Microbiologist (KTP ASSOCIATE)
ROWETT INSTITUTE,
SCHOOL OF MEDICINE, MEDICAL SCIENCES AND NUTRITION

Closing date: 19 May 2024
Interview date: To Be Confirmed
Reference number: ROW123R
INTRODUCTION

THE ROWETT INSTITUTE, UNIVERSITY OF ABERDEEN and THE NATIONAL COLLECTION OF INDUSTRIAL, FOOD AND MARINE BACTERIA (NCIMB LTD) will work together to further fundamental and applied research to enhance current knowledge about host-microbe interactions in the human gut that contribute to human health. The project aims to develop a pre-clinical model.

The project aims to develop a pre-clinical model to study interactions between anaerobic microbes with important roles in health and disease and gut epithelial cells. This model will be used to study microbes with important roles in health and disease. The aim is to generate better insights on microbial interactions within the gut and support new therapeutic developments for inflammatory bowel disease, liver disease and cancer.

NCIMB aims to grow its core microbiology and molecular analysis methodology in high value healthcare markets. The microbiome sector has been identified as a growth opportunity focusing on industry practitioners developing probiotics and live biotherapeutic products. Our vision is to embrace cutting-edge tools to enhance service provision in this sector.

The University of Aberdeen’s Rowett Institute is part of the School of Medicine, Medical Sciences & Nutrition and is a vibrant and exciting working environment for both established and early career researchers. The successful candidate will join a multidisciplinary team with world leading microbiome expertise working in the excellent purpose-built facilities in the Rowett’s Gut Microbiology group.

This 26-month post is jointly funded by Innovate UK and NCIMB through the Knowledge Transfer Partnerships programme. KTP provides talented graduates the opportunity to manage a strategic innovation project that will drive business growth, supported by an expert academic team.

JOB DESCRIPTION

MAIN PURPOSE OF THE ROLE:
You will lead delivery of a KTP project to develop a model which supports microbial growth without oxygen, whilst also providing conditions with oxygen to support growth of epithelial cells. This dual feature will enable better simulation of the colonic environment than existing in vitro gut models. The model will be inexpensive, flexible and reduce the need for animal testing.

Your role will develop and refine the model for testing anaerobic bacteria:host cell interactions and validate the model through specific test experiments.

Throughout the project you will be fully supported by academic supervisors Dr Silvia Gratz and Professor Karen Scott, from the University of Aberdeen’s Rowett Institute.

A key aspect of your role will be to consolidate the knowledge and technical skills necessary to develop and validate the in vitro model and transfer this knowledge and expertise to NCIMB. Hence you will also work closely with the NCIMB team, qualifying the market opportunity and balancing the commercial and quality requirements of the company with the experimental challenges of the project.

This is a technically challenging commercial project. The candidate is expected to carry out administrative tasks related directly to the timely delivery of the project and knowledge transfer.

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Effective communication with colleagues, as well as building rapport with existing and potential stakeholders is critical to the success of this project. The successful candidate is expected to have and develop technical and personal skills (verbal and written) as required with increasing responsibility as experience level develops through the duration of the project.

KEY RESPONSIBILITIES:

- Deliver the project objectives as detailed in the KTP project proposal and contribute to project documentation compilation, including update reports.
- Review literature for current host-microbe co-culture models to inform model development and maintain up-to-date knowledge to ensure the delivery of a market-appropriate, user-friendly model.
- Take a leading role in developing the co-culture model, ensuring viability of respective cells in the aerobic and anaerobic environments.
- Maintain bacterial and host-cell cultures, and use the model to assess interactions between bacteria and host cells.
- Keep comprehensive and up-to-date records of tasks performed, thoroughly documenting project progress.
- Maintain an up-to-date project plan and provide progress reports for presentation at regular Local Management Committee (LMC) meetings.
- Engage effectively with colleagues and stakeholders within the academic and commercial setting, as well as prospective collaborators and the general public. Train/supervise colleagues in relevant technical skills to ensure development of SOPs and transfer of knowledge between project partners.
- Any other duties that maybe reasonable, assigned by the Academic Supervisor/ Company Supervisor.
CANDIDATE BACKGROUND

Qualifications:

- PhD or MSc plus equivalent research experience in a relevant subject area (e.g. microbiology or related subject)

Knowledge & Experience:

- Background in microbiology and knowledge of how the gut microbiota intersects with human health.
- Experience in host cell biology and strong competency in host cell culture. It is also desirable for the candidate to have skills in bacterial anaerobic culture.
- Experience in presenting data to other scientists and non-academic stakeholders and lay people, both written and oral.
- Ability to organise own workload, including forward planning.
- Ability to work to tight deadlines.

Personal Qualities & Skills:

- Self-motivated with an ability to work independently and to tight deadlines within a dynamic and small team environment.
- Ability to make informed decisions in a changing environment.
- Ability to undertake independent research and development analysis.
- Excellent communication and interpersonal skills with written and verbal skills that are clear and easy to understand.
- Willingness to engage and support commercial activities related to dissemination of project outputs to stakeholders.
TERMS OF APPOINTMENT

Salary will be paid at the rate £30,000 to £34,600 per annum with placement determined by skills and experience. The successful candidate will also receive a personal development budget of £4,333 (or £2,000 per year).

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

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

This role is based in the UK (Aberdeen) and as such the successful candidate will be required to live and work in the UK, within commuting distance of Aberdeen.

Should you require a visa to undertake employment in the UK you will be required to fulfil the minimum points criteria to be granted a Certificate of Sponsorship under the requirements of the Skilled Worker visa. At the time an offer of appointment is made, you will be asked to demonstrate that you fulfil the criteria in respect of qualification and competency in English. For research and academic posts, we will consider eligibility under the Global Talent visa. Please do not hesitate to contact Grant Rae, HR Adviser (e-mail: grant.rae@abdn.ac.uk) for further information.

AT A GLANCE

SALARY:
£30,000 to £34,600 per annum

HOURS OF WORK:
Full-time, 37.5 hours per week

CONTRACT TYPE:
Project-limited for 26 months

LOCATION:
Aberdeen
## Person Specification

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<th><strong>Education/Qualifications</strong></th>
<th><strong>Essential</strong></th>
<th><strong>Desirable</strong></th>
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| Academic, technical and professional education and training | - PhD or MSc plus equivalent research experience in a relevant subject area (e.g. microbiology, biochemistry or immunology) | - Extensive relevant industry experience.  
- Good Clinical Practice training |

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<tr>
<th><strong>Work and Other relevant experience (including training)</strong></th>
<th><strong>Essential</strong></th>
<th><strong>Desirable</strong></th>
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| e.g. Specialist knowledge, levels of experience, supervisory experience, research | - Laboratory experience in microbiology techniques  
- Experience in working with human cell lines  
- Experience in development of lab assays and models/products  
- Evidence of independent writing of reports or thesis  
- Experience presenting results to research team as well as academic and non-academic audiences  
- Evidence of independent thought and trouble shooting | - Experience of working within commercial research settings  
- Experience in host-microbe co-culture experiments  
- Experience in microbial co-culture techniques  
- Experience in bacterial bioinformatic analysis  
- Experience in scientific publishing and in presenting at scientific conferences |

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<th><strong>Personal qualities and abilities</strong></th>
<th><strong>Essential</strong></th>
<th><strong>Desirable</strong></th>
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| e.g. Initiative, leadership, ability to work on own or with others, communication skills | - Able to work well in a team.  
- Be highly driven, self-motivated and pro-active, and with the ability to work independently, manage own workload, to meet deadlines and to prioritise tasks  
- Ensure up-to-date knowledge of the field and to take full ownership of the project  
- Have an excellent command of the English language with written and verbal communication that is clear and easy to understand | - Have an understanding of the commercial drivers of the project and potential business impact. |

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<th><strong>Other</strong></th>
<th><strong>Essential</strong></th>
<th><strong>Desirable</strong></th>
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<td>e.g. Special circumstances (if any) appropriate to the role such as unsocial</td>
<td>- Willingness to engage and support commercial activities related to dissemination of project outputs to stakeholders.</td>
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*Updated October 2022*
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<th>ESSENTIAL</th>
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<td>- Willingness to travel to meetings with external stakeholders and conferences to present findings.</td>
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<td>- Flexibility to work out of normal office hours (when required)</td>
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UNIVERSITY OF ABERDEEN

open to all and dedicated to the pursuit of truth in the service of others

The University of Aberdeen is a broad based, research intensive University, and we put students at the centre of everything we do. Outstanding in a wide range of discipline areas, Aberdeen is credited for its international reach and commercialisation of research ideas into spin out companies. The University has over 16,000 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 and inspires.

CURRENT CONTEXT

The University continues to uphold the principals of the foundational purpose. We remain committed to delivering positive change both locally and globally. We work together and with our partners in an interdisciplinary way, catalysing world-leading research in our areas of strength: Energy Transition; Social Inclusion and Cultural Diversity; Environment and Biodiversity; Data and Artificial Intelligence; and Health, Nutrition and Wellbeing. We are investing in our future and have committed £100m to upgrading our campus, including the new fully digitised Science Teaching Hub, the regeneration of the historic King’s Quarter and a new Business School building. Our commitment to our students, campus and community has led to us being named a Top 20 UK institution in two major league tables¹ and 4th in the UK for overall student satisfaction².

¹ The Times and Sunday Times Good University Guide 2023 and the Guardian University Guide 2023
² National Student Survey (NSS) 2022

Updated October 2022
On our 525th anniversary as a University we launched Aberdeen 2040, our strategic vision for the next 20 years. Four strategic themes will shape our learning and discovery, underlined by 20 commitments we have made against each theme:

- **Inclusive**
  We welcome students, staff and partners from all backgrounds, organisations and communities. We value diversity.

- **Interdisciplinary**
  We innovate in education and research by generating, sharing and applying new kinds of knowledge. We learn together.

- **International**
  We connect with others and extend our networks and partnerships around the world. We think across borders.

- **Sustainable**
  We understand and nurture our environment, and take care of our resources, including our people and finances.
  We work responsibly.

**OUR EDUCATION**
Recognised as the Scottish University of the Year in the Times and Sunday Times Good University Guide 2019, we remain true to our roots as an ancient Scottish university, combining breadth and depth in our degree programmes and drawing strength from the quality of our research. Our flexible curriculum encourages students to grow as independent learners and therefore to thrive as graduates in the diverse workplaces of the future. Our education is open to all and we are setting ambitious targets to further widen access.

**OUR RESEARCH**
Researchers at the University of Aberdeen have been at the forefront of innovation and excellence throughout the centuries, generating insights in medicine, science, engineering, law, social sciences, arts and humanities. This research has contributed to five Nobel prizes as well as other awards such as the Queen’s Anniversary prize. Our research is intellectually rigorous working within our established areas of excellence as well as new methods of enquiry. We will continue to generate new knowledge addressing economic and societal issues with ambition and imagination, ensuring that it is globally excellent and locally relevant.

**INTERNATIONAL**
Aberdeen is increasing its international presence, positioning the University as a global organisation and building on established global partnerships around the world, including Qatar, China, North America, Europe. We feature in the top 50 institutions worldwide for international students¹.

¹ Times Higher Education World University Rankings 2021
IMPACT

In 2020 the University signed the United Nations Sustainable Development Goals accord, solidifying our commitment to developing the world in a sustainable way. In 2022 we were listed in the global Top 100 for 8 of these goals\textsuperscript{4}.

Our highly cited work in zero-carbon technology and global outlooks makes us Scotland’s best institution for environmental research\textsuperscript{5}.

\begin{footnotesize}
\textsuperscript{4} Times Higher Education Impact Rankings 2022
\textsuperscript{5} QS World University Rankings 2022
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The School of Medicine, Medical Sciences & Nutrition

The School (https://www.abdn.ac.uk/smmssn/index.php) encompasses all of the disciplines that underpin today’s medicine, including biomedical sciences, health sciences, nutrition and medical, medical science and dental education and these are organised into five Institutes. The largest school in the University, the SMMSN has five Institutes: the Institute of Medical Sciences (IMS), the Institute of Applied Health Sciences (IAHS), the Rowett Institute, the Institute of Education in Healthcare and Medical Sciences (IEHMS) and the Institute of Dentistry, comprising all of our undergraduate and postgraduate programmes and our own graduate entry Dental School.

Staff are line managed and research opportunities are supported through our institutes which work together in an integrated and coordinated way to deliver research and teaching across the School, details of which can be found on their websites as below.

- The Institute of Applied Health Sciences https://www.abdn.ac.uk/iahs/
- The Institute of Medical Sciences http://www.abdn.ac.uk/ims/
- The Rowett Institute http://www.abdn.ac.uk/rowett/
- The Institute of Education in Healthcare and Medical Sciences https://www.abdn.ac.uk/IEHMS/
- The Institute of Dentistry https://www.abdn.ac.uk/dental/ https://www.abdn.ac.uk/dental/

The position is based within the Rowett Institute, which moved to its Foresterhill campus site in 2016, and whose staff undertake nutrition research to help improve people’s lives through the prevention of ill-health and disease. The new Rowett Institute building has provided the University of Aberdeen with a facility with unique capabilities for human nutrition and metabolic research, and staff within the Rowett Institute collaborate with those across the school, NHS and wider University. Current research areas include a strong focus on One Health, human nutrition, metabolic research and the role of the gut microbiota in maintaining health and preventing disease, in humans and animals.

Within the IMS, scientists are working towards the creation of effective therapies for patients with a range of debilitating and life-threatening conditions. Current research areas include: arthritis and musculoskeletal medicine; cell developmental and cancer biology; immunity, infection and inflammation; metabolic and cardiovascular health; microbiology and translational neuroscience.

Within the IAHS, research is focused on improving health and health care delivery. It is home to a multidisciplinary grouping of around 100 university academic staff who conduct population and clinically-orientated health research and hosts the Health Services Research Unit (HSRU) and Health Economics Research Unit (HERU), both funded by the Chief Scientist’s Office (CSO) of the Scottish Government.

As well as being the organisational home to the teaching scholarship staff and responsible for oversight of the UG and PGT programmes offered by the School, the IEHMS promotes and supports excellence in medical education through research and development, with a focus on conceptually and theoretically robust research and development which has strong potential for reaching international recognition. The highly regarded University of Aberdeen MBChB programme and several postgraduate programmes including a Masters in Clinical Education are delivered by IEHMS.
The Dental Institute runs an undergraduate BDS programme and a growing suite of masters programmes for professional development.

We have a number of specialist Centres representing areas of particular research strength and capacity within the School all of which are willing to support colleagues on projects in their areas. More information is available at the following websites.

- The Centre for Healthcare Education Research and Innovation (https://www.abdn.ac.uk/cheri/)
- The Centre for Health Data Science (https://www.abdn.ac.uk/achds/)
- The Aberdeen Cardiovascular & Diabetes Centre (https://www.abdn.ac.uk/acdc/) and
- The Aberdeen Centre for Arthritis and Musculoskeletal Health (https://www.abdn.ac.uk/acamh/)

The School is home to over 800 staff and 2000fte students. It is located on the Foresterhill site, shared with our main clinical partner, NHS Grampian, with whom we work in close collaboration at primary and secondary care levels.

This is one of the largest integrated healthcare delivery, training and research sites in Europe and has rich assets including state-of-the-art academic (research and teaching) and clinical buildings. Excellent infrastructure is also provided through core facilities for biomedical science including flow cytometry, proteomics, microscopy and genome sequencing, support for data health science projects and clinical trials.
ABERDEEN AND ABERDEENSHIRE

Scotland’s third largest city, Aberdeen sits on the coast between the mountains of Aberdeenshire and the stunning North Sea coastline. The Aberdeen City region is a can-do place that is actively investing, at scale, in its future.

Renowned as a Global Energy Hub, Aberdeen is a vibrant, entrepreneurial region, home to a unique mix of business opportunities and specialist skills across various sectors including energy, technology, life sciences and food & drink. More than 20% of Scotland’s top businesses are located in this region which is taking great strides to ensure that it continues to compete on a world stage. Investments of more than £10 billion of public and private infrastructure is due to be delivered before 2030, marking an exciting time to be part of a genuine world-class location.

Built from sparkling local granite Aberdeen has earned the name of the Silver City. As the energy capital of Europe, Aberdeen nevertheless retains its old-fashioned charm and character making it an attractive place in which to live, work and study. Due to its global business and international energy industry credentials, Aberdeen is well served by local and national transport infrastructure with excellent rail networks that run both North and South of Scotland and the rest of the UK. It also acts as an international travel hub. Flying time to London is just over one hour with regular daily flights and serves international travel to European centres such as Amsterdam (Schiphol) and Paris (Charles de-Gaulle) as well as flights to other European destinations.

The City and the surrounding countryside provide a variety of urban, seaside and country attractions. Aberdeen has first class amenities including His Majesty’s Theatre, Music Hall, Art Gallery, the P&J Arena, Museums, and Beach Leisure Centre. The City is framed by its accessible beach front which is within a short walk of the city centre and there are an array of activities available across the region such as hill walking; mountaineering; sailing; surfing; salmon, trout and sea fishing; golf; sailing; surfing and windsurfing. The surrounding countryside, known as Aberdeenshire, is also 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.

The city and the surrounding area have ranked consistently highly in nationally recognised quality of life surveys, coming out top 10 as one of the best places to live in Scotland in 2020 in the annual Bank of Scotland survey.

To find out more visit www.visitabdn.com

Updated October 2022
EQUALITY AND DIVERSITY

The University values and celebrates a diverse working and learning environment and recognises the richness this brings, both in terms of contributing to the success of the University and creating safe and inclusive cultures. The University welcomes applications from individuals with diverse lived experiences.

The University supports flexible working, including hybrid working arrangements, and has policies in place to facilitate this where it is appropriate. The policies can be found at https://www.abdn.ac.uk/staffnet/working-here/flexible-working--5607.php.

The University is committed to progressing gender equality across all its functions and has been a proud member of the Advance HE Athena Swan Charter, achieving an institutional Bronze award, one Silver departmental award for the School of Psychology and eleven departmental Bronze awards. LGBTQ+ equality is championed through the University’s membership of the Stonewall Diversity Champions Programme, where the University has achieved a Silver award in the Workplace Equality Index. The University is on a continual journey to respond to, and combat, GBV in our community and beyond. We are proud to be working towards the EmilyTest Charter, in partnership with the charity, EmilyTest. We all have a role to play in knowing how to signpost colleagues and students to support for gender-based violence, and training and support is available to all staff on this topic.

The University is signed up to Advance HE’s Race Equality Charter, affirming the University’s commitment to the Charter’s aim of improving the representation, progression and success of staff and students who identify as belonging to a racialised group. The University launched its Antiracism Strategy in 2022, representing a bold framework for progress on race equality. Recognising the importance of addressing the under-representation of racialised groups in the senior team, the University’s new Recruitment and Selection Policy embeds specific positive action measures to address this.

The University is delighted to be accredited as a Disability Confident employer and strives to ensure that disabled staff and students have the opportunity to work and study in an inclusive, accessible and supportive environment. The University’s Wellbeing Strategy commits it to progressing work to tackle stigma related to mental health and action to promote and improve health and wellbeing for staff and students. Candidates who are British Sign Language (BSL) users can contact us directly by using contact SCOTLAND-BSL.

The University’s work on equality, diversity and inclusion is supported by a range of networks and engagement activities, designed to provide safe spaces and raise awareness of the support available and the steps everyone can take to create inclusive campuses.

www.abdn.ac.uk/staffnet/governance/equality-and-diversity-277
HOW TO APPLY

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

The closing date for receipt of applications is 19 May 2024

Should you wish to make an informal enquiry please contact:

Dr Silvia Gratz, Gut Health Theme, Rowett Institute or Prof. Karen Scott (s.gratz@abdn.ac.uk or k.scott@abdn.ac.uk).

Please do not send application forms or CVs to Dr Gratz or Prof Scott.

Please quote reference number ROW123R on all correspondence