1 Advertisement

Post Title: Post-Doctoral Research Fellow : Structural Biology of DNA Single-strand Break Repair
School/department: Genome Damage and Stability Centre / School of Life Sciences
Hours: full time or part time hours considered up to a maximum of 1.0 FTE. Requests for flexible working options will be considered (subject to business need).
Contract: Fixed term for 3 years
Reference: 1739
Salary: starting at £33,199 and rising to £39,609, per annum
Placed on: 15 July 2019
Closing date: 15 August 2019. Applications must be received by midnight of the closing date.
Expected Interview date: week beginning 26th August 2019
Expected start date: 1 October 2019 or as soon as possible after this date

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.

Based in the School of Life Sciences, the Genome Damage and Stability Centre, is an internationally renowned Institute carrying out research on the response of cells to DNA damage, genome instability and its relationship to disease.

A Post-doctoral position funded by Cancer Research UK is available from 1st October 2019 in the laboratory of Prof. Laurence Pearl FRS and Dr. Antony Oliver, to study the structure and mechanism of multi-protein complexes involved in the recognition and repair of DNA single-strand breaks and gaps, primarily using single particle reconstruction by cryo-electron microscopy.

Recent work from the Pearl/Oliver group and an overview of research in the Genome Damage and Stability Centre can be found at http://www.sussex.ac.uk/gdsc/researchgroups

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

Potential candidates are strongly encouraged to make informal contact with Prof. Pearl laurence.pearl@sussex.ac.uk or Dr. Oliver antony.oliver@sussex.ac.uk before applying.
Applications should be accompanied by a full CV, a statement of research interests and aspirations (not more than 4 pages), and the names of three academic referees.

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 when Professor Laurence Pearl FRS was appointed as founding Head of the new School. Under his leadership the School adopted a unified structure with no formal departments. Instead there are 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 six Fellows of the Royal Society (FRS) and seven 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 School admits nearly 600 undergraduates each year on to a range of BSc and MSci degrees, with around 75 students on post-graduate taught degrees in Genetic Manipulation and Cell Biology, Cancer Cell Biology and Neuroscience. 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 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 170 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.

3. Job Description and Person Specification

CORE JOB DESCRIPTION

Job Title: Post-Doctoral Research Fellow
Grade: Research Fellow I, Grade 7
School: School of Life Sciences
Location: Genome Damage and Stability Centre (GDSC)
Responsible to: Prof. Laurence Pearl, Dr. Antony Oliver
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 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.

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.

July 2019
1.2 Conduct research projects individually and in collaboration with others.

1.3 Maintain excellent research records.

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

1.5 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.

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

1.7 Individually or with colleagues, explore opportunities for enterprise activity, knowledge exchange income and/or consultancy, where permissible.

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

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

1.10 Maintain strong links with industrial collaborators.

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 Perform recombinant expression and purification of protein constructs, and assembly of protein-DNA complexes.

4.2 Perform biochemical and biophysical characterisation of complexes and activity using established techniques.

4.3 Develop reliable and reproducible conditions for preparation of cryoEM grids suitable for high-resolution data collection.

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4.4 Develop skills in cryoEM data collection, data processing and model refinement.
4.5 Liaise with external partners to obtain additional project specific data.
4.6 To establish effective interdisciplinary collaborations with scientists both at the University of Sussex and within external organisations.
4.7 To present work and lead discussion at project meetings, scientific advisory meetings and steering group discussions.
4.8 To develop the external network and credibility of the group and communicate results at external scientific meetings.

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.
- 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 policymakers.
- 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. Expertise in protein expression and purification
2. Experience in molecular biology and biochemistry
3. Experience of structure determination by cryoEM and/or X-ray crystallography
4. Ability to acquire new techniques and introduce new technology to the lab
5. High level of computing skills relevant to molecular and structural biology
6. Ability to work with others across scientific disciplines
7. Ability to work both independently and within a team.
8. Ability to design innovative solutions to problems
9. PhD in a molecular science
10. High degree of self-motivation and enthusiasm
11. Attention to detail and rigour in data generation and evaluation

DESIRABLE CRITERIA

1. Experience of structural studies of DNA repair targets
2. Emerging track record of high-quality publications in reputable journals and other appropriate media of similar standing.
3. Experience of generating research or knowledge exchange income.
4. Ability to draft research papers
5. Supervision of junior research staff