



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

Research Fellow in Biophysics of Amyloid Formation, Astbury Centre for Structural Molecular Biology, Faculty of Biological Sciences



**Salary: Grade 7 (£39,105 - £46,485 p.a.)** Due to funding limitations, it is unlikely an appointment will be made above £39,105.

**Reference: FBSAC1009**

**Available on a fixed-term basis for 6 months (to complete specific time limited work)**

**This role will be based *on the university campus***

**We are open to discussing flexible working arrangements.**

# Research Fellow in Biophysics of Amyloid Formation, Astbury Centre for Structural Molecular Biology, School of Molecular and Cellular Biology

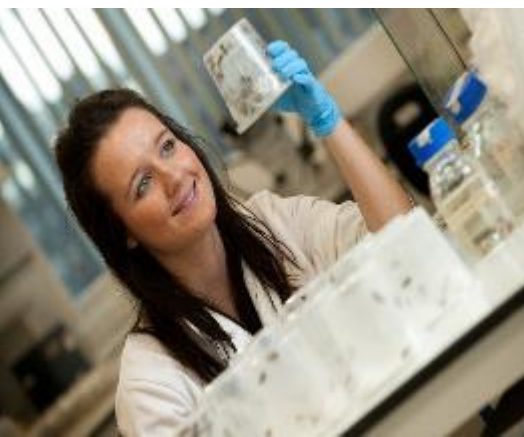
**Are you an ambitious researcher looking for your next challenge? Do you have an established background in biophysical analysis of amyloid formation mechanisms and want to help to develop new routes to combat amyloid diseases? Do you want to further your career in one of the UK's leading research intensive Universities?**

We are looking for an outstanding postdoctoral research fellow to join our interdisciplinary team that is investigating how proteins aggregate into amyloid fibrils, using  $\alpha$ -synuclein as a model system. This role will use NMR spectroscopy, combined with other biochemical, biophysical and computational methods, to understand how the properties of the initially disordered  $\alpha$ -synuclein monomer funnels its self-assembly into different polymorphic amyloid structures. In parallel, you will use *C. elegans* as a model organism to follow aggregate formation of  $\alpha$ -synuclein and its natural variants in a living organism.

You will be based in the laboratory of Professor [Sheena Radford](#) and work closely with our collaborators and other members of the amyloid team (funded by Wellcome, BBSRC and the Royal Society). You should have a PhD (or be close to completing one) in Structural Biology, Biophysics, Biochemistry, or a related discipline, and you should have extensive experience of using biophysical and computational methods to elucidate biological mechanisms. Experience of working in the amyloid field is required.

## What we offer in return

- 26 days holiday plus approx. 16 Bank Holidays/days that the University is closed by custom (including Christmas) – That's 42 days a year!
- Generous pension scheme plus life assurance– the University contributes 14.5% of salary
- Health and Wellbeing: Discounted staff membership options at The Edge, our state-of-the-art Campus gym, with a pool, sauna, climbing wall, cycle circuit, and sports halls.





- Personal Development: Access to courses run by our Organisational Development & Professional Learning team.
- Access to on-site childcare, shopping discounts and travel schemes are also available.

And much more!

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 has demonstrated its commitment by achieving a Silver award. 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.

## Main duties and responsibilities

- Designing, planning and conducting a programme of investigation, in consultation with [Professor Sheena Radford](#);
- Generating independent and original research ideas and methods in Structural Biology of amyloid formation, including using fluorescence, CD and NMR to monitor protein conformation of intrinsically disordered proteins and computational methods to model these dynamic systems;
- Using *C. elegans* as a model system to develop a new molecular understanding of amyloid aggregation mechanisms;
- Using molecular biology, including creating mutants and new *C. elegans* strains to explore aggregation mechanisms in a living organism;
- Using kinetic analysis of coupled systems to deduce how mutations affect amyloid formation and to make testable hypothesis;
- 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;



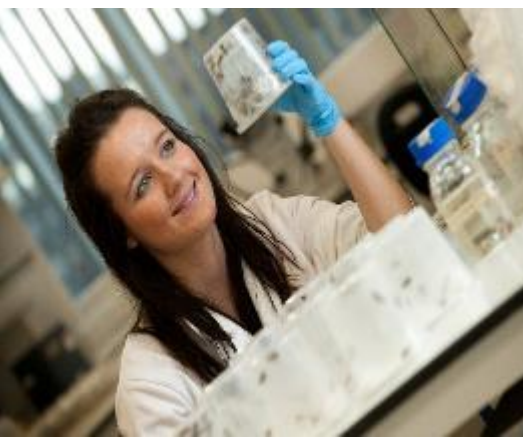
- Evaluating methods and techniques used and results obtained by other researchers and relating such evaluations to your own research;
- To contribute to, and to encourage, a safe working environment.

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.

## Qualifications and skills

### Essential

- A PhD (or close to completion) in biophysics or a closely allied discipline;
- Experience in creating mutants using molecular biology and in recombinant protein expression and purification using *E. coli*;
- Substantial experience in the use of biophysical methods applied to understanding amyloid formation mechanisms, including significant experience in using and interpreting kinetic measurements of amyloid formation using thioflavin T fluorescence;
- Significant experience in using CD, NMR and other methods to define the structural properties of intrinsically disordered proteins and to map their interactions in self-assembly, including with membrane surfaces;
- Experience of creating strains of *C. elegans* as a model organism to explore how protein aggregation and its associated proteotoxicity lead to organismal dysfunction, including measuring lifespan and movement disorders and using FRAP/FLIM to characterise aggregate properties;
- Good data management, analytical and computer skills together with experience of using software for analysing data;
- The desire and drive to learn new skills and techniques with imagination, creativity and ambition to drive new areas of science;
- The ability to design, execute and write 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;
- Good time management and planning skills, with the ability to meet tight deadlines;
- A proven ability to work well both independently and as part of a team;
- A strong commitment to your own continuous professional development



## Desirable

- Experience with negative stain electron microscopy;
- Experience in computational analysis of complex data;
- 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:

[Professor Sheena Radford](#), Astbury Professor of Biophysics

Tel: +44 (0)113 343 3170

Email: [s.e.radford@leeds.ac.uk](mailto:s.e.radford@leeds.ac.uk)

## Additional information

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

For information about our facilities available and the [Astbury Centre for Structural Molecular Biology](#).

To see our recent publications and our [Research Team](#)





## Working at Leeds

We are a campus-based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.

### Our University

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Biological Sciences we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian, those who belong to a minority ethnic community; people who identify as LGBT+; and disabled people. Candidates will always be selected based on merit and ability.

### Information for disabled candidates

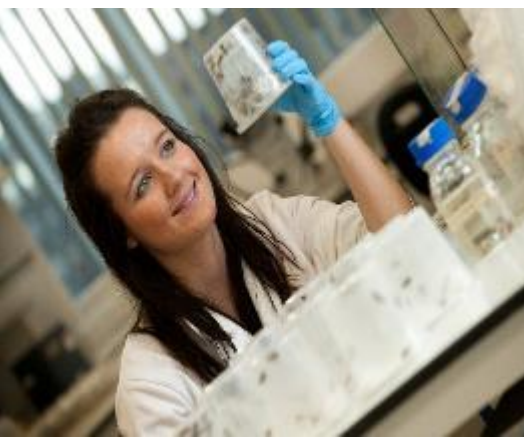
Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found under the 'Accessibility' heading on our [How to Apply](#) information page or by getting in touch by emailing HR via [hr@leeds.ac.uk](mailto:hr@leeds.ac.uk).

### Salary Requirements of the Skilled Worker Visa Route

If you are not a British or Irish citizen, 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, this may be your status under the EU Settlement Scheme.

Please note that this post may be suitable for sponsorship under the Skilled Worker visa route but first-time applicants might need to qualify for salary concessions. For more information, please visit [the Government's Skilled Worker visa page](#).

For research and academic posts, we will consider eligibility under the Global Talent visa. For more information, please visit [the Government's page, Apply for the Global Talent visa](#).



## **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.

