1 Advertisement

Post Title: Research Fellow in Laboratory and Computational Systems Biology Cancer research
School/department: Brighton and Sussex Medical School
Hours: full time or part time hours considered up to a maximum of 1 FTE.
Requests for flexible working options will be considered (subject to business need).
Contract: fixed term for 4 years
Reference: 4890
Salary: starting at £33,797 to £40,322 per annum, pro rata if part time.
Placed on: 30 October 2020
Closing date: 2 December 2020. Applications must be received by midnight of the closing date.
Expected start date: 1 January 2020

- Join a ground-breaking project as part of a UKRI Future Leaders Fellowship.
- Interdisciplinary role combining laboratory science with computational biology.
- Work towards the future of personalised medicine.
- Benefit from strong clinical and computational collaborations.

A unique and exciting post-doctoral research opportunity is available at Brighton and Sussex Medical School; a joint venture between the University of Sussex and University of Brighton.

The project is part of a prestigious UKRI Future Leaders Fellowship project and is supervised by Dr Simon Mitchell, a systems biologist, and Prof Chris Pepper, a cancer cell biologist. Both Simon and Chris' groups form part of the vibrant interdisciplinary Haematology Research Group. The initial appointment is for 4 years, and there may be an option to extend for a further 3 years, contingent on funding and the demonstration of satisfactory progress.

The project will use systems biology approaches to understand B-cell lymphomas. These are relatively common cancers, occurring when mutations cause a loss of regulation of molecular signalling pathways. While lots is known about the mutational landscape of B-cell lymphomas, there is still a significant knowledge gap in our understanding of how mutation-driven dysregulation of molecular signalling pathways modifies cancerous cell fates. This project is designed to address this gap with the ultimate aim of identifying druggable molecular targets tailored for individual subsets of patients.

We recently published computational models predicting new molecular interactions, and targets to control B-cells, that led to informative laboratory experiments. We now want to test model-predicted targets to improve treatments for B-cell lymphoma, predict treatment failure, and avoid the development of treatment resistance.

The successful candidate will:

- Gain true interdisciplinary experience by iteratively performing cellular and molecular biology experiments and using computational models.
- Characterise the effects of novel targeted approaches on B-cell lymphoma cells.
- Work with experts in computational modelling.
- Translate insight towards clinically adoptable approaches.

The research will take place in a vibrant and collaborative research environment at BSMS and the successful applicant will benefit from opportunities for national and international collaboration and conference participation. In addition, a wealth of scientific and computing resources are available to support the work as well as the experience and expertise of the supervisory team.

The successfully candidate will work in the beautiful and diverse seaside city of Brighton and Hove, 1 hour from London by train; some work may be performed remotely initially due to COVID-19-related restrictions.

Please contact Dr Simon Mitchell, S.A.Mitchell@bsms.ac.uk for informal enquiries.

The University is committed to equality and valuing diversity, and applications are particularly welcomed from women and black and minority ethnic candidates, who are under-represented in academic posts in Science, Technology, Engineering, Medicine and Mathematics (STEMM) at Sussex.

For full details and how to apply see our vacancies page

www.brighton.ac.uk/jobs www.bsms.ac.uk

The University of Sussex values the diversity of its staff and students and we welcome applicants from all backgrounds.

2. The School / Division

Please find further information regarding the school/division at www.BSMS.ac.uk

3. Job Description

Job Description for the post of: Research Fellow in Laboratory and Computational Systems Biology Cancer Research

Grade:	Research Fellow I, Grade 7.33
School:	Brighton and Sussex Medical School
Location:	Medical Research Building (Falmer)
Responsible to:	Principal Investigator through to Head of School
Direct reports:	n/a

Key contacts:	Members of research group, members of faculty within the School and University. Dr Simon Mitchell Prof Chris Pepper

Research Fellow I is an early career-grade research position. Post-holders will be expected to contribute to the work of the research team, and also to develop their research skills with support from more experienced members of staff.

4. Person Specification

PRINCIPAL ACCOUNTABILITIES

1. To engage in individual and/or collaborative research activity resulting in high-quality publications.

KEY RESPONSIBILITIES

1. Research, Scholarship & Enterprise

1.1 Develop research objectives and proposals for own or joint research, at acceptable levels, with assistance if required.

1.2 Conduct research projects individually and in collaboration with others.

1.3 Analyse and interpret research findings and draw conclusions on the outcomes.

1.4 Produce high-quality research outputs for publication in monographs or recognised high-quality journals as appropriate and contribute to the School's REF submission at acceptable levels of volume and academic excellence.

1.5 Contribute to the preparation of proposals and applications to external bodies, for example for funding purposes.

1.6 Build internal contacts and participate in internal networks and relevant external networks in order to form relationships and collaborations.

1.7 Continually update knowledge and understanding in field or specialism and engage in continuous professional development.

3. Contribution to School & University

3.1 Attend and contribute to relevant School and project meetings.

3.2 Undertake additional duties, as required by the Principal Investigator and/or Head of School.

4. Role-specific duties

4.1 Perform molecular and cell biology assays on B-cell lymphoma cells including cell culture, flow cytometry, ELISA, Immunohistochemistry, Western Blotting, qPCR and potentially RNA-seq.

4.2 Utilise computational models, in collaboration with modelling experts, to produce clinically impactful results.

4.3 Publish research results in internationally recognised journals.

4.4 Maintain high standards of research integrity and reproducibility at all times.

4.5 Assist in knowledge exchange with other members of the group, including providing guidance to PhD students.

4.6 Present research findings at national and international conferences. Attend, present and participate in school, departmental and university-wide research events.

4.7 Collaborate, where appropriate, on related haemato-oncology research projects within the University and externally.

4.8 Participate in research outreach, where appropriate, to maximise the impact and benefit to patients, of the project.

This Job Description sets out current duties of the post that may vary from time to time without changing the general character of the post or level of responsibility entailed.

INDICATIVE PERFORMANCE CRITERIA

- A PhD or equivalent scholarly or relevant professional activity
- Pursuing a line of independent research within a research group.
- Publishing research (either from a recently completed PhD or new original research).
- Other forms of externally recognised professional practice or creative output of a standing equivalent to regular publication of original research.
- Initiating, developing or participating in links between the University and external bodies such as business and industry, the professions, community organisations and policy-makers.
- Evidence of successful engagement in teaching or supervision.

PERSON SPECIFICATION

ESSENTIAL CRITERIA

1. Normally educated to doctoral level, or other equivalent qualification, or appropriate level of experience, as appropriate to the discipline (see role-specific criteria below).
2. Evidence of engagement in high-quality research activity.
3. Excellent presentation skills, with the ability to communicate effectively, both orally and in writing, with students, colleagues and external audiences.
4. Ability to work individually on own initiative and without close supervision, and as part of a team.
5. Ability to exercise a degree of innovation and creative problem-solving.
6. Excellent organisational and administrative skills.
7. Ability to prioritise and meet deadlines.
8. Excellent IT skills.

ESSENTIAL ROLE-SPECIFIC CRITERIA

1. Ability to communicate insight in an interdisciplinary environment (i.e. experimental results to computational biologists and analytical results to clinical audiences).
2. Knowledge of, or ability to rapidly learn, the genetic, molecular and cellular details of B-cell signalling and Diffuse Large B-Cell Lymphoma.
3. Experience with the following laboratory techniques: cell culture, flow cytometry, ELISA, qPCR, Western Blotting.

4. Familiarity with running computational code/scripts and managing input and output files.

DESIRABLE CRITERIA

1. Emerging track record of high-quality publications in reputable journals and other appropriate media of similar standing.

2. Experience of generating research or knowledge exchange income.

3. Knowledge of B-cell biology, lymphoma, haematology, immunology, cell signalling or related areas; and the ability to independently gain knowledge of these areas where not already present.

4. Some experience writing and/or reading computational code/scripts in any language.

5. Ability to independently design, perform and trouble-shoot molecular and cell biology experiments.

6. Exposure, through education or research experience, to mathematics. Most relevant are algebra and calculus.

7. Experience in communicating effectively with computational and experimental bio-scientists to interpret experimental data, explain modelling results, and collaborate effectively.

8. Be driven to improve outcomes for patients through systems biology.