



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Senior Research Technician in Gene Expression

Faculty of Biological Sciences



Salary: Grade 6 (£32,296 - £37,999 p.a.)

Reference: FBSMB1294

Available on a fixed-term, full-time basis for 3 years (to complete specific time limited work).

This role will be based on the university campus. We are open to discussing flexible working arrangements.

Senior Research Technician in Gene Expression Faculty of Biological Sciences

Are you an experienced technician looking for a challenge? Do you have a background in gene expression and RNA biology? Do you have experience in using model organisms? Do you want to further your career in one of the UK's leading research-intensive Universities?

We are looking for an experienced research technician to join the Aspden group at the University of Leeds. The technician will be part of a large team (£5.6M, funded by a BBSRC Strategic Longer and Larger grant) including two other technicians. The team aims to unravel the 'ribosome code', rules that explain how compositionally dissecting ribosomes enable translation of specific sets of mRNA. Specifically, the Senior Research Technician will focus on generating tagged ribosome populations and disrupting gene function. This will include cloning, designing transgenics, CRISPR, RNAi, phenotypic assessment and purification of ribosomes. The majority of this work will be in *Drosophila melanogaster* but some will be in other models such as *Arabidopsis thaliana*. The technician will work closely with others of the team who will characterise the structure and function of these ribosome populations. Together we will be able to dissect conserved mechanisms of ribosome specialisation across eukaryotes, allowing us to unravel the 'ribosome code'.

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 options plus life assurance
- 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!



You must have a degree in biochemistry, biological sciences, genetics, biology or a closely allied discipline; and experience in *Drosophila melanogaster*. You should have an interest in learning to work with *Arabidopsis thaliana*.

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.

Main duties and responsibilities

- Working with Dr Julie Aspden and co-investigators to plan and conduct experiments using current methodology and developing new techniques as appropriate. These would include (but are not limited to) the following:
 - *Drosophila* husbandry including stock maintenance
 - *Drosophila* crosses
 - Dissecting *Drosophila*
 - *Arabidopsis* care and maintenance
 - Performing immunofluorescence
 - Performing RNA *in situ* hybridisation assays
 - Generating CRISPR mutant lines
 - Identifying and growing insertion mutant lines
 - Assessing phenotypes in flies
 - Purifying translation complexes from sucrose gradients
 - Preparing translation complexes for Cryo-EM and mass spectrometry
 - RNA purifications and extractions
 - qRT-PCR
 - Western blotting
- Troubleshoot any research methodology or experimental difficulties encountered within the laboratory reporting findings to the PIs;
- Act as first point of contact for any Health and Safety matters related to the work in the laboratory developing risk assessments for new and existing



protocols. This will include responsibility for the induction of new group members, explaining local laboratory procedures and protocols;

- Maintaining good laboratory records of work carried out and databases of samples held in storage;
- Providing clear understandable data to other members of the research team;
- Supplying information as required to contribute to grant applications and research papers for publication;
- Day-to-day supervision of the laboratory and any junior staff or students working in the area associated with the project;
- Responsibility for the management and maintenance of equipment specifically associated with the project. This will also include ordering of specialist services and supplies.

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 degree in biochemistry, biological sciences, genetics, biology or a closely allied discipline;
- Extensive experience of working in a laboratory environment, with the ability to perform technically demanding tasks with care and precision;
- Specific experience working on gene expression;
- Track record of working with *D. melanogaster*;
- Excellent organisational and time management skills, with the ability to manage your own workload, working under pressure whilst maintaining a high level of accuracy;
- The ability to work pro-actively both independently and within a team;
- Demonstrable problem-solving skills and initiative;
- Good verbal and written communications skills, with the ability to clearly articulate and present information, ideas and analysis, modifying your approach to suit different audiences;
- Good IT skills, including use of MS Office software.

Desirable

- Previous experience with mRNA translation;



- RSci (Registered Scientist) or RSci Tech (Registered Science Technician) qualification from IST.

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.

Contact information

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

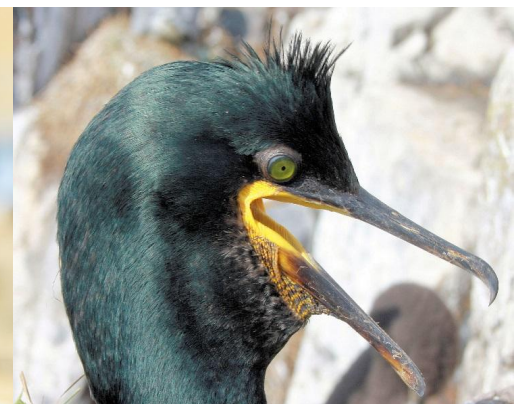
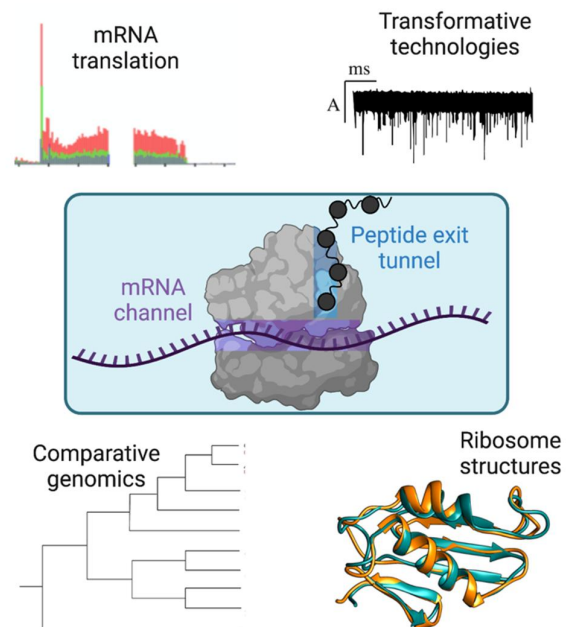
[Dr Julie Aspden](#), Director of RiboCode BBSRC sLoLa

Email: j.aspden@leeds.ac.uk

Additional information

Background

Recent discoveries, across a wide range of eukaryotes, have identified ‘specialised ribosomes’ – compositionally distinct ribosomes that actively regulate mRNA translation. Unravelling the structural implications of differential ribosome composition and linking this to translational outputs has been technically challenging, limiting our understanding of the molecular mechanisms that drive ribosome specialisation. Additionally, analysis has been restricted to single organisms. This project aims to overcome these barriers with an innovative, multidisciplinary and multi-system, evolutionary strategy to dissect molecular mechanisms of ribosome specialisation.



Project

Overall, we aim to understand the detailed molecular mechanisms of ribosome specialisation and determine common features across eukaryotes. We will study ribosome specialisation from an evolutionary, functional (translational outcome) and structural perspective (see Figure), using different eukaryotic model systems (yeast, *Drosophila*, *Arabidopsis*, human cells) that cover >1 billion years of evolution. We will also develop novel tools, including nanopore- based approaches to characterise specialised ribosomes in single cells.

Together this programme of research will allow us to unravel precisely how heterogeneity results in specialisation, and to define a 'ribosome code' applicable to all eukaryotes. It will build upon recent work across the team on ribosome heterogeneity, specialisation and mRNA translational control. Our findings have the potential to impact our understanding of several human diseases, including ribosomopathies, cancers and viral infection, and enable the modulation of ribosome translation in future medical, agricultural and biotechnological applications.

What we can offer you

This position represents a unique opportunity to be involved in a highly collaborative, interdisciplinary project. Working as part of a team of 7 postdocs, 5 PhD students, 3 research technicians, 2 data scientists and 8 group leaders, across 3 universities (Leeds, Nottingham and Sheffield), you will have the opportunity to develop excellent skills in communication, teamwork and collaboration. A position on this team will expose you to a range of technical expertise including but not limited to cryo-electron microscopy, mass spectrometry, ribosome profiling, comparative genomics, CRISPR, and nanopore technology. Extensive training opportunities will be available, and you will be embedded within bouyant research communities (e.g. LeedsOmics, Astbury Centre, RNA Salon).

Environment

We are passionate about fostering a supportive, responsible, and inclusive research culture. Equity, diversity, and inclusion (EDI) are central to how the team operates, and the team will play active roles in EDI activities across the 3 universities. Development opportunities for a range of career avenues (e.g. CV writing workshops, presentation training, meeting industrial representatives, fellowship writing) will be available. Mentoring will be provided and tailored to your career goals.



Find out more about:

- The [Aspden](#) group
- [RiboCode project](#)
- [LeedsOmics](#)
- [Astbury Centre for Structural Molecular Biology.](#)
- [Faculty of Biological Sciences.](#)
- [School of Molecular and Cellular Biology.](#)
- Our [Research](#) and associated [facilities](#).
- Our [Faculty Equality and inclusion and Inclusion](#) initiatives.

Find out more about the [Faculty of Biological Sciences](#).

Our University

As an international research-intensive university, we welcome students and staff from all walks of life. 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

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.

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).



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](#).

Salary Requirements of the Skilled Worker Visa Route

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.

Please note that due to Home Office visa requirements, this role may only be suitable for first-time Skilled Worker visa applicants if they are eligible 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](#).

