

1 Advertisement

Post Title: Postdoctoral Research Fellow – Molecular mechanisms of chromosome stability

School: School of Life Sciences

Hours: full time or part time hours considered. Requests for flexible working options will be considered (subject to business need).

Contract: fixed term for 2 years initially

Reference: 0683

Salary: starting at £33,199 and rising to £39,609 per annum, pro rata

Placed on: 29 January 2019

Closing date: 28 February 2019. Applications must be received by midnight of the closing date.

Expected start date: As soon as possible

A postdoctoral fellowship is available immediately to study fundamental questions of genome stability. Using the tractable yeast model, we have recently gained novel insight into how cells maintain the structural integrity of chromosomes when genome replication is perturbed and/or DNA double-strand breaks occur (Ölmezer et al. (2016) *Nature Communications* 7:13157; Mattarocci et al. (2017) *Nature Structural & Molecular Biology* 24:588-595). The successful candidate will use a combination of molecular genetics and analysis of DNA intermediates to mechanistically elucidate these conserved processes, with important biomedical implications for our understanding and therapeutic exploitation of genome instability in cancer.

Candidates with a proven track record in genome stability (first authorship publication) are encouraged to apply. This post is funded for 2 years initially. Applicants should have extensive experience with *S. cerevisiae* molecular genetics and cell-based assays, while experience with human cell culture is a plus.

The successful candidate will join the [Genome and Stability Centre](#), an internationally renowned institute within the School of Life Sciences, carrying out research on cellular responses to DNA damage and their impact on genome instability and disease. We provide a stimulating and supportive research environment and our expertise covers a wide range of experimental systems. An overview of research interests can be found at the [Rass Lab](#).

Application forms should be accompanied by a full CV, a statement of research interests and aspirations (up to a total of 4 pages), and the names of two academic referees. Informal enquiries are welcome and should be sent to Prof. Ulrich Rass at U.W.Rass@sussex.ac.uk.

The School of Life Sciences is at the forefront of research in the biological sciences in the UK, coming in the top 10 in the REF 2014.

The School is committed to equality and valuing diversity, and currently holds an Athena SWAN Silver Award. 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. The School of Life Sciences welcomes applications to academic posts from candidates who wish to work part-time or as job-sharers.

The University offers various schemes to provide real benefits to parents, these can be found at [Family Friendly Policies](#)

For full details and how to apply see our [vacancies page](#)

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

2. The School/Division

The School of Life Sciences is the largest School in the University in terms of research activity with an annual research income of over £13m, and one of the largest in terms of student and staff population. The School has a teaching and research faculty of nearly 80, over 150 research fellows and technicians, and a small professional services team. Life Sciences have played a major role in the research and teaching of the University of Sussex since 1961. The original School of Biological Sciences (BIOLS), founded by John Maynard Smith FRS, trained some of the world's leading biologists and biomedical scientists, and was a beacon of innovation and creativity in its integrated approach to research and teaching.

The current School of Life Sciences was formed in 2009; it has six research subject groups – Neuroscience; Evolution, Behaviour and Environment; Genome Damage and Stability; Biochemistry and Biomedicine; Chemistry and the Sussex Drug Discovery Centre. Each research subject group is chaired by a prominent scientist, who is responsible for research leadership in their subject. The School currently has five Fellows of the Royal Society (FRS) and six Fellows of the Academy of Medical Sciences (FMedSci) on its Faculty.

Professor Sarah Guthrie was appointed Head of School in September 2017, and the School will continue to develop under her leadership. The University has committed to building a new research building, which will bring life scientists from all disciplines together. Planning for this building has been approved.

The School admits more than 600 undergraduates each year on to a range of BSc and MSci degrees, with around 80 students on post-graduate taught degrees in Genetic Manipulation and Cell Biology, Cancer Cell Biology, Neuroscience and several postgraduate degrees in Conservation and Ecology. Taught programmes are firmly based on our research excellence, and offer students substantial opportunities for personal research experience along with conventional lecture, seminar and tutorial teaching. We offer 3-year BSc and 4-year integrated Masters degrees (MSci) in Biochemistry, Biomedical Science, Biology, Ecology, Genetics, Neurosciences, and Zoology, and Royal Society of Chemistry accredited BSc and MChem degrees in Chemistry and Chemistry and Drug Design. We offer an MPharm degree which has passed stage 5 of accreditation. We also offer a Foundation Year in Biological Sciences which is ideally suited for students whose A-level (or equivalent) qualifications don't meet the requirements for direct entry on to our BSc/Masters degrees.

We have a large and vigorous post graduate research community with over 160 PhD students undertaking cutting-edge research across all our areas of interest. As well as standard PhD programmes in all the Subject Groups, we also offer a highly interdisciplinary 4-year Neurosciences PhD incorporating a first year with laboratory rotations, run in partnership with the Schools of Psychology and Engineering and Informatics, and the Brighton and Sussex Medical School.

In the REF2014 more than 96% of the School's research was rated as 'world leading', 'internationally excellent', or 'internationally recognised'. Our Biological Sciences research in particular was ranked 10th in the UK overall, and 8th on quality of our research outputs – putting us comfortably above the majority of Russell Group institutions.

The University of Sussex is a medium sized research intensive University based on a single campus in Falmer, just outside Brighton in East Sussex. The University has ambitious plans to develop its teaching and research; for example, to move from a taught student population of c13,000 to one of c18,000 by 2018.

3. Job Description and Person Specification

CORE JOB DESCRIPTION

Job Title:	Research Fellow in Molecular mechanisms of chromosome stability
Grade:	Research Fellow I, Grade 7
School:	Life Sciences
Location:	Genome Damage and Stability Centre
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.
Role description:	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.

PRINCIPAL ACCOUNTABILITIES

1. To engage in individual and/or collaborative research activity resulting in high-quality publications; and to develop research funding and knowledge exchange income individually or in collaboration with others, as appropriate, depending on the size and scope of the bid.
2. To contribute to School teaching activities if/where appropriate.

KEY RESPONSIBILITIES

2. 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, or performance/exhibition, 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 Individually or with colleagues, explore opportunities for enterprise activity, knowledge exchange income and/or consultancy, where permissible.
- 1.7 Build internal contacts and participate in internal networks and relevant external networks in order to form relationships and collaborations.
- 1.8 Continually update knowledge and understanding in field or specialism, and engage in continuous professional development.

2. Teaching & Student Support

- 2.1 Undertake teaching duties, if required.
- 2.2 Assist in the assessment of student knowledge and supervision of student projects if required.
- 2.3 Assist in the development of student research skills, for example as part of a postgraduate supervision team.

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 To manipulate and analyse DNA repair and replication stress response pathways in the yeast model.
- 4.2 To assess the function of target proteins at the cellular/molecular level using a combination of techniques including molecular genetics, microscopy, and the biophysical analysis of DNA intermediates.
- 4.3 To progress the project to a level appropriate for publication in a timely manner.
- 4.4 To keep up with relevant scientific literature and maintain an accurate and complete record of lab work.
- 4.6 To interface with the supervisor on a regular basis to discuss results and project progression/direction.
- 4.7 To present results in lab meetings, internal seminars and, if appropriate, external seminars, and aiding new/junior members of the laboratory where appropriate.
- 4.8 To contribute to annual science outreach activities where appropriate.

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 of 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. Educated to doctoral level.
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. Research experience in genome stability and DNA replication stress.
2. Extensive experience with the *S. cerevisiae* yeast model.
3. Significant experience in fluorescence microscopy and a broad range of molecular biology and biochemical skills, including the biophysical analysis of DNA intermediates.
4. A good working knowledge in the analysis of DNA replication and damage related phenotypes.
5. Proven ability to develop new skills and set up new techniques.
6. Professional presentation of data.
7. Excellent oral and written communication skills.
8. Ability to drive a research project and prepare high-quality figures, images, and scientific papers.
9. First author paper in a genome stability related field published or in press.

DESIRABLE CRITERIA

1. Emerging track record of high-quality publications in reputable journals.
2. Experience in the molecular analysis of chromosome stability and DNA replication.
3. Experience with nuclease and DNA helicase enzymatic assays, CHIP, CHIP-seq, co-IP, DNA fibre analysis, 2D and pulsed-field gel electrophoresis.
4. Experience of writing research proposals.