UNIVERSITY OF CAMBRIDGE

BBSRC DOCTORAL TRAINING PARTNERSHIPS

iCASE Student Handbook 2019-2023

BBSRC Doctoral Training Partnerships

Contents

Welcome

Welcome to Cambridge and to the BBSRC DTP (Doctoral Training Partnership), which will oversee your studies as an iCASE student for the next four years. As well as working with your supervisor and industrial partner, you will also be a member of the wider DTP cohort, taking advantage of the training opportunities and the vibrant and exciting scientific community in Cambridge. The Cambridge BBSRC DTP comprises 20 different partners, both University Departments and Institutes as well as affiliated Institutions in the region. They have joined forces to establish an innovative interdisciplinary programme for graduate students in the biosciences, building on the excellent research training for which Cambridge is renowned, and combined with additional activities. You will follow tailored courses in Exploiting New Ways of Working, covering statistics, computational biology and modelling. As an iCASE student, you will spend between 3 and 18 months working with your industrial partner, gaining experience in scientific research in the wider world.

Our aim is for you to graduate in four years' time with a deep understanding and enjoyment of science and scientific research, and a network of colleagues and friends who will have shared your experience. Our hope is that you can aspire to become a future leader in research, or use your expertise in other ways to help society meet its future challenges. Four years, as you will find out, is not long, so make the most of the opportunities provided by the DTP, by your Department or Institute, and by Cambridge more generally, as well as your industrial partner.

Good luck in your studies—I look forward to hearing about your progress

Professor Chris Smith
Director of the University of Cambridge BBSRC DTP

Last update 23 September 2019

Programme Structure

The BBSRC iCASE Programme is studied on a full-time basis. You will become part of the BBSRC DTP cohort which is made up of students who have BBSRC funding and also other students who have alternative funding but who will follow the same training schedule and join in the other cohort activities. During the orientation week in October and the first week of term in January you will join with the other students who make up the BBSRC DTP 2019 Cohort for training and cohort building activities. These include training in data analysis in R, lab book management, statistics and reproducible research. During the PhD project, you will continue to undertake further research skills and subject-specific training, and spend 3-18 months working with your industrial partner.

The Programme is four years in duration; therefore, students must submit their thesis no later than 48 months after their start date. For students starting in October 2019, the final date for submission of a thesis is 30 September 2023. (Please note 30 September 2023 is a Saturday).

The Programme is a partnership between several Departments and Institutes at the University of Cambridge and five research organisations (Partner Institutes) situated nearby.

The Programme allows students to carry out research in any of the Departments and Partner Institutes listed (subject to the scope of the relevant theme). Students undertaking research in Partner Institutes remain registered with the University, receive their award from the University and have access to facilities at both the University and the Partner Institute.

The Departments and Institutes

School of the Biological Sciences
Department of Biochemistry
Department of Genetics
Department of Pathology
Department of Pharmacology
Department of Physiology, Development and Neuroscience
Department of Plant Sciences
Department of Psychology
Department of Veterinary Medicine
Department of Zoology
The Sainsbury Laboratory (SLCU)

Other University Departments
Department of Applied Mathematics and Theoretical Physics (DAMTP)
Department of Chemical Engineering and Biotechnology
Department of Chemistry
Department of Physics
Department of Pure Mathematics and Mathematical Statistics (DPMMS)
Institute of Metabolic Science (IMS) – Metabolic Research Laboratories

Partner Institutes
Animal Health Trust (AHT)
Babraham Institute
European Molecular Biology Laboratory – European Bioinformatics Institute (EBI)
National Institute of Agricultural Botany (NIAB)
Wellcome Trust Sanger Institute

BBSRC research themes

BBSRC-funded research and training at Cambridge emphasises research aimed at improved understanding of basic biological mechanisms, from the study of biological molecules, to cellular and physiological processes, including genetic and genomic approaches. This means the work will drive innovative discoveries; for example, new leads for drugs or disease prevention strategies, or underlying principles of cellular function, as well as interfacing with physical sciences and mathematics through improved understanding of biological mechanisms that underpin normal growth and development. Our bioscience research projects will help sustain the biotechnology and pharmaceutical industries in the UK where the flow of ideas, skills and key capabilities provides mutual benefit.

The Programme has themes, outlined below, which align with the strategic research priorities of the BBSRC. Your PhD will align with one of these themes.

Advancing the frontiers of bioscience discovery

Understanding the rules of life

Understanding living systems and how they function is at the very heart of bioscience research and innovation. From the structure of DNA, to the processes by which cells divide and replicate, the UK has a rich history of contributing ground-breaking discoveries in bioscience that have begun to reveal the basic operating 'rules of life'.

However, for all that is already known about biological systems, there is much still to learn and tremendous excitement about the opportunities that future discoveries in bioscience will unlock. For example, understanding how cells communicate with one another, or being able to predict how the interplay between an organism's genetic make-up and its environment will affect its physical characteristics.

Transformative technologies

Advances in research often involve the development or application of new tools and technologies and, increasingly, data-intensive and predictive approaches to biological discovery. To understand biological processes and organisms better, researchers need to measure many different parameters across multiple scales (e.g. molecules, cells, organs), ideally under physiologically relevant conditions. Greater integration of bioscience with innovation in the engineering and physical sciences is a huge opportunity to improve on existing technologies and create new ones.

The increasing complexity and scale of biological data arising from technologies such as next-generation sequencing and high-resolution imaging present both a challenge and an opportunity. The use of artificial intelligence (e.g. machine learning) and other innovative data science approaches is key to unlocking new understanding, value and scientific leads from the enormous quantities and diversity of data available.

The broader availability of, or access to, advanced tools and technologies supports the embedding of advanced methodologies across the research community and the wider democratisation of science through, for example, citizen science and crowd-sourcing approaches.

The emergence and exploitation of disruptive technologies can open up transformative new opportunities for research and business innovation. For example, major developments in genome-editing tools (e.g. CRISPR/Cas9) mean that it is now possible to make precise, targeted changes to the genomes of cells and organisms. Alongside the tools of synthetic biology, this enhances our ability to design and engineer biological systems, fuelling major advances in both fundamental bioscience research and its applications in areas such as agriculture, materials, chemicals, and bio-medicine.

Tackling strategic challenges

Bioscience for sustainable agriculture and food

Predictions of population growth suggest that by 2050 the world's population will have expanded to over 9 billion and 60% more food will be required. Reducing the amount of food waste is part of the solution, but a huge, sustainable boost in agricultural productivity will also be needed to meet this demand. It is not simply about using more land for food production, but maximising efficiency of land use and resources. We must increase the resilience of food supply chains in the face of challenges such as climate change, growing threats from pests, pathogens, extreme weather and soil degradation, whilst also protecting the environment.

Advances in 'omics technologies, crop and livestock breeding, coupled with the convergence of sensor technologies, robotics and autonomous systems, big data, machine learning and artificial intelligence, offer an unprecedented opportunity to revolutionise food supply chains. Bioscience will contribute essential knowledge and evidence for farmers, food producers, processors, retailers, consumers and governments, to enable them to farm sustainably, producing healthy, nutritious and affordable food, while reducing impacts on the environment, protecting biodiversity and enhancing our natural capital.

For the UK's strengths in bioscience to have an impact on global food security and drive innovation and clean growth in the agri-food sector, effective user engagement and knowledge exchange will be essential, as will integration with other disciplines such as environmental and social sciences and engineering.

Bioscience for renewable resources and clean growth

Harnessing the power of biology through industrial biotechnology has the potential to transform a wide range of industries and supply chains, reducing reliance on chemical processes and fossil fuels, helping to meet international climate change targets and driving productivity and growth in the bioeconomy. The move to bio-based processes offers opportunities to generate materials, biopharmaceuticals, chemicals and energy with improved performance, lower operational costs and reduced carbon emissions, leading to more sustainable, cleaner manufacturing and greater use of residues or wastes in a more circular bioeconomy.

The industrial biotechnology sector is growing at a rate of 8-10% pa, which is predicted to continue beyond 2025. Recent investments have increased the UK's capacity for industrial biotechnology research and innovation in academic and business communities, encompassing engineering, physical, chemical and biological sciences. However, for UK industry to realise its full potential will require sustained support and specialist infrastructures to enable the translation of world-leading UK bioscience into innovative, bio-based products and processes at industrial scales.

Bioscience for an integrated understanding of health

The UK has an ageing population, but, as our average lifespan increases, our healthspan is not extending as fast. Changing lifestyles are having significant impacts on health across the lifecourse, and declining health and wellbeing in later life are placing increasing pressure on health and social services. In addition, globalisation presents specific and urgent health challenges in zoonotic infections and antimicrobial resistance. There is a pressing need for integrated approaches across a range of disciplines, organisms and scales that generate new insights to improve animal and human health and wellbeing, inform strategies for the prevention of disease, and underpin innovation in health-related industrial sectors.

Bioscience has a crucial foundational role in healthrelated research and innovation, providing a deep, integrated understanding of the 'healthy system' across the lifecourse, and of the factors that maintain health and wellness under stress and biological or environmental challenge. However, its impact on health challenges depends on effective integration and translation across different areas of bioscience research, with other disciplines such as the medical, social, environmental and physical sciences, and between academia, industry and policy-makers.

Industrial placement

iCASE students must undertake a placement with their Industrial Partner for a minimum of three months and a maximum of 18 months. The length of time and nature of the placement will have been agreed between your PhD Supervisor and your Industrial Partner Supervisor prior to you beginning the Programme. Your Department/Partner Institute Graduate Administrator will be able to advise you regarding University requirements whilst undertaking your placement (for example, Leave to Work Away approval: https://www.cambridgestudents.cam.ac.uk/your-course/graduate-study/your-student-status/work-away-cambridge iCASE students must complete a post-placement report on completion of their time with the Industrial Partner. Students should email: CASE@bbsrc.ac.uk to obtain their report. Students should submit the completed report to BBSRC within one month of finishing their placement.

iCASE students are not required to undertake rotations, but may do so if they feel that this training would be useful. Rotation projects allow students to gain experience of different research environments, to organise collaborations and to network outside of their PhD research area. Students interested in undertaking a rotation(s) should speak with their PhD Supervisor as the rotation will be organised by the supervisor and Department or Partner Institute. "Standard" DTP students submit project reports following each rotation. iCASE students should submit a report to the Programme Co-ordinator if they choose to undertake a rotation(s). Further information on what should be included in the project report can be found in Appendix 2. Information on plagiarism can be found in this handbook. You will receive feedback and a mark (Excellent, Very Good, Good, Satisfactory or Requires Improvement) for each rotation project report. Students whose report(s) are marked as 'Satisfactory' or 'Requires Improvement' will be asked to meet with their PhD Supervisor to discuss training and skills development. The review process is overseen by the BBSRC DTP Research Committee who will review feedback and marks from supervisors and assessors.

BBSRC DTP Committees

The BBSRC DTP at Cambridge is governed by a number of different committees. These are the Management Committee, Research Committee and Training Committee, we are also provided guidance by an External Advisory Board which has representatives from other BBSRC DTP programmes from across the UK. The Degree Committee for the Faculty of Biology also oversees your progress through the degree and will make the final recommendation to award you the PhD.

Each committee has a distinct remit and during your time at Cambridge you may be told that a matter will be to be approved or discussed at a meeting of one of these committees.

Details of each committee's membership is available on Moodle and will change over your time at Cambridge. The remit of each committee is outlined below.

The Management Committee, overall responsibility for the DTP including data collection, financial and strategic decisions, liaising with the University Departments and Partner Institutes, reporting and communication.

The Research Committee, selecting projects and rotations, recruitment to the DTP, monitoring rotation and PhD project reports, organises mentors and advisors.

The Training Committee, monitors the training portfolio and professional development, oversees PIPs and industrial placements and manages DTP cohort activity.

The Degree Committee for the Faculty of Biology oversees all research courses within the Faculty of Biology. It is responsible for appointing your supervisory team and examiners, monitoring your progress including the first year registration, reviewing any applications for a change in circumstances (for example to intermit or work away) and resolving any conflicts where these cannot be resolved at a local level. At the end of your programme, the Degree Committee will recommend the award of the PhD to the Board of Graduate Studies (on the recommendation of you examiners). See Paragraph 4-10 page 5-6 of the Code of Practice for more information. https://www.cambridgestudents.cam.ac.uk/new-students/manage-your-student-information/graduate-students/code

Year 1 Coursework

iCASE students are expected to complete the following requirements:

- Formal assignments related to the training sessions
- Rotation Project Report(s) (if applicable)
- Attendance at DTP Programme events
- Departmental requirements (health & safety and other training courses, PhD Project Proposal, etc.)

Upon starting the PhD in October 2019, progression will be determined according to the procedures of the graduate programme in your Department or Partner Institute. Funding from the DTP Programme is contingent on satisfactory reports of progress submitted via CamSIS by your Department or Partner Institute. Students are expected to submit their thesis within 48 months of starting the Programme. The Programme recommends that students submit a traditional thesis.

Training/ Cohort Building

Throughout your four years at the University of Cambridge the BBSRC DTP Programme Office will arrange for various training and cohort building activities. These are a compulsory element of the programme you are joining and attendance at such events will be monitored. A timetable of BBSRC DTP organised activities can be found at the back of this handbook (Appendix 3).

In addition to the training organised by the Programme Office you will also have access to a plethora of training opportunities offered by the University training service and your Department or Partner Institute.

You will also have access to a fund of £920 which can be used during your PhD to cover attending conferences and for travel.

During the Orientation week of the programme you must attend the University Health and Safety and the Lab and Chemical Management training sessions.

During your first day in the lab you should be shown the fire evacuation procedures. If not, please ask to be shown where to go in the case of a fire.

We have also asked the labs to include you in their own health and safety training.

Student Charter

The BBSRC DTP Student Charter

Students will:

- Be integral members of the Department / Partner Institute they join. Fellow students, staff and visitors will be treated with respect.
- Act as ambassadors for the BBSRC DTP programme and the University of Cambridge at all times.
- Be aware of and adhere to good research practices and behave professionally.
- Have intellectual ownership of, and assign top priority to, their PhD to enable thesis submission within the 4-year timeframe, taking into account the time required to complete rotations, PIPS or industrial placement as per the programme of which they are part.
- Recognise that taking part in educational activities, such as PIPS, is a compulsory part of the DTP programme.
- Report to their supervisor and BBSRC DTP Co-ordinator any issues likely to impact on their ability to undertake their PhD work.
- Attend BBSRC DTP organised training and cohort activities and take responsibility for their own development by attending courses, journal clubs, conferences.
- Engage with scientific literature.
- Respond to requests from the BBSRC DTP Programme Office in a timely fashion and submit all reports and documents by the agreed deadlines.
- Familiarise themselves with literature relating to their PhD studies, both scientific and administrative, including the BBSRC DTP guidelines and the University of Cambridge Code of Practice for Research Students.
- Understand that non-compliance will result in exclusion from the DTP programme.

Supervisors will:

- Assign high priority to students and their rotation and/or PhD research to ensure thesis submission within the 4-year timeframe.

- Regularly monitor student progress and meet with students to discuss their development and/or research project on a regular basis (at least fortnightly and ideally weekly).

- Support and encourage student attendance at BBSRC DTP training and cohort building sessions. Attendance at these sessions is a condition of student funding.

- Work with the student to develop their research aims throughout the course of the PhD and provide the necessary resources (including sufficient lab space, computational resources, all essential materials and consumables funding) and clearly delineate risks and back-up plans.

- Provide an environment where good research practice is the norm. Mentor students in the scientific method and encourage them to present their work at conferences and write scientific papers.

- Understand that PIPS is a compulsory and integral part of the BBSRC DTP:
    - Support students in their selection of PIPS.
    - Discuss during the first term of the PhD suitable timings for the PIPS to help reduce disruption to the students PhD work.
    - Release students from all work related to their PhD during PIPS.
    - Ensure the student is informed of any important information or training they may have missed during PIPS.

- Respond to requests from the BBSRC DTP Office in a timely fashion and support the student to submit all reports and documents by the agreed deadlines, and to attend events relevant to their development.

- Engage with the BBSRC DTP Programme Office by providing written feedback on student rotations and/or PhD reports and termly CamSIS reports by the deadlines provided. Ensuring assessors you have nominated also provide feedback by the agreed deadlines.

- Familiarise themselves with the BBSRC DTP and the University of Cambridge Code of Practice for Research Students.

- Understand that failure to comply with the above points may result in their lab being excluded from receiving future BBSRC funded students.

Approved at BBSRC DTP Management Committee, 17 September 2019

PhD project proposal

iCASE students are not required to submit a PhD Project Proposal to the DTP Programme. Students will be contacted by their Graduate Administrator regarding specific Department or Partner Institute guidelines and deadlines.

Assessment during the PhD

Towards the end of the first year of the Programme (exact timings will differ according to the PhD Department/Partner Institute) iCASE students will be required to submit a report (First Year Report) which will be examined in a viva voce examination. This process will be managed by the Graduate Administrator in your Department/Institute. Courses on how to complete this report are available through the Graduate School of Life Sciences (GSLS) Researcher Development Programme (www.gradschl.lifesci.cam.ac.uk/). On passing this students become fully registered for the PhD. Before the end of the fourth year students must have completed and submitted their thesis for examination. Further information is available on the GSLS website, including details of courses that will help you in this process, such as the Writing Skills Summer School and the Finishing Up, Moving On (FUMO) course for final year students. The DTP also organises a Thesis and Viva Preparation workshop during the final year of the Programme.

Plagiarism

At all stages of the Programme you must adhere to the University and School Guidelines for assessed work. The University's statement on plagiarism is below. More information is available here: www.admin.cam.ac.uk/univ/plagiarism/ and here: www.biology.cam.ac.uk/undergrads/exams/plagiarism

The General Board, with the agreement of the Board of Examinations and the Board of Graduate Studies, has issued this guidance for the information of candidates, Examiners and Supervisors. It may be supplemented by course-specific guidance from Faculties and Departments.

Plagiarism is defined as submitting as one's own work, irrespective of intent to deceive, that which derives in part or in its entirety from the work of others without due acknowledgement. It is both poor scholarship and a breach of academic integrity.

*Examples of plagiarism include **copying** (using another person's language and/or ideas as if they are a candidate's own), by:*

- ***quoting verbatim** another person's work without due acknowledgement of the source;*
- ***paraphrasing** another person's work by changing some of the words, or the order of the words, without due acknowledgement of the source;*
- ***using ideas** taken from someone else without reference to the originator;*
- ***cutting and pasting** from the Internet to make a pastiche of online sources;*
- ***submitting someone else's work** as part of a candidate's own without identifying clearly who did the work. For example, buying or commissioning work via professional agencies such as 'essay banks' or 'paper mills', or not attributing research contributed by others to a joint project.*

*Plagiarism might also arise from **colluding** with another person, including another candidate, other than as permitted for joint project work (i.e. where collaboration is concealed or has been forbidden). A candidate should include a general acknowledgement where he or she has received substantial help, for example with the language and style of a piece of written work.*
Plagiarism can occur in respect to all types of sources and media:

- *text, illustrations, musical quotations, mathematical derivations, computer code, etc;*
- *material downloaded from websites or drawn from manuscripts or other media;*
- *published and unpublished material, including lecture handouts and other students' work.*

Acceptable means of acknowledging the work of others (by referencing, in footnotes, or otherwise) is an essential component of any work submitted for assessment, whether written examination, dissertation, essay,

registration exercise, or group coursework. The most appropriate method for attribution of others' work will vary according to the subject matter and mode of assessment. Faculties or Departments should issue written guidance on the relevant scholarly conventions for submitted work, and also make it clear to candidates what level of acknowledgement might be expected in written examinations. Candidates are required to familiarize themselves with this guidance, to follow it in all work submitted for assessment, whether written paper or submitted essay, and may be required to sign a declaration to that effect. If a candidate has any outstanding queries, clarification should be sought from her or his Director of Studies, Course Director or Supervisor as appropriate.

Failure to conform to the expected standards of scholarship (e.g. by not referencing sources) in examinations or assessed work may affect the mark given to the candidate's work. In addition, suspected cases of the use of unfair means (of which plagiarism is one form) will be investigated and may be brought to one of the University Courts or disciplinary panels. The University courts and disciplinary panels have wide powers to discipline those found to have used unfair means in an examination, including depriving such persons of membership of the University, and deprivation of a degree.

The University makes use of text-matching software for the purpose of plagiarism education and detection, and reserves the right to submit a candidate's work to such a service. For this purpose, candidates consent to the submission of their papers to the service and for the submitted papers to form part of the service's comparative source work database. To facilitate use of the service, students (and participating Examiners and Assessors) may be required to agree to the service provider's end-user agreement and provide a limited amount of personal data upon registration to the service, for instance, their name, email address, and course details.

(July 2016): www.admin.cam.ac.uk/univ/so/2016/chapter02-section19.html#heading2-17

The Faculty Board of Biology's Statement on Plagiarism can be found here:
www.biology.cam.ac.uk/undergrads/exams/plagiarism

Students based in Departments outside the remit of the Faculty of Biology can access guidance from:
www.admin.cam.ac.uk/univ/plagiarism/students/depts.html

Research Contracts

A research contract is required to ensure that a researcher has freedom to operate when working with an external collaborator. The role of the Research Operations Office (www.research-operations.admin.cam.ac.uk/) is to negotiate contracts on behalf of the researcher and the University. Students should direct any queries to their PhD Supervisor and/or the Research Operations Office.

BBSRC DTP Programme cohort development

iCASE students are invited to DTP Programme events, including the welcome dinner and the annual summer event for all students in the Programme. These events, along with numerous training courses and workshops that foster cohort development, skills enhancement and networking and provide social opportunities. Students are expected to attend all events. Students are actively encouraged to plan additional social events and skills development opportunities, such as informal presentations or journal clubs. Cambridge offers a plethora of opportunities to "get involved" between the DTP Programme, Department, Industrial Partner, College and University Clubs and Societies. iCASE students will receive access to the BBSRC DTP Moodle site which lists Programme news and training/funding opportunities within Cambridge and further afield.

Annual leave and Intermission

Graduate students are entitled to a total of eight weeks of annual leave, to be taken at times agreed with their PhD Supervisor. Students who are unable to work on their project for medical or other reasons can apply to intermit by completing an application form which is available from their CamSIS self-service page. Further information can be found on the Student Registry webpage at: https://www.cambridgestudents.cam.ac.uk/your-course/graduate-study/your-student-status/medical-intermission . html Students funded by the BBSRC should bear in mind that they will not receive a stipend for a period of intermission (unless the intermission is to cover a period of maternity leave). Students with joint awards from other funders should check with them to see if payment is made during periods of intermission.

Working

Students are permitted to undertake up to eight hours paid employment per week during the course of their studies, usually teaching (demonstrating or supervising). However, we would advise that you do not work during the first year of the Programme.

Finances

Funding (fees, stipend, consumables) for iCASE studentships will be transferred to the Department or Partner Institute. Students should discuss financial matters with their PhD Supervisor and Department or Partner Institute Administrator. Tuition fees will be paid directly to the College and students eligible to receive a maintenance stipend from BBSRC will receive payments on the 26th of each month once the forms supplied by the Department or Partner Institute have been completed by the student and returned to Payroll.

Your stipend payments will stop as soon as your PhD thesis is submitted.

As part of the BBSRC DTP iCASE Studentship each BBSRC-funded student is awarded:

- £18,500 for consumables for the duration of the PhD
- £920 for travel/conferences for the duration of the PhD

These funds are paid directly to Departments and Partner Institutes. Students should therefore discuss expenditure requests with their Rotation Project and PhD with their supervisor(s) and liaise with their Department/Institute Graduate Administrator if they wish to spend these funds.

Laptops and internet access

You will need to bring your own laptop to Cambridge. Once you start your full PhD your consumables fund can be used for IT software/ upgrades, please discuss your needs with your PhD supervisor.

You will need access to the internet on your laptop during the induction week of the programme. For this you will need to access the Eduroam network, for information on how to do this please follow instruction at this link: https://help.uis.cam.ac.uk/service/devices-networks-printing/network-services/wi-fi

Leaving the BBSRC DTP Programme

If you are considering or wishing to leave the DTP Programme, please consult your PhD Supervisor and Department Graduate Administrator. Please also notify the Programme Co-ordinator as soon as possible.

Student support and wellbeing

There are a number of support mechanisms available to students, in addition to your PhD Supervisor.

BBSRC DTP Programme Office

The BBSRC DTP Programme Office can be contacted via email or phone and we are available to offer help, guidance and support throughout your time in Cambridge. We can also put you in touch with other people or groups within the university as appropriate.

Email: bbsrcdtp@admin.cam.ac.uk Telephone: 01223 766878

College Pastoral Support:

Your College is responsible for your pastoral support and there are a number of different people in College who you can turn to for help and advice. In the first instance, students will be assigned a Graduate Tutor, who is normally a Fellow of the College and will take an interest in your wellbeing and progress. Graduate Tutors, as well as the College Senior Tutor, can offer advice on academic, social, financial, medical and personal matters. Tutorial Office staff, student MRC Welfare Officers and, where available, the College Nurse, Chaplain and College Counsellor can also provide pastoral care and help to students. Further information on the advice and support provided by Colleges can be found here:
www.cambridgestudents.cam.ac.uk/welfare-and-wellbeing/college-tutorial-support

University Counselling Service

The Counselling service provides meetings with counsellors and workshops as well as a number of self-help resources. Information can be found on their website at:
www.counselling.cam.ac.uk/studentcouns

GRASP

The GSLS Graduate Student and Postdoc forum (GRASP) represents graduate students and Postdocs from each University Department and Partner Institute from Life Sciences. GRASP was developed in 2011 to provide postgraduate students and early career researchers with a platform for the communication of ideas and mutual concerns, and for the coordination of academic activities. Further information about GRASP can be found on the GSLS website: https://www.gradschl.lifesci.cam.ac.uk/grasp

Other

General information on being a student at Cambridge can be found here:
www.cambridgestudents.cam.ac.uk/

Students should ensure that they have read the University's Code of Practice for Graduate Research Degrees:
www.cambridgestudents.cam.ac.uk/new-students/manage-your-student-information/graduate-students/code

Information specific to graduate students in Life Sciences can be found on the Graduate School of Life Sciences website: www.gradschl.lifesci.cam.ac.uk/

Information for graduate students in Colleges can be found at: www.graduate.study.cam.ac.uk/colleges

Useful Contacts

Sandra Di Eleonora	Programme Co-ordinator	bbsrcdtp@admin.cam.ac.uk/ 01223 766 878
Professor Chris Smith	Programme Director	
Dr Holly Canuto	Programme Deputy Director	

BBSRC DTP Programme Office, Room F39
School of the Biological Sciences
17 Mill Lane
Cambridge, CB2 1RX

Appendix 1: General Safety in Research Labs

www.safety.admin.cam.ac.uk

Chemicals: All labs contain biologically hazardous chemicals, which are not always immediately obvious. To protect from accidentally exposure to these chemicals, each laboratory holds COSHH forms listing the chemicals used in the lab, how to store and handle them and action to take in case of an accident. You should read the forms before using any listed substances. Your supervisor has a responsibility to ensure that you fully understand the potential hazards in the lab and the appropriate safety measures. You should seek the advice of technical or academic staff on the procedures for using dangerous substances before you start using them.

Radiochemicals: All students who expect to use radioisotopes must be registered with the relevant Departmental Radiation Officers before using isotopes. You must have received basic training on safe handling procedures in order to be registered. You are responsible for ensuring that you are fully aware of both handling and disposal procedures for each radioisotope you use and should therefore contact your supervisor before using any radiochemicals.

Equipment: All electrical equipment is routinely checked. You must not tamper with the power supply to any device. If you suspect a piece of equipment to be faulty, you should report it to the relevant Departmental electricians.

Animals: If you conduct a research project involving any procedures that may have the effect of causing pain, suffering, distress or lasting harm to animals protected by the Animals (Scientific Procedures) Act 1986, you must hold a Home Office licence. This will require attendance at training courses and reading relevant guidance documents. You must not begin any work with animals until you have received the licence, and even then you must work under the close supervision of your supervisor or other appointed persons.

Appendix 2: Rotation Project Report Guidance

Rotation project reports will not exceed 5,000 words in length, including figure legends but excluding the bibliography (and words in figures and tables). Your **word count** (excluding the bibliography) must be given on the title page.

Reports should be properly referenced. Information on referencing can be found on the Student Registry website: www.admin.cam.ac.uk/univ/plagiarism/students/referencing/

Students must include in the report a preface with a **signed statement** along the following lines: "I confirm that the material in this report is not copied from any published material, nor is it a paraphrase or abstract of any published material unless it is identified as such and a full source reference is given. I confirm that, other than where indicated as above, this document is my own work."

Reports should be broken down into: summary, introduction, methods, results, and discussion.

Introduction: this section should give the non-specialist reader, **in a concise manner**, the background information necessary to understand your project and set the results in context. It should not be a full literature review. You should explain why you are doing the research (why is it important or why should the public care) and its wider economic, societal or cultural impact (www.bbsrc.ac.uk/funding/apply/application-guidance/pathways-impact/).

Methods: this section should **be concise**, yet contain sufficient information to allow someone else to repeat the work: give priority to novel approaches and condense standard molecular methods by citing previous publications or manufacturer's instructions.

Results: this section should flow as a logical, coherent description of the project, including the rationale for doing each experiment. This will not necessarily be the order in which you carried out the experiments. Make use of figures and tables. Remember that this is a report of what you did in your rotation, not a paper for publication: don't just put in your best (or only positive) results, but discuss problems encountered and/or troubleshooting.

Discussion: this section should NOT be a repetition of the Results section, but should critically evaluate the significance of your
results in relation to published works, which should also be critically appraised. It will usually contain ideas of further work required to clarify your findings. This is a valuable inclusion in a project report where you may not have had sufficient time to complete the research as you might have wished.

It is recommended that you write parts of the report alongside conducting the research. You will have a two-week writing period at the end of the rotation, but during this time you will need to submit the report to your rotation project supervisor. You should plan your time accordingly so that your supervisor has time to read the report and provide feedback and you have time to implement the feedback before the submission deadline. Contact the Programme Co-ordinator for details of the submission deadline relevant to you.

Appendix 3: Training Schedule for first two weeks

Monday 30 September, 2pm-5pm	Introduction to R Software Environment	Mill Lane Lecture Theatre 2
Tuesday 1 October, 2pm-5pm	Data analysis with R – Visualisation	Mill Lane Lecture Theatre 2
Wednesday 2 October, 2pm-5pm	Data analysis with R – Manipulation	Mill Lane Lecture Theatre 2
Thursday 3 October, 10am-5pm	Data analysis with R – Programming	Mill Lane Lecture Theatre 2
Friday 4 October, 10:30am-3:30pm	"Cohort building"	Milton Country Park
Tuesday 8 October, (various)	University Health and Safety Training University Chemical Handling	Babbage Lecture Theatre

You will be contacted at various times during the first year with details of other training you are required to take.

An example of an additional event is:

Friday 1 November, 2pm-4pm	How to keep a notebook	Biffen Lecture Theatre

(sign-up for the event at https://training.csx.cam.ac.uk/gsls/event/3109983)