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UNIVERSITY OF
ABERDEEN

Research Assistant

DC9 (Marie-Sklodowska Curie Doctoral Candidate)

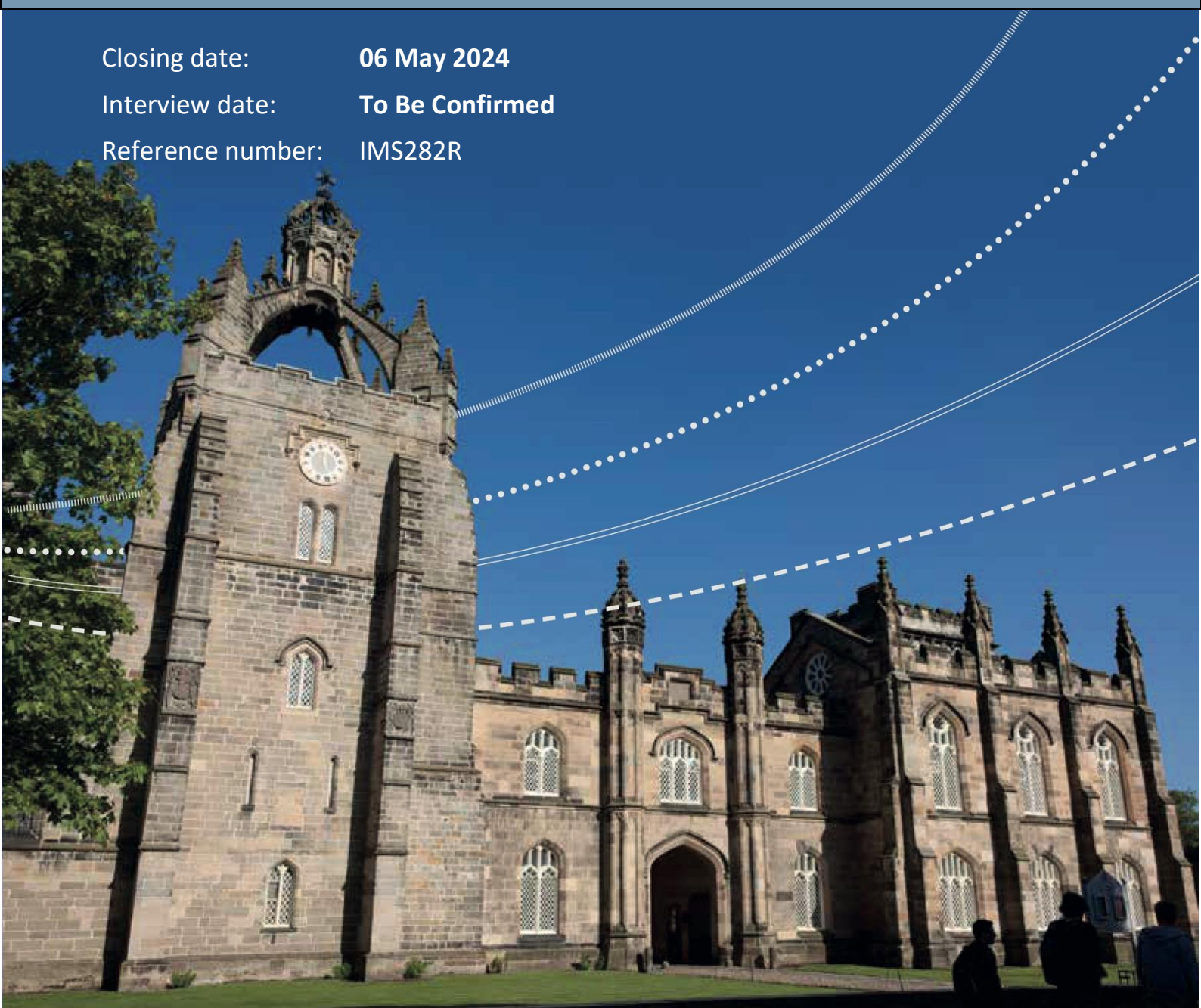
INSTITUTE OF MEDICAL SCIENCES,

SCHOOL OF MEDICINE, MEDICAL SCIENCES & NUTRITION

Closing date: **06 May 2024**

Interview date: **To Be Confirmed**

Reference number: **IMS282R**



**Healthy
Working
Lives**



INTRODUCTION

The University of Aberdeen is offering a unique opportunity for a Doctoral Candidate to undertake full-time research, in the framework of the PHABB consortium (Pathogens of Algae for Biocontrol and Biosecurity). The Doctoral Candidate will be funded for 3 years by the UKRI Horizon Europe guarantee fund as part of the prestigious Marie Skłodowska-Curie Actions (MSCA) Doctoral Network (DN) training programme HORIZON-TMA-MSCA-DN-101120280. PHABB is a MSCA-DN programme bringing together 8 Partners and 12 Associated Partner organisations from throughout Europe. PHABB will employ 10 Doctoral Candidates (DCs) across the consortium, two of which will be based at the University of Aberdeen.

The main objective of PHABB is to develop new disease management strategies in seaweeds and biocontrol measures of Harmful Algal Blooms with the help of natural pathogens. Micro and macroalgae are vulnerable to many diseases. The presence of pathogens and their potential spread to non-native areas can significantly hinder seaweed production. Likewise, microscopic algae (i.e. cyanobacteria, diatoms, and dino-flagellates) that can form HABs are also vulnerable to many pathogens. There are a wide range of microorganisms, including fungal, oomycete, protist, bacterial and viral agents that can all reduce fitness or kill algae. Therefore, the central research aim that links all 10 training projects in PHABB is to exploit the infection strategies of algal pathogens to either fight diseases that they cause in seaweeds or to harness these infection tactics to combat harmful algal blooms. The DCs in PHABB will gain broad interdisciplinary skills plus a translational mindset through our integrated and inter-sectoral training programme and will secure continued vital research on Biocontrol of HABs and Biosecurity of seaweeds in Europe. The PHABB Training Programme will train the DCs in cutting-edge inter-sectoral scientific and transferable skills to prepare them for future careers as research leaders and innovators. We are looking for young scientists (DCs) with enthusiasm and we will provide multidisciplinary inter-sectoral scientific training through individual projects. PHABB will therefore deliver highly employable researchers with skills in water quality management, aquaculture of fish, shellfish and seaweeds, biocontrol of HABs and biosecurity. Insert text regarding where the post will be based and background to relevant School or Directorate

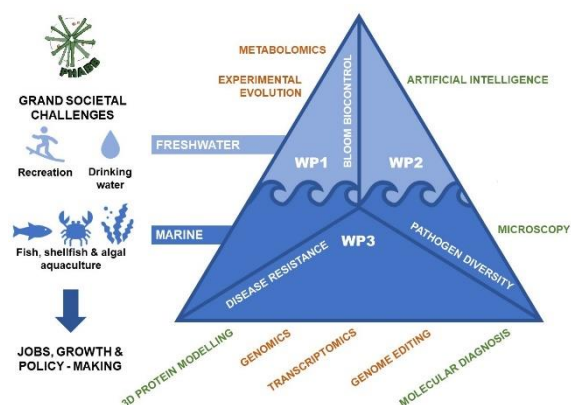
JOB DESCRIPTION

MAIN PURPOSE OF THE ROLE:

Our planet is mostly blue and mankind relies on the quality of our marine and freshwater bodies to produce our food and provide clean drinking water. Micro and macro algae play an important role in these aquatic ecosystems and our future thus increasingly depends on the presence of both desirable and undesirable algae. Desirable algae are, for example, seaweeds that we consume, use for biofuels, pharmaceuticals and cosmetics. Whereas undesirable algae can form harmful algal blooms (HABs) that alter water quality, with dramatic consequences for wild and farmed fish and shellfish, as well as our supplies of drinking water. Unfortunately, climate change is intensifying occurrences of HABs in our

coastal and inland waters, in concert with progressive warming, ocean acidification and deoxygenation. It is conservatively estimated that HABs cause €6.8 billion damage to the global aquaculture industries alone, annually. Whereas seaweed cultivation is the fastest growing sector of all aquaculture sectors and now contributes ~51% by volume to global mariculture production: global seaweed production has tripled between 2000 and 2018, when it reached 32.4 million tonnes, at a total value of €10.7 billion. The potential of seaweed farming to improve livelihoods, alleviate poverty, reduce inequalities, and underpin food security is accordingly huge. As with any form of cultivation, pathogen outbreaks and their spread can significantly hinder seaweed production. Disease management in farms, as well as biosecurity is needed to minimise the risk of disease outbreaks, thus ensuring the sustainability of the industry and also safeguarding the environment from adverse impacts. Likewise, microscopic algae (i.e. cyanobacteria, diatoms, and dinoflagellates) that can form HABs are also vulnerable to many pathogens, most of which are very poorly known. The most recent research keeps unveiling a wealth of ubiquitous microorganisms, including fungi, oomycetes, protists, bacteria, and viruses that reduce fitness or kill algae. Therefore, the central research question that links together all 10 PHABB's training projects is: "how can we fight pathogens of algae to safeguard seaweed production, and exploit them to combat harmful algal blooms?"

PHABB is divided into 3 research work packages and 3 training, coordination, communication and exploitation work packages (WPs) (See Figure). To develop and implement novel, durable biosecurity and disease control strategies that support natural ecosystems and allow for a reduction in chemical pesticides, PHABB is focussed on identifying and studying pathogens that can eliminate harmful algal blooms in freshwater (WP1) and salt water (WP2) and investigating pathogens that threaten our seaweed crops (WP3).



DC9 will be involved in WP2 "HAB biocontrol to underpin coastal management and animal aquaculture" (WP2). The aims are to 1) obtain community profiles and early detection of HAB and pathogens through eDNA sequencing and droplet digital PCR. 2) purify and identify HAB species and their associated bacterial and eukaryotic pathogens. 3) characterise the disease cycle of the most voracious HAB-disruptive pathogens. The specific project for DC9 will be 'the identification of eukaryotic pathogens of HABs that are relevant to Scottish salmon farming'.

Planned secondments: BioPol, Iceland (M8-9) to learn isolation with micromanipulation techniques and culturing and maintenance of algal pathogen interactions. CSIC, Spain (M12) to learn phylogenetic analysis; IAGE, France (M18-20) to set up early detection system of droplet digital PCR of algal blooms and their pathogens; OTAQ, Aberdeen (M26-28) to help improve the artificial intelligence of the life algal bloom detection system with cultures obtained during the 2-year sampling period. |

- To manage and carry out a research project in close collaboration with partners in PHABB
- To actively participate in research and training activities and secondments within the PHABB network.
- To contribute to preparation of reports.
- To contribute to writing articles for scientific journals
- To disseminate research results in the scientific community (via international conferences) and in the non-scientific community (via outreach and public engagement)

CANDIDATE BACKGROUND

- 1st class or 2.1 Honour Degree or equivalent in or equivalent in Biochemistry, Microbiology, Biotechnology, Molecular Biology or related discipline.
- Demonstrable knowledge of biochemistry, microbiology and molecular biology.
- Be willing and able to perform secondments or participate in training programs at the facilities of other consortium members.
- Be in the first 4 years (full-time equivalent) of their research careers and not yet have been awarded a doctorate. This 4-year period is measured from the date of obtaining the degree which would formally entitle to embark on a doctorate.
- You must not have resided or carried out your main activity (work, studies, etc.) in the UK for more than twelve months in the three years immediately prior to your recruitment.
- For more information on MSCA-DN, visit:
http://ec.europa.eu/research/mariecurieactions/index_en.htm

TERMS OF APPOINTMENT

Salary will be £38,119 per annum. You will also receive a monthly mobility allowance of at least £409 per month.

This post will be available for a period of three years starting after 1st July 2024. This appointment will be made subject to the usual terms and conditions of employment of the University. Requirement to register for PhD programme and progression to completion is subject to satisfactory progress in accordance with University regulations.

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.

The candidate appointed to this post may be eligible for homeworking on an occasional or regular basis. For more information please refer to our [Homeworking Policy](#).

AT A GLANCE

SALARY:

£38,119 per annum
(plus monthly mobility allowance of £409 per month)

HOURS OF WORK:

Full-time, 37.5 hours per week

CONTRACT TYPE:

Funding-limited for three years

LOCATION:

Aberdeen



PERSON SPECIFICATION

	ESSENTIAL	DESIRABLE
Education/Qualifications Academic, technical and professional education and training	<ul style="list-style-type: none"> 1st class or 2.1 Honour Degree or equivalent in biochemistry, microbiology, molecular biology, biotechnology, or related discipline Be in the first 4 years (full-time equivalent) of their research careers and not yet have been awarded a doctorate 	<ul style="list-style-type: none"> MSc in biochemistry, microbiology, molecular biology, biotechnology or related discipline Presented work at conferences. Publication record
Work and Other relevant experience (including training) e.g. Specialist knowledge, levels of experience, supervisory experience, research	<ul style="list-style-type: none"> To have carried out a laboratory project as part of their undergraduate degree 	<ul style="list-style-type: none"> Laboratory experience in biochemistry, microbiology, molecular biology or biotechnology sciences. Knowledge and experience of metabarcoding sequencing and purification techniques.
Personal qualities and abilities e.g. initiative, leadership, ability to work on own or with others, communication skills	<ul style="list-style-type: none"> Ambitious and highly motivated Evidence of good intellectual skills Ability and motivation to work independently as well as collaboratively in an interdisciplinary team Ability to think independently Excellent attitude and commitment to work Good oral and written communication skills Willingness to actively participate in research and other training as part of PhD, University requirements, and requirements of the PHABB consortium Be willing and able to perform secondments or participate in training programs at the facilities of other consortium members. 	<ul style="list-style-type: none"> Enthusiasm to develop an independent research career Strong organisational skills Ability to meet targets

Other

e.g. special circumstances (if any) appropriate to the role such as unsocial hours, travelling, Gaelic language requirements etc.

ESSENTIAL

- Must meet eligibility criteria for the European Commission's Marie Curie Doctoral Network.
- Must not have lived in the UK for more than 12 months in the last 3 years.
- Flexible approach towards work.

DESIRABLE

- Willingness to work non-standard hours if necessary.

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

ABERDEEN 2040

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.

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/smmsn/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/>

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 **06 May 2024**

Should you wish to make an informal enquiry please contact:

Professor Pieter van West, Chair in Oomycete Biology
p.vanwest@abdn.ac.uk

Please do not send application forms or CVs to Professor van West.

Please quote reference number IMS282R on all correspondence