



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Systems Biology of the Liver, Faculty of Biological Sciences



Salary: Grade 7 (£33,797 – £40,322 p.a.)

Please note that due to funding limitations it is unlikely that any appointment will be made above £33,797 p.a.

Reference: FBSMB1170

Closing date: 18 December 2019

Available from 1 January 2020

Fixed-term to 31 December 2023

Research Fellow in Systems Biology of the Liver School of Molecular and Cellular Biology

Are you an ambitious researcher looking for your next challenge? Do you have an established background in computational and/or liver biology? Do you want to further your career in one of the UKs leading research intensive Universities?

Endocrine disruptors (EDs) are exogenous chemicals, which alter functions of the endocrine system, causing adverse health effects in an organism or its progeny. Historically, the field of ED research has focused on reproductive endocrinology and related hormones. However, recent evidence has suggested that EDs can result in an increased incidence of metabolic syndrome (a cluster of metabolic risk factors including abdominal obesity, dyslipidemia, elevated blood pressure, and elevated fasting glucose), increasing the incidence of atherosclerosis and type 2 diabetes.

The Horizon2020 project “Metabolic effects of Endocrine Disrupting Chemicals: novel testing Methods and adverse outcome pathways” (EDCMET) brings together systems toxicologists, experimental biologists with a thorough understanding of the molecular mechanisms of metabolic disease, and comprehensive *in vitro*, and *in vivo* methodological skills and ultimately, epidemiologists linking environmental exposure, to adverse metabolic outcomes. Working with scientists across the consortium, this position will build an *in silico* predictive mechanistic model, of how EDs alter liver metabolism, predisposing individuals to metabolic syndrome. This will build upon our published model of lipid loading in the liver (doi: 10.1038/s41540-018-0070-3), using our novel QSSPN framework. QSSPN is a modelling approach that allows the integration of genome-scale metabolism and regulatory networks, generating models that can simulate the dynamic alterations in metabolism that occur during chemical exposure (doi: 10.1002/psp4.12230; 10.1038/npjsba.2016.32)

To apply for this role you must have a PhD or be close to completion in either, computational biology, liver metabolism, nuclear receptor biology or a closely allied discipline. You must also have experience in computational modelling of biological processes including nuclear receptor biology and/or liver metabolism.

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 reawarded a Bronze award in 2017. 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 [Professor Nick Plant](#);
- Generating independent and original research ideas and methods in computational modelling of liver metabolism with an aim to extend the Computational Biology research portfolio;
- 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 computational biology, liver metabolism, nuclear receptor biology or a closely allied discipline;
- Experience in computational modelling of biological processes at the large scale (e.g. constraint-based modelling, genome-scale metabolic networks,)



and/or small scale (e.g. ODE or Petri net representation of gene regulatory networks) nuclear receptor biology and/or liver metabolism;

- 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;
- Ability to work accurately and carefully;
- A strong commitment to your own continuous professional development.

You may also have:

- 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 Nick Plant, Professor of Systems Biology](#)

Tel: +44 (0)113 343 7109

Email: N.Plant@Leeds.ac.uk



Additional information

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

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.

