wellcome-MRC cambridge stem cell institute

UNIVERSITY OF CAMBRIDGE

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


## Course Manual
## 2021/22

wellcome

UKRI Medical Research Council

UNIVERSITY OF CAMBRIDGE

# Contents

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

## Programme Management

PhD Programme Director:
Dr Brian Hendrich bdh24@cam.ac.uk

PhD Programme Co-Director:
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Postgraduate Administrator:
Jo Jack phd@stemcells.cam.ac.uk

## 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 2021-22 are as follows:

| | Decision deadline | Rotation starts | Rotation ends | Report due |
|---|---|---|---|---|
| Rotation 1 | Thurs 14 October 2021, midday | Mon 18 October | Fri 17 December | Fri 7 January 2022 |
| Rotation 2 | Thurs 9 December 2021, midday | Mon 10 January | Fri 11 March | Fri 1 April 2022 |
| Rotation 3 | Thurs 10 March 2022, midday | Mon 25 April | Fri 24 June | Mon 11 July 2022 |
| PhD Lab Choice & Project Title | Fri 17 June 2022, midday | | | |
| PhD Proposal/Critical Appraisal deadline | | | | Fri 5 August 2022 |

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 1st and 2nd 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 5 August 2022. 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 | Fri 10th December 2021 |
| 2 | Fri 4th March 2022 |
| 3 | Fri 17th June 2022 |

# Assessment Information

## Year One Assessment

The 1st 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 2022 (*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, Sep 2022)

Your formal MRes Viva will take place in September 2022, 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 2022)

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 Postgraduate 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$^{rd}$ 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$^{th}$ year (30/09/2025, for 2021 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

### 1st 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). 28th -29th October 2021

### 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*.

### 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) 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.

*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

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

# Guidelines for Assessed Work

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 2021-22

<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.
- An electronic copy must be submitted to the Postgraduate Administrator by the deadline.
- 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 17th June 2022**.
- 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.
- An electronic copy of your PhD Proposal/Critical Appraisal should be submitted to the Postgraduate Administrator **by Friday 5th August 2022**.
- 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 own work."*

_____

*(Your signature)*

The order of your Critical Appraisal should be as follows:

i. **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.

ii. **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 $^1/_3$ of the proposal might be background, but there is no set rule.

iii. **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

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 Education 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.

### PostDoc Academy
The PostDoc Academy supports the postdoctoral community. The Academy provides 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.

### Wellbeing
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. Further information can be found here.

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. Further details can be found here. In order to comply with their policies, please contact our CSCI data team data@stemcells.cam.ac.uk as soon as you have an article accepted for publication.

The team 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. The current Code of Practice for 2021-22 can be found at https://www.cambridgestudents.cam.ac.uk/grad-code-of-practice/code-practice-research-students

When you have read it, please sign a copy and email it to the Postgraduate Administrator, phd@stemcells.cam.ac.uk

# Best Practice for CSCI PhD Supervisors

## 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 and Academic Misconduct: Information for Students

The University of Cambridge information on Plagiarism and Academic Misconduct can be found at https://www.plagiarism.admin.cam.ac.uk/.

With effect from 1 October 2019, the University has outlined Rules of Behaviour for both current and former registered students (Statutes and Ordinances 2019, Chapter II, Section 19; p.191). All registered students and formerly registered students are responsible for following the Rules of Behaviour.

### 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.

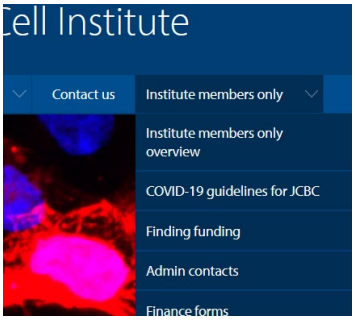
Use of Turnitin UK complies with UK Copyright and Data Protection Laws. Submission to Turnitin does not affect your ownership of the work; the copyright and intellectual property of all work remains with the original owner (normally the student, with the exception of some sponsored research projects). 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

### CSCI Website




http://www.stemcells.cam.ac.uk/

NOTE: The 'Institute members only' area (see web tab on the right), 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 9:00am.

### 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 authorisation from your PhD supervisor.

You can contact the finance team (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 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

Most reports are submitted electronically now, but if you would like to print and bind a copy, binding materials 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. JCBC staff can also access the canteen next door in CRUK, which offers a wider variety of lunchtime options. 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. All rooms are

equipped with AV equipment for presentations. 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).

Rooms are booked via the Booker system using your Raven login:
https://booker.eventmapsolutions.com/Account/Login

### Holiday

The University holiday year runs from 1st October - 30th 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 report/presentation deadlines, events etc. (please 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

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

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.

This year's Postgraduate Safety Training, will consist of a mandatory introductory session for all students plus sessions on topics chosen according to the discipline and nature of your research activities. Details of how to access this training will be available at https://www.safety.admin.cam.ac.uk/training/postgraduate-safety-course/postgraduate-training by the start of term.

In addition to the above training, all Postgraduate students need to complete additional subject specific training appropriate to their research area before starting their research activities. This additional training will be flagged to you in the Postgraduate Safety Training. You must therefore actively engage with your supervisor (and vice-versa) to ensure you are competent and adequately trained to undertake all aspects of your research activities safely before starting. Where appropriate, seek advice from supervisors, those with safety roles within your department and from the Safety Office if you are in any doubt as these principles are key and core to safe research.

The additional training sessions we recommend you complete, are:

- '*Safe Use of Pipettes & Computers*'
- '*Biological Safety*' (for people working with micro-organisms)
- *'Glass and Sharps Hazards'* (for anyone working in the laboratory)
- *'Pressurised Gas Safety'* (for anyone using cylinder gases)

**Transferable skills**
All the UK Research Councils regard learning about health and safety issues as an essential part of the training requirements for research students. You can gain credits for Transferable Skills Training by attending the University Postgraduate Safety Course and other courses provided by the Safety Office. For more information on transferable skills and our courses, visit https://www.safety.admin.cam.ac.uk/training which takes you to the Safety Office Training and Development page.

# Postgraduate School of Life Sciences (PSLS)

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

**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.

Visit https://www.rdp.cam.ac.uk/getting-started to start mapping out the core competencies you need as a professional researcher, and give you an idea of where your strengths and areas of focus are.

# Useful CSCI Contacts

These staff members can be found in the Jeffrey Cheah Biomedical Centre (Ground Floor). Staff details can also be found in the CSCI website: https://www.stemcells.cam.ac.uk/people

**Jo Jack**
Postgraduate Administrator, phd@stemcells.cam.ac.uk

Contact Jo regarding:
- Your course schedule, rotations, student events, discussion course, etc.
- Updates to your studentship, i.e. extensions, changes to funding etc.
- PhD mailing list

**Rosie Moss**
Research Grants Administrator, grants@stemcells.cam.ac.uk

Contact Rosie regarding:
- your studentship grant, incl. travel, training, consumables etc.

**Edita Paralova**
HR Administrator, hr@stemcells.cam.ac.uk

Contact Edita regarding:
- stipend payment information
- studentship extensions.

**Greg Palmer**
Public Engagement, engage@stemcells.cam.ac.uk

Contact the team to:
- get involved in CSCI public engagement & outreach activities
- tell them about PE activities you've done outside of the CSCI.

**Jacqui Davidson**
Records & Data Assistant, records@stemcells.cam.ac.uk

Contact Jacqui to:
- notify her of new publications/reviews/other outputs from your lab.
- 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
- manage your Symplectic profile.

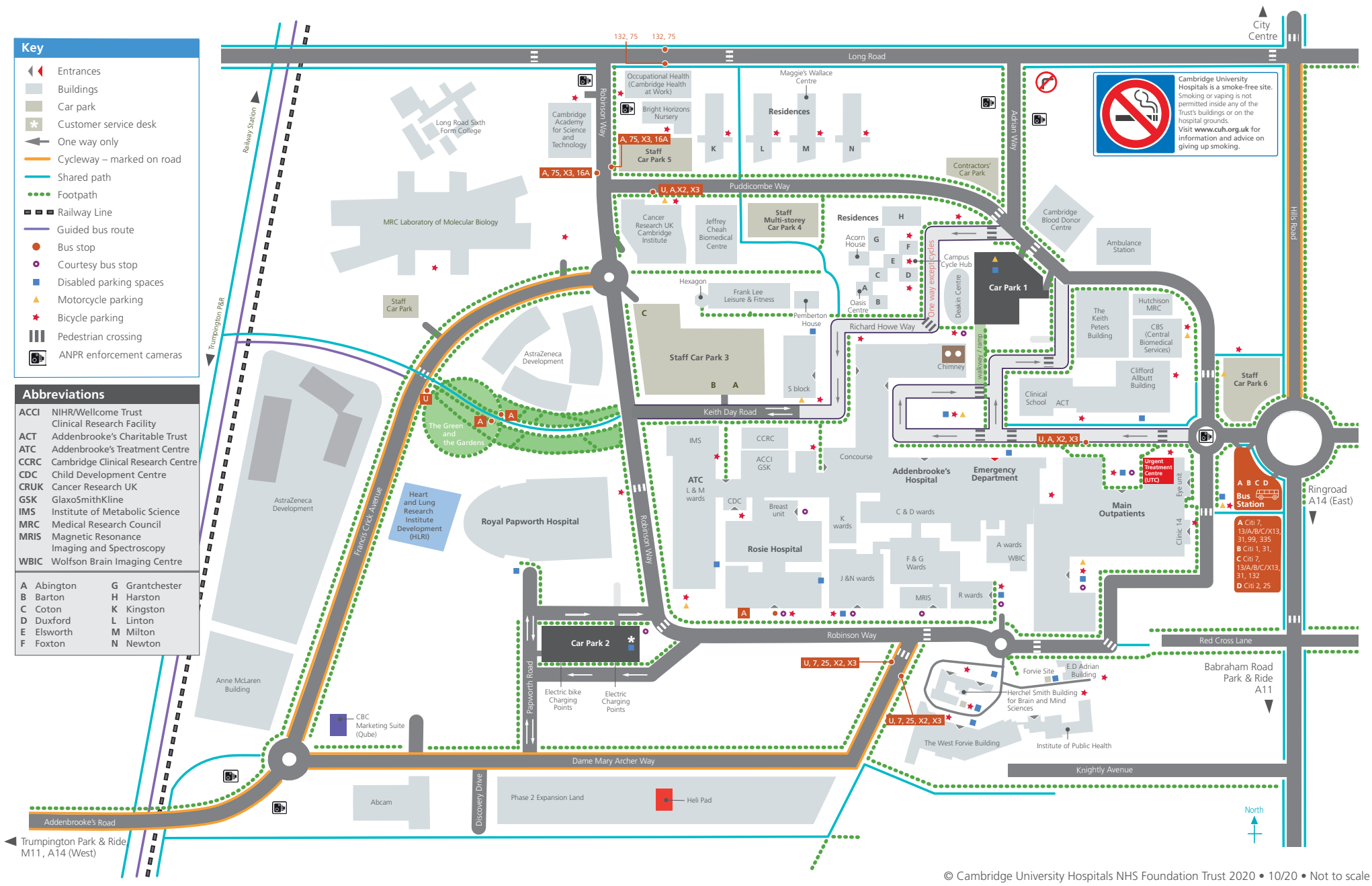
**Steph Hall**
Principal Technician, slh60@cam.ac.uk

Contact Steph regarding:
- equipment issues
- Health & Safety issues (*lab or general building*).

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

# Cambridge Biomedical Campus

Version 1, correct as of November 2020






## Catch the Bus

**Plan your journey around Cambridge by visiting**
**https://www.traveline.info/**

or download 'MotionMap' or 'My Bus Trip App' from the App Store

### Bus Stops

**A** Citi 7,31,13/A/B/C/X13,99,335
**B** Citi 1,31
**C** Citi 7,13/A/B/C/X13,31,132
**D** Citi 2,25
**Dame Mary Archer Way** Citi 7,25,75,X2,X3,Busway A,B & Universal
**Long Road Sixth Form College** Citi 1,31
**Outpatients** Citi 7,13/A/B/C/X135,X2,X3,31,132 & Busway B
**Puddicombe Way** Citi 2,255,X2,X3 & Busway B
**Francis Crick Avenue Citi** 7,25,75,Busway A,B & Universal

Please refer to the Bus routes map overleaf for more information about buses in an around Cambridge.

## Travel discounts, loans and more

Check with your employer for travel plan initiatives on offer to you at CBC. These can include discounts and loans for rail season tickets, the Cycle to Work Scheme and discounts at local bicycle retailers.

### University Card Holders

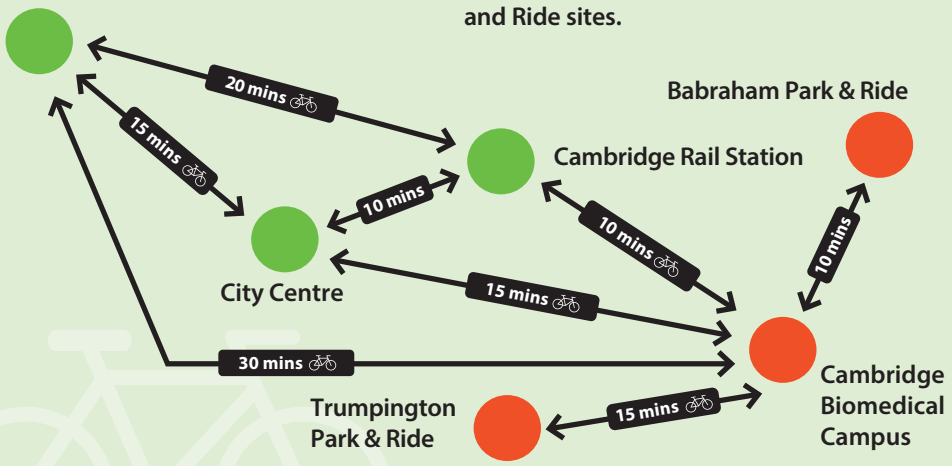
A single (one-way) journey on route U is just £1 for holders of University Cards issued by the University of Cambridge.

For non-University card holders, any trip costs £2.20. More information on prices can be found online: **www.go-whippet.co.uk/new-route-u/**

## Get on your bike

**West Cambridge University Sites**

**CBC is only a 10-15 minute cycle ride from both Babraham and Trumpington Park and Ride sites.**




**Campus Cycle Hub** can be found on site (Richard Howe Way, CB2 1DG), open every weekday from 8am-5pm. Services include bike repairs, servicing and sales, for more info: **www.thebikeman.co.uk/campus-cycle-hub.html**

# Travelling to the **Cambridge Biomedical Campus**

## Catch the Bus

Please see overleaf for more information about the buses you can take from each stop at CBC.

## Cambridgeshire Guided Busway

Bus routes A, B, and U operate along the Cambridgeshire Guided Busway, the longest guided busway in the world. This specially constructed traffic-free route provides rapid transport between Cambridge Railway Station and CBC, with consistent journey times of just a few minutes. It's the quickest way of travelling between the two locations.

**For more details please visit**
www.thebusway.info

## Train & Bus

There are plenty of buses between Cambridge Railway Station and CBC. The quickest journeys are usually on board those which operate along Cambridgeshire Guided Busway (see below).

Get Plusbus with your rail ticket which provides unlimited travel on both Whippet and Stagecoach buses across the whole urban area of Cambridge City.

**Find out more:**
http://www.plusbus.info/cambridge

## Park & Ride

Drive to one of the five Park & Ride sites located on the outskirts of the city that provide free parking all day and a fast and frequent bus ride to the city centre. A return ticket costs £3 (£3.50 from Trumpington) and travel is unlimited.

If you are travelling to CBC from Babraham Park & Ride, you can purchase a short hop return ticket for just £2.50.

**Find out more by visiting:**
http://www.cambridgeparkandride.info/

To find out more about Cambridge Biomedical Campus visit
**https://cambridge-biomedical.com**

Funded by:

UNIVERSITY OF CAMBRIDGE

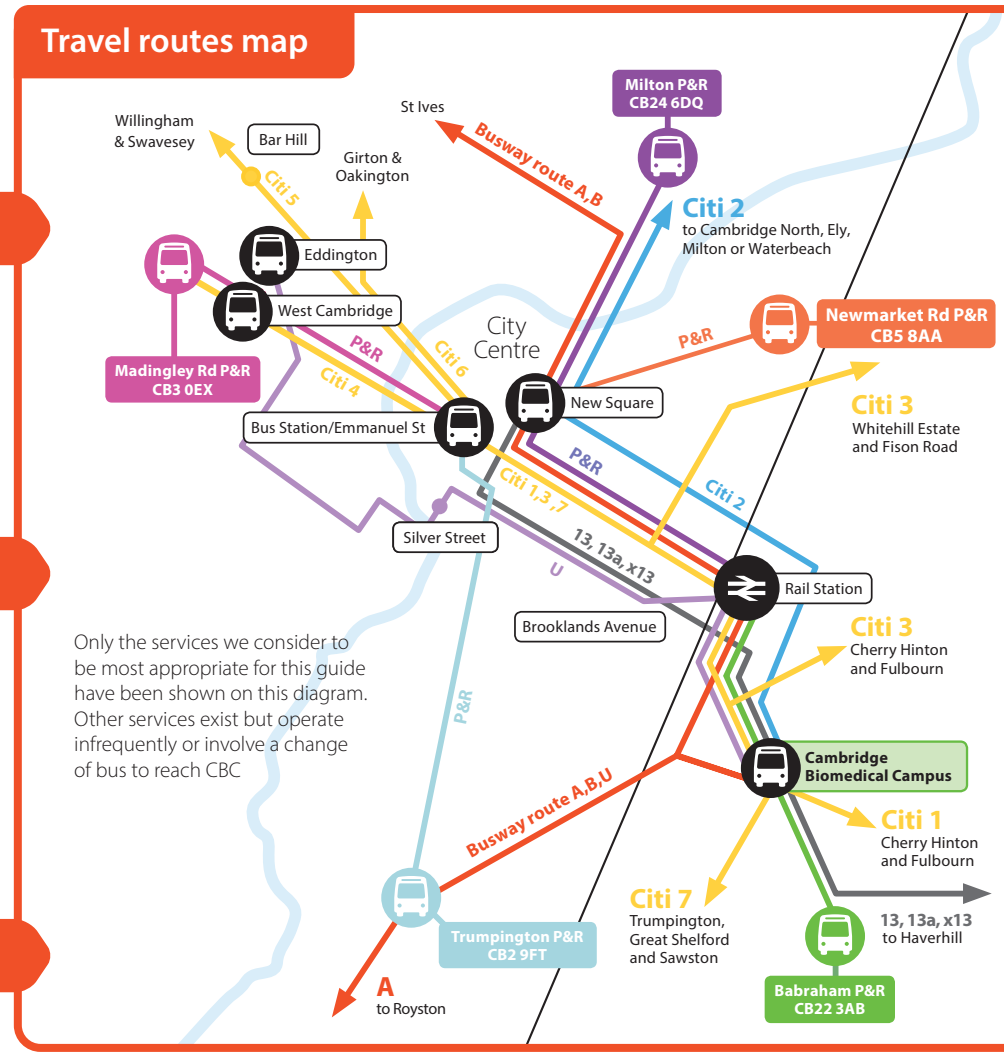
NHS Royal Papworth Hospital NHS Foundation Trust

AstraZeneca

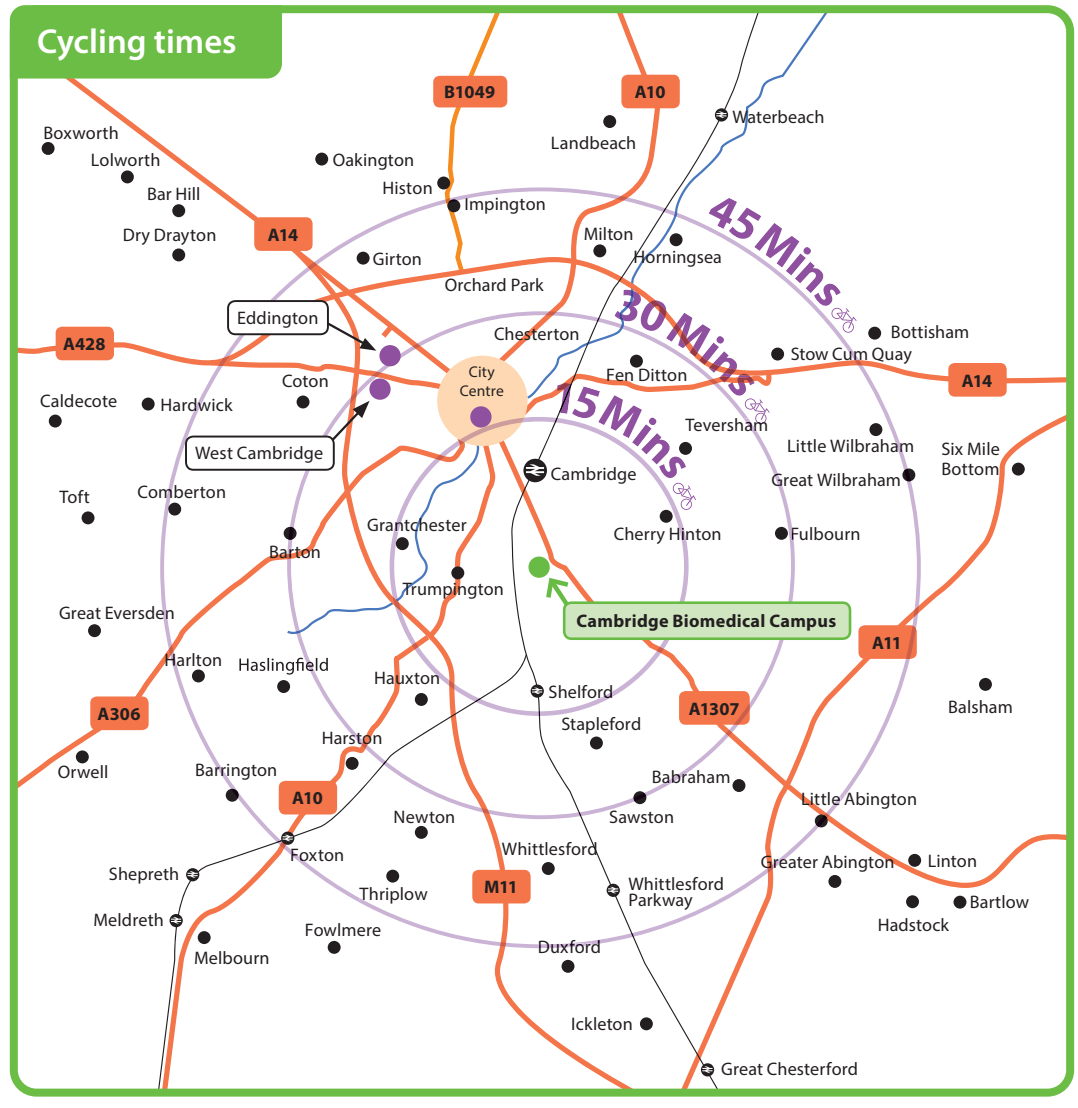
NHS Cambridge University Hospitals NHS Foundation Trust

abcam

## Travel routes map




## Cycling times




Cambridge Biomedical Campus

# Travel Guide

## Go Electric

If you have an electric vehicle, there are charging points at both Trumpington and Babraham Park and Ride sites. In addition, there are electric charging points available for use in Car Park 2 for both cars and cycles.

## Join a Car Club

Car clubs give you access to a car when you need it, perfectly maintained without the hassle or expense of ownership.

Both Zipcar and Ecar vehicles are located across Cambridge. Find out where your nearest vehicles are located on the Zipcar and E-Car websites:

www.zipcar.co.uk https://ecarclub.co.uk/

**Business Travel**
If you need to use a car for work, check if your employer has a pool hire scheme for business use.

## Car Sharing

Why not share your car journey to reduce the costs of driving to work? Join Liftshare, the car-sharing community: https://liftshare.com/uk

1. Register online at https://liftshare.com/uk
2. Register your journey to work
3. Look for members who travel the same route
4. Get in touch with them to organise a match!
5. If there isn't a match already you will be informed when somebody with your journey registers.

**How much would you save from car-sharing?**
**Try the fuel saving calculator:**
https://liftshare.com/uk/savings-calculator

liftshare.com travel together

## Car Parking

Car parking on site is limited so we encourage all who are able to travel by sustainable modes.

Please note that through route enforcement is in place with Automated Number Plate Recognition (ANPR) cameras monitoring traffic movements. Drivers using the site as a through-route may be fined. Anyone who is driving onto the campus to collect, drop off or to visit one of the Hospitals or businesses will not be fined.