UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Electron Paramagnetic Resonance (EPR) Spectroscopy, Faculty of Biological Sciences



Salary: Grade 7 (£34,304 – £40,927 p.a.) Due to funding limitations it is unlikely an appointment will be made above £34,304

Reference: FBSBM1160

Available from 01 February 2022 on a fixed-term basis for 3 years (external funding)

We will consider flexible working arrangements

Research Fellow in Electron Paramagnetic Resonance (EPR) Spectroscopy

School of Biomedical Sciences

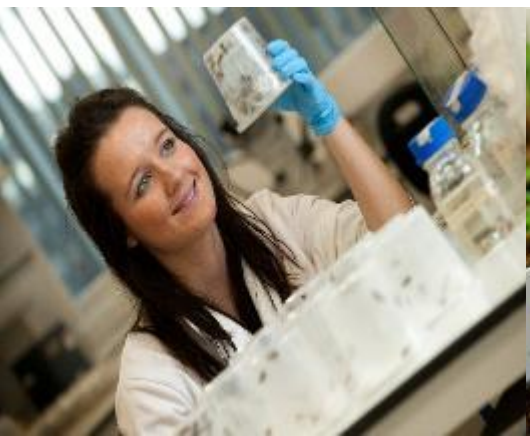
Are you an ambitious researcher looking for your next challenge? Do you have an established background in EPR spectroscopy? Do you want to further your career in one of the UK's leading research intensive Universities?

We are seeking a highly motivated and talented individual interested in undertaking a challenging and exciting 3 year postdoctoral project in the laboratory of Dr Christos Pliotas (EPR spectroscopy and MD), in collaboration with Professor Frank Sobott (mass spectrometry).

You will make a leading contribution to a two-centre BBSRC-funded research project, in collaboration with the University of Glasgow, the overarching goal of which is to study protein complexes that produce ribosomally synthesised natural products known as RiPPs. The latter encompass a plethora of bioactive molecules, including anti-viral and anti-biotic compounds. A better understanding of the dynamics of these complexes is essential to advance enzyme engineering efforts. You will investigate these complexes using state-of-the-art EPR (PELDOR/DEER, ESEEM, cwEPR) spectroscopy, structural mass spectrometry (HDX-MS, native and ion mobility), biophysics and structural biology. The investigation of the dynamics, conformational landscape and high-resolution structures of these protein complexes will lead to a step-change in our understanding of RiPP biosynthesis and ultimately to the production of high-value chemicals and drugs.

You should have a PhD (or close to completion) in Biophysics, Chemistry, Structural Biology, Biochemistry or a closely allied discipline with experience in EPR spectroscopy (PELDOR/DEER) or any related magnetic resonance method.

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 was awarded a Silver award in 2020. 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.

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 Dr Christos Pliotas and Professor Frank Sobott;
- Generating independent and original research ideas and methods in the application of EPR spectroscopy and structural MS to RiPP protein complexes with an aim to extend the Pliotas Group and Sobott Group research portfolios;
- 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.

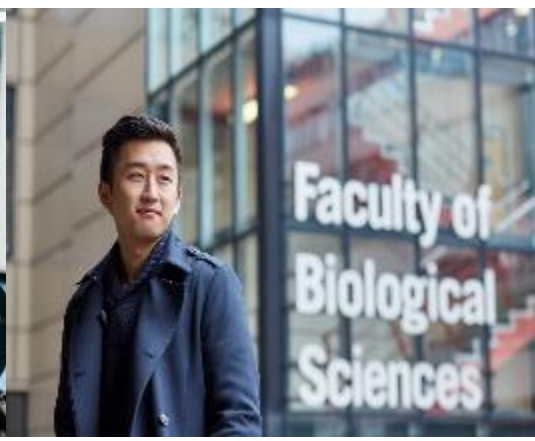
These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Research Fellow you will have:

- A PhD (or close to completion) in Biophysics, Chemistry, Structural Biology, Biochemistry or a closely allied discipline;
- Experience in EPR spectroscopy (PELDOR/DEER) or any related magnetic resonance method;
- 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:

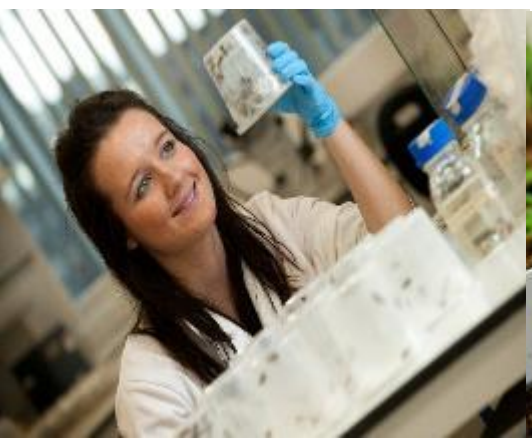
- Experience in protein biochemistry, structural mass spectrometry and MD simulations, although in-depth training in these methods could be provided;
- Experience in other related magnetic resonance techniques, such as protein NMR spectroscopy;
- Evidence of pursuing external funding to support research.

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 Christos Pliotas, Assistant Professor in Integrative Membrane Biology

Pliotas Group Website:

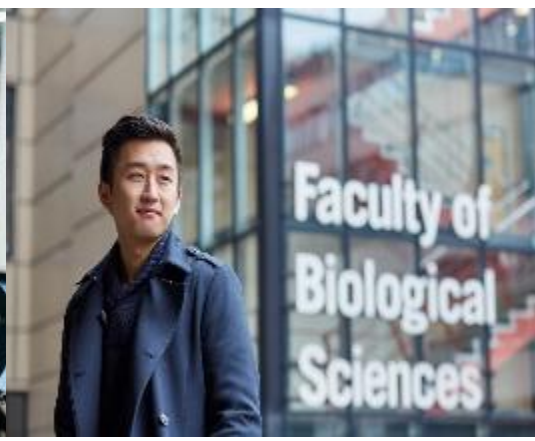
Twitter:
Tel: +44 (0)113 343 1229
Email: c.pliotas@leeds.ac.uk

> *'Please note: If you are not a British or Irish citizen, from 1 January 2021 you will require permission to work in the UK. This will normally be in the form of a visa but, if you are an EEA/Swiss citizen and resident in the UK before 31 December 2020, this may be your passport or status under the EU Settlement Scheme.'*

Additional information

The postholder will be based in the Astbury Centre for Structural Molecular Biology, in Leeds (BMS), working under the supervision of Dr Christos Pliotas (EPR) and Prof Frank Sobott (MS). The post will involve protein spin labelling and sample characterisation using an X-band cwEPR spectrometer and 2 x multiwavelength Akta Pure instruments within the Pliotas lab in Leeds. The project will also involve regular trips to the world-leading national EPR facilities in Manchester consisting of Bruker cwEPR (L-, S-, X-, K- and Q-bands), pulse-EPR (X-band, 2K base temperature; Q/S-band, 2K; X-band 7K, with AWG technology) to set up and perform PELDOR experiments. The postholder will also perform complementary PELDOR/DEER distance restrained MD, (Pliotas Lab), using the Arc3/4 supercomputers (Leeds). Structural mass spectrometry experiments (HDX-MS, Native and ion mobility) will be carried out in Leeds using state-of-the-art equipment, including the very latest Orbitrap Exactive, Eclipse and UHMR platforms for proteomics and high resolution native MS, Waters Synapt G2-Si mass spectrometers and liquid handling robotics for automated HDX-MS, within the Astbury Centre, under the supervision of Professor Frank Sobott. The successful candidate will also be expected to contribute to the formulation and submission of research publications and proposals as well as help manage and direct this challenging project as opportunities allow.





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.

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.

