



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

Research Assistant in VLP Vaccine Optimisation, Faculty of Biological Sciences



**Salary: Grade 6 (£30,487 - £36,024 p.a.)**

**Reference: FBSMB1281**

**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 Assistant in VLP Vaccine Optimisation School of Molecular and Cellular Biology

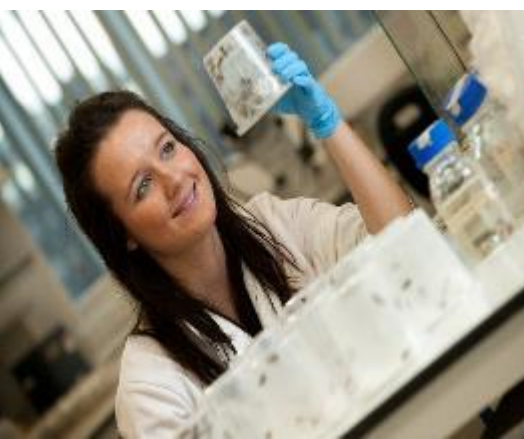
**Are you an early career researcher looking for your first challenge? Do you have a background in virology or vaccines? Do you want to further your career in one of the UK's leading research intensive Universities?**

Successful poliovirus vaccination has made the prospect of global eradication possible. However, these vaccines come with risks of reintroduction into naive populations. Therefore, novel vaccines without this risk are essential for successful eradication. One alternative is a vaccine based on virus-like particles (VLPs), where the virus capsid proteins are expressed without infectious genetic material. We have been using the yeast *Pichia pastoris* to express poliovirus VLPs. This expression system is used within industrial settings with high yields, low costs and scalability (Sherry *et al*, 2020. <https://doi.org/10.1128/mSphere.00838-19>; Sherry *et al*, 2024. <https://doi.org/10.1101/2024.05.13.593909>). This is of particular importance as future poliovirus vaccines must be accessible for low-and middle-income countries. This project builds on this work, with a focus on alternative yeast strains and optimisation of expression conditions to improve yield.

This project is an opportunity for a motivated applicant to work as part of an established team (funded by the World Health Organisation and Bill and Melinda Gates Foundation) at the university alongside international industrial collaborators. This 6 month position is funded by an internal impact acceleration award to drive our research forward.

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.



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 Assistant your main duties will include contributing to the 'Optimising poliovirus virus-like particle (VLP) expression as a vaccine candidate project', as directed by Professor Nicola Stonehouse, Dr Jess Swanson and Dr Emma Wroblewski, by carrying out laboratory-based research.

Duties will include:

- Production and characterisation of proteins/VLPs using a variety of techniques;
- Generating original ideas based on the outcome of analysis, in collaboration with Professor Nicola Stonehouse, Dr Jess Swanson and Dr Emma Wroblewski;
- Contributing to the dissemination of research results in leading peer-reviewed journals and through presentation at meetings and conferences, with guidance as necessary;
- Supporting the activities of the research group to ensure a successful programme of investigation, including participation at group meetings and seminars;
- Providing support and advice to other members of the group, and assisting in the supervision of students;
- Working both independently and as part of a larger team of researchers and stakeholders;
- Continually updating your knowledge, understanding and skills in the research field in which you work.



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.

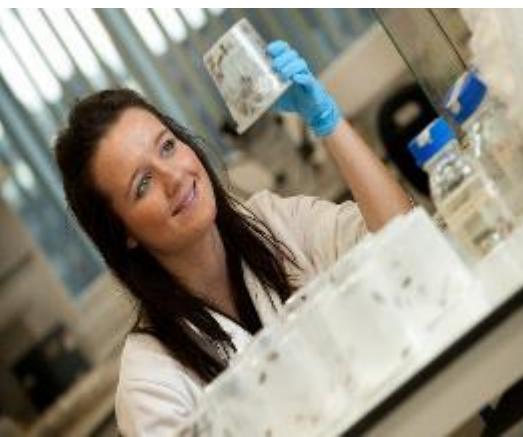
## What will you bring to the role?

As a Research Assistant you will have:

- A first degree/Masters in Virology/Molecular Biology/Biochemistry or a closely allied discipline;
- Experience in protein expression and purification;
- Experience in SDS-PAGE and Western blotting;
- Experience in molecular cloning;
- Evidence of contributing to papers in internationally recognised, peer-reviewed journals or evidence of publishable research in progress;
- Good interpersonal and communication skills, both written and verbal, and the ability to communicate effectively with a wide range of stakeholders;
- 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;
- The ability to work accurately and carefully;
- A strong commitment to your own continuous professional development.

You may also have:

- A PhD (or close to completion) in Virology/Molecular Biology/Biochemistry or a closely allied discipline;
- Experience in protein expression in a yeast system;
- Experience purifying viruses or VLPs using sucrose density gradients;
- Experience in ELISAs;
- Experience in negative stain TEM;
- Experience in DLS and/or similar biophysical characterisation techniques;
- Experience in chromatographic protein purification;
- Accepted publications in internationally recognised, peer-reviewed journals.



## 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 Jess Swanson** or **Dr Emma Wroblewski**

Email: [j.j.swanson@leeds.ac.uk](mailto:j.j.swanson@leeds.ac.uk) ; [e.l.wroblewski@leeds.ac.uk](mailto:e.l.wroblewski@leeds.ac.uk)

*Please note: 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.*

## Additional information

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

At the University of Leeds, we are committed to providing a culture of inclusion, respect and equity of opportunity that attracts, supports, and retains the best students and staff from all backgrounds. Whatever role we recruit for we are always striving to increase the diversity of our community, which each individual helps enrich and cultivate. We particularly encourage applications from, but not limited to Black, Asian, people 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.

### **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](mailto: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.

