



## Research Fellow in Child Stunting Genomics (epigenetics and microbiome)

School of Medicine, Medical Sciences and Nutrition

**Closing date:** ~~28 July 2020~~ 29 August 2020

**Interview date:** To Be Confirmed

**Reference number:** ROW063R



# Introduction

## *The project*

Applications are invited for a Postdoctoral Research Scientist working in the area of genomics to join a multidisciplinary, multicentre team studying the biology of child growth and development in three low- and middle-income countries (India, Indonesia and Senegal). The project ('Action Against Stunting') is a UK Research and Innovation Global Challenges Research Fund HUB.

This GCRF Action Against Stunting Hub is made up of researchers from 18 institutions. Running for a five-year period until 2024, the Hub aims to transform current research on child undernutrition or stunting (low height for age). The project takes a 'whole child' approach to understanding the biological, social, environmental and behavioural context in which stunting occurs. The University of Aberdeen led work will focus on the biology of stunting and specifically the role of epigenetics in children and the importance of the child's microbiome.

The practical aims of the biological work are to: develop better methods of identifying biological stunting type; detect children and pregnancies already on the pathway to stunting to prioritise for early intervention; ameliorate or reverse the effects of stunting by developing interventions based on an understanding of deep biology; and prevent stunting by understanding the causes that give rise to different stunting types.



## Job description



### *Main purpose of the role:*

The post-holder will work on the epigenetic and microbiome components of the Hub. The field collections, sample processing, and most of the analytical work, will be carried out in the study countries (India, Indonesia, and Senegal) by local staff under the supervision of the post-holder. You will be based in Aberdeen but will be required to travel to the study sites and laboratories. You will develop and adapt methods for use in the study countries and provide training for local staff. You will be expected to oversee quality assurance and quality control of the analysis, data transfer and processing, and bioinformatics. You will play a key role in the statistical analysis, interpretation, write-up, and dissemination of results. You will work closely with the study team and project leads on the production of reports and publications and in stakeholder engagement.

For the epigenetic work, the genomic methods used will be Next Generation Sequencing and array analysis using the Illumina Infinium Methylation EPIC 850k Bead Chip. The microbiome will be assessed by high-throughput 16S rRNA gene sequencing using the Illumina platform. Data analysis and bioinformatics will be carried out using the University of Aberdeen's Maxwell High Performance Computing cluster and in-country High Performance Computing facilities.

### *Key responsibilities:*

#### **Research Fellow**

The post holder will take responsibility for the varied aspects of the epigenetic and microbiome analyses. Appropriate training will be provided to augment your previous experience in order to prepare you for this multi-faceted role. You will be expected to:

- 1) develop and adapt of methods for use in LMICs.
- 2) oversee sample collection and storage.
- 3) provide training for local staff.
- 4) oversee analytical quality assurance and quality control.
- 5) be responsible for data transfer and processing.
- 6) oversee and lead the project bioinformatics, data handling and secure data storage.
- 7) produce reports and publications with the research teams.
- 8) take a lead role in presenting findings internally and externally to researchers and a wide range of stakeholders.
- 9) organise and deliver a range of stakeholder engagement and project dissemination activities.

### At a glance

#### **Salary:**

Grade 6 (£33,797 - £35,844 per annum)

#### **Hours of work:**

Full-Time (37.5 hours per week)

#### **Contract type:**

Project Limited (to 12 February 2024)

## Candidate background



You will have a PhD in a relevant area of genomic research (preferably human epigenetics, genetics, computational biology, bioinformatics or microbiomics). Experience in the quantitative aspects of handling genomic data is essential, as is a good understanding of genome biology. Previous experience in next generation sequencing and bioinformatics is desirable. Lead authorship or evidence of a significant role in at least one publication in a peer-reviewed scientific journal is preferred. Successful candidates will be motivated and organised, with excellent verbal and written communication skills. The ability to work independently in collaboration with a large multi-disciplinary team is essential. A willingness to travel and work with a diverse group of researchers in rewarding and stimulating environments is essential. Previous experience of working with relevant platforms is desirable.



## Terms of appointment

Salary will be at the appropriate point on the Grade 6 salary scale and negotiable with placement according to qualifications and experience.

As this post is externally funded by MRC it will be available until 12 February 2024.

Any appointment will be made subject to satisfactory references and a 6 month probation period.

For further information on various staff benefits and policies please visit [www.abdn.ac.uk/staffnet/working-here](http://www.abdn.ac.uk/staffnet/working-here)

[Should you require a visa to undertake paid employment in the UK you will be required to fulfil the minimum points criteria to be granted a Certificate of Sponsorship and Tier 2 visa. As appropriate, at the time an offer of appointment is made you will be asked to demonstrate that you fulfil the criteria in respect of financial maintenance and competency in English. Please do not hesitate to contact Natalie Reid, HR Adviser on +44 (0)1224 437066 or email [n.reid@abdn.ac.uk](mailto:n.reid@abdn.ac.uk) for further information.]





# Person specification

	<i>Essential</i>	<i>Desirable</i>
<b>Education/Qualifications</b> Academic, technical and professional education and training	<ul style="list-style-type: none"> <li>A PhD relevant to genomic research, preferably in one of the following areas; human epigenetics, human genetics, computational biology, bioinformatics or microbiomics</li> </ul>	<ul style="list-style-type: none"> <li>Lead authorship or evidence of a significant role in at least one publication in a peer-reviewed scientific journal</li> </ul>
<b>Work and Other relevant experience (including training)</b> eg Specialist knowledge, levels of experience, supervisory experience, research	<ul style="list-style-type: none"> <li>Extensive experience in the quantitative aspects of handling sequence data, and a good understanding of genome biology</li> <li>Willingness to undergo training in topics outside existing expertise</li> <li>Willingness to train others in relevant techniques/analyses</li> </ul>	<ul style="list-style-type: none"> <li>Previous experience in high-throughput sequencing</li> <li>Previous experience of working with others from different backgrounds or disciplines</li> </ul>
<b>Personal qualities and abilities</b> eg initiative, leadership, ability to work on own or with others, communication skills	<ul style="list-style-type: none"> <li>Motivated and well organised with the drive and determination to take a project to completion.</li> <li>Excellent verbal and written communication skills</li> <li>The ability to work independently in collaboration with a large multi-disciplinary team</li> </ul>	
<b>Other</b> eg special circumstances (if any) appropriate to the role such as unsocial hours, travelling, Gaelic language requirements etc.	<ul style="list-style-type: none"> <li>Willingness to travel internationally and spend periods in India, Indonesia and Senegal.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

# 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](http://www.visitabdn.com)



## How to apply



Online application forms are available at [www.abdn.ac.uk/jobs](http://www.abdn.ac.uk/jobs)

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The closing date for receipt of applications is ~~28 July 2020~~ 29 August 2020

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Should you wish to make an informal enquiry please contact:

Professor Paul Haggarty, (Epigenetic lead; Deputy Director, Rowett Institute, Deputy Lead Action Against Stunting Hub)

01224 438630

[p.haggarty@abdn.ac.uk](mailto:p.haggarty@abdn.ac.uk)

or

Dr Alan Walker (Microbiome lead)

Tel 01224 438739

email [a.walker@abdn.ac.uk](mailto:a.walker@abdn.ac.uk)

Please do not send application forms or CVs directly to Prof Haggarty or Dr Walker

**Please quote reference number ROW063R on all correspondence**

*The School of Medicine, Medical Sciences and Nutrition welcomes a diverse working environment and recognises the benefits this can bring. We are 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>