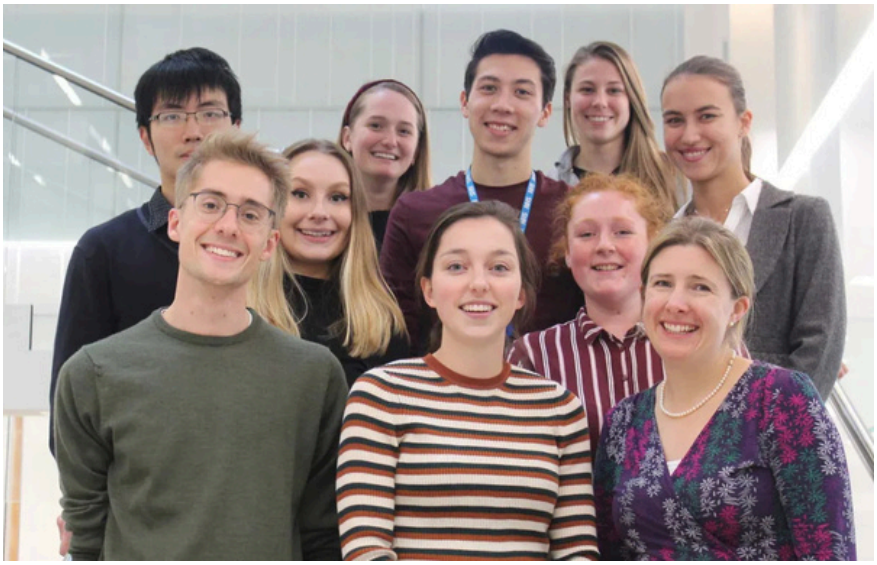
KENNEDY
INSTITUTE OF RHEUMATOLOGY | NDORMS

UNIVERSITY OF OXFORD

Our DPhil students

Kennedy Institute of Rheumatology: world-leading translational science driven by exceptional DPhil students

We are a **world-leading medical research institute** at the University of Oxford, benefitting from close collaborations with **on-campus hospitals and clinical facilities**. At the Kennedy Institute, over 200 staff and students carry out exciting discovery and translational research into immune function and inflammatory disease. Our researchers aim to **discover and translate** new therapeutics across diseases including rheumatoid arthritis, inflammatory bowel disease, osteoarthritis, heart disease, and many other debilitating conditions. Our students drive a huge amount of innovation and collaboration.



We attract some of the **brightest and most promising** graduate students to study their DPhil at the Kennedy Institute, and **we welcome collaborations with biotech and pharmaceutical partners to sponsor DPhil students**.

Our students benefit from **interdisciplinary training,** access to cutting-edge in-house technologies, and a strong research culture, enabling them to succeed and lead in academia, industry and beyond.

Our discovery to translation pipeline

Kennedy Institute researchers use molecular and cellular biology, analysis of disease models, patient tissue samples and longitudinal clinical data within their studies. Clinical translation, driven through industrial partnerships and entrepreneurship, is critical for the Kennedy Institute to bring new therapies from discovery research through to patients in the clinic. Long-standing collaborations with clinicians in Oxford enable access to patient cohorts for early stage clinical translation. They also enable access to several units that provide essential infrastructure for clinical science, including the accredited Oxford Clinical Trials Research Unit and the Experimental Medicine Clinical Research Facility.

We have more than fifteen strategic industrial partnerships, including large pharma (e.g. Johnson & Johnson), and biotechnology (e.g. Celsius), many of which enable exciting discovery research to enter the pipeline towards commercialisation. Our industrial partners benefit from a platform to accelerate and de-risk therapy development using human perturbation experimental medicine studies.

A culture of innovation and entrepreneurship

Our students have a strong interest in industrial science, having identified entrepreneurship training and access to seminar speakers from industry as training priorities, which we have supported.

In early 2025 we appointed an Industrial Strategy and Entrepreneurship Lead to build a culture of entrepreneurship through supporting spinout creation, leading training workshops, facilitating mentorship, and organising 1:1 meetings and seminars from industrial leaders. Our Director of Graduate Studies works closely with the Industrial Strategy and Entrepreneurship Lead to support students in their translational aspirations.

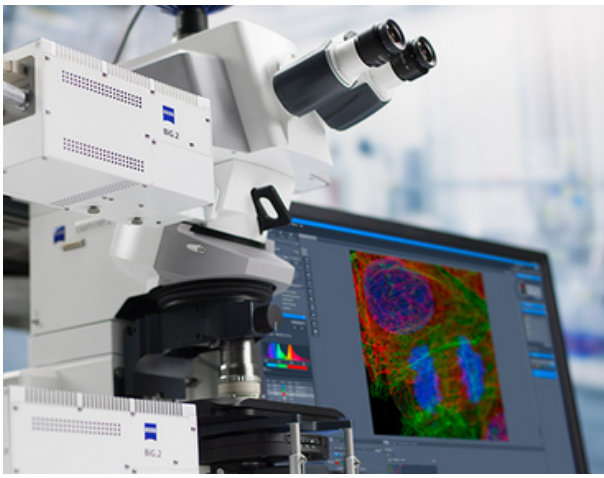
Kennedy Institute students have opportunities to engage with established entrepreneurship programs including Nucleate UK, EnSpire Programs including Ideas 2 Impact and All Innovate (Saïd Business School).

Kennedy Institute DPhil students: in numbers

- Each year, **100-160** applications result in us welcoming **11-17** new students.
- We have **56** current DPhil students.
- **163** scientific papers have been published by DPhil students since 2018.
- **10** independent research grants awarded, **5** patents filed, and **1** company spun-out by DPhil students since 2018.

We support the Student Committee to nominate external seminar speakers, to attend departmental and external career days, and to lead the annual Kennedy Institute Student Symposium (KISS).

A vibrant programme of events brings students together with other students and staff, including departmental student socials, monthly Kennedy Institute socials, weekly Kennedy Institute internal and external seminars, and whole institute retreats.



Granza Bio: a DPhil spinout

Dr. Ashwin Jainarayanan founded Granza Bio based on the work from his DPhil studies. Granza Bio is developing synthetic 'attack particles' that can operate independently of immune cells. Their precision shell technology, inspired by how the immune system works, is designed to deliver therapies deep into hard-to-reach tissues, with potential applications for cancers, autoimmune diseases and infections.

After completing his DPhil in September 2023, Ashwin was selected to become one of only 32 Schmidt Science Fellows worldwide, providing funding and a leadership programme for exceptional early career researchers. In 2025 he was named in the Forbes 30 under 30 in the Europe list for Science and Healthcare.

Unparalleled technology access

The Kennedy Institute has invested heavily in world-class technologies which facilitate our discovery and translational research, and which also underpin many of our industrial partnerships. Our staff and students have primary access to in-house facilities including advanced single cell genomics, digital pathology, and advanced imaging technologies. Each facility is led by an experienced manager to provide specialist expertise and training to internal users and external partners.

Oxford-ZEISS Centre of Excellence:

Through a strategic partnership with Carl Zeiss GMBH, researchers within the Oxford-ZEISS Centre of Excellence led by Kennedy Institute Professor Marco Fritzsche are developing the next generation of advanced imaging technologies. Not only do Kennedy Institute students and collaborators have access to cutting-edge lattice lightsheet, multiphoton and confocal microscopes, our

students are situated at the heart of development of new hardware and software development for advanced imaging.

Digital Pathology Omics Core (DPOC): The Kennedy Institute was the first in Europe to adopt the Cell DIVE technology for multiplexed imaging of tissues at a single-cell resolution. We also have an in-house Multiplexed Ion Beam Imaging (MIBIscope), and an Open Top Light Sheet (OTLS) for imaging in three dimensions and PhenoCycler Fusion (Akoya).

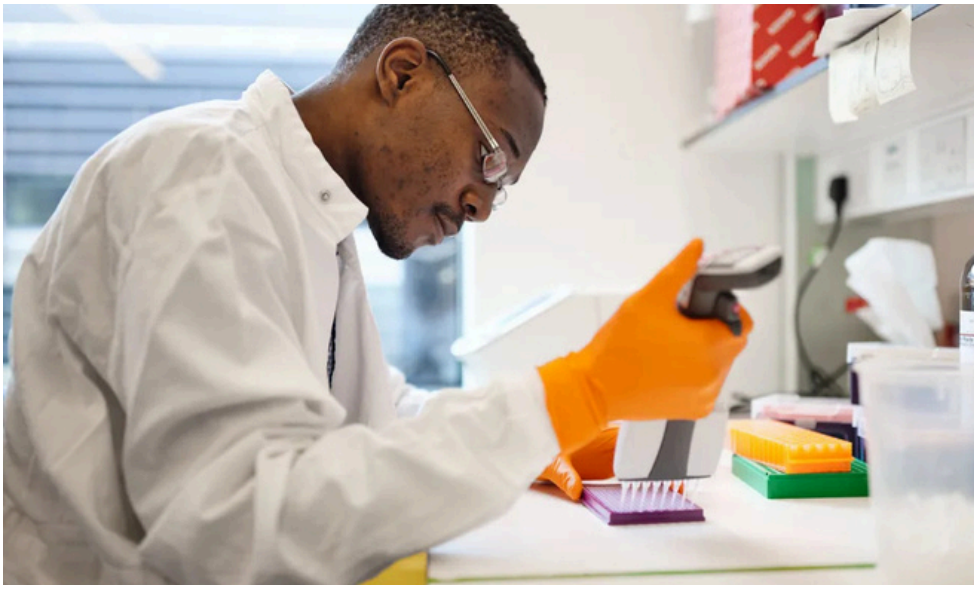
Single Cell and Spatial Genomics: This facility provides access to 10x single cell biology and spatial transcriptomics platforms, along with end-to-end workflows to assist with cell isolation, capture, and library preparation.

Microbiome science: The Oxford Centre for Microbiome Studies (OCMS) combines interdisciplinary expertise with state-of-the-art research facilities in order to advance our understanding of how microbes impact human health. OCMS covers a range of scales, from cohort-based studies to identify changes in the microbiome in arthritis patients to the identification of bacterial products that have immune-regulatory properties.

Full list of technologies: advanced microscopy, mass cytometry, flow cytometry, microbiome science, gnotobiology, single cell and spatial genomics, research computing, research informatics, histology, digital pathology omics core.

Spotlight on innovation in osteoarthritis

STEpUP OA, an international consortium of academia and industry (8 commercial partners) led from the Kennedy Institute, has delivered the largest ever proteomic profiling exercise in osteoarthritis. These partnerships have shown the unique value and power of academic-industry partnerships to deliver game changing clinical studies to help the institute deliver on its scientific vision.



The Arthritis Treatment Acceleration Programme (A-TAP)

A-TAP is a cross-institute consortium which aims to match the correct treatment, at the correct dose, to the correct patient based on the cell types involved in their inflammation. It uses innovative basket trials to test new and repurposed drugs across different diseases. A-TAP is strongly linked with clinical colleagues at the University of Birmingham and has attracted investment from large pharma and biotech.

Clinical collaborations

Our extensive clinical collaborations within and beyond Oxford give Kennedy Institute researchers access to clinical trial cohorts covering a wide range of inflammatory and autoimmune diseases. These include IBD (adult and paediatric), inflammatory skin disease, Ankylosing spondylitis with and without rheumatoid arthritis, osteoarthritis, acute knee injury, systemic lupus erythematosus, and thyroid eye disease.

Industrial careers for DPhil students

Clinical DPhil student Dr Rahul Ravindran began an industry placement fellowship to foster clinical innovation through partnership with AstraZeneca and the Medical Research Council (MRC). He is working on early-phase clinical trials in inflammation.

Student career paths

Our students go on to lead diverse and exciting careers. Roughly a third of alumni since 2018 are postdocs within academic institutions. Many are building their career in biotech (including startups) and large pharma. Destinations also include scientific writing, science management, and finance and consulting.

Contact us

We welcome new short- and long-term collaborations, including potential sponsors of DPhil students, and encourage potential partners to reach out and discuss how we could work together.

Professor Kim Midwood, Director of Graduate Studies: dgs@kennedy.ox.ac.uk
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