgate Oxford shopping centre and Bicester Village offer a wide range of global brands alongside exceptional dining and leisure facilities. Small independent traders can be found on many high streets, offering boutique products manufactured locally and from further afield.

Excellent educational opportunities: In addition to the two universities, there are many fantastic schools in the state and private sector, ensuring choice for all.

Safe and welcoming communities: Newcomers are welcomed by communities, with many people willing to offer help and advice. The county also benefits from low levels of crime.

Literary, TV and film connections: Home to filming locations for productions including; Inspector Morse, Harry Potter, His Dark Materials and Downton Abbey. The annual Oxford Literary Festival celebrates world-class writers in the city of Lewis Carroll, CS Lewis, JRR Tolkien and Phillip Pullman.

Gastronomical delights: From exquisite cuisine offered by Michelin starred restaurants to a pint of locally brewed Hooky Ale poured in the village pub, there is no shortage of places to eat and drink.

Credit A2Dominion

Oxford-based life sciences companies have raised significant funding, including Oxford Nanopore ($1.179bn) and Immunocore ($525m)

Comprehensive support for investors

Support for businesses investing in Oxfordshire

We provide comprehensive tailored assistance to help companies from across the world establish their new operation in the area.

Our Inward Investment team offers a range of support including:

- Identifying commercial premises and co-ordinating property viewings
- Facilitating introductions to the University of Oxford and Oxford Brookes University
- Making introductions to Oxfordshire's science and research facilities
- Connecting businesses with professional service providers, business support organisations and sector specific networks.
- Offering assistance with graduate recruitment and training support including apprenticeships
- Providing ongoing support to Oxfordshire-based companies

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