



UNIVERSITY OF
CAMBRIDGE

BBSRC DOCTORAL
TRAINING
PARTNERSHIP

*Staff
Handbook
2017-2018*

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Introduction

The BBSRC DTP Programme is the main provider of PhD training in the area of BBSRC-funded biosciences in the University. The Programme currently has more than 120 students doing their PhDs in all the Biological Sciences Departments in the University, as well as in other University Departments/Institutes, and five external Partner Institutes (see Appendix 1). During the four-year Programme students complete taught courses, two rotation projects, an internship (PIPS) and their PhD.

The mission of the BBSRC is as “an investor in research and training, with the aim of furthering scientific knowledge, to promote economic growth, wealth and job creation and to improve quality of life in the UK and beyond.” It has three strategic research priorities: Agriculture and Food Security, Bioscience for Health and Industrial Biotechnology and Bioenergy, as well as supporting World-Class Underpinning Bioscience. Students are recruited into a specific theme when they join the Programme, and carry out PhD and rotation projects that are within the remit of one of these Research Themes.

The DTP Programme is overseen by a Management Committee, which has a representative from all 20 partners. The Executive Committee is made up of Theme and Deputy Theme Leaders who come from the partners on a rotation basis; they are responsible for recruiting students and then supporting them in the first year of the Programme before the start of the PhD proper. There are also Theme Leaders for the taught courses in statistics and mathematical/computational biology (known as Exploiting New Ways of Working, ENWW). The DTP Coordinator and DTP Administrator carry out the day-to-day operation of the Programme.

The Cambridge BBSRC DTP has a number of other PhD students associated with it who are funded from other sources, including iCASE studentships in partnership with industry.

This handbook is for staff involved in the University of Cambridge BBSRC DTP Programme. Please email the DTP Coordinator, Dr Sarah Fahle (srf42@cam.ac.uk), with any comments or suggestions.

Programme Structure

All students in the BBSRC DTP Programme study on a full-time basis and must complete within 48 months. The Programme consists of:

- In the first six months (October 2017 to April 2018):
 - Exploiting New Ways of Working (ENWW): complete training in statistics, Systems Training in Maths, Informatics and Computational Biology (SysMIC) and personal development
 - Complete assignments
 - Two 10-week rotation projects, either in a University Department or one of the Partner Institutes
 - Complete two project reports
 - Begin Professional Internship for PhD Students (PIPS) *Preparing for PIPS* e-learning course Module 1
 - Finalise PhD project and complete a project proposal
- April 2018 to end of Programme (30 September 2021):
 - Complete *Preparing for PIPS* Module 1 (by 31 August 2018)
 - Complete *Preparing for PIPS* Module 2
 - Complete 12-week internship—ideally after the Department/Institute's First Year Assessment and before the last six months of the Programme
 - Complete *Preparing for PIPS* Module 3 within one month of finishing internship
 - Complete PhD

As the first year is highly structured, students are not permitted to be absent from the Programme except under exceptional circumstances. Christmas and Easter holidays have been factored into the schedule.

During the second, third and fourth years of the Programme (ie, the PhD project), students continue to undertake further research skills and subject-specific training. They also complete a 12-week (60 working days) internship which can be taken as one 12-week block or two shorter blocks (subject to the agreement of the PhD Supervisor and PIPS Coordinator, Dr Sarah Fahle). Students cannot undertake a PIPS until they have completed the ENWW taught courses, two rotation projects and written their PhD project proposal, which all occur in the first year of the Programme. As the objective of the PIPS is to give students an opportunity to gain work experience in a non-academic environment, students should select an opportunity that is not related to their field of research.

The BBSRC DTP Programme is four years in duration. Therefore, students must submit their thesis NO LATER than 48 months after their start date; this includes the 12-week internship (PIPS). The Programme recommends that students submit a traditional thesis, but will abide by Department/Institute regulations concerning submitting a thesis by publication.

Management Structure and Responsibilities

DTP2 is managed by two committees: the Management Committee and the Executive Committee (Fig. 1). The Management Committee is responsible for oversight of the Partnership and the Executive Committee operates the Programme. The DTP Coordinator and DTP Administrator, both based in the Department of Plant Sciences, provide additional support.

Management Committee

The Management Committee comprises:

- Chair (PI of DTP2)
- One representative from each Department/Partner Institute
- One representative from the School of the Biological Sciences
- Student representatives
- DTP Coordinator/Administrator

The Management Committee meets twice a year, in March and September. It is vital that each Department/Partner Institute is represented at these meetings; therefore, Committee members are requested to send a deputy if they are unable to attend. Departments and Partner Institutes confirm their representative at the beginning of each academic year.

Executive Committee

The Executive Committee comprises:

- Programme Director (Dr Finian Leeper)
- Five Theme Leaders
 - Agriculture and Food Security (AFS)
 - Bioscience for Health (Health)
 - Industrial Biotechnology and Bioenergy (IBBE)
 - World-Class Underpinning Bioscience (World)
 - Exploiting New Ways of Working (ENWW)
- Deputy Theme Leaders
 - AFS, Health, IBBE, World and ENWW
- DTP Coordinator/Administrator

The Executive Committee meets several times a year:

- September: approve submitted Co-Funded/Targeted and iCASE projects (for recruitment to 2018 cohort) and approve first rotation project choices for incoming 2017 cohort
- November: discuss the first month of the Programme, report on student progress with the training courses and prepare for recruitment tasks (December and January)
- January: shortlist candidates for interview for admission in October 2018
- January: following interviews select final candidates and make offers, discuss feedback/marks for rotation project 1 reports and report on student progress with the training courses
- April/May: discuss feedback/marks for rotation project 2 reports, agree Research Experience Placements projects and report on training courses
- June: discuss feedback/marks for PhD project proposals and review approve submitted Rotation/PhD projects for 2018 cohort
- July: welcome new Deputy Theme Leaders and discuss recruitment, confirm student timetable and Executive Committee meeting dates for 2018/19 academic year and discuss BBSRC annual report

Fig. 1: Management and Administration of Cambridge DTP2

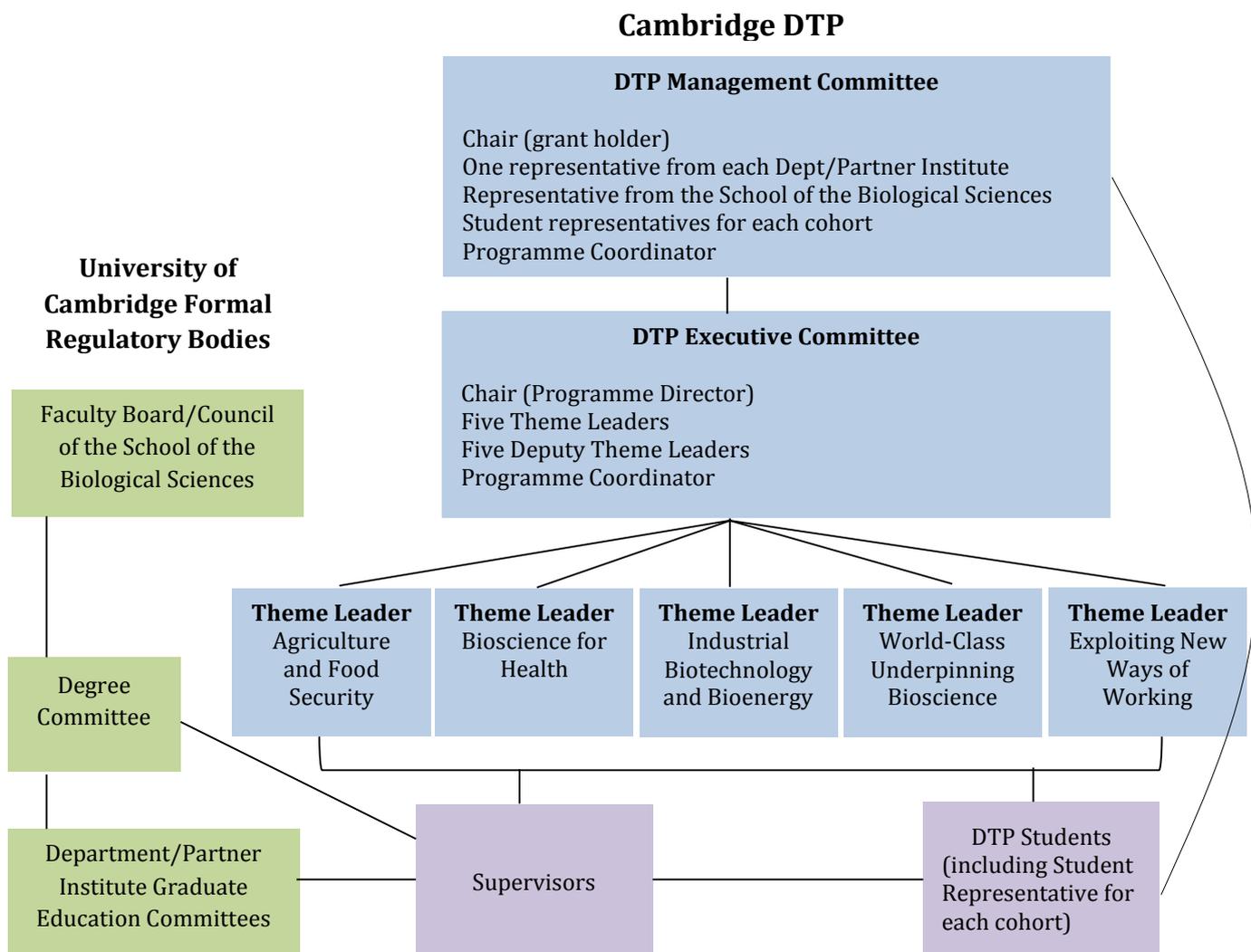


Fig. 2: Timelines for DTP1 and DTP2 Cohorts over Four Year PhD Programme

	DTP1			DTP2				
2012/13	Cohort 1							
2013/14	Cohort 1	Cohort 2						
2014/15	Cohort 1	Cohort 2	Cohort 3					
2015/16	Cohort 1	Cohort 2	Cohort 3	Cohort 4				
2016/17		Cohort 2	Cohort 3	Cohort 4	Cohort 5			
2017/18			Cohort 3	Cohort 4	Cohort 5	Cohort 6		
2018/19				Cohort 4	Cohort 5	Cohort 6	Cohort 7	
2019/20					Cohort 5	Cohort 6	Cohort 7	Cohort 8
2020/21						Cohort 6	Cohort 7	Cohort 8
2021/22							Cohort 7	Cohort 8
2022/23								Cohort 8

Theme Leaders (TL)

Theme Leaders are appointed by their Head of Department as Deputy TLs (see below), then the following year become TLs. Their responsibilities are:

- Students within their theme and cohort for the entire four-year Programme
- To act as Supervisors for the purposes of CamSIS during the first six months of the first year of the Programme. TLs complete a CamSIS report on their students in both the Michaelmas and Lent Terms of the first year. CamSIS is then updated to reflect the student's new PhD Supervisor from Easter Term of the first year.
- Meet with their students as least once during both Michaelmas and Lent Terms to assess academic progression and provide duty of care, and to facilitate completion of the CamSIS reports. TLs are not formally required to meet with students after the first year.
- Organise social/learning opportunities for their cohort
- Attend the Programme summer event for all students
- Membership of the Executive Committee (approx. seven meetings per year)
- Provide support for the Deputy Theme Leader

2017 Theme Leaders: Responsible for students in Cohort 6 (October 2017 start)

Agriculture & Food Security	Zoology	Prof Bill Sutherland
Bioscience for Health	Psychology	Dr David Belin
Industrial Biotechnology & Bioenergy	Plant Sciences	Prof Alison Smith
World-Class Underpinning Bioscience	Sanger	Dr Martin Hemberg
World-Class Underpinning Bioscience	EBI	Dr Oliver Stegle
Exploiting New Ways of Working	Veterinary Medicine	Dr Simon Frost

Deputy Theme Leaders (Deputy TL)

Deputy TLs are appointed by their Head of Department. Their responsibilities are:

- Student recruitment to the DTP Programme
 - For example, 2017/18 Deputy TLs assess and rank applications in Michaelmas 2017 and carry out interviews in Lent 2018 in order to recruit the October 2018 intake (Cohort 7; Fig. 2 and Fig. 3)
 - Deputy TLs nominate two colleagues, preferably from other Departments, in November to assist with scoring and ranking applications in December in order to shortlist candidates
 - Deputy TLs should attend shortlisting and offer meetings in January
- Membership of the Executive Committee (approx. seven meetings per year)
- Provide support for the incoming Deputy TL (new to the DTP Programme)
- Promotion to TL the following year

2017 Deputy Theme Leaders: Responsible for recruiting Cohort 7 (October 2018 start)

Agriculture & Food Security	Pathology	Dr Paolo D'Avino
Bioscience for Health	IMS-MRL	Dr Frank Reimann
Industrial Biotechnology & Bioenergy	Physics	Dr Sarah Bohndiek
World-Class Underpinning Bioscience	PDN	Prof Bill Colledge

Fig. 3: Theme and Deputy TLs for DTP2

Each Department/Partner Institute selects a representative who is “on duty” for five years, but in practice the majority of the work is recruitment in late Michaelmas/Lent of the first year on the Committee (as Deputy TL), and monitoring students for the second year on the Committee (as TL). They would also be involved with the cohort they recruited throughout the four-year Programme. [Theme Leaders in bold].

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture & Food Security	Raymond Bujdoso, Vet Med	Raymond Bujdoso, Vet Med	Raymond Bujdoso, Vet Med	Raymond Bujdoso, Vet Medicine	Raymond Bujdoso, Vet Medicine				
Target = 9 students per year		Alison Bentley, NIAB	Alison Bentley, NIAB	Alison Bentley, NIAB	Alison Bentley, NIAB	Alison Bentley, NIAB			
			Bill Sutherland, Zoology	Bill Sutherland, Zoology	Bill Sutherland, Zoology	Bill Sutherland, Zoology	Bill Sutherland, Zoology		
				Paolo D'Avino, Pathology	Paolo D'Avino, Pathology	Paolo D'Avino, Pathology	Paolo D'Avino, Pathology	Paolo D'Avino, Pathology	
					Plant Sciences	Plant Sciences	Plant Sciences	Plant Sciences	Plant Sciences

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Bioscience for Health	Angela Roberts, PDN	Angela Roberts, PDN	Angela Roberts, PDN	Angela Roberts, PDN	Angela Roberts, PDN				
Target = 6 students per year		John Doorbar, Pathology	John Doorbar, Pathology	John Doorbar, Pathology	John Doorbar, Pathology	John Doorbar, Pathology			
			David Belin, Psychology	David Belin, Psychology	David Belin, Psychology	David Belin, Psychology	David Belin, Psychology		
				Frank Reimann, IMS	Frank Reimann, IMS	Frank Reimann, IMS	Frank Reimann, IMS	Frank Reimann, IMS	
					Pharmacology	Pharmacology	Pharmacology	Pharmacology	Pharmacology

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Industrial Biotechnology & Bioenergy	Chris Howe, Biochemistry	Chris Howe, Biochemistry	Chris Howe, Biochemistry	Chris Howe, Biochemistry	Chris Howe, Biochemistry				
Target = 5 students per year		Finian Leeper, Chemistry	Finian Leeper, Chemistry	Finian Leeper, Chemistry	Finian Leeper, Chemistry	Finian Leeper, Chemistry			
			Alison Smith, Plant Sciences	Alison Smith, Plant Sciences	Alison Smith, Plant Sciences	Alison Smith, Plant Sciences	Alison Smith, Plant Sciences		
				Sarah Bohndiek, Physics	Sarah Bohndiek, Physics	Sarah Bohndiek, Physics	Sarah Bohndiek, Physics	Sarah Bohndiek, Physics	
					Chem Eng & Biotech	Chem Eng & Biotech	Chem Eng & Biotech	Chem Eng & Biotech	Chem Eng & Biotech

	2014	2015	2016	2017	2018	2019	2020	2021	2022
World-Class Underpinning Bioscience	Peter Evans, Babraham	Peter Evans, Babraham	Peter Evans, Babraham	Peter Evans, Babraham	Peter Evans, Babraham				
Target = 10 students per year		Cahir O'Kane, Genetics	Cahir O'Kane, Genetics	Cahir O'Kane, Genetics	Cahir O'Kane, Genetics	Cahir O'Kane, Genetics			
			Hemberg, Sanger/Oliver Stegle, EBI	Hemberg, Sanger/Oliver Stegle, EBI	Hemberg, Sanger/Oliver Stegle, EBI	Hemberg, Sanger/Oliver Stegle, EBI	Hemberg, Sanger/Oliver Stegle, EBI		
				Bill Colledge, PDN	Bill Colledge, PDN	Bill Colledge, PDN	Bill Colledge, PDN	Bill Colledge, PDN	
					Biochemistry	Biochemistry	Biochemistry	Biochemistry	Biochemistry

	2015	2016	2017	2018	2019	2020	2021	2022
Exploiting New Ways of Working		Nik Cunniffe, Plant Sciences	Nik Cunniffe, Plant Sciences	Simon Frost, Vet Med				
		Julia Gog, DAMTP	Simon Frost, Vet Med					

Rotation Project Supervisors

During the first six months of the first year of the Programme, students complete two 10-week rotation projects, either in a University Department/Institute or one of the external Partner Institutes. The rotation projects allow students to gain experience of two different research environments and make an informed choice of their PhD project.

In April, the DTP Administrator asks Departments and Partner Institutes to submit projects for consideration. Projects are assessed by the Executive Committee (Theme and Deputy TLs) and approved projects are classified by theme. Ordinarily, each Supervisor is permitted to supervise one rotation project each term, but special circumstances will be considered.

Over the summer, students are invited to express their preferences for rotation projects which are discussed at the Executive Committee meeting in September. Students are given contact details of their Supervisor and notified of the start date at the start of the Programme in September/October. They confirm their second rotation project in November, following the Department Introduction event, visits to the external Partner Institutes and opportunities to network within the partnership. Rotation Project 1 runs from October to December and Rotation Project 2 runs from January to March.

Rotation Project Supervisors are responsible for arranging access, facilities, equipment and any specific training required in good time for the student to complete the project within the 10 weeks. Funding for the student is allocated by the University Research Office to the Department where the rotation project laboratory is based.

Following each rotation project students have a two-week period to write and submit the project report. The two weeks are used to complete analysis and write-up data—not undertake further research. Students should submit a final draft of their report to their Rotation Project Supervisor in good time for the Supervisor to read the report and provide feedback before the submission deadline.

Rotation Project Supervisors are required to:

- Nominate two colleagues to assess their DTP student's rotation report
 - The DTP Administrator provides each Assessor with a copy of the report and feedback form
- Submit feedback and a mark once they have read their student's report

Please note, although Rotation Project Supervisors are responsible for supervising DTP students whilst they complete their projects, they are not recorded as a Supervisor in CamSIS. The student's Supervisor is their Theme Leader until their PhD Supervisor/project is approved.

PhD Supervisors

The majority of rotation projects are linked to PhD projects and most students choose one of these to continue for a PhD. However, different projects with the same Supervisor or different Supervisors are also possible, in consultation with the Theme Leader. Ordinarily, each Supervisor is permitted to have one BBSRC DTP PhD student per cohort, but special circumstances will be considered.

During Michaelmas Term students are introduced to Departments involved in the DTP Programme and visit the five external Partner Institutes. Students are responsible for organising their PhD project and completing a project proposal by April of their first year. Prospective PhD Supervisors should read and provide feedback on at least one draft of the

project proposal prior to submission. In May, two Assessors, nominated by the prospective PhD Supervisor, and the PhD Supervisor provide feedback and a mark for the report. The Executive Committee (Theme and Deputy Tls) reviews all feedback/marks.

PhD Supervisors are required to:

- Nominate two colleagues to assess their DTP student's PhD project proposal
 - The DTP Administrator provides each Assessor with a copy of the report and feedback form
- Submit feedback and a mark once they have read their student's report

During the second year of the Programme students follow the procedures of their Department/Institute Graduate Education Committee, which usually involves submission of a written report ('first year report') on their activities and a viva. Upon passing these requirements students are fully registered for the PhD, backdated to when they entered the DTP Programme.

If a student chooses to undertake Module 1 of the online *Systems training in Maths, Informatics and Computational Biology* (SysMIC) course during the first year of the Programme, then PhD Supervisors should encourage them to progress through Modules 2 and 3 during their PhD.

It is a requirement of the BBSRC DTP Programme that students complete a 12-week non-academic internship (PIPS), ideally after the Department/Institute's First Year Assessment and before the last six months of the Programme. PhD Supervisors should be positive and encouraging regarding this opportunity, which is an obligatory part of the DTP Programme, and assist students in deciding the most appropriate time to be away from the laboratory.

PhD Supervisors are required to submit a termly report on their student through CamSIS. Academics based in Partner Institutes should request access to CamSIS and renew their access each year.

Before the end of the fourth year (48 months total) students must complete and submit their thesis for examination.

Supervisors of DTP students are subject to the same Statutes and Ordinances of the University (www.governance.cam.ac.uk/governance/uni-legislation/Pages/Stats-and-Ords.aspx) and reporting processes as for other postgraduate students.

New PhD Supervisors must ensure that they have a CRSid and have access to all University IT systems, as required to supervise a graduate student. They should complete the New Supervisor Form (www.student-registry.admin.cam.ac.uk/graduate-information-university-staff/graduate-supervision) and return this to Student Registry. New supervisors should read the University's guidance for new supervisors, available in the Code of Practice (www.cambridgestudents.cam.ac.uk/new-students/manage-your-student-information/graduate-students/code), and contact their Department's graduate administrator/committee for further advice regarding supervising postgraduate students.

If a DTP PhD supervisor is considering leaving their Department or the University, please speak to the DTP Programme Director or Coordinator immediately to assess feasibility of retaining students and studentships.

Training in Exploiting New Ways of Working

DTP students participate in Exploiting New Ways of Working (ENWW) during the first year of the Programme:

- Formal Training Courses
 - Training in *Programming in R, Data Carpentry and Plotting, Reproducible Research* and *Statistics*. Three-hour, mixed lecture-practical, sessions in September/October.
 - Five three-hour sessions in Lent Term consisting of a short reminder of the autumn training, followed by a free-flowing class in which students can receive help with the assignments.
 - Training to be delivered in Easter Term based on student need.
- Mathematical Modelling and Computing
 - *Systems Training in Maths, Informatics, Statistics and Computational Biology* (SysMIC; <http://sysmic.ac.uk/>) online course which runs during Michaelmas, Lent and Easter Terms. SysMIC focuses on reinforcing/developing skills in mathematical modelling and computing (via the programming language MATLAB). Students with a strong background can select a more advanced version of this course.
 - For those students whose research needs are not fulfilled by the SysMIC course they can access a training budget to ensure they have the opportunity to attend useful courses and develop the skills, knowledge and experience required to be successful in their PhD.
- Personal Development Strategy
 - In Michaelmas Term, each student will have a brief discussion with a member of the ENWW Team to discuss their training needs and available options. They will be responsible for finding opportunities and attending training courses and will write a brief 'Learning Log' to be submitted with their second rotation project report.

The ENWW TL for 2017/18 is **Dr Simon Frost**, from the Department of Veterinary Medicine. He and the Deputy TL are responsible for the entire cohort, irrespective of their theme.

Programming in R

The aim of these sessions is to introduce basic computer programming in R, which will be used for the Statistics for Biologists training. The sessions are deliberately pitched at the introductory level, although exercises of varying difficulty will be provided for students with more programming experience.

Data Carpentry and Plotting

The aim of these sessions is to show how to effectively handle and transform data.

Reproducible Research

The aim of this session is to introduce the concept of reproducible research, and how this may be assisted using 'literate programming'—combining documentation with code.

Statistics for Biologists

The aims of this training are to help students acquire the data analysis and statistical skills necessary for research projects and for evaluating literature and to provide practical experience in performing common statistical analyses using the R programming language and environment.

SysMIC Training Modules

The SysMIC (*Systems Training in Maths, Informatics, Statistics and Computational Biology*) modules are online training courses that involve using simple MATLAB programming to solve mathematical problems in a biological context. They were developed by a consortium of UK Universities (University College London, Birkbeck College, University of Edinburgh and the Open University) and funded by BBSRC. Students will be given the choice whether to complete SysMIC or have access to a training budget. All students who register for SysMIC will be expected to complete either Module 1 or 2 of the course, which starts in November 2017.

Student progress through the SysMIC course will be monitored and satisfactory completion of Module 1 or 2 is a pre-requisite for progression into the second PhD year. This requires submitting write-ups for nine assignments, plus a mini-project, which involve using simple MATLAB programming to solve mathematical problems in a biological context.

If the SysMIC course does not fulfil research needs, then students can access a training budget to support training relevant to the PhD. Students have access to the budget throughout the four years of the Programme. They should not spend these funds on travel/conference. Students should contact the DTP Coordinator with information about the training course; if approved by the ENWW Team then the Coordinator will facilitate funding the course.

Personal Development Strategy

Students attend a brief interview with the ENWW team early in Michaelmas Term, in order to identify suitable training from the wide range of courses available across the University. They also discuss their rotation projects and agree on a way in which learning in ENWW can be evidenced in their own data. Students submit a brief 'Learning Log' alongside the second rotation project. This log will be a reflection of what mathematics, computing and/or statistics skills students have learnt during the first six months of the Programme and information regarding skills they intend to develop and how they will go about doing so.

Researcher Development

Researcher Development (RD) encompasses all of the learning and development that students acquire and apply during their time in Cambridge. The Cambridge Researcher Development Framework (CamRDF) presents these skills as 15 core competencies. The DTP Programme encourages and supports students in completing the Graduate School of Life Sciences (GSLS) Core Skills Training Programme (CSTP).

Health and Safety

Students must adhere to the specific health and safety regulations of the Department in which they are working at each stage of the Programme. Students must attend the compulsory lectures in the University Safety course in October and are encouraged to attend the optional biological safety, cryogenics, VDUs, pipettes, glass and sharps, and radiation courses as appropriate. Courses can be booked online: www.safety.admin.cam.ac.uk/training/graduate-safety-course/current-timetable-venues-and-handouts

Professional Internship for PhD Students (PIPS)

As part of the BBSRC DTP Programme students complete a 12-week (60 working days) internship in a professional environment. Students should choose a PIPS that is not research in academia, or related to their field of research. The PIPS can be taken as one 12-week block or two shorter blocks (subject to the agreement of the PhD Supervisor and PIPS Coordinator, Dr Sarah Fahle).

Students attend a PIPS workshop, which explains the purpose of the internship, describes how the process is managed and gives them the opportunity to listen to students from previous cohorts who have completed their PIPS. Following the workshop students are given access to the *Preparing for PIPS* e-learning Moodle course and are expected to complete Module 1 by the end of August of the first year of the Programme. Module 1 requires students to think about the skills they would like to develop and to speak to their PhD Supervisor about the best time to be away from the laboratory. The accompanying assignments are approved by the PIPS Coordinator as part of their first year of study.

Module 2 guides the students through the practical aspects of planning their PIPS. This must be completed and approved by the PIPS Coordinator before the placement begins. Students are encouraged to conduct their PIPS after the Department/Institute's First Year Assessment and before the last six months of the Programme. They must not postpone the internship until the end of their PhD; therefore, PhD Supervisors should assist students in deciding the most appropriate time to be away from the laboratory.

Students should prioritise agreeing dates with the host organisation and starting the Leave to Work Away (LTWA) process. All students must obtain LTWA permission, even if their internship is in Cambridge. Further information is available here: www.cambridgestudents.cam.ac.uk/your-course/graduate-study/your-student-status/work-away-cambridge

As students should not be paid for their internship and there are limited funds available for travel/accommodation, students are highly encouraged to conduct their PIPS in Cambridge or in the UK.

Students must complete Module 3 of the *Preparing for PIPS* course within one month of finishing their internship. Both the student and host organisation are required to submit short reports. Students must also complete a report for BBSRC.

Dr Sarah Fahle (srf42@cam.ac.uk) is available to discuss internship opportunities and the internship organisation process with students. Dr Ben Murton (blm23@cam.ac.uk) is available to discuss personal and professional development. Further details about PIPS will be provided in the PIPS workshop and Sarah organises regular 'contact days' for students to meet with her. Details of current internship opportunities can be found in the *Preparing for PIPS* Moodle course and students are emailed internship opportunities throughout the year.

PhD Supervisors can find more information about PIPS on the DTP website: bbsrcdtp.lifesci.cam.ac.uk/PIPS

Queries regarding PIPS should be directed to the PIPS Coordinator, Dr Sarah Fahle: srf42@cam.ac.uk

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. The Programme has four themes which align with the strategic research priorities of BBSRC and students are recruited into a specific theme.

Agriculture and Food Security

The Theme Leader for 2017/18 is **Professor Bill Sutherland** from the Department of Zoology. He is responsible for Cohort 6 (2017-2021) students within this theme.

The Deputy TL for 2017/18 is **Dr Paolo D'Avino** from the Department of Pathology. He will recruit Cohort 7 and as Theme Leader will be responsible for these students throughout the Programme (2018-2022).

The Deputy TL for 2018/19 will be from the Department of Plant Sciences.

Please visit: bbsrcdtp.lifesci.cam.ac.uk/dtpprog/food for information about this theme and example rotation/PhD projects.

Bioscience for Health

The Theme Leader for 2017/18 is **Dr David Belin** from the Department of Psychology. He is responsible for Cohort 6 (2017-2021) students within this theme.

The Deputy TL for 2017/18 is **Dr Frank Reimann** from the Institute of Metabolic Science. He will recruit Cohort 7 and as Theme Leader will be responsible for these students throughout the Programme (2018-2022).

The Deputy TL for 2018/19 will be from the Department of Pharmacology.

Please visit: bbsrcdtp.lifesci.cam.ac.uk/dtpprog/health2 for information about this theme and example rotation/PhD projects.

Industrial Biotechnology and Bioenergy

The Theme Leader for 2017/18 is **Professor Alison Smith** from the Department of Plant Sciences. She is responsible for Cohort 6 (2017-2021) students within this theme.

The Deputy TL for 2017/18 is **Dr Sarah Bohndiek** from the Department of Physics. She will recruit Cohort 7 and as Theme Leader will be responsible for these students throughout the Programme (2018-2022).

The Deputy TL for 2018/19 will be from the Department of Chemical Engineering and Biotechnology.

Please visit: bbsrcdtp.lifesci.cam.ac.uk/dtpprog/bib for information about this theme and example rotation/PhD projects.

World-Class Underpinning Bioscience

The Theme Leaders for 2017/18 are **Dr Martin Hemberg**, from the Wellcome Trust Sanger Institute, and **Dr Oliver Stegle** from the European Bioinformatics Institute. They are responsible for Cohort 6 (2017-2021) students within this theme.

The Deputy TL for 2017/18 is **Professor Bill Colledge** from the Department of Physiology, Development and Neuroscience. He will recruit Cohort 7 and as Theme Leader will be responsible for these students throughout the Programme (2018-2022).

The Deputy TL for 2018/19 will be from the Department of Biochemistry.

Please visit: bbsrcdtp.lifesci.cam.ac.uk/dtpprog/world2 for information about this theme and example rotation/PhD projects.

Contact details for the Executive Committee (Theme and Deputy TLs) can be found here: bbsrcdtp.lifesci.cam.ac.uk/ProspectiveCurrentStudents/contact

Further information about BBSRC strategic research priorities can be found here: www.bbsrc.ac.uk/news/planning/strategy/

Access to CamSIS (Partner Institutes)

It is essential that the person(s) representing the Graduate Committee at each external Partner Institute has access to CamSIS, in order to approve supervisor reports and elements of the Programme, such as a student's Leave to Work Away (required for PIPS). PhD Supervisors must also have access in order to complete termly reports on their students, using the Cambridge Graduate Supervision Reporting System (CGSRS): www.student-registry.admin.cam.ac.uk/information-supervisors/cambridge-graduate-supervision-reporting-system-cgsrs PhD Supervisors are required to complete these reports each term to ensure that student progress is monitored.

New users should contact the CamSIS Helpdesk: camsishelp@admin.cam.ac.uk or 01223 (7)64999.

Users from Partner Institutes need to renew or "Self Certify" their access each year or else will have to go through the set-up process again. The CamSIS Team send a reminder email through the "@cam.ac.uk" email address (which Partner Institute employees may not be receiving). To receive the reminder email, please do the following:

Once given access to Hermes webmail (webmail.hermes.cam.ac.uk/), login (using Raven) and change the settings to forward emails (Settings - Mail Processing - Redirect). Users will then receive the CamSIS reminder email and can confirm they are still a Supervisor before the account is shut down. Users can also forward emails by going to the University's Lookup Directory (www.ucs.cam.ac.uk/lookup/), login using Raven and change the "@cam delivery address".

Important information about the Programme is held behind a Raven login on the DTP website: bbsrcdtp.lifesci.cam.ac.uk/dtpint

Supervisor and Student Support

Staff and students are encouraged to contact the following individuals regarding any issue within the DTP Programme:

- Management Committee Chair and grant holder, Professor Alison Smith: as25@cam.ac.uk and (3)33952
- Programme Director and Executive Committee Chair, Dr Finian Leeper: fji1@cam.ac.uk and (3)36403
- Programme Coordinator/PIPS Coordinator, Dr Sarah Fahle: srf42@cam.ac.uk and (7)47160
- Executive Committee members: bbsrcdtp.lifesci.cam.ac.uk/ProspectiveCurrentStudents/contact

The BBSRC DTP website: bbsrcdtp.lifesci.cam.ac.uk/ is frequently updated and provides a wealth of information.

Year One Assessment

Progression within the DTP Programme relies on satisfactory completion of the following:

- Taught modules
 - Michaelmas Term training courses
 - Lent Term training courses
 - SysMIC (if applicable)
 - ENWW 'Learning Log'
- Reports on two rotation projects
- PhD project proposal
- Module 1 of the Moodle course *Preparing for PIPS*

Students receive feedback and a mark (Excellent, Very Good, Good, Satisfactory or Requires Improvement) for each rotation project report and PhD project proposal. Students whose reports or proposal are marked as 'Satisfactory' or 'Requires Improvement' will be asked to meet with their Theme Leader and/or PhD Supervisor to discuss training and skills development. The DTP Programme reserves the right to withdraw financial support if a student is not adequately progressing (ie, repeatedly receiving 'Requires Improvement' marks) through the Programme. The review process is overseen by the Executive Committee (bbsrcdtp.lifesci.cam.ac.uk/ProspectiveCurrentStudents/contact) who will review feedback and marks from Supervisors and Assessors.

Research Contracts

A research contract is required to ensure that a researcher has freedom to operate when working with an external collaborator. Prior to any external work Partner Institutes and DTP students must contact the DTP Administrator (bbsrcdtp@lifesci.cam.ac.uk) for advice.

Eligibility and Funding

UK and EEA students who meet the UK residency requirements are eligible for a full BBSRC studentship. Students from EEA countries who do not meet the residency requirements may still be eligible for a fees-only award.

Further details on eligibility (qualifications and residency criteria):

www.bbsrc.ac.uk/documents/studentship-eligibility-pdf/

EEA students eligible for a fees-only award can apply for University-wide funding schemes. Further information can be found here: www.graduate.study.cam.ac.uk/finance/funding

Students funded by BBSRC will have their University tuition fees paid directly from the School of the Biological Sciences. Students who are eligible to receive a maintenance stipend from BBSRC will receive payments on the 26th of each month once the forms supplied by the Programme Administrator have been completed.

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

- Up to £1,500 for consumables for each rotation project
- £15,000 for consumables for the duration of the PhD
- £900 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 Supervisors and liaise with their Department/Institute Graduate Administrator.

Laptops are not provided, but financial support may be available for upgrades or software. Generally, after the first year of the Programme, IT needs should be met through the PhD consumables funding.

Recruitment Process for Studentships

Students are recruited centrally by the Executive Committee to the DTP Programme using the following timetable:

- October: open call for applications on the BBSRC DTP website
- December (beginning): deadline for applications from students
- December (middle): applications sent to Deputy TLs and Assessors for ranking
- January (beginning): assessment scores and rankings returned to DTP Administrator
- January (beginning): Executive Committee meets to shortlist candidates
- January (end): candidate interviews
- January (end): Executive Committee finalises offers

Co-Funded/Targeted Studentships

Co-Funded/Targeted projects allow the DTP Programme to fund more postgraduates and offer the opportunity for all Partners to participate in the Programme. Approximately 10 Co-Funded/Targeted Studentships are awarded per year.

All Partners can bid for these studentships, which are allocated by the BBSRC DTP Executive Committee and assessed using one or more of the following criteria:

1. The project provides training in vulnerable skills
2. The project is interdisciplinary and/or involves a collaboration between DTP Partners
3. The project is in a new highlight area or focuses on a specific problem that arises, such as tackling an epidemic of crops or farm animals
4. The DTP Partner has not received any students from the previous year's cohort
5. The Supervisor is engaged in the DTP Programme (ie, sits on a Committee, involved in the recruitment process, etc)
6. There is the opportunity for co-funding, for example from a Departmental studentship, another doctoral training programme or an industrial partner

Each Partner can bid for one project per year under criteria 1-5 or up to two per year under criterion 6.

The call for projects is usually April through August. The DTP Executive Committee then reviews and awards projects. The successful PI is responsible for advertising and recruiting to the studentship and can make an informal offer. Before making an offer, the PI should ensure that the successful candidate is eligible for BBSRC funding and make arrangements for further funding, if required. The DTP Executive Committee reviews all candidate GRADSAFs and accompanying documentation and makes the formal offer.

Students awarded Co-Funded/Targeted Studentships follow the full DTP Programme. During the first six months they complete training in Statistics, Computational and Systems Biology and Research Skills (Exploiting New Ways of Working) and undertake two 10-week rotation projects, although these may be designated by the Supervisor rather than the student. On successful completion of the above, they proceed to their PhD project. Moreover, the students must complete a 12-week (60 days) non-academic internship (PIPS), ideally after the Department/Institute's First Year Assessment and before the last six months of the Programme. All aspects of the DTP Programme must be completed within 48 months of their start date.

Information about Co-Funded/Targeted Studentships and the application form can be found here (Raven login required): bbsrcdtp.lifesci.cam.ac.uk/dtpint

BBSRC Industrial Case (iCASE) Studentships

Industrial CASE (iCASE) studentships are allocated to BBSRC DTP Programmes to be awarded alongside their standard studentships. The Cambridge DTP Programme awards 11 studentships per year.

Each iCASE Studentship provides funds for fees (RCUK rate only), student maintenance stipend (if BBSRC eligible), PhD consumables, conference/travel and DTP Programme training courses.

Industrial Partners (IPs) must cover all costs associated with the placement. Students must carry out a placement with their Industrial Partner for at least three months and up to a maximum of 18 months.

For IPs with 50+ employees, the IP must make a cash contribution to the academic partner of at least £1,400 per year. This requirement is not mandatory for IPs who have 50 or fewer employees.

It is recommended that IPs cover the Academic Partner Cost, which in 2018 will total £6,600 (estimated) over the four years of the studentship. If the IP cannot cover this cost then the PI (or

Department/Partner Institute) will be required to meet this shortfall. This cost is in addition to the £1,400 per year requirement.

IPs might also be able to contribute funding for:

- Maintenance stipend top-up (desirable but not essential)
- Consumables/field work/travel/conferences
- DTP Programme training (£1,500)
- In kind (data, access to equipment, staff time, etc)

A signed supporting letter from the IP, outlining their contribution to the project (financial and in kind), should be submitted with the application form.

The call for projects is usually April through August. The DTP Executive Committee then reviews and awards projects. The successful PI is responsible for advertising and recruiting to the studentship and can make an informal offer. Before making an offer, the PI should ensure that the successful candidate is eligible for BBSRC funding and make arrangements for further funding, if required. The DTP Executive Committee reviews all candidate GRADSAFs and accompanying documentation and approves candidates, but the formal offer is made by the Department/Partner Institute. The Research Operations Office and Supervisor/Department negotiate a contract with the IP. External Partner Institutes are responsible for organising subcontracts with the University.

Students awarded iCASE Studentships complete training in Statistics, Computational and Systems Biology and Research Skills (Exploiting New Ways of Working). In principle, it is possible for the student to undertake a rotation(s) if they wish, but a rotation(s) is not compulsory and responsibility for organising/administering this element is devolved to the Department. Students must carry out a placement with their Industrial Partner for at least three months and up to a maximum of 18 months. iCASE students will be invited to attend DTP Programme training and social opportunities. All aspects of the DTP Programme must be completed within 48 months of their start date.

Information about iCASE Studentships and the application form can be found here (Raven login required): bbsrcdtp.lifesci.cam.ac.uk/dtpint

Research Experience Placements (REP)

As part of the DTP Programme, BBSRC has provided funds to support 12 summer students in the REP scheme.

The call for projects is usually March through April. Each Department/Partner Institute is invited to submit two applications nominating a student with an identified project and Supervisor. The applications should be ranked (first and second choice). The value of a REP is £2,500 to cover a minimum stipend of £200 per week to the student and a contribution towards research expenses during the placement.

Information about student eligibility and funding—as well as the application form and the post-placement report—can be found here: bbsrcdtp.lifesci.cam.ac.uk/reps

BBSRC DTP Events and Activities

The DTP organises a number of events to foster relationships within the cohort and entire Programme and to provide students with additional personal and professional training opportunities. Students are expected to attend all Programme training and events. We encourage individuals involved with the DTP Programme to attend when appropriate.

- Theme Leader meetings
- Welcome dinner and Department/external Partner Institute visits
- PIPS workshop
- Thesis and Viva workshop (final year)
- Annual event for all DTP Programme students and staff

For each cohort, students elect a representative who serves on the Management Committee and is responsible for collecting feedback and reporting this information to committee members.

PhD Supervisors of DTP students will receive the DTP Programme monthly e-news bulletin, updating them on Programme news and training/funding opportunities within Cambridge and further afield.

Student Employment

Students are permitted to undertake up to eight hours paid employment per week during the course of their studies, usually teaching (demonstrating or supervising). It is advised that they do not work during the first year of the Programme.

Annual Leave and Intermission

Due to the structured nature of the first year of the Programme, it is not possible for students to take annual leave outside of the designated holiday periods in December and Easter. In subsequent years of the Programme, students are entitled to a total of eight weeks of annual leave (which includes public holidays), 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:

www.admin.cam.ac.uk/students/studentregistry/current/graduate/programme/intermission.html

Students funded by 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.

Withdrawal From the Programme

DTP2 students are not awarded the MRes degree upon completing the first year of the Programme. Students considering or wishing to leave the Programme should consult their Theme Leader and PhD Supervisor and notify the Programme Coordinator.

Useful Information and Contacts (2017/18)

Role	Name	Telephone and Email
Chair, Management Committee	Professor Alison Smith	(3)33952 as25@cam.ac.uk
Programme Director/Chair, Executive Committee	Dr Finian Leeper	(3)36403 fjl1@cam.ac.uk
Programme Coordinator/PIPS Coordinator	Dr Sarah Fahle	(7)47160 srf42@cam.ac.uk
Programme Administrator		bbsrcdtp@lifesci.cam.ac.uk
Graduate School of Life Sciences	Cathy Butler	(7)66897 enquiries@lifesci.cam.ac.uk

BBSRC DTP Executive Committee (2017/18)

[\[bbsrcdtp.lifesci.cam.ac.uk/ProspectiveCurrentStudents/contact\]](http://bbsrcdtp.lifesci.cam.ac.uk/ProspectiveCurrentStudents/contact)

Theme Leaders

Role	Name	Dept	Telephone and Email
Agriculture & Food Security	Professor Bill Sutherland	Zoology	(3)36686 wjs32@cam.ac.uk
Bioscience for Health	Dr David Belin	Psychology	(3)33588 bdb26@cam.ac.uk
Industrial Biotechnology & Bioenergy	Professor Alison Smith	Plant Sciences	(3)33952 as25@cam.ac.uk
World-Class Underpinning Bioscience	Dr Martin Hemberg	Sanger	martin.hemberg@sanger.ac.uk
World-Class Underpinning Bioscience	Dr Oliver Stegle	EBI	01223 494101 stegle@ebi.ac.uk
Exploiting New Ways of Working	Dr Simon Frost	Veterinary Medicine	sdf22@cam.ac.uk

Deputy Theme Leaders

Role	Name	Dept	Telephone and Email
Agriculture & Food Security	Dr Paolo D'Avino	Pathology	(3)33712 ppd21@cam.ac.uk
Bioscience for Health	Dr Sarah Bohndiek	Physics	(3)37267 seb53@cam.ac.uk
Industrial Biotechnology & Bioenergy	Dr Frank Reimann	IMS-MRL	(7)62626 fr222@cam.ac.uk
World-Class Underpinning Bioscience	Professor Bill Colledge	PDN	(3)33881 whc23@cam.ac.uk

Appendix 1: Programme Participants

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

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](#)

All University Departments/Institutes and Partner Institutes are represented on the Management Committee. Each summer, the Head of Department confirms their representative on the Committee for the next academic year.

Members of the Partnership serve on the Executive Committee on a rotation. Each spring, the Head of Department appoints a Deputy Theme Leader for their assigned theme who recruits students and then becomes Theme Leader for their cohort.

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.

Appendix 2: BBSRC DTP Management Committee (2017/18)

If a Committee member is unable to attend a meeting they are obliged to send a deputy to ensure that all Departments/Partner Institutes are represented.

Meeting dates:

- 26 September 2017, 09:30-11:00, at 17 Mill Lane (Seminar Room E/F)
- 20 March 2018, 09:30-11:00, at 17 Mill Lane (Seminar Room E/F)

DTP Department/Partner Institute	Name
Animal Health Trust (AHT)	Dr Adam Rash
Applied Mathematics & Theoretical Physics (DAMTP) & Pure Mathematics & Mathematical Statistics (DPMMS)	Dr Stephen Eglon
Babraham Institute	Professor Michael Wakelam Dr Peter Evans
Biochemistry	Professor George Salmond
Chemical Engineering & Biotechnology	Dr Graham Christie
Chemistry	Dr Paul Barker Dr Finian Leeper
European Bioinformatics Institute (EBI)	Dr Zamin Iqbal
Genetics	Professor Steve Russell
Institute of Metabolic Science (IMS)	Dr Frank Reimann
National Institute of Agricultural Biology (NIAB)	Dr Fiona Leigh
Pathology	Dr Heike Laman
Pharmacology	Dr Lesley MacVinish
Physics	Professor Pietro Cicuta
Physiology, Development & Neuroscience (PDN)	Professor Dino Giussani
Plant Sciences	Professor Alison Smith
Psychology	Dr Greg Davis
The Sainsbury Lab	Dr Sebastian Ahnert
Veterinary Medicine	Dr Raymond Bujdoso
Wellcome Trust Sanger Institute	Dr Carl Anderson Dr Annabel Smith
Zoology	Dr Andrea Manica