



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in membrane protein structure/function studies,
Faculty of Biological Sciences



Salary: Grade 7 (£32,548 - £38,833 p.a.) Due to funding limitations an appointment cannot be made above £32,548 p.a.

Reference: FBSBM1090

Closing date: 26 July 2018

Fixed-term for 36 months (external funding)

We will consider flexible working arrangements

Research Fellow in membrane protein structure/function studies

School of Biomedical Sciences

Are you an ambitious researcher looking for your next challenge? Do you have an established background in membrane protein biochemistry? Do you want to work in a multidiscipline environment of academic and industrial partners? Do you want to work with cutting edge electron microscopy and mass spectrometry techniques?

This is an exciting opportunity to become part of a multidisciplinary team of both academic and industrial partners working on a 3 year project funded by BBSRC, GlaxoSmithKline, and UCB. It is becoming increasingly apparent that association with specific lipids is an important factor in membrane protein structure and function. This project aims to investigate how different membrane protein extraction methodologies and expression regimes affect the lipids that are extracted with the protein and how this impacts on activity, structure and ease of structure determination by single particle electron microscopy (EM). To address this important question this project will amalgamate expertise in cutting edge mass spectrometry and EM, taking advantage of the recent investment within the University of Leeds. These include the Astbury Biostructure facility which houses two Titan Krios microscopes and a ~£1M investment in the mass spectrometry facility to incorporate an ion-mobility enabled Q-TOF mass spectrometer, a fully automated HDX-MS system, FPOP (Fast Photochemical Oxidation of Proteins) and a custom-modified Orbitrap. This work is built upon our previous work looking at new methodologies for membrane protein extraction, in particular styrene maleic acid co-polymers (SMA) and the diverse range of membrane proteins currently being studied both biochemically and structurally (Lee *et al.*, Nat Protocols 2016, Parmar *et al.*, BBA Biomembranes 2017).

The project will be led by [Dr Stephen Muench's](#) group at the University of Leeds and will involve collaborations with experts in mass spectrometry ([Professor Frank Sobott](#)), ion channel pharmacology ([Dr Jon Lippiat](#)), membrane biochemistry ([Dr Vincent Postis](#)) and will involve two industrial collaborators, Dr Chun-wa Chung (GlaxoSmithKline) and Dr Tom Ceska (UCB). This position will allow you to develop skills in cutting edge techniques, including mass spectrometry and EM. Moreover, you will acquire skills in using different membrane protein support scaffolds and develop a broad range of experience in membrane protein studies. This will be an excellent



opportunity for someone looking to peruse the latest developments in membrane protein research, using EM and mass spectrometry. This research will enhance our understanding of membrane protein structure/function and the role of the native lipid environment.

What does the role entail?

As a Research Fellow your main duties will include:

- Designing, planning and conducting a programme of investigation, in consultation with the research team;
- Generating independent and original research ideas and methods with an aim to extend the group research portfolio;
- Making a significant contribution to the dissemination of research results by publication in leading peer-reviewed journals, and by presentation at national and international meetings;
- Working independently and as part of a larger team of researchers , both internally and externally to develop new research links and collaborations and engage in knowledge transfer activities where appropriate;
- Contributing to the supervision of junior researchers and PhD students and acting as a mentor to less experienced colleagues;
- Evaluating methods and techniques used and results obtained by other researchers and relating such evaluations to your own research;
- To contribute to, and to encourage, a safe working environment.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Research Fellow you will have:

- A PhD (or close to completion) in structural biology, protein biochemistry or a closely allied discipline;
- Experience in protein biochemistry, structural biology or related discipline;
- A good track record of high quality research;
- Strong analytical skills, with the ability to work accurately and carefully, designing, executing and writing up research independently;



- A developing track record of peer reviewed publications in international journals;
- Excellent communication skills, both written and verbal and the ability to communicate your research at national and international conferences;
- The ability to work well both independently and as part of a team;
- Strong initiative and a pro-active approach, with excellent organisational, planning and self-management skills, including the ability to prioritise workloads to meet deadlines/demand and deliver high quality under pressure;
- A strong commitment to your own continuous professional development.

You may also have:

- Experience in mass spectrometry, electron microscopy, membrane protein biochemistry;
- Evidence of pursuing external funding to support research.

How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23.59** (UK time) on the advertised [closing date](#).

Your application should include:

- A supporting statement providing evidence to support each requirement listed on the 'What will you bring to the role' section of the Candidate Brief (no more than two sides of A4, minimum font size 11);
- An academic curriculum vitae, including a list of your publications.

Contact information

To explore the post further or for any queries you may have, please contact:

[Dr Stephen Muench](#), Lecturer in Membrane Biology

Tel: +44 (0)113 343 4370

Email: s.p.muench@leeds.ac.uk



Additional information

Find out more about the [Faculty of Biological Sciences](#) and the [School of Biomedical Sciences](#)

Working at Leeds

Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our [Working at Leeds](#) information page.

A diverse workforce

The University of Leeds and the Faculty of Biological Sciences are committed to providing equal opportunities for all and offer a range of family friendly policies. The University is a charter member of Athena SWAN (the national body that promotes gender equality in higher education), and the Faculty of Biological Sciences gained a Bronze award in 2014 and submitted an application for a Silver award in April 2017. We are proud to be an inclusive Faculty that values all staff, and are happy to consider job share applications and requests for flexible working arrangements from our employees. Our Athena SWAN webpage provides more information. <http://www.fbs.leeds.ac.uk/equality-and-diversity/athena-swan/>

Candidates with disabilities

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.

