Course Information Sheet for entry in 2021-22: DPhil in Biomedical and Clinical Sciences

About the course

This three-year programme is tailored specifically to the needs of talented clinicians who aspire to a career in academic medicine or clinical psychology. The course is also known as the Doctoral Training Fellowship Scheme for Clinicians.

Successful applicants will work towards a DPhil within one of three streams which are in basic sciences, mental and cognitive health, and translational/experimental medicine.

You will be offered generic research training and required to meet standard University milestones for progress. All students are formally monitored via supervisor feedback forms submitted three times per year.

1. Basic sciences

This stream aims to provide high-quality research training in basic and applied molecular science for clinical academics who aspire to a career in academic medicine. It is expected that you will carry out DPhil projects in one of the following broad areas:

- metabolism
- genomics
- haematology
- infection/immunity/inflammation
- neurobiology
- cardiovascular
- rheumatology related disease, including the process of inflammation, damage and repair.

Training provision is tailored to your needs, in relation to your research project and determined in consultation with supervisors, mentor and programme directors.

It is expected that you will have both basic-scientist and clinician-scientist supervisors, to bridge the gap between basic and applied research.

2. Mental and cognitive health

This stream aims to recruit clinical psychologists, psychiatrists and neurologists to the DPhil programme and place them into internationally-recognised research groups that have successfully developed new treatments, clinical assessments and rehabilitation procedures and/or novel experimental medicine approaches to psychopharmacology.

You should expect to receive core teaching in a range of skills important for clinical research in mental and cognitive health. These may include: experimental design, structured clinical interviews, cognitive testing, programming experiments MATLAB/using E-Prime/SuperLab etc, design and analysis of clinical trials, acquisition and analysis of fMRI and other imaging data.

In addition, Oxford has exceptional multimodal imaging facilities to which you should have access. If appropriate for your research, you will normally be able to join the FMRIB graduate training programme.

Throughout the DPhil course, students on this stream will have a weekly day-long placement in a unit that conducts clinical work closely related to your research programme, in order to:

- observe how research and clinical implementation can work together
- continue to develop your clinical skills

Each placement normally lasts for twelve months, during which you should have the opportunity to work in units that aim to help you observe translational work in a complementary area to your research. In this way, the programme aims to equip you with the skills you need to ensure that, when relevant, you can rapidly translate your future research findings into patient benefit.

You will be required to meet standard University milestones for progress and will be monitored formally via supervisor feedback forms submitted three times per year.

3. Translational/experimental medicine

This theme takes advantage of other strengths in biomedical science. These include projects in:

- the Institute of Biomedical Engineering, which provides a unique environment where engineers and clinicians work together, focusing on novel technological approaches to healthcare problems;
- vaccinology through the Jenner Institute and the Oxford Vaccine Group, where novel vaccine approaches for infection and also non-infectious targets such as cancer are developed and tested through clinical trials;
- veterinary science in collaboration with the Pirbright Institute (formerly the Institute of Animal Health) and the Royal Veterinary College in conjunction with the Jenner Institute and Wellcome-funded projects (eg in orthopaedics and in neuromuscular disease) and an interdisciplinary training initiative on Innovative Food Systems Teaching and Learning;
- translational and applied neurosciences including advanced neuro-imaging available through the Functional Magnetic Resonance Imaging Building (fMRIB) and novel PET approaches with Imanova, interfacing with scientists with skills in physics and big data;
- major non-communicable diseases through the Nuffield Department of Population Health, Clinical Trials Service Unit, and Epidemiologic Studies Unit, and the new Big Data Institute (BDI), focusing on the analysis of large, complex, heterogeneous data sets for research into the causes and consequences, prevention and treatment of disease. Ethox, also based in the Nuffield Department of Population Health, provides an environment where empirical research and ethical analyses can be combined around clinical ethics, research ethics, and global/population health ethics; and
- international health and tropical medicine, building on collaborations between Oxford investigators and its major overseas programmes with bases in Kenya, Thailand, and Vietnam.

Supervision

For this course, the allocation of graduate supervision is the responsibility of the Medical Sciences Doctoral Training Centre, and it is not always possible to accommodate the preferences of incoming graduate students to work with a particular member of staff. Under exceptional circumstances a supervisor may be found outside the Medical Sciences Doctoral Training Centre and/or closely-related departments. Students should meet with their supervisors at least once a fortnight, on average, across a year.

Assessment

All students will be initially admitted to the status of Probationer Research Student (PRS). Within a maximum of four terms as a PRS student you will be expected to apply for transfer of status from Probationer Research Student to DPhil status.

A successful transfer of status from PRS to DPhil status will require the submission of a report on progress to date on research and future plans. Students who are successful at transfer will also be expected to apply for and gain confirmation of DPhil status within nine terms of admission, to show that your work continues to be on track.

Both milestones normally involve an interview with two assessors (other than your supervisor) and therefore provide important experience for the final oral examination.

You will be expected to submit an original thesis of up to 50,000 words after three or, at most, four years from the date of admission. To be successfully awarded a DPhil in Biomedical and Clinical Sciences you will need to defend your thesis orally (viva voce) in front of two appointed examiners.

Changes to courses

The University will seek to deliver this course in accordance with the description set out above. However, there may be situations in which it is desirable or necessary for the University to make changes in course provision, either before or after registration. These may include significant changes made necessary by a pandemic (including Covid-19), epidemic or local health emergency. For further information, please see the University's Terms and Conditions (http://www.graduate.ox.ac.uk/terms) and our page on changes to courses (http://www.graduate.ox.ac.uk/coursechanges).

Expected length of course

	Full Time Only
Expected length	3 years