UNIVERSITY OF ABERDEEN

Research Fellow

School of Biological Sciences

Closing date:	17 November 2019
Interview date:	TBC
Reference number:	SBS071R

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Introduction

This research position is funded by the Bilateral BBSRC/ Science Foundation Ireland (SFI). This is a joint project involving Professor John R. Speakman, Dr Alex Douglas and Dr Sharon Mitchell at the University of Aberdeen and Dr Kanishka Nilaweera, Teagasc Food Research Centre, Moorepark, Cork, Ireland.

The project is entitled 'The role of hypothalamic neuropeptide network in regulating tissue sizes in response to diet energy content and composition'. Details are as follows:

All animals feed to get the energy they need. Rarely however, does energy supply exactly match demand. Thus, surplus energy intake must be deposited in tissues. Conversely, energy deficits must be supplied by withdrawal of energy from tissues. The mechanisms that govern this process are poorly understood. Yet they have profound health impacts.

Our work has shown that under energy deficit most tissues decrease in size, but some tissues increase. The changes in tissue sizes were correlated to expression of a network of genes in the hypothalamus.

This led us to hypothesise that there are genes in the hypothalamus regulating tissue growth that are responsive to the dietary energy content and composition. In this project, we aim to identify these genes using an approach of graded energy deficits. Once identified a gene knockdown and knockout approach will be used to confirm the involvement of individual targets. Finally, we will devise a protocol with a specific combination of macronutrients that minimises lean mass loss and maximise fat loss during calorie restriction-induced weight loss.

Job description

Main purpose of the role:

This position will be available for a researcher with expertise in neuro-endocrinology, molecular biology, physiology and experience of bioinformatics. Experience of in vivo animal work is essential, and holders of HO personal licences are preferred. The researcher will work as part of a team to elucidate the mechanisms in the hypothalamus regulating tissue growth that are sensitive to dietary energy content and composition.
This post is available immediately and funding is agreed until June 2020.

Key responsibilities:

Research Fellow

- Perform murine studies to assess the impact of energy deficit and dietary protein/ fat composition/content on genes of interest.
- Measure gene expression using high-throughput sequencing technologies in tissues.
- Analyse data using custom bioinformatic tools and approaches.
- Measure protein levels in tissues and plasma.
- Use transgenic models and/or gene knockdown approaches to elucidate the functionality of genes of interest.
- Liaise and engage with team members in the University of Aberdeen and Teagasc team.
- Interpret research findings and take an active role in the dissemination process by preparing reports and manuscripts, and presenting data in group and international conferences.

Additional Duties & Responsibilities:

- To comply with all relevant University of Aberdeen policies and procedures.
- Fully co-operate with the provisions made for ensuring the health, safety and welfare of themselves, fellow staff and students. Co-operate with management and comply with legal obligations. This includes full compliance with the responsibilities outlined in the Safety Statement.

At a glance

Salary:

£33,797 per annum, pro rata

Hours of work:

Full-time

Contract type:

Fixed Term to 30 June 2020

Candidate background

We seek highly motivated individuals with a strong interest in the control of body weight and the relationship with dietary intake.

Terms of appointment

Salary will be on the Grade 6 salary scale (£33,797 per annum, pro rata)

Any appointment will be made subject to satisfactory references and a 12 month probation period.

As this post is externally funded by BBSRC it is available until 30 June 2020.

For further information on various staff benefits and policies please visit
www.abdn.ac.uk/staffnet/working-here

This post does not meet the minimum requirements as issued by UK Visas & Immigration (UKVI) to qualify for an employer-sponsored visa. We are therefore unable to consider applications from candidates for this post who require sponsorship to work in the UK.

Person specification

	Essential	*Desirable*
Education/Qualifications Academic, technical and professional education and training	• *PhD in Physiology, Molecular Biology or related field*	•
Work and Other relevant experience (including training) eg Specialist knowledge, levels of experience, supervisory experience, research	• *Experience in undertaking murine studies with knowledge related to the ethics of in vivo experimentation* • *Demonstrated research and technical expertise in molecular biology work related to quantification of gene and/or protein expression* • *Excellent project management, report writing and data analysis skills.* • *Demonstrated ability to write research papers* • *Experience presenting data (conference presentations)* • *Prior experience in analysing and interpreting RNA-Seq data using open source bioinformatics tools and statistical environments (i.e. R)* • *Demonstrated experience working with both open source and proprietary data repositories*	• *Holds (or has held) a ScotPil Personal Licence or equivalent for applicants outside Scotland* • *Experience in working with and breeding transgenic animals and creating gene knockdown and/or knockouts* • *Experience using IPA* • *Experience working with Linux operating systems* • *Familiarity with network statistical approaches*
Personal qualities and abilities eg initiative, leadership, ability to work on own or with others, communication skills	• *Excellent communication skills (oral, written, presentation) with an ability to enable effective knowledge and technology transfer* • *An ability to collaborate with team members to help build research knowledge and skills to guide professional development*	• *Ability to generate new ideas, unique concepts, models and solutions* •
Other eg special circumstances (if any) appropriate to the role such as unsocial hours, travelling, Gaelic language requirements etc.	• *Animal studies requires flexibility to work out of hours (including weekends). A rota will be set with other team members*	•

The University

Founded in 1495, Aberdeen is Scotland's third oldest University and the fifth oldest in the UK. Ranked within the world top 160 in the Times Higher Education Rankings 2019 and named Scottish University of the Year in the Times and Sunday Times Good University Guide 2019. Aberdeen is 'open to all and dedicated to the pursuit of truth in the service of others'.

Aberdeen is a broad based, research intensive University, which puts students at the head of everything it does. It has significant academic strengths and potential across a wide variety of disciplines. Outstanding in a wide range of discipline areas, Aberdeen has also been credited for its international reach and its commercialisation of research ideas into spin out companies.

The University has over 14,000 matriculated students and 3,600 staff representing 130 nationalities. We encourage bold thinking, creativity and innovation and we nurture ambition with many opportunities for professional and personal development in an inclusive learning environment which challenges, inspires and helps every individual to reach their full potential.

The University combines a distinguished heritage with a forward looking attitude. In the past few years, the University has encouraged creativity in its academic staff, broken new ground with an innovative curriculum, and developed state-of-the-art facilities including the new Sir Duncan Rice Library and the Aberdeen Sports Village and Aquatics Centre. In looking to the future, the University seeks to enhance its reputation as one of the world's leading Universities by moving forward with ever more ground breaking research; ensuring students have an intellectual and social experience second to none; and capitalising upon the dual role as one of the major institutions of the north and as a cornerstone of regional economic and cultural life.

The city and the region

Aberdeen and Aberdeenshire

With a population of approximately 230,000, the city stands between the Rivers Dee and Don. This historic city has many architectural splendours and the use of its sparkling local granite has earned Aberdeen the name of the Silver City. Recognised as the oil capital of Europe, Aberdeen nevertheless retains its old-fashioned charm and character making it an attractive place in which to live.

Aberdeen enjoys excellent communication services with other European cities - e.g. flying time to London is just over one hour with regular daily flights. There are direct air links to London (City, Gatwick, Heathrow, and Luton), Manchester, Birmingham, Leeds, Southampton, Belfast and East Midlands within the U.K. There are also flights to international hub airports: Amsterdam (Schiphol), and Paris (Charles De-Gaulle as well as flights to other European destinations. http://www.aberdeenairport.com Road and rail links are also well developed.

The Grampian Region which took its name from the Grampian Mountains has a population of approximately 545,000. It is made up of five districts – Aberdeen, Banff & Buchan, Gordon, Kincardine & Deeside and Moray. The city and the surrounding countryside provide a variety of urban, sea-side and country pursuits. Aberdeen has first class amenities including His Majesty's Theatre, Music Hall, Art Gallery, the Aberdeen Exhibition Centre, Museums, and Beach Leisure centre. Within a short time, beach pursuits, equine activities, salmon, trout and sea fishing, hill-walking, mountaineering, golf, sailing, surfing and windsurfing can be reached. The city and the surrounding countryside are repeatedly given high ratings for quality of life in surveys.

Aberdeenshire is one of Scotland's most appealing regions. Royal Deeside and the Cairngorms National Park are within easy access of the city, and there are a variety of towns and villages scattered along the coastline.

Aberdeen and Aberdeenshire cater for a wide range of tastes in sporting and cultural activities.

To find out more about Aberdeen and Aberdeenshire go to www.visitabdn.com

How to apply

Online application forms are available at www.abdn.ac.uk/jobs

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The closing date for receipt of applications is 17 November 2019

Should you wish to make an informal enquiry please contact
Prof John Speakman or Dr Sharon Mitchell
j.speakman@abdn.ac.uk; s.e.mitchell@abdn.ac.uk

Please do not send application forms or CVs to either Prof Speakman or Dr Mitchell unless requested to do so.

Please quote reference number SBS071R on all correspondence

The School of Biological Sciences welcomes a diverse working environment and recognises the benefits this can bring. The School is keen to receive applications from individuals from across all of the equality protected characteristics (race, gender, disability, gender reassignment, age, sexual orientation, religion/belief, pregnancy/maternity, marriage/civil partnership).

The University supports opportunities for flexible working for a range of reasons and has policies in place to facilitate this. The policies can be found here:

https://www.abdn.ac.uk/staffnet/working-here/flexible-working--5607.php

The University's commitment to gender equality has been recognised through the achievement of an Athena SWAN Bronze award. The University is also a Stonewall Diversity Champion to further LGBT equality and a Disability Committed Employer recognising our commitment to supporting disabled staff and students.

https://www.abdn.ac.uk/staffnet/governance/equality-and-diversity-277.php