KTP ASSOCIATE (Serology Test Developer)

INSTITUTE OF MEDICAL SCIENCES,
SCHOOL OF MEDICINE, MEDICAL SCIENCES AND NUTRITION

Closing date: 31 January 2024
Interview date: 15 February 2024
Reference number: IMS279R
INTRODUCTION

The Aberdeen Cardiovascular and Diabetes Centre at the University of Aberdeen and Vertebrate Antibodies Limited (VAL) (a subsidiary of EpitogenX) will work together to further fundamental and applied research to enhance current knowledge of Diabetes, with a strong emphasis on the development of advanced diabetes diagnostic solutions. A key area of focus is on the molecular signatures underpinning autoimmune diabetes subtypes, utilising the project team’s knowledge and existing technologies for the development of novel screening diagnostic assays.

Type 1 Diabetes (T1D) subtypes are often diagnosed too late, commonly once the patient is hospitalised due to diabetic ketoacidosis coma. This can be life threatening and also lead to long-term damage of the body.

Currently, there are no screening tests in the UK despite the fact that early diagnosis could help identify early-stage T1D before the onset of severe symptoms and coma. With early diagnosis, monitoring plans can be developed, with more rapid testing of potential prevention therapies. Multiple autoantibody tests are required for diagnosis, often performed across several specialised clinical laboratories, making the diagnostic process lengthy, complex and expensive. This project aims to improve and expedite testing, establishing a new standard in diabetes diagnosis.

This 30-month fixed term post is jointly funded by Innovate UK and Vertebrate Antibodies Limited 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 30-month KTP project to develop a new standard in diagnosis of diabetes, through the application of basic machine learning, bioinformatics, immune assay development, and optimisation of said assays.

Your role will facilitate the development of improved diabetes testing, accelerating VAL’s goal to provide affordable, effective testing for autoimmune disorders. With VAL, you will work alongside the team to navigate between the commercial requirements of the company and the technical challenges of the project.

Throughout the project you will be fully supported by Professor Mirela Delibegovic and Dr Nimesh Mody, academic experts from the University of Aberdeen’s Aberdeen Cardiovascular & Diabetes Centre.

A key aspect of your role will be to consolidate the knowledge and technical skills necessary to develop and validate novel products arising from the project (e.g., molecular biomarkers, assay technology, cell lines) and transfer this knowledge and expertise to Vertebrate Antibodies Ltd.
This is a technically challenging commercial project. The candidate is expected to carry out administrative tasks related directly to the delivery of the project and knowledge transfer. 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 science reports, and design control reports.
- Explore, understand, and critically evaluate existing products/process at Vertebrate Antibodies Ltd.
- Take a leading role in developing and evaluating technical challenges including existing methodologies, process mapping, and methodologies reporting.
- Collect, analyse, and interpret large datasets to derive meaningful conclusions and solve complex problems using various techniques, including statistical analysis and data visualization.
- Maintain an up-to-date project plan and provide a progress report for presentation at regular Local Management Committee (LMC) meetings.
- Maintain up-to-date knowledge of developments in the field and contribute to scientific knowledge, ensuring the delivery of market-appropriate, user-friendly, safe assays.
- Review literature for identification of biomarkers for diabetes subtypes and identify new trends and innovations relating to the identification and application of novel biomarkers.
- Engage effectively and build credibility with colleagues and stakeholders at differing levels, including NGOs, current and prospective collaborators, and laypersons.
- Any other duties that maybe reasonable, assigned by the Academic Supervisor/ Company Supervisor

Updated October 2022
CANDIDATE BACKGROUND

Qualifications:

- PhD or MSc/BSc in genomics, molecular biology, immunology or related topic.

Knowledge & Experience:

- Clear and extensive knowledge on the application of molecular technologies to biomarker identification and application.
- Broad Knowledge of diabetes physiology and disease pathology with knowledge of immune and health markers.
- Practical and technical knowledge for the analysis of large datasets using bioinformatic platforms. It is desirable for the candidate to have experience of machine learning and data visualisation.
- Experience in cloning, cell culture, strong competency in immunoassay development such as flow cytometry, ELISA and ELISpot and qPCR is essential. Antibody production experience and validation of antibodies is also desirable.

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. The successful candidate will also receive a personal development budget of £5,000.

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 and as such the successful candidate will be required to live and work in the UK.

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 - £34,600 per annum

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

CONTRACT TYPE:
Project-limited for 30 months

LOCATION:
Aberdeen
## Person Specification

### Education/Qualifications

**Academic, technical and professional education and training**

- BSc in relevant life sciences subject (genomics, molecular biology, immunology or related qualification).
- PhD (or near completion) in genomics, molecular biology or immunology or related topic.
- Sufficient relevant industry experience.

### Work and Other relevant experience (including training)

**e.g. Specialist knowledge, levels of experience, supervisory experience, research**

- Experience in analysis of large data sets and interpretation of scientific literature.
- Broad knowledge of physiology and disease pathology.
- Experience in development and use of immune-based assays such as ELISA, lateral flow and qPCR.
- Practical and technical knowledge of interrogating nucleic acid and protein databases involving bioinformatics (functional genomics).
- Experience in gene cloning, protein expression, and protein purification, and assay optimisation.
- Antibody production experience and validation of antibodies.
- Experience with programming languages such as R.
- Experience with basic machine learning algorithms and data visualisation.
- Basic coding skills, and data science.

### Personal qualities and abilities

**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-starting 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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| e.g. special circumstances (if any) appropriate to the role such as unsocial hours, travelling, Gaelic language requirements etc. | • Willingness to engage and support commercial activities related to dissemination of project outputs to stakeholders.  
• Willingness to travel to meetings with external stakeholders and conferences to present findings. | • |
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 students³.

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³ 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 goals⁴.

Our highly cited work in zero-carbon technology and global outlooks makes us Scotland’s best institution for environmental research⁵.

⁴ Times Higher Education Impact Rankings 2022
⁵ QS World University Rankings 2022
The School of Medicine, Medical Sciences & Nutrition

The School (https://www.abdn.ac.uk/smmrn/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/

Within the IMS, our 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.

The last major academic capital development was the opening of the Rowett Institute, occupied in March 2016, whose staff undertakes nutrition research to help improve people’s lives through the prevention of ill-health and disease. Their new £40M building has provided the University of Aberdeen with a facility with unique capabilities for human nutrition and metabolic research.
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
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 31 January 2024

Should you wish to make an informal enquiry please contact:

Professor Mirela Delibegovic, Professor in Diabetes Physiology and Signalling, or Dr Nimesh Mody, Senior Lecturer (m.delibegovic@abdn.ac.uk or n.mody@abdn.ac.uk).

Please do not send application forms or CVs to Prof Mirela Delibegovic or Dr Nimesh Mody.

Please quote reference number IMS279R on all correspondence