



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Virology, Faculty of Biological Sciences



Salary: Grade 7 (£38,205 - £45,585 p.a.) (due to funding limitations it is unlikely an appointment will be made above £39,347)

Reference: FBSMB1283

Available on a fixed-term basis for 2 years (to complete specific time limited work)

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

Research Fellow in Virology School of Molecular and Cellular Biology

Are you an ambitious researcher looking for your next challenge? Do you have an established background in Molecular Virology and Neurobiology and looking to apply these skills to gain a novel molecular understanding of the mechanism of arbovirus infections in the human brain? Do you want to further your career in one of the UKs leading research intensive Universities?

Applications are invited for a Wellcome Trust funded Postdoctoral Research Fellow position to join a dynamic team in the [School of Molecular and Cellular Biology](#). The project is aimed towards understanding emerging RNA virus infections in the human brain, using tick-borne flaviviruses as model systems. Prior experience in transcriptomics and CRISPR/Cas9 knockout generation is essential. The project will involve experiments using human neuronal progenitor cells (hNPCs) or brain organoids.

We are seeking a highly motivated and well-organised candidate with a PhD (or be close to completion) in virology, cell biology, neurology, or a closely allied discipline. You should have excellent organisational skills, including data collection, database management and data analysis. The project will involve learning and applying cutting-edge brain organoid techniques including virological assessments in organoid cultures, therefore experience in culturing iPSCs and their genetic manipulation is essential. You should also have previous experience of working in a high containment biosafety category 3 (BSL3) facility. Some experience in studying the role of proteins in cellular cytotoxicity and apoptosis would be desirable as the project will involve the use of both approaches.

This position is ideal for an experienced researcher looking to further develop their technical repertoire. You would join a dynamic research group that utilizes a range of cellular, virological, and high-resolution imaging systems to tackle viral infections in the human brain.

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 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 the project leader [Dr Niluka Goonawardane](#);
- Generating independent and original research ideas and methods in viral neuropathogenicity, using a combination of both proteomics and a single-cell and single-nucleus RNA-Seq in iPSCs derived cell lines, with an aim to extend the viral encephalitis research portfolio of the team;
- 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 be close to completion) in virology, cell biology, neurology, or a closely allied discipline;
- Experience in generation, differentiation and expansion of human iPSC cell lines and their genetic manipulation;
- Experience in either a single-cell and single-nucleus RNA-Seq or Orbitrap-base proteomic analysis;
- Experience of working in a high containment biosafety category 3 (BSL3) facility;
- The ability to design, execute and write up research independently;
- Excellent organisational skills, including data collection, database management and data analysis;
- 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;
- Ability to work accurately and carefully;
- A strong commitment to your own continuous professional development;

You may also have:

- Experience in studying the role of proteins in cellular cytotoxicity and apoptosis;



- Experience in virus infections and high-resolution microscopy;
- 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 Niluka Goonawardane](#), Wellcome CDA Fellow

Email: N.Goonawardane@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

The project: background and aims

There is an unmet need to understand the mechanisms that lead to the increasing incidence of neuropathogenic virus virulence. Over the past 30 years, arboviruses (mosquito- or tick-borne viruses) have crossed the species barrier into humans, causing outbreaks of neurological diseases with varying severity. Despite this threat,



no antiviral therapeutics are available for these viruses and the underlying molecular mechanisms of virus virulence in humans remain largely unknown.

The project aim is to identify new cellular- and viral-factors that determine the pathogenicity of viral encephalitis, using tick-borne encephalitis virus (TBEV) as a model. We will use state-of-the-art in vitro 3D-models, proteomics and transcriptomics to understand how TBEV infections established in the human brain. These experiments will reveal how viral/cellular factors shape the arbovirus neuropathogenesis. The project will also tackle more translational aspects of tick-borne flavivirus infections for which no antiviral drugs are available.

Recent Relevant Publications

- Identification of Host Factors Differentially Induced by Clinically Diverse Strains of Tick-Borne Encephalitis Virus. **Goonawardane N** et al., (2022) J. Virol. doi: 10.1128/jvi.00818-22.
- Functional characterization of 5' untranslated region (UTR) secondary RNA structures in the replication of tick-borne encephalitis virus in mammalian cells. Upstone L, Colley R, Harris M, **Goonawardane N**. (2023) PLoS Negl Trop Dis. doi: 10.1371/journal.pntd.0011098.
- Characterization of Live-Attenuated Powassan Virus Vaccine Candidates Identifies an Efficacious Prime-Boost Strategy for Mitigating Powassan Virus Disease in a Murine Model. Cheung AM, Yip EZ, Ashbrook AW, **Goonawardane N**, Quirk C, Rice CM, et al., (2023) Vaccines (Basel). doi: 10.3390/vaccines11030612.

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 opened 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.

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.

Visa Information

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: www.gov.uk/skilled-worker-visa.

For research and academic posts, we will consider eligibility under the Global Talent visa. For more information please visit: <https://www.gov.uk/global-talent>

