

# 4-Yr (1+3) PhD Programme in Stem Cell Biology and Medicine



Course Manual  
2020/21

# Contents

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CSCI Induction Day.....	1
1+3 PhD Programme in Stem Cell Biology and Medicine .....	2
Assessment Information .....	4
CSCI Student Opportunities.....	6
Guidelines for Assessed Work .....	8
Positive Research Culture.....	11
Open Access .....	14
Code of Practice.....	14
Best Practice for CSCI PhD Supervisors .....	15
Plagiarism: Information for Students .....	16
JCBC Building Information .....	17
Safety & Security Information .....	18
Graduate Safety Course.....	19
Graduate School of Life Sciences (GSLs) .....	20
Useful CSCI Admin Contacts .....	21
Useful University Links for Students .....	22

# CSCI Induction Day

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Monday 5 October 2020

Wellcome - MRC Cambridge Stem Cell Institute  
 Jeffrey Cheah Biomedical Centre (JCBC), Cambridge Biomedical Campus, CB2 0AW

TIME	SESSION	VENUE	
09:45	Register on Zoom <i>Dr Claire Williams, CSCI Graduate Administrator</i>	All morning sessions on Zoom	
10:00	Welcome from the Deputy Director of the CSCI <i>Professor Bertie Göttgens</i>		
10:15	Welcome from:  PhD Programme Director - <i>Dr Brian Hendrich</i> PhD Programme Co-Director – Prof Brian Huntly Graduate Education Director (Haematology) - <i>Dr Dan Hodson</i>		
10:30	Introduction to Public Engagement <i>Greg Palmer</i>		
11:00	<i>Break</i>		
11:20	Introduction to the University Counselling Service <i>Matt Harding</i> CSCI Wellbeing Champion <i>Katie Light</i>		
11:45	Meet the Postgraduate Student Committee		
12:00	JCBC Building Induction <i>Ross Coates</i>		
12:40	JCBC Building Briefing <i>Laboratory Management Team</i>		
13:00	<i>Lunch break</i>		
14:00	Introduction to the 4-Yr Stem Cell PhD Programme <i>Dr Brian Hendrich and Professor Brian Huntly</i>		WT/MRC students to meet in the ground floor large seminar room (JCBC)  Face coverings <u>must</u> be worn
15:00	4-Yr Stem Cell PhD – tours of JCBC (in pairs) <i>With current postgraduate students</i>		
	<i>Refreshments</i>		

# 1+3 PhD Programme in Stem Cell Biology and Medicine

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## Programme Management

PhD Programme Director:  
Dr Brian Hendrich [bdh24@cam.ac.uk](mailto:bdh24@cam.ac.uk)

PhD Programme Co-Director:  
Professor Brian Huntly [bjph2@cam.ac.uk](mailto:bjph2@cam.ac.uk)

Graduate Administrator:  
Dr Claire Williams [sci-phd@stemcells.cam.ac.uk](mailto:sci-phd@stemcells.cam.ac.uk)  
(Jo Jack is on maternity leave until June 2021)

## Course Overview

### Part One: Course Introduction and Orientation (Term 1)

The main aim of these sessions is to introduce you to contributing programme supervisors and their research topics, and to familiarise you with the various buildings and facilities.

### Part Two: Lab Rotations & Skills Courses (Terms 1, 2 and 3)

The aims are to:

- enable you to participate in a cross-section of research through three laboratory rotations throughout the first year
- provide a framework for learning fundamental aspects of stem cell and developmental biology through a series of teaching modules
- develop your critical evaluation of science via the literature reviews and seminar programme
- receive training in a variety of technical approaches such as flow cytometry, cell culture and imaging
- develop skills in project management, data presentation and scientific writing.

You will rotate in the labs of three different contributing supervisors of your choice. You are expected to select your rotations so that you gain experience of at least two different stem cell types and at least two different working environments (i.e. different buildings/ departments).

Each rotation lasts for 9 weeks, at the end of which you will have approximately 3 weeks to hand in a report. The 9+3 week rotation is to emphasise the need to consolidate, analyse data and write-up during the designated '+3' period, to ensure that you don't overrun. Your reports will each be evaluated by two assessors whose comments will be discussed with you. Each of your rotation project supervisors will provide an evaluation of your performance in their laboratory.

You should not regard the rotations as trials for a PhD project.

Your key course deadlines in 2020-21 are as follows:

	Decision deadline	Rotation starts	Rotation ends	Report due
Rotation 1	Thurs 14 October 2020, midday	Mon 19 October	Fri 18 December	Fri 7 January 2021
Rotation 2	Thurs 10 December 2020, midday	Mon 11 January	Fri 12 March	Thurs 1 April 2021
Rotation 3	Thurs 11 March 2021, midday	Mon 19 April	Fri 18 June	Fri 9 July 2021
PhD Lab Choice / Project Title	Fri 18 June 2021, midday			
PhD Proposal				Fri 6 Aug 2021
MRes vivas				Thurs 2 Sept 2021

Note: Each lab can only support one student per rotation. We suggest that you discuss your preferred rotation option with the other students on the course and try to agree amongst yourselves who should do which projects each term. If more than one student wishes to do a particular project and you cannot agree, please notify Brian Hendrich of your 1<sup>st</sup> and 2<sup>nd</sup> choices, and he will make the final decision. In some cases, it may be possible for the same/similar project to be offered in subsequent terms.

### Part Three: Choosing your PhD Lab (Term 3)

Your choice about the lab and the project you wish to pursue for your PhD should be made by Friday, you will need to discuss possibilities in detail with your prospective supervisor(s) before coming to any decisions. Once the decision is finalised, you will need to write a PhD (research) Proposal (also known as a “Critical Appraisal”) for your PhD. The submission deadline for this is Friday 6 August 2021. This proposal will be assessed by the internal and external examiners as part of your MRes Viva examination at the end of your first year.

Note: each lab may only take on one Wellcome 4-year PhD student per year. PhD projects can only be undertaken with one of the accredited programme supervisors. Supervisors are not able to accept Wellcome 4-year PhD students in consecutive years.

### Department Affiliation

All students must be formally affiliated to a Department of the University of Cambridge. In Year One, all students on this Programme will be affiliated to the Stem Cell Institute, with Brian Hendrich listed as your official MRes Supervisor. Thereafter, Departmental affiliation is determined by the affiliation of your Principal PhD Supervisor.

### Rotation presentations

At the end of each rotation, you will give a 15-minute presentation on your project to Dr Hendrich and your fellow students, prior to submitting your rotation report. The dates of the presentations are:

Rotation	Presentation date
1	Wed 16 <sup>th</sup> December 2020
2	Wed 10 <sup>th</sup> March 2021
3	Wed 16 <sup>th</sup> June 2021

# Assessment Information

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## Year One Assessment

The 1<sup>st</sup> year of your 4-year PhD Programme forms the basis for an MRes in Stem Cell Biology. The assessment for the MRes, which is awarded on a pass/fail basis, is based on the following work that you are required to produce/participate in during year one:

### **Stem Cell Discussion Course (Terms 1, 2 & 3)**

As part of the MRes course you are expected to attend the weekly Stem Cell Discussion Course. In term 1, '*Introduction to the CSCI*' sessions are led by CSCI PI's as an introduction to their research fields. In terms 2 & 3, the '*Stem Cell Biology discussion sessions*' are group discussions. Each week the lead PI(s) will provide papers for you to read, and discussion topics for you to think about prior to the session. These will form the basis of the discussion.

### **Rotation Reports (Terms 1, 2 & 3)**

At the end of each lab rotation, you will have approximately 3 weeks to write a short report on the research you have performed. The report will be assessed by Dr Hendrich and one other CSCI PI, who will each provide you with feedback. You may be asked to make corrections based on this feedback, and re-submit. These comments will also be available to the MRes external examiner. It is advisable to do these as soon as possible, but certainly within 3 weeks of receipt of the corrections.

### **Rotation Presentations (Terms 1, 2 & 3)**

At the end of each rotation, you will give a 15-minute presentation on your project to Dr Hendrich and your fellow students, prior to submitting your rotation report.

### **Outline PhD Proposal Presentation (Term 3)**

Prior to submitting your Research Proposal, you will give a 20-minute presentation of your PhD project to the Programme Directors. They will want to know the background, the specific questions or hypothesis you'll be addressing and an outline of the experimental methods. This will take place in July 2021 (date: TBC).

### **PhD Research Proposal/Critical Appraisal (Term 3)**

Once you have chosen the laboratory in which you will carry out your PhD project, you will be required to write a Research Proposal. This proposal should describe the background to the field, the aims of the project and the experimental approach that you plan to pursue. This proposal will be sent to the MRes examiners and will be the main focus of your oral examination/presentation (MRes Viva).

### **MRes Viva (End of Term 3)**

Your formal MRes Viva will take place in Sep 2021, with an External Examiner, a Senior Examiner and the Chair of Examiners, with the Programme Directors fulfilling at least one of the latter two roles. You will be required to give a 15-minute presentation of your PhD project, to include some background to the project, questions/hypotheses to be addressed and a good indication of how you intend to go about doing your project. The remainder of your viva will involve discussion with the examiners of your submitted Research Proposal and rotation reports. The examiners will then write a joint report on your performance based on your written work and oral presentation.

This report will be used to determine whether or not you have met the criteria for an MRes Degree. The examiners will also make a recommendation to the Degree Committee about your suitability to pursue a PhD.

## Wellcome Research Project Proposal (Oct 2021)

At the end of year one, students with Wellcome funding will be required to complete a PhD Research Project Proposal. Instructions will be received from Wellcome by the end of summer, with a submission deadline in October. Your PhD supervisor should help you to complete this. There will also be an opportunity to apply for an animal costs supplement for your PhD project.

## Events

You will discuss your PhD Project plans with the PhD Management Committee at the annual 4-Year Stem Cell Student Presentation Day. You will also present a poster at the annual Stem Cell PhD Symposium (*in year 1, your poster should be based around your PhD proposal; an intro, preliminary data generated during your rotation and future plans. You could also include data from your prospective supervisor for background information*).

## Subsequent Monitoring

### Year Two

In Year 2 you will be required to write a Progress Report for assessment. This report and assessors' comments will provide the basis for progression to PhD registration. You will present your work at the annual Four-Year Stem Cell Student Presentation Day, and will receive feedback from the PhD Management Committee. You will also present a poster at the annual Stem Cell PhD Symposium.

You will meet informally as a group with the Programme Directors / members of the Graduate Committee three times in year 2, to discuss your progress and any concerns / issues you might have.

### Year Three

During year 3, and certainly by the end of year 3, you should begin to consider directions for your Post-Doctoral career. It is often advisable to apply a year in advance of an intended start date to allow time for visits/interviews and to apply for funding. You will present your work at the annual Four-Year Stem Cell Student Presentation Day, and will receive feedback from the PhD Management Committee. You will also be expected to verbally present your work at the annual Stem Cell PhD Symposium in your 3<sup>rd</sup> year.

You will meet informally as a group with the Programme Directors / members of the Postgraduate Committee twice in year 3, to discuss your progress and any concerns / issues you might have.

### Year Four

*Students on the Wellcome PhD Programme are required by the funders, to submit their thesis by the end of September of your 4<sup>th</sup> year (September 2024, for 2020 starters).*

You will be required to submit a thesis plan, in outline form, by the end of Jan in your final year. This will be discussed with your PhD Supervisor and the Programme Coordinator, to check how your project is developing and that you are on track to submit on time. They will provide feedback and guidance for the completion of the work. You will present your work at the annual Four-Year Stem Cell Student Presentation Day, and will receive feedback from the PhD Management Committee.

The procedures for submission of your PhD thesis and appointment of examiners will follow those presently in operation at The University of Cambridge as required by the Degree Committee.

# CSCI Student Opportunities

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## **1<sup>st</sup> Year Wellcome Postgraduate Students' Meeting**

You will be invited to attend a meeting for all first year postgraduate students on Wellcome studentships. The aim of this meeting is to provide an overview of Wellcome's activities/history, their expectations of students, and further opportunities available to you. All invited students are expected to attend. *Date TBC.*

## **Four-Year Stem Cell Student Presentation Day (Annually, June)**

Annual presentation event for all students on the Four-Year (1+3) Stem Cell Biology & Medicine Programme. Each student will give a presentation to their fellow students and the PhD Management Committee. You will receive feedback from the Committee. A College dinner for all participants is held in the evening. All Four-Year (1+3) Stem Cell Students are expected to attend.

## **PhD Day Symposium (Annually)**

Annual event for CSCI PhD students in their penultimate year, to present their work orally. All other students are expected to present a poster (*your first poster (in year 2) should be based around your PhD proposal; an intro, preliminary data generated during your rotation and future plans (you can also include data from your supervisor for background information)*). All CSCI members are invited. It is an excellent opportunity to hear about other labs' work and prepare for when your turn comes to give an oral presentation (in year 4). *Date TBC.*

## **Final Year Wellcome Students' Meeting**

In your final year, you will be invited to attend a meeting at Wellcome for all final year students on Wellcome studentship funding. Students are given an opportunity to present a poster of their results to fellow students, meet with members of Wellcome staff, and find out about potential career paths. All invited students are expected to attend.

## **CSCI Seminars**

The CSCI and affiliated departments organise regular seminars for internal and external participation. You are expected to attend all seminars in whichever department you find yourself. All postgraduate students are expected to attend the CSCI Internal Seminars, which are held every Monday at midday in the JCBC lecture theatre, and the CSCI External Seminars, which are more *ad-hoc*.

## **Core Skills Training Programme**

The Postgraduate School of Life Sciences (PSLS) provide an online Core Skills Training Programme for new graduate students. The GSLS views researcher development as an essential part of your research degree course and this programme has been designed as a starting point, aiming to:

- help you identify existing skills and skill gaps
- gain training in key areas of personal effectiveness and communication
- provide a foundation for further skills development in subsequent years
- gain recognition of training upon completion of the CSTP.

The programme has four compulsory components:

- a skills analysis survey to help you identify the skills that you want to develop
- time management training, a key skill for being a researcher
- presentation and performance training as it is just as important for scientists to be able to communicate their research to other people as well as being able to obtain results in the lab
- scientific writing to aide you to be prepared for report writing that you will need in your first year.



We strongly recommend that all students participate in this online programme. You will be sent an invitation by the PSLS, and the course should then be available to you on your Moodle course list.

### **Public Engagement**

At the CSCI we have embedded a culture of engaged research that runs through all levels of the Institute. We encourage and support all students and researchers to take part in, and develop, their own public engagement activities. This will help you gain skills and expertise to support your personal and professional development, and is a great way to meet new people and have fun too!

The Institutes Public Engagement team provide opportunities and advice to help you share your research with the public in engaging ways.

All students are expected to take part in at least one public engagement activity per year during their studentship. This can be led by you, with support to develop your own project, or part of a larger activity organised by the PE team (e.g. local festivals, talks, tours, arts collaborations, patient workshops, films etc.). Training can be provided before participation in any event, to give you the confidence and skills to engage effectively. You may also decide to take part in externally-organised public engagement activities. In this instance, please notify the public engagement team ([engage@stemcells.cam.ac.uk](mailto:engage@stemcells.cam.ac.uk)) so that they can acknowledge your contribution, and provide advice and resources if required.

### **Other things to look out for at the CSCI:**

*Public Engagement Seed Fund:* Apply for £500 - £2,000 to fund your own public engagement initiative. The next call opens in Autumn 2020.

*Prizes:* Win one of our awards for outstanding contribution to engagement, presented by the Institute Director at the Institute Retreat.

*Committee:* Support our Public Engagement Steering Committee with new ideas and insights from the student community.

For more info: [www.stemcells.cam.ac.uk/about-us/publicengagement](http://www.stemcells.cam.ac.uk/about-us/publicengagement)

You can also stay up to date with the latest opportunities via the CSCI weekly bulletin.

If you would like to discuss an idea, please get in touch by emailing the public engagement team at: [engage@stemcells.cam.ac.uk](mailto:engage@stemcells.cam.ac.uk)

# Guidelines for Assessed Work

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The cover page for all assessed reports should be laid out using the following template:

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**<Project Title>**

**<Your Name>**

MRes + PhD Programme in Stem Cell Biology and Medicine 2019/20

**<Report type & rotation dates>**  
*e.g. Term One Rotation Project, Oct 2017 – Dec 2018*

**<Report Submission/Revision Date>**

**<Supervisors Name(s)>**

**<Supervisors Laboratory>**

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## 1. Rotation Report Guidelines

For the rotation reports, we ask for a maximum of 6000 words (*including figure legends, but excluding words in tables and bibliography*).

We suggest you break the report down into the following:

- i. Summary
- ii. Introduction
- iii. Methods
- iv. Results
- v. Discussion
- vi. References

- It is recommended to prepare figures in Photoshop, Illustrator or Freehand.
- If submitting a *revised* version, please remember to include 'version 2', on the cover page.
- A binding machine is available in the JCBC admin office, and binding materials can be obtained from the Postgraduate Administrator.
- One bound copy (*including any figures*) plus an electronic copy must be submitted to the Postgraduate Administrator by the given deadlines. A second bound copy should be given to your rotation supervisor.
- See your course schedule for submission deadlines. Your Postgraduate Administrator will notify you if the submission procedure changes.

## 2. Research Proposal (Critical Appraisal)

- You should inform Dr Hendrich and the Postgraduate Administrator of your PhD lab choice and Research Proposal title by Midday on Friday 18<sup>th</sup> June 2021.
- Maximum 6000 word limit (*including figure legends, but excluding tables, footnotes, bibliography and appendices*).
- Experimental Design section ideally to be approx. 2 pages in length.
- Two bound copies (*including any figures*) plus an electronic copy of your Critical Appraisal should be submitted to the Postgraduate Administrator by Friday 6<sup>th</sup> August.
- Your Critical Appraisal must include a signed statement (*on the inside page*) along the following lines:

*"I confirm that the material in this Critical Appraisal 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 such, a full source reference is given. I confirm that, other than where indicated as above, this document is my ownwork."*

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(Your signature)

The order of your Critical Appraisal should be as follows:

- Aims of the project** - This should be concise, with perhaps a few sentences of overview explaining the general focus and then listing some specific objectives/goals.
- Background and work that has led up to the project** - This should set the scene for the research, so needs to be a summary of the relevant literature, perhaps beginning more broadly and getting more specific. It may include preliminary unpublished data from yours or other work in the lab (if relevant). It may also include diagrams or pictures of data. We suggest about  $\frac{1}{3}$  of the proposal might be background, but there is no set rule.
- Experimental design and methods to be used in investigating this problem** - This should describe your plan of investigation. It is often helpful to subdivide this into sections. These might represent sequential steps in the investigation (e.g. genetic screen; molecular characterisation of genes; etc.) or parallel approaches (e.g. loss of function studies; gain of function studies; etc.) or different questions to be addressed (e.g. does *X* regulate *Y*? Is *X* essential for mesoderm development?). See what works best for your proposed project.

Remember to think about issues such as:

- If you will be doing a screen and then characterising some of the genes isolated, how will you choose which ones to characterise?
- Will you be able to distinguish control from experimental animals? How?
- What controls will you use to test whether your results are meaningful?
- Do you foresee any pitfalls? If so, how might you handle them if they arise?
- You may also like to include a time-line or flow diagram.

- iv. **Budget** - This should be an appendix. Don't feel the need to go into too much detail here, but think about where the major costs of your project will lie. Subdivide the budget into: animals and animal costs, consumables (e.g. enzymes; molecular biology kits; antibodies; tissue culture reagents; tips; tubes - check out the basic costs of some of these and consider where the bulk of your costs are going to lie), equipment (if you don't need any specific equipment, there may not be anything in this category). You should try to find out as much of this financial information for yourself as possible, rather than relying on your supervisor (they can of course check it for you, but will not be happy to do it for you!). You will have access to catalogues and the web, so do some research. The aim is to increase your awareness of the costs associated with different kinds of experiments.

Please allow yourself plenty of time for discussion and feedback with your supervisor - they have extremely busy schedules, so remember to take this into consideration when planning your time.

#### **Report-writing tips from the Programme Directors:**

- Use first person singular, "I", when describing your experiments – this is very important!
- Do not summarise your results in the Introduction - this should end with stating clearly the aim of the project (hypothesis under investigation).
- Do summarise your results at the beginning of the Discussion.
- Present all elements of a Figure on a single page.
- State numbers of biological and technical replicates for all experiments.
- Be critical about your experimental approach and results.
- Propose the next key experiment(s).
- Only large datasets that cannot be included in normal figures/tables should be added as "Supplementary Data". Do not use this as a dumping ground for all of the other experiments you did, that don't fit into the main narrative.

# Positive Research Culture

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The Cambridge Stem Cell Institute is a vibrant community where an inclusive culture is promoted and diversity is valued. We subscribe to the University's [Equal Opportunities Policy](#) and have an active [Equality and Diversity Working Group](#) to ensure best practices are maintained and new strategies are developed to promote an inclusive and thriving environment at the Institute.

## **Research Culture & Integrity Committee**

Ensuring high standards of research culture and integrity are central to the mission and success of the CSCI. The remit of this committee will include setting guidelines, procedures and policies related to research reproducibility, misconduct, and data management. Importantly, the committee will not just set boundaries and establish procedures for when "things have gone wrong", but instead develop proactive guidelines that facilitate a research culture which promotes a positive working environment. The 'excellence' of our institute in future will be evaluated not just by what we produce, but how we produce it. The remit of this committee therefore includes to help establishing a positive research environment. This Committee is Chaired by Prof. Bertie Göttgens.

Any members of this Committee or the [CSCI Postgraduate Committee](#) can be contacted should you have any issues or concerns.

The CSCI also supports the following University-led initiatives:

### [Breaking the Silence](#)

There is no place for any form of harassment or sexual misconduct at the University of Cambridge. The 'Breaking the Silence' initiative aims to prevent harassment and sexual misconduct, and provides a range of resources for staff and students.

### [Childcare Office](#)

The Childcare Office oversees the facilities and assistance offered to University staff with Children. The support offered included Workplace Nurseries, a Holiday Play scheme, salary exchange schemes and an information service.

### [Counselling Service - Students](#)

Many personal decisions are made and problems solved through discussions with friends or family, a College Tutor or Director of Studies, a Nurse, Chaplain, colleague, line manager or a GP. However, at times it is right to seek help away from one's familiar daily environment. The University Counselling Service exists to meet such a need.

### [Dignity at Work](#)

The aim of the Dignity at Work policy is to support and sustain a positive working environment for all staff and students, free from any form of unacceptable behaviour.

### [Equality & Diversity Section](#)

The E&D section seeks to help the University progress equalities policy in line with legislation, and to develop good practice in supporting under-represented groups.

### [Mediation Service](#)

The mediation service can help resolve disagreements between members of staff with support from impartial, trained mediators.

### Office of Postdoctoral Affairs (OPdA)

The OPdA supports the postdoctoral community. They provide academic, administrative and pastoral focus and aim to enhance the physical and intellectual experience of postdocs.

### Personal and Professional Development (PPD)

The PPD team offers a wide range of practical training and development opportunities to help staff explore their potential and get the most from their time at the University.

### Reflection & Prayer Facilities

A number of rooms are made available by the University for its students, staff and authorised visitors, with the primary purpose of providing safe, clean and inclusive places for prayer and reflection.

### SPACE (Supporting Parents And Carers @ Cambridge)

SPACE provides support and information for members of the University with caring responsibilities for children or other dependents.

### WellCAM

The University is committed to providing a healthy and fulfilling working environment and improving the quality of working lives for all staff.

*The definition of research integrity used in this document is adapted from Universities UK, The concordat to support research integrity (July, 2012). For guidance provided at the European and global level see: European Science Foundation, The European Code of Conduct for Research Integrity (March, 2011); 2nd World Conference on Research Integrity, Singapore Statement on Research Integrity (July, 2010); National Institutes of Health, NIH Policies and Procedures for Promoting Scientific Integrity (November, 2012).*

### Wellcome Guidelines on Good Research Practice

Wellcome expects the researchers it funds to adhere to the highest standards of integrity. To facilitate this, it has drawn up these guidelines on Good Research Practice. Wellcome funds a wide range of research, including biomedical science, biomedical ethics, social sciences and history of medicine. These guidelines are designed to apply to all of the research that Wellcome funds.

#### Research integrity:

- Researchers should be honest in respect of their own actions in research and in their responses to the actions of other researchers. This applies to the whole range of research work, including experimental design, generating and analysing data, applying for funding, publishing results, and acknowledging the direct and indirect contribution of colleagues, collaborators and others.
- Plagiarism, deception or the fabrication or falsification of results should be regarded as a serious disciplinary offence.
- Researchers are encouraged to report cases of suspected misconduct and to do so in a responsible and appropriate manner.
- Researchers should declare and manage any real or potential conflicts of interest.

## University of Cambridge Guidelines on Research Integrity

The University is committed to achieving excellence in research and scholarship. The pursuit of excellent research and the fulfilment of our responsibilities to participants in research, research users and the wider community require the maintenance of the highest standards of integrity and ethics.

To maintain the high standards of research practice at Cambridge, the University will uphold the commitments outlined in Universities UK's Concordat to Support Research Integrity. The information below sets out the principles to which all research and scholarship at the University of Cambridge should adhere and provides guidance on where to seek further advice on specific research integrity issues. The University expects all researchers, be they staff, students or visitors to the University, to abide by national, European and international standards of research integrity. This includes:

Honesty in all aspects of research, including:

- presentation of research goals, intentions and findings
- reporting on research methods and procedures
- gathering data
- using and acknowledging the work of other researchers
- conveying valid interpretations and making justifiable claims based on research findings

Scrupulous care, thoroughness and excellence in research practice:

- in performing research and using appropriate methods
- in adhering to an agreed protocol where appropriate
- in drawing interpretations and conclusions from the research
- in communicating the results

Transparency and open communication:

- in declaring conflicts of interest
- in the reporting of research data collection methods
- in the analysis and interpretation of data
- in making research findings widely available, including sharing negative results as appropriate
- in presenting the work to other researchers and to the general public

Care and respect for:

- all participants in and subjects of research, including humans, animals, the environment and cultural objects
- the stewardship of research and scholarship for future generations.

In addition to these core principles, researchers should ensure that their research is conducted according to appropriate ethical, legal and professional frameworks, obligations and standards. This includes seeking ethical approval for research where appropriate. Researchers are also expected to treat colleagues with integrity, honesty and collegiality, including the fair provision of references and peer review.

As part of its commitment to the principles of the Concordat, the University will support researchers to maintain the highest standards of integrity in research by:

- providing clear policies and procedures, as well as training and guidance to help researchers better understand how to maintain high standards of research integrity
- having suitable mechanisms for reviewing ethical issues raised by research
- using transparent, robust and fair processes to deal with allegations of research misconduct
- defending researchers who live up to high standards in difficult circumstances and any individual who, in good faith, reports research misconduct at the University

- continuing to work to strengthen the integrity of its research through regular review and monitoring of its support, policies and procedures.

The University has a number of policies that relate to research integrity issues. These include:

- Guidelines on Good Research Practice
- Policy on the Ethics of Research Involving Human Participants and Personal Data
- Misconduct in Research Policy
- Policy on the use of Animals in Research and Teaching
- University Financial Regulations
- 'Whistleblowing' Policy
- Policy Against Bribery and Corruption

For more guidance on good research practice and research integrity see:

- RCUK Policy and Guidelines on the Governance of Good Research Conduct
- UK Research Integrity Office guidance documents

## Open Access

Our funders require that all papers coming from the Cambridge Stem Cell Institute be made Open Access. In order to comply with their policies, please contact our CSCI Records Assistant, Susana Camacho ([sci-records@stemcells.cam.ac.uk](mailto:sci-records@stemcells.cam.ac.uk)) as soon as you have an article accepted for publication.

Susana will assist you with the administrative processes relating to publications, including uploading articles to the University's repository, compliance with funders' open access policies and payment of open access charges.

## Code of Practice

We expect all students in the CSCI to read and be familiar with the University's Code of Practice for Research Students:

[https://www.cambridgestudents.cam.ac.uk/files/cop\\_research\\_20\\_to\\_21.pdf](https://www.cambridgestudents.cam.ac.uk/files/cop_research_20_to_21.pdf)



# Best Practice for CSCI PhD Supervisors

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## CSCI Research Culture – Best Practice for PhD Supervisors

- New supervisors are required to attend the *Supervising Postgraduate Students* workshop provided by the University prior to, or within 3 months of accepting their first CSCI PhD Student, and experienced supervisors are encouraged to attend update sessions.
- The Supervisor should have regular 1:1 meetings with the student (monthly in Year 1), and the student should be made aware of the planned meeting schedule. During these meetings, in addition to considering research matters, the Supervisor should pay attention to the general wellbeing of their student.
- The supervisor must ensure that the student is trained in the principles of good research practice and research integrity (as summarised in University guidelines <https://www.research-integrity.admin.cam.ac.uk/research-integrity/research-integrity-and-good-research-practice-checklist>) and should reinforce these principles in meetings with the student.
- PhD projects may be closely related to or fall within ongoing projects in the lab, but the student must be given their own area of responsibility with scope to pursue new directions. Extent of delegation of supervision over experiments should be discussed and agreed between postdoc, student and supervisor. The supervisor must ensure the post-doc understands their responsibilities to the student and must monitor the relationship between post-doc and student, intervening if any difficulties arise.
- The student should learn that research involves teamwork. However, after any initial training period, students should not work on studies outside on their thesis project without careful consideration by the supervisor for the impact on PhD quality and completion, and without full consent of the student.
- Students should present regularly at group meetings and receive supervisor feedback on both scientific content and presentation skills
- Students should be expected to attend all CSCI internal and invited speaker seminars, and relevant external seminars. Students should also be encouraged to participate in relevant journal club(s) and the PhD student discussion club.
- Supervisors are encouraged to use preprint servers when appropriate for early dissemination of student results. Note that this forum may be used flexibly to publish sets of results prior to a final manuscript for journal publication. Preprints provide an opportunity for students to experience manuscript preparation, allow them to receive recognition for their work, and make the work visible to potential employers.
- Supervisors should provide advice and mentoring on future career choices, including opportunities outside academic research.
- Supervisors should advise on timing and planning of thesis writing and should be available to provide feedback on drafts up to and including the final submission.

# Plagiarism: Information for Students

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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 (<https://www.plagiarism.admin.cam.ac.uk/definition>). In the context of a first year report or a PhD thesis, this might involve copying text or a figure from another source without giving due acknowledgement to the original source. Even if you paraphrase you should acknowledge this by referencing the original source. Plagiarism is considered unacceptable by the University and can lead to severe penalties.

Students are responsible for ensuring they have read and understood the University's Statement on Plagiarism, available at <https://www.plagiarism.admin.cam.ac.uk/>, as well as your own Department's guidance on plagiarism.

Further information for students can be found at:

<https://www.plagiarism.admin.cam.ac.uk/what-plagiarism/students-responsibilities>

## Turnitin UK

The University of Cambridge uses [Turnitin UK](#) to screen student work. Screening is only generally carried out if concerns are raised about the originality of work, however please check your department's individual status on this, at the above department policy link. All work screened will be reviewed by the Academic Integrity Officer to determine whether further action may be necessary.

Use of Turnitin UK complies with UK Copyright and Data Protection Laws. Submission to Turnitin does not affect your ownership of the work; the copyright and intellectual property of all work remains with the original owner (normally the student, with the exception of some sponsored research projects). No personal or sensitive data will be transmitted. Work screened by Turnitin UK will be retained in the Turnitin database for comparison with future submissions; if matches are identified, the full text is not accessible to other institutions, only the matching text. You may request that your work is removed from the Turnitin UK database at the conclusion of the examination process, but this must be done separately for each piece of submitted work. Retaining your work on the database will help to ensure that your work remains protected from future attempts to plagiarise it, will help maintain the integrity of the University's qualifications, and will maximise the effectiveness of the software.


Full details about Turnitin UK and your rights and responsibilities can be found on the University's website: <https://www.plagiarism.admin.cam.ac.uk/turnitin-uk/turnitin-information-students>

Queries about plagiarism or your Department's use of Turnitin UK, should be addressed in the first instance to your Director of Studies or College Tutor.

# JCBC Building Information

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## Website and Intranet

1. CSCI Website: <http://www.stemcells.cam.ac.uk/>
2. CSCI Intranet: <http://www.stemcells.cam.ac.uk/> then click  . Accessed via your Raven login (accessible to CSCI members only), it contains useful staff-only information including a contacts directory for CSCI staff members, useful forms and templates.

## Fire Alarm Tests

JCBC fire alarm testing takes place every Thursday at 10:00am.

## Travel / Training expenses

Your student grant includes an allowance for travel and training related to your course. If you would like to attend a meeting/conference in year 1, please email Dr Hendrich, providing him with all the details of the meeting and a short justification of why you want to attend. For meeting/conference attendance in years 2-4, you should obtain authorization from your PhD supervisor.

You can contact the finance team ([sci-grants@stemcells.cam.ac.uk](mailto:sci-grants@stemcells.cam.ac.uk)) to check on your current budget and for instructions on claiming the funds back. In most cases you will be required to make the payment yourself, then claim the funds back afterwards via an [expense claim form](#).

## Photocopying and Printing

There is a printer/photocopier located on each floor of the JCBC. Please speak to the IT team, [it-support@jcbc.cam.ac.uk](mailto:it-support@jcbc.cam.ac.uk) if you need assistance with the printers.

During your first rotation year, you should have access to the printer/photocopier located nearest to your rotation lab. Your College will also have printing facilities.

## Binding your reports

Binding materials for your student reports (i.e. cover/backing sheets, binding combs) can be obtained from the Postgraduate Administrator. The binding machine is located in the JCBC admin office on the ground floor.

## Reception

The JCBC Building reception is open Mon - Fri, 08:30-17:00. If you are expecting a visitor please let the receptionist know, and make sure you are available when they arrive. If you have visitors arriving out of reception hours, it is your responsibility to meet them in reception.

## Stationery

Standard stationery items can be obtained from the Goods-in team, on the ground floor at the rear of the JCBC. For more specialist items, please speak to your supervisor/lab manager to place an order.

## Canteen

The JCBC canteen is open Mon-Fri, 07:30 – 16:00. There is also a shared kitchen located on each floor.

## Meeting Rooms

The JCBC has a number of meeting rooms available to use in different layouts and sizes. There are meeting rooms on all floors of the building but only the rooms on the Ground Floor and levels 1, 2 and 3 are bookable by members of the Stem Cell Institute (meeting rooms on Levels 4 / 5 are for CITIID).

All rooms are equipped with AV equipment for presentations. Rooms are booked via the Booker system using your Raven login: <https://booker.eventmapsolutions.com/Account/Login>

### **Holiday**

The University holiday year runs from 1<sup>st</sup> October - 30<sup>th</sup> September. For postgraduate students, holiday should only be taken *outside* of the academic term dates (you cannot take holiday during your rotation periods) and not on any of your report/presentation deadlines, event dates etc. (be sure to check your course schedule before arranging holiday). Holiday must be agreed by your current PhD supervisor or Dr Hendrich.

### **Sickness / Absence**

If you are unable to come in, you must contact your rotation / PhD supervisor as soon as possible.

If you are unable to attend one of the Discussion Course sessions, you must inform the Postgraduate Administrator by email as soon as possible. Should we receive a number of apologies, it may be necessary to cancel the session, and is important that we inform the session leader(s) urgently so as not to waste their time.

## **Safety & Security Information**

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This basic information is in addition to the 'CSCI Safety Manual', which you have also been issued with.

### **Building Access**

Your college will issue you with a University ID card. Once you have attended the JCBC building induction, this ID card will be programmed to give you access to the JCBC. Access to other departments (for rotations with affiliate labs for example) must be arranged by yourself via those buildings.

### **Emergency Procedures**

Trained first aiders are on hand to provide immediate first aid. Contact telephone numbers are displayed on notice boards throughout the building and on the intranet.

University Security provide 24-hour operation and can be contacted as follows:

Routine calls: 01223 (3)31818

Emergencies: 101 or 01223 (7)67444

### **Working Out of Hours**

Out of hours is defined as before 07:00 and after 19:00 Monday to Friday and all day on Saturday, Sunday and Bank Holidays. When this is operationally necessary, research groups and facility managers must provide adequate supervision, communication and contact arrangements. The worker must sign the out of hour's sheet located in reception.

### **Contact security in the event of an incident:**

Routine calls: 01223 (3)31818

Emergency calls - internal: 101

Emergency calls - external: 01223 767444

# Postgraduate Safety Course

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<https://www.safety.admin.cam.ac.uk/training/postgraduate-safety-course>

## About the Safety Course

The Safety Office runs an 'Introduction to Health & Safety in the University' each October, which is mandatory for all new postgraduate students in science-based Departments/Institutes.

This is supplemented with the JCBC building talk to ensure you are familiar with local procedures.

Information about the Safety Course is sent directly to postgraduate students by the Safety Office.

### Day One: Postgraduate Safety Course (General Safety)

Tuesday 6 October 2020 But TBC at time of print

Virtual session

- Attendance at the General Safety session is mandatory.
- See <https://www.safety.admin.cam.ac.uk/training/postgraduate-safety-course> for details.

### Day Two: Postgraduate Safety Course (optional sessions)

Wednesday 7 October 2020 But TBC at time of print

Virtual session

- CSCI students **MUST** attend all 3 sessions in green italics in the list below.
- You can attend as many other sessions as you wish.
- Sessions start promptly at the advertised times.

Choosing which sessions to attend (examples):

- *'Safe Use of Pipettes & Computers'*
- *'Biological Safety'* (for people working with micro-organisms)
- *'Glass and Sharps Hazards'* (for anyone working in the laboratory)
- 'Working with Ionising Radiation'
- 'Laser Safety'
- 'Cryogenic Safety' (for anyone working with cryogenic gases (liquid or solid))
- *'Pressurised Gas Safety'* (for anyone using cylinder gases)

# Postgraduate School of Life Sciences (PSLS)

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As a student on this PhD Programme, you are a member of the Postgraduate School of Life Sciences. For more information about the PSLs, visit: <https://www.postgradschl.lifesci.cam.ac.uk/>

## Researcher Development (RD)

Take a moment to visit the RD website at <https://www.rdp.cam.ac.uk/research-students>.

### What is Researcher Development?

Researcher Development (RD) encompasses all of the learning and development that you might wish to experience and acquire during your time in Cambridge. It will provide you with the skills and experiences that you need as a professional researcher, both today for your degree, and for the future, whatever that might be!

The Cambridge Researcher Development Framework (CamRDF) presents these skills as 15 core competencies. You can use the CamRDF to explore why these skills are helpful for a researcher, understand what they look like in the real world and point you towards how you can further develop them. Examples include:

- Personal Skills e.g. Leadership and Resilience.
- Core Skills Training Programme.
- Professional Skills e.g. Presentation Skills and Time management.
- Career-related Skills e.g. Writing CVs and Interview Technique.
- Academic Skills e.g. Paper writing and Teaching.
- Entrepreneurial Skills e.g. Commercial Awareness and Innovation.

### The Core Skills Training Programme (CSTP)

The Postgraduate School of Life Sciences (PSLS) has developed a Core Skills Training Programme (CSTP), which you are strongly recommended to complete in your first year. Completing the CSTP will ensure that you are informed of the range of RD opportunities available in Cambridge and provide the foundational skills in personal effectiveness and scientific communication that are essential for progression.

You will be enrolled onto the CSTP Introductory Moodle in early October, which can be accessed from your dashboard at [www.vle.cam.ac.uk](http://www.vle.cam.ac.uk) with your Raven login. This will provide you with all the information you need about the components of the CSTP. The first is the online Skills Analysis Survey, which introduces you to the CamRDF, helps you identify your training needs, and allows you to create a personal development plan. The other components will be available from November and you will receive regular updates by email.

### Completing the CSTP

Completion of the CSTP is sufficient for the training requirements that are assessed in your First Year Report. We will track your engagement, update your department on your progress and present you with a certificate when you finish the CSTP. You should also maintain a training log of other activities that contribute to your professional development, and be aware of any department-specific requirements.

# Useful CSCI Admin Contacts

These staff members can be found in the Jeffrey Cheah Biomedical Centre admin office (Ground Floor).

Cambridge Stem Cell Institute: Admin Contacts:	
 <p>Jo Jack</p>	<p>Postgraduate Administrator, <a href="mailto:phd@stemcells.cam.ac.uk">phd@stemcells.cam.ac.uk</a>            Claire Williams (Maternity cover until June 2021)</p> <p>The postgraduate administrator should be your first point of contact, but especially for:</p> <ul style="list-style-type: none"> <li>○ Your course schedule, rotations, student events, discussion course etc.</li> <li>○ PhD mailing list.</li> <li>○ Updates to your studentship, i.e. extensions, changes to funding etc.</li> <li>○ Expense claims.</li> </ul>
 <p>Steph Hall</p>	<p>Principal Technician, <a href="mailto:slh60@cam.ac.uk">slh60@cam.ac.uk</a>            Contact Steph regarding:</p> <ul style="list-style-type: none"> <li>○ equipment issues</li> <li>○ Health &amp; Safety issues (<i>lab or general building</i>).</li> </ul>
 <p>Paul Game</p>	<p>Research Grants Administrator, <a href="mailto:sci-grants@stemcells.cam.ac.uk">sci-grants@stemcells.cam.ac.uk</a>            Contact Paul regarding:</p> <ul style="list-style-type: none"> <li>○ your studentship grant, incl. travel, training, consumables etc.</li> </ul>
<p>Edita Paralova</p>	<p>HR Administrator, <a href="mailto:hr@cscr.cam.ac.uk">hr@cscr.cam.ac.uk</a></p> <p>Contact Edita regarding:</p> <ul style="list-style-type: none"> <li>○ stipend payment information</li> <li>○ studentship extensions.</li> </ul>
<p>Greg Palmer Helene Dowding</p>	<p>Public Engagement Team, <a href="mailto:engage@stemcells.cam.ac.uk">engage@stemcells.cam.ac.uk</a></p> <p>Contact the team to:</p> <ul style="list-style-type: none"> <li>○ get involved in CSCI public engagement &amp; outreach activities</li> <li>○ tell them about PE activities you've done outside of the CSCI.</li> </ul>
 <p>Susana Camacho</p>	<p>Records &amp; Data Assistant, <a href="mailto:sci-records@stemcells.cam.ac.uk">sci-records@stemcells.cam.ac.uk</a>            Contact Susana to:</p> <ul style="list-style-type: none"> <li>○ notify her of new publications/reviews/other outputs from your lab.</li> <li>○ get assistance with administrative processes regarding your publications i.e. compliance with funders' open access policies, uploading articles to the University's repository, payment of open access fees</li> <li>○ your Symplectic profile.</li> </ul>

Useful University links for students:	
Student Registry ( <i>Information for current students</i> )	<a href="http://www.student-registry.admin.cam.ac.uk/">http://www.student-registry.admin.cam.ac.uk/</a> <a href="http://www.cambridgestudents.cam.ac.uk/">http://www.cambridgestudents.cam.ac.uk/</a>
CamSIS ( <i>'Self-Service' student area</i> )	<a href="http://www.camsis.cam.ac.uk/cam-only/log_in_students/">http://www.camsis.cam.ac.uk/cam-only/log_in_students/</a>
International students	<a href="http://www.internationalstudents.cam.ac.uk/">http://www.internationalstudents.cam.ac.uk/</a>
University Safety Office	<a href="https://www.safety.admin.cam.ac.uk/">https://www.safety.admin.cam.ac.uk/</a>
University Environment and Energy Team	<a href="https://www.environment.admin.cam.ac.uk/">https://www.environment.admin.cam.ac.uk/</a>
Student Counselling Service	<a href="http://www.counselling.cam.ac.uk/studentcouns/students">http://www.counselling.cam.ac.uk/studentcouns/students</a>
University map	<a href="http://map.cam.ac.uk/">http://map.cam.ac.uk/</a>
University term dates	<a href="https://www.cam.ac.uk/about-the-university/term-dates-and-calendars">https://www.cam.ac.uk/about-the-university/term-dates-and-calendars</a>
Stem Cell Institute website	<a href="http://www.stemcells.cam.ac.uk/">http://www.stemcells.cam.ac.uk/</a>
Postgraduate School of Life Sciences (PSLS)	<a href="http://www.postgradschl.lifesci.cam.ac.uk/">http://www.postgradschl.lifesci.cam.ac.uk/</a>
Thesis submission information	<a href="http://www.cambridgestudents.cam.ac.uk/your-course/examinations/graduate-exam-information/submitting-and-examination/phd-msc-mlitt/submit">http://www.cambridgestudents.cam.ac.uk/your-course/examinations/graduate-exam-information/submitting-and-examination/phd-msc-mlitt/submit</a>
Student complaints procedure	<a href="http://www.studentcomplaints.admin.cam.ac.uk/student-complaints">www.studentcomplaints.admin.cam.ac.uk/student-complaints</a>