

1 Advertisement

Post Title: Research Fellow in Cancer Cell Signalling

School: School of Life Sciences

Hours: Full time and part time considered up to a maximum of 1FTE

Requests for [flexible working](#) options will be considered (subject to business need)

Contract: Fixed term for 1 year (*with an option to extend it for another 1 year*)

Reference: 8403

Salary: Starting at £34,304 to £40,927 per annum, pro rata if part time

Placed on: 8 April 2022

Closing date: 31 May 2022, Applications must be received by midnight of the closing date.

Expected Interview date: Beginning/Middle of June 2022

Expected start date: 1 July 2022

Project: 'Elucidating the role of extracellular vesicles in the tumour microenvironment and their use as cancer biomarkers'

A post-doctoral position is available in the laboratory of Georgios Giamas to elucidate the involvement of extracellular vesicles (EVs) in cancer progression, their regulation and their use as potential biomarkers.

EVs are defined as lipid bilayer enclosed vesicles secreted by both normal and cancer cells. Through transfer of proteins, nucleic acids and lipids, they are directly implicated in the constant crosstalk of cancer cells with their tumour microenvironment (TME) exerting complex effects on neighbouring cells. There has been a lot interest in EVs for their potential roles in normal and pathological conditions, while methods for their detection, concentration and analysis have substantially improved the last 5 years. As a result, EVs have gained an increased interest as potential biomarker candidates for diagnosis, disease recurrence and monitoring response to treatment in cancer patients.

Amongst the goals of this project are to: (i) decipher the EVs-mediated reshaping of the tumour microenvironment, (ii) investigate their regulation (e.g. biogenesis, targeting/binding to recipient cells, etc) and (ii) explore the use of EVs-based liquid biopsies for the identification of novel cancer biomarkers (including glioblastoma, breast, etc).

For these aims, a variety of biochemical and molecular/cellular biology techniques will be employed and therefore a solid background in molecular/tumour biology and in the field of EVs is required. The predominant cancer types that will be used as models for this study will be breast and brain tumours (in particular glioblastoma).

Our lab is equipped with the NanoSight NS300 instrument, the ExoView R100 platform as well as a Transmission electron microscope (TEM), allowing for proper detection and characterisation of EVs. We have also obtained blood liquid biopsies of glioblastoma patients from Genomics England (as part of 'The 100,000 Genomes Project') and healthy volunteers, as part of investigating the prospective clinical implementation of EVs-based liquid biopsies cancer biomarkers.

The position will be initially reserved for 1 year, with possible extension renewable annually up to 3 years. We are an active research group and provide a stimulating and supportive research environment combining a variety of *in vitro* and *in vivo* models / tools. An overview of research within the Giamas lab can be found at: <http://www.sussex.ac.uk/lifesci/giamaslab/>

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.

Required qualifications for this position:

- PhD in biochemistry, molecular/cellular biology or equivalent.
- A minimum of one first author publication in a reputable journal.
- Advanced skills in biochemistry, molecular/cellular and cancer biology.
- Commitment to work in a highly competitive field.
- Ability to independently drive a research project and analyse data.
- Fluent in written /spoken English and writing scientific reports/papers.

Informal enquiries to: Prof Georgios Giamas

E-mail: g.giamas@sussex.ac.uk; Tel: +44 1273 873163.

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

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](#)

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 £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 University has committed to building a new teaching and research building, which will bring life scientists from all disciplines together. Planning for this building has been approved and will provide both academic and

social spaces to improve the culture and interaction in the School. The building is scheduled for delivery in circa 2021.

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. The first intake on the MPharm was 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.

4. Job Description and Person Specification

Job Title:	Postdoctoral Researcher
Grade:	Research Fellow I, Grade 7
School:	Life Sciences
Location:	Life Sciences; JMS 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

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, 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 identify, develop and apply techniques to pursue the research objectives

4.2 Keeping up with relevant scientific literature

4.3 Keeping accurate and complete records of lab work

4.4 To present scientific work at seminars within the Laboratory and at external meetings

4.5 To contribute to lab-wide discussions on developments within the field

4.6 Progression of specific project to level appropriate for publication in a timely manner, and interfacing with supervisor on regular basis to discuss results and project progression/direction

4.7 To assist in the training of PhD students and other members of the laboratory where necessary.

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.

5. 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. PhD in biochemistry, molecular/cellular biology or equivalent.
2. Extensive knowledge and experience in the field of extracellular vesicles and cancer cell signalling.
3. Extensive and in depth knowledge and experience in Cell biology techniques including: cell cultures (primary and immortalised cell lines), transfections (siRNA, shRNA, CRISPR-CAS), Immunofluorescence/confocal microscopy.
4. Extensive experience in Molecular biology and Biochemical techniques including: cloning, site-directed mutagenesis, agarose gels, real-time RT-PCR, mini/maxi DNA preparations, SDS-PAGE, Western blotting, HPLC/FPLC, protein expression and purification, FACS analysis and mass-spectrometry.
5. Extensive and in depth knowledge and experience in different Phenotypic assays including: cell proliferation / viability / apoptosis / invasion / migration.
6. Excellent oral and written communication skills.
7. Honesty, motivation, demonstrable independence, commitment and a strong work ethic.
8. Proven ability to develop new skills and set up new techniques.
9. Demonstrable ability to work co-operatively as a member of a research team and lead a research project.
10. A track-record of lead (first) author, high-quality, publications in well cited journals within the last 2 years.
11. Professional presentation of data.
12. A demonstrated ability to write scientific papers and prepare high-quality figures and images.

DESIRABLE CRITERIA

1. Previous experience working in a cancer cell signalling laboratory.
2. Good knowledge in other techniques/assays including transmission electron microscopy and working with p32 radioactivity (*in vitro* kinase assays).
3. Experience of writing research proposals
4. Experience with *in vivo* xenograft (and/or transgenic) cancer mice models.

The post holder will be expected to work independently although supervision will be available in the event of a problem.