1 Advertisement

Post Title: Research Fellow in NMR Spectroscopy  
School: School of Life Sciences  
Hours: Full time  
Contract: 3 year fixed term  
Reference: 1992  
Salary: starting at £32,004 and rising to £38,183.  
Closing date: 18 May 2017. Applications must be received by midnight of the closing date.  
Expected start date: 1 June 2017

We wish to appoint a post doctoral researcher to work on the EPSRC-funded project “PASSE: Photochemical Amplification of Signal for Structure Elucidation”. The research will be conducted in the laboratory of Dr Iain Day in collaboration with Dr Mark Osborne, within the School of Life Sciences.

The aim of the project is to develop the use of photochemically induced dynamic nuclear polarisation as a tool for small molecule structure elucidation. The use of this technique is unexplored in small molecule NMR and has the potential to offer a significant enhancement in sensitivity. The project will involve the construction of a suitable illumination source and associated optics along with the development of a suite of photochemically-enhanced heteronuclear correlation experiments.

Applicants should hold a Ph.D. in NMR spectroscopy and have experience in pulse sequence development and/or small molecule structure determination. An interest in electronics and/or optics would be an advantage.

Potential candidates are strongly encouraged to make informal contact Dr Iain Day (i.j.day@sussex.ac.uk) or Dr Mark Osborne (m.osborne@sussex.ac.uk), before applying.

For more details on research in the Day lab please visit http://www.sussex.ac.uk/lifesci/daylab. An overview of research within the Chemistry theme can be found at http://www.sussex.ac.uk/lifesci/chemistry.

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 and engineering 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 is committed to equality of opportunity
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.

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 £12m, and one of the largest in terms of student and staff population. The School has a teaching and research faculty of nearly 70, 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.

The University has committed to building a new teaching and research building, which will bring life scientists from all disciplines together. Planning for this building is well under way and will provide both academic and social spaces to improve the culture and interaction in the School. The building is scheduled for delivery in 2017-18.

The School admits around 400 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. The first intake on the MPharm is in October 2016.

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.
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. Senior Leadership and management

The Vice-Chancellor (Professor Adam Tickell) is the senior academic officer and, as Chief Executive, is responsible to the University Council for management of the University. He is supported by an executive group which includes the three Pro-Vice-Chancellors, the Registrar and Secretary, the Director of Finance and the Director of Human Resources. The Heads of the Schools of Studies at Sussex report to the Pro-Vice-Chancellors.

The Registrar and Secretary heads the Professional Services of the University. In addition, under the University Statutes, the Registrar and Secretary is Secretary to the University Council. The Director of Finance reports to the Vice-Chancellor. The Director of ITS reports to the Registrar and Secretary, and the Librarian reports to one of the Pro-Vice-Chancellors.

4. Job Description and Person Specification

CORE JOB DESCRIPTION

Job Title: Research Fellow in NMR Spectroscopy
Grade: Research Fellow I, Grade 7
School: Life Sciences
Location: Chemistry (Chichester II Building)
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.
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 Undertake the design and construction of the illumination device and optical pathway
4.2 Contribute to the design and implementation of photochemically-enhanced heteronuclear correlation experiments

4.3 Collect, analyse and interpret NMR data from photochemically-enhanced NMR experiments

4.4 Contribute to the supervision and training of doctoral and masters students

4.5 Assist with the day to day running of the laboratory

4.6 Contribute to the preparation of manuscripts for publication in peer-review journals

4.7 Present results at relevant national and international conferences

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. 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. Ph.D. or equivalent, in NMR spectroscopy

2. Experience of pulse sequence development and / or small molecule structure determination

3. Knowledge of NMR data analysis methods

4. Ability and willingness to learn and apply new techniques

DESIRABLE CRITERIA

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

2. Interest in electronics and instrument development

3. Knowledge of optics and optical systems