



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Structural Molecular Biology, Faculty of Biological Sciences



Salary: Grade 6 or 7 (£26,052 - £31,076 p.a. or £32,004 – £38,183 p.a.)

Reference: FBSAS1006

Closing date: 30 March 2017

Fixed-term for 24 months (due to funding)

Research Fellow in Structural Molecular Biology

School of Molecular and Cellular Biology, Faculty of Biological Sciences

Are you looking to apply your skills in Structural Biology to the development of new approaches for discovery of protein-protein interaction inhibitors?

Protein-protein interactions (PPIs) control all cellular processes relevant to health and disease. Selective inhibition of individual PPIs would thus facilitate both a greater understanding of biological mechanisms and provide new opportunities for therapeutic intervention. Presently, PPI inhibitors represent a minute fraction of current small molecule drugs, this is largely because of specific challenges associated with development of inhibitors for these targets.

The Perturbation of Protein-Protein Interactions ([PoPPI](#)) project is a major £3.4 million five-year collaborative research programme led by [Professor Andy Wilson](#), funded by the [Engineering and Physical Sciences Research Council \(EPSRC\)](#), and bringing together the [University of Leeds](#), the [University of Bristol](#), the [Northern Institute of Cancer Research](#) (Newcastle University) and drug discovery organisations, [AstraZeneca](#) and [Domainex](#). This large and diverse programme focuses on developing, validating and exploiting new tools to discover inhibitors of PPI's. *This position will use structural biology and biophysics to assess the application of our methods for preparing inhibitors of multiple PPIs. The position will provide multiple opportunities for personal development, as well as the possibility of research secondments at Bristol and our drug discovery partners.*

You should have, or be about to obtain, a PhD in Biochemistry or related biological science with expertise in Structural Chemistry. You will work closely, interactively and collaboratively with project team in an interdisciplinary setting, so you will need excellent communication skills, the ability to work under pressure and to meet deadlines.

You will be part of a large team based in [The Edwards Group](#), in the [School of Molecular and Cellular Biology](#) and the [Astbury Centre for Structural Molecular Biology](#). You will have access to a superb infrastructure for research in structural and chemical biology, including synthetic laboratories. NMR equipment, X-ray



crystallographic, mass spectrometry and, biophysical techniques, together with state of the art online resources.

What does the role entail?

As a Research Fellow, your main duties will include:

- Contributing to the development of the project, as directed by [Dr Edwards](#) and [Professor Wilson](#);
- Analysis of the inhibition of protein-protein interactions using peptides, peptidomimetics and small molecules that have been synthesized by other members of the team to generate original ideas and directions;
- To carry out protein expression and purification for use in biophysical assays to test for inhibition of protein-protein interactions and structural characterisation of the inhibitor protein interactions using crystallography and/or NMR as appropriate;
- Supporting research activities and communication, such as participation at group meetings/seminars, presentations at meetings/conferences, publications in papers/journals, and participating in our programme of public engagement activities;
- Working as part of a larger team of researchers, in Leeds and beyond, to develop new research links and collaborations, and engage in knowledge transfer activities, including secondments to other institutions, where appropriate;
- Contributing to the supervision of junior researchers and PhD students and acting as a mentor to less experienced colleagues;
- Contributing to, and to encouraging, a safe working environment.

At Grade 7, your duties will also include:

- Designing, planning and conducting a scientific programme of investigation, in consultation with Dr Edwards and Professor Wilson;
- Generating independent and original research ideas and methods, in the development of inhibitors of protein-protein interactions;
- Making a significant contribution to the dissemination of research results, through publications in leading peer-reviewed journals, and by presentation at national and international meetings.



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 in, or be close to completion in, structural biology, chemical biology or biochemistry, or have submitted a thesis prior to taking up the appointment;
- Knowledge of structural biology in its broadest sense and appreciation of the key role it plays in drug discovery;
- A demonstrable ability to successfully apply extensive knowledge of modern Molecular Biology, protein purification and a broad range of modern biophysical methods to study molecular recognition, and demonstrable interest in the modulation of protein-protein interactions;
- Effective communication skills, including research report writing and evidence of contributing to publication of papers in internationally recognised peer-reviewed journals, with a strong commitment to research in a team environment focused on cutting-edge approaches for protein-protein interaction inhibitors;
- A high level of organisational, planning and self-management skills, with the ability to support a range of different work streams/projects simultaneously, understand the links between them, and retain a clear focus on outcomes/deadlines.

At Grade 7 you will also have:

- A PhD in structural biology or biochemistry;
- Strong analytical skills, with the ability to work accurately and carefully, designing, executing and writing up research independently;
- Proof of independence as a researcher, for example, evidence of leadership of a high impact peer-reviewed publication, or a successful application for research funding;
- A developing track record of peer-reviewed publications in leading international journals and experience of delivering presentations/talks at national and international conferences.



You may also have:

- The ability to successfully apply extensive knowledge in the use of appropriate analytical methods such as SPR and ITC to study non-covalent interactions or solve problems relating to molecular recognition;
- Practical experience in the use and/or development of cell culture and cell-based assays;
- Experience of research at the interface between chemistry and biology;
- Experience of public communication and engagement.

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 clear statement as to which role you wish to be considered for, i.e. Grade 6 or Grade 7;
- 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 2 sides of A4, minimum font size 11);
- An academic curriculum vitae, including a list of your publications.

The interview will involve a scientific discussion about the project, as such we recommend that you familiarise yourself with recent publications from the [PoPPI](#) project.

Contact information

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

Dr Thomas Edwards, Associate Professor of Structural Biology

Tel: +44 (0)113 343 3031

Email: T.A.Edwards@leeds.ac.uk



Additional information

Find out more about the:

- Perturbation of Protein-Protein Interactions [research](#) programme;
- Protein-Protein Interactions [Network](#);
- [The Edwards Group](#)
- [Wilson Group](#) and their [research](#);
- [School of Molecular and Cellular Biology](#),
- [Astbury Centre](#) for Structural Molecular Biology, their [research](#) and associated [facilities](#);
- [Faculty of Biological Sciences](#);
- University [libraries](#), [journal](#) and [database](#) subscriptions.

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.

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.

