



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Post Doctoral Research Assistant in Skeletal Muscle Physiology and Metabolism, Faculty of Medicine and Health



Salary: Grade 6 (£27,511– £32,817 p.a.)

Reference: MHLCM1218

Closing date: 12 March 2020

Fixed-term for 3 years

Post Doctoral Research Assistant in Skeletal Muscle Physiology and Metabolism

Faculty of Medicine and Health

Leeds Institute of Cardiovascular & Metabolic Medicine

Are you a post doctoral scientist with a keen interest in molecular physiology and metabolism in health and disease? Are you interested in understanding how the adaptation of skeletal muscle to exercise results in beneficial health effects? Do you want to learn more about skeletal muscle organ crosstalk and myokines?

This post doctoral research assistant (PDRA) role is on a Biotechnology and Biological Sciences Research Council funded project within the laboratory of Dr Lee Roberts, Leeds Institute of Cardiovascular and Metabolic Medicine. The research in Dr Roberts' group addresses the metabolic regulation of skeletal muscle and adipose tissue with a focus on tissue cross talk and bioactive metabolites and lipids. Exercise has multiple beneficial effects on health. **How exercise exerts its systemic adaptive effects remains poorly understood.** The PDRA will investigate the molecular mechanisms through which skeletal muscle adapts to exercise in preclinical *in vivo* and *in vitro* models. Myokines are molecular signals released from muscle which signal to distal tissues to elicit a physiological response. **This project will focus on the role of the metabolite myokine β -aminoisobutyric acid (BAIBA) in the adaptive response of muscle to exercise.** We previously discovered BAIBA was released from muscle during exercise and signals to liver and adipose tissue (<https://www.ncbi.nlm.nih.gov/pubmed/24411942>). The successful candidate will use a variety of state-of-the-art techniques including high-resolution respirometry, muscle contractility analysis, whole body physiological, exercise, and indirect calorimetry analysis, PET-CT imaging, tissue light sheet microscopy, and metabolomics alongside histological, tissue culture and molecular biology techniques.



What does the role entail?

As a Post Doctoral Research Assistant your main duties will include:

- Leading, organising and taking responsibility for your research project.
- Experimental design and realisation of *in vitro* and *in vivo* experiments using a variety of metabolic, physiological and molecular biology techniques.
- Writing reports, undertaking literature reviews and preparing papers for publication and grants for submission, with guidance as necessary;
- Working both independently and as part of a larger team of researchers and stakeholders;
- Supervising students and postgraduate researchers in a laboratory environment.
- Supporting research activities, including contributing to research results and outputs and to the generation of independent and original ideas, ensuring a successful programme of investigation;
- Collating and analysing data;
- Participating in the research group and presenting research output where appropriate;
- Contributing to the research culture of the School, where appropriate;
- Continually updating your knowledge, understanding and skills in the research field.

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.

You will report to Dr Lee Roberts, Associate Professor of Molecular Physiology and Metabolism.



What will you bring to the role?

As Post Doctoral Research Assistant you will have:

- A PhD (or passed PhD with minor corrections) in a biochemical, physiological, metabolic subject area or another closely allied discipline;
- A strong background in metabolism research or molecular physiology, preferably evidenced with authorship of scientific publications.
- A broad knowledge of skeletal muscle and/or adipose tissue function.
- Proficiency in a range of metabolic techniques that may include but are not limited to respirometry, whole body indirect calorimetry, muscle contractility and fatigability assays, murine exercise protocols.
- Experience of preclinical murine models.
- Good interpersonal and communication skills, both written and verbal and the ability to communicate effectively with a wide range of stakeholders;
- Well-developed analytical skills;
- Good time management and planning skills, with the ability to meet tight deadlines;
- A proven ability to work well both individually and in a team;
- The ability to work unsupervised and to use your own initiative.
- Experience of supervision in a laboratory setting.
- Experience of molecular biology techniques which may include but are not limited to RT-qPCR, Western blot, ELISA.

You may also have:

- It is highly desirable that you have a home office personal licence.
- Experience of tissue culture would be beneficial.
- Experience with small molecule mass spectrometry / metabolomics.
- Experience of histological techniques.



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 12 March 2020.

Contact information

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

Dr Lee Roberts, Associate Professor of Molecular Physiology and Metabolism

Tel: +44 (0)113 343 1050

Email: L.D.Roberts@leeds.ac.uk

Additional information

Find out more about the [Faculty of Medicine and Health](#)

Find out more about Leeds Institute of Cardiovascular and Metabolic Medicine: <https://medicinehealth.leeds.ac.uk/leeds-institute-cardiovascular-metabolic-medicine>

Find out more about our Research and associated facilities. <https://medicinehealth.leeds.ac.uk/medicine/staff/713/dr-lee-roberts>

Find out more about [Athena Swan](#) in the Faculty.

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.

Security checks



Appointment to this post will be subject to appropriate security checks being carried out with your permission by a third party company.

Criminal record information

Rehabilitation of Offenders Act 1974

This post requires a basic criminal record check from the Disclosure and Barring Service (DBS), and any equivalent overseas authorities where relevant. The successful candidate will be required to give consent for the University to check their criminal record status and all applicants must declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be subject to the University being satisfied with the outcome of these checks, in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.

