

GMS Programme

Information for supervisors

Updated 20th August 2025

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1. Overview

Genomic Medicine and Statistics (GMS) is a 4-year Dphil programme based at the Centre for Human Genetics (CHG) which focusses on training in a broad range of topics relating to genomics. It has been running since 2008; to date, 58 students have completed DPhil training, while a further 30 are still in training. The programme is supported by over 60 research groups from a diverse range of institutes and departments who offer Dphil and rotation project opportunities, mentorship, training and other support.

We regularly review applications from new PIs and would particularly like to welcome those who have recently joined. All GMS supervisors have the opportunity to attract students from the programme; at the same time we ask all supervisors to sign up to support the course in various ways as set out in **Section 3**~~Error! Reference source not found.~~ – please do check you are happy with these requirements.

In previous years the programme has been supported by generous funding from Wellcome (and this funding still supports the students currently enrolled i.e. up to and including the 2024 intake). However, this is no longer the case and from 2025 the directorship have sought funding from a range of other sources to continue the programme. This change in funding brings with it some changes to how the programme is structured. Funding for the 2025 intake includes generous contributions of studentships from individual institutes / departments, and thanks to these contributions, we are pleased to announce that the

programme has recruited six new high-calibre students for enrolment in the 2025/26 academic year.

The changes to funding do introduce some new aspects to how these studentships are managed, including the way that Dphil project opportunities are made available to them, and we ask affiliated PIs to be aware of the new requirements (further details in **Section 4** below). In particular, in some cases this may mean designing projects that operate jointly with the CHG or with contributing institutions.

1.1. Course structure

GMS is structured as a 1+3 year programme with the first year comprising a taught term followed by two or three rotation projects which take place in GMS-affiliated research groups. Based on these rotations, students then go to choose a supervisory team and develop a research project which they undertake in years 2-4. The programme focusses on a broad range of topics in genomic research and supports a range of training opportunities which can include experimental work, methodological development and/or computational analysis. Alongside this, we deliberately recruit students from diverse academic backgrounds, and this breadth of expertise within the cohorts and across research groups is one of the key reasons for the success of the programme.

As genomic technology and applications have continued to develop at pace over the past 5 years, the programme has focused on a set of interdisciplinary areas of genomic research organised into 7 themes:

1. **Genomic and -omic technologies** (including method development, single cell genomics, imaging, model systems, CRISPR screens, genome engineering; proteomics, metabolomics, high throughput screening)
2. **Functional genomics** (gene regulation and epigenetics)
3. **Genome biology** (genetic variation, recombination, human history, evolution, palaeogenomics, pathogen genomes)
4. **Genomics of disease** (Mendelian and multifactorial traits, cancer)
5. **Genomic analysis** (bioinformatics and statistical genetics)
6. **From genes to clinical proof of concept** (integrated drug development pipeline spanning genetic-led target discovery, structural biology, medicinal chemistry)
7. **Application of genomics in the clinic** (rare disease diagnostics, cancer therapeutics, personalised medicine and genome therapies)

Each year we ask supervisors to outline potential rotation projects (with an indication of the relevant themes and training opportunities) and provide mechanisms for students to meet GMS research groups and explore potential rotation and Dphil project opportunities.

Having completed rotation projects, students submit outline Dphil project proposals as they enter their 2nd year of study. These are not binding but help students frame their research and provide a useful monitor on the planned project areas. We then provide ongoing programme support for students and groups as they start, develop and complete their Dphil research and transition to the next phase of their careers.

The following sections outline the management and organisation of the course, and the responsibilities we expect of affiliated PIs.

2. Course management and organisation

2.1. GMS Management team

The GMS management group consists of:

Course director: Prof Julian Knight
Co-directors: Prof Ira Milosevic
Teaching leads: Helen Lockstone and Dr Gavin Band
Course administrator: Sally McKendrick / NDM Academic Programmes Centre
MSDTC administrator: Louise Samson
Administration contact: dphil-gms@ndm.ox.ac.uk

Please CC the above contact (dphil-gms@ndm.ox.ac.uk) on any correspondence relating to GMS.

The management group meet regularly to plan and review all aspects of the GMS programme. We also hold yearly review meetings, usually in June/July which all GMS PIs are invited to attend. Project supervisors, teaching staff and student representatives are invited to these meetings to hear the updates and give their input to help shape the programme. The June/July meeting is open to all supervisors linked to the programme.

For anyone interested in joining the management committee, please email us on dphil-gms@ndm.ox.ac.uk. We welcome ideas and input for developing the programme.

2.2. Supervisor team

A list of over 60 research groups from are affiliated with the programme and provide rotation and Dphil training opportunities for students, as well as mentoring, training and other support. **If you would like to be considered as a potential supervisor for the programme, please first read this document to check you are happy with the duties and obligations this will confer. Then, please send a short CV and research statement to dphil-gms@ndm.ox.ac.uk.** The management committee will review and respond at the earliest opportunity.

2.3. Website and communication

The website is crucial both to provide information for current students and supervisors, and as a way of attracting high-calibre students.

<https://www.well.ox.ac.uk/work-and-study/gms-dphil-programme>

Communication within the programme is further carried out by email using a series of mailing lists (including well-gms-supervisors@well.ox.ac.uk which reaches all affiliated PIs) as well as via the yearly review meetings.

From 2025 course administration is being undertaken by the NDM Academic Programmes Centre (<https://unioxfordnexus.sharepoint.com/sites/CLME-AcademicProgrammes>) who undertake triaging of communications. Please email dphil-gms@ndm.ox.ac.uk with any queries.

3. Supervisor responsibilities

As a GMS-affiliated PI, we ask you to accept the following duties:

- Undertake mandatory training for DPhil supervision at Oxford (Sciences). This is a short online course and must be completed once every three years.
<https://www.ctl.ox.ac.uk/online-courses>
- Training in Equality Diversity and Inclusion related courses listed here <https://edu.admin.ox.ac.uk/training>. They cover: an overview of EDI; implicit bias; race; LGBT+ role models, mentoring and allies; mentoring schemes for BME staff; harassment and bullying training; and recruitment and selection.
- Termly supervision reporting through GSR and eVision (<https://academic.admin.ox.ac.uk/graduate-supervision-reporting-gsr>)
- Contribute to teaching (team members' contributions)
- Supervise students for rotations
- Provide a project for the booklet and for you or a senior member of your team to give a short presentation on this at the beginning of Michaelmas term
- Be willing to act as mentor
- Report outputs involving students including destination following DPhil and publications
- Update us with any changes in your circumstances that may affect your ability to supervise. Please refer to the NDM supervisor webpage for information on this <https://www.ndm.ox.ac.uk/for-supervisors>

4. Progress and planning for the GMS 2025/26 cohort

4.1. Funding sources and recruitment

For the 2025 intake a number of institutes have generously offered funding for studentships. In addition we are trialling the inclusion of a DPhil funded under a specific project-based Wellcome Discovery Award in the course this year. In total this has allowed us to recruit 6 students who will join the University in October. **We would like to thank everyone who helped with shortlisting and interviewing candidates for the programme.**

An important point is that the nature of this funding does place more restrictions on students than has been the case in previous years. From 2025 onwards we are asking that Dphil projects undertaken by GMS students from 2025 onwards involve supervisors from the CHG or from the contributing institutions. In particular, please be aware that as part of the recruitment process, students were in some cases made offers based on specific funding sources and will be expected to undertake Dphil projects relevant to those sources, including by involving supervisors from the relevant Institutes. Although this provides less flexibility than has been the case in previous years, we strongly hope this approach will help foster new collaborative projects between the participating Institutes and the broader pool of research groups involved in the programme.

4.2. Funding and project costs

Students who enrolled before 2025 are supported by generous funding from Wellcome that includes a stipend as well as 'bench', travel, and computing equipment funds. These funds are intended for use by the student during their project. As usual, all costs must be justified and we typically ask supervisors to send approval for larger purchases made on these grant codes – in particular for longer periods of travel, international conferences, or large pieces of equipment, we will typically ask for the supervisor to confirm the request is appropriate.

For students who enrol from 2025 onwards, this funding is not available and so it is expected that supervisors who take on these students will have sufficient funds to support students throughout their Dphil.

4.3. Teaching term

On enrolment, students undergo an intensive term of training at the Centre for Human Genetics during which they are exposed to a range of laboratory and computational techniques. The key goals of this term are to bring students to a reasonable level, fill knowledge and skills gaps and expose them to the types of research undertaken by the affiliated research groups, and to prepare them for rotation project work in Hilary and Trinity terms. The training term is overseen by Helen Lockstone and Gavin Band among other topics includes modules on:

- Basic lab skills and techniques
- Introductory and more advanced programming R and/or python
- Statistical analysis techniques
- Population genetics and genome-wide association studies.
- Analysis of genomic data, including whole-genome sequencing, RNA-seq and other 'omics.
- Cellular Imaging and genome engineering.
- Machine learning applications.

We augment this with guest lectures and there is overlap with MSc Genomic Medicine content, where appropriate. This model has worked well in previous years and through this we now have a wealth of material on which to build training. We welcome contributions and suggestions for new training modules.

4.4. PI meet & greet sessions

A key component of the Michaelmas term is to provide opportunities for the students to meet affiliated PIs (and/or their research groups) and to discuss possible rotation project opportunities. To this end, we schedule specific times in the term (typically late morning / early afternoon on Tuesdays and Thursdays) which we will ask you / your groups to sign up to, so that you can meet the students. You can use this time flexibly; typically a short presentation on your research followed by discussion works well. (Students and research groups are of course free to pursue discussions outside of these times as well.)

4.5. PI and project webpages

For 2025 we intend to move information about rotation projects onto the PINFOX system (which you may be familiar with due to its use on the NDM Clinical Medicine programme). The system will allow you to upload / update rotation project areas which the students will be able to browse.

We will typically ask you to create / update this information in late August / early September although this may be a bit later in 2025 as we move to the new system. (We reserve the right to remove PIs from this list if we aren't able to obtain up-to-date information.)

4.6. Project rotations

The students have the option of taking 2-3 rotations. These start in January and each run for approximately 10 weeks although we provide flexibility about exact dates. **We encourage all GMS PIs to offer potential rotation projects.**

It is often the case that students start the course with a specific area already in mind for their DPhil, but we encourage them to make the most of the rotation year and use it as an opportunity to experiment and explore areas outside their previous experience / comfort zones. Students are advised to make contact with the supervisors they would like to take rotation with as early as possible. **Please do engage with students as they seek to**

arrange rotation project placements – including during the PI sessions in Michaelmas that are designated for PIs to meet students and discuss projects.

The placements starting in January are sometimes the most difficult to secure, as the students have less time to arrange them, please do support them in this.

5. Student supervision and support

5.1. Formal DPhil project supervision

All students need to have a minimum of two supervisors selected from the programme's PIs. There is the possibility to have third supervisor taken from outside programme, to fit with scientific needs.

5.2. Supervisor limits

No individual may supervise more than 6 students in total at any one time. Co-supervision counts as a half, regardless of the total number of supervisors.

5.3. Mentorship

All students have a named Mentor as they enrol on the course, and this provides important source of advice and support during their first year.

We ask all GMS-affiliated PIs to be potentially available to act as Mentors to students in the first year of their Dphil. We ask Mentors to meet the students twice in Michaelmas to provide any needed advice about project rotations, and then at least once in each other term.

Mentors will also be responsible, along with the management team, for submitting a supervisory reports on the Graduate Supervision Reporting System (GSR) for this period. Further information about the GSR process can be found on their webpage <https://academic.admin.ox.ac.uk/graduate-supervision-reporting-gsr>.

Mentorship arrangements are intended to operate during the first year, but sometimes do extend over longer periods by mutual agreement between the student and Mentor, and we are happy to support that arrangement as well.

5.4. Research culture

A positive research culture is absolutely essential to our students and the future success of the programme, and we continue to look for ways to enhance the research environment the students work in. This includes

- Building a strong sense of community within the CHG and other Institutes where our students work
- We ensure access to the programme for the best students, whatever their background.
- We aim to build a strong cohort effect which provides a support base for students to work in and allows them to benefit from each other's experience.
- A strong emphasis on managing transitions at the start and end of the course.
- Effective training and monitoring, and an openness in our approach. This includes setting clear expectations, early recognition of problems and effective support that helps ensure students maximise and deliver on their potential.
- We actively seek and act on student feedback, including by appointing student representatives who act as a channel of feedback for the programme.
- We recognise the critical importance of preventing bullying and harassment and our efforts in this area are overseen by a named co-Director (Ira Milosevic). All supervisors are expected to undergo relevant training and we highlight the issue at induction for supervisors and students.

- We are committed to improving EDI (Equality, Diversity and Inclusion) across the programme and work with the CHG and NDM EDI committees to achieve this.
- We aim to make research accessible to students by providing high-quality training, that is relevant to student's needs and covering the broad range of skills they will need.
- We also play a crucial role in training and supporting the wider pool of DPhil students at CHG and partner institutions, further contributing to the student environment. In addition, we work closely with the MSc Genomic Medicine team to identify opportunities for shared training and continual improvement.

5.5. Internships

In addition to rotations and Dphil project work, students sometimes identify opportunities to undertake industry placements or internships. We support these efforts, where they are deemed appropriate to the student's project, and they can in principle be taken up during the course of the Dphil project or during the transition period (see below.)

5.6. Thesis committee

Thesis Committees are an extension to the core supervision structure and are described here: <https://www.ndcn.ox.ac.uk/study-with-us/graduate-students/current-students/thesis-committees>.

5.7. Transition funding

In 2019 Wellcome introduced a new "transition fund" which may be used flexibly to support student career transitions. The length and type of support may vary as it is to be tailored to the individual student's needs. The students are provided with guidance on suitable applications as they approach the end of their Dphil projects, and these applications are reviewed and approved by the GMS team. From 2025 we are also considering implementing a panel of reviewers drawn from the GMS supervisor pool to review and provide feedback on applications.

Transition funds can be used flexibly, including to complete work that will lead to strengthening onward prospects, to undertake research visits and build onward collaborations, or to undertake new experiments that will set up future avenues of research. In all cases they are intended to support the student's onward career development as they transition out of the programme. While we are unlikely to be able to offer similar support to students from 2025 intake who did not receive Wellcome funding, the transition fund still applies to all students who enrolled prior to 2025. Please do encourage students to think carefully about how to make the most of transition funds.