

# Research Fellow (Yeast Chromosome Maintenance)

## *SCHOOL OF MEDICINE, MEDICAL SCIENCES AND NUTRITION*

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**Closing date:** 13 May 2021  
**Interview date:** Interview Date (HR)  
**Reference number:** IMS209R



## INTRODUCTION

A Cancer Research UK-funded position is available for a Research Fellow to work on mechanisms of yeast chromosome maintenance in the laboratory of Professor Anne Donaldson & Dr Shin-ichiro Hiraga. The successful candidate will join a well-funded, dynamic research team within an interactive and growing group of laboratories sharing an interest in chromosome biology.

Accurate chromosome maintenance is a central requirement for all living cells, and correct operation of genome stability pathways and integration with DNA replication, repair and transcription are crucial to ensure that the genome is stably maintained. Chromosome loss, mutation, or rearrangement has catastrophic effects, including diseases caused by genome instability including cancer. Our lab studies the molecular mechanisms needed for eukaryotic chromosome maintenance. We have a track record of elucidating fundamental principles by using the budding yeast *S. cerevisiae* to investigate conserved genome stability components, whose operation we then analyse using human cell lines. A long-term aim is to translate our discoveries into opportunities for cancer treatment.

## JOB DESCRIPTION

### *Main purpose of the role:*

The researcher appointed will investigate how yeast Rif1 ensures correct chromosome maintenance, harnessing cutting-edge genomic and single-molecule approaches to understand where and how Rif1 operates at sites of DNA replication. Our existing results form the basis for a timely and unique opportunity to understand the role of this key regulator of fundamental genome maintenance mechanisms. The post would particularly suit a postdoctoral researcher interested in working in a cross-disciplinary environment that uses molecular, biochemical, cellular, genomic and computational approaches to address fundamental cellular processes. Applicants with prior experience in analysis of chromosome maintenance, DNA replication, genome stability and genomics analyses, and/or the biochemistry of nucleic acids are particularly encouraged to apply. Our dynamic, enthusiastic and international research group is embedded within an extended network of labs sharing an interest in chromosome maintenance, offering an outstanding training opportunity for researcher career development.

Informal enquiries are welcome and should be addressed to Professor Anne Donaldson ([a.d.donaldson@abdn.ac.uk](mailto:a.d.donaldson@abdn.ac.uk)) or Dr Shin-ichiro Hiraga ([s.hiraga@abdn.ac.uk](mailto:s.hiraga@abdn.ac.uk)).

### *Key Responsibilities:*

#### *Key duties of the role include:*

- Carry out research within the context of Cancer Research UK Programme grant, as directed by Professor Anne Donaldson.
- Together with the Principal Investigators Professor Anne Donaldson and Dr Shin-ichiro Hiraga, take responsibility for the planning and production of research papers.
- Record accurately all results and communicate results at meetings.
- Participate in undergraduate teaching as appropriate.
- Participate in the group, School and Institute research events and attend research seminars, conferences, and staff development workshops, and liaise with experts in the field.

### **AT A GLANCE:**

#### **SALARY:**

Grade 6, £33,797 -  
£36,914 per annum

#### **HOURS OF WORK:**

Full-time, 37.5 hours

#### **CONTRACT TYPE:**

Open ended, project  
limited, 36 months

#### **LOCATION:**

Aberdeen

Please refer to the Person Specification at the bottom of this document for role requirements.



## CANDIDATE BACKGROUND

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We are seeking a well-motivated, enthusiastic individual with a demonstrated interest in the field of chromosome maintenance. You should have (or be about to obtain) a PhD in Molecular Biology or a related field, or an MSc plus the appropriate level of experience demonstrating the required skills and capabilities. Experience in one or more of the following area(s) will be an advantage: handling and analysis of genomics data and/or yeast molecular genetic methods, chromatin analysis methods (e.g. ChIP and related techniques), proteomic analysis, protein expression and purification, and functional assays for chromosome stability (e.g. DNA repair and/or replication assays).

## TERMS OF APPOINTMENT

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Salary will be at the appropriate point on the Grade 6 salary scale (£33,797 - £36,914 per annum) and negotiable with placement according to qualifications and experience.

As this post is externally funded by Cancer Research UK it is available for 36 months in the first instance.

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

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

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 Natalie Reid, HR Adviser (e-mail: [n.reid@abdn.ac.uk](mailto:n.reid@abdn.ac.uk)) for further information.

This role is based in the UK and as such the successful candidate will be required to live and work in the UK.



## PERSON SPECIFICATION

	Essential	Desirable
<b>Education/Qualifications</b> Academic, technical and professional education and training	<ul style="list-style-type: none"> <li>• <i>PhD (at or near completion) in a relevant area (e.g. molecular biology, biochemistry, genetics, genomics) or an MSc plus the appropriate level of experience which demonstrates the required skills and capabilities.</i></li> <li>• <i>Demonstrated interest in the biology of chromosome maintenance</i></li> </ul>	
<b>Work and Other relevant experience (including training)</b> e.g. Specialist knowledge, levels of experience, supervisory experience, research	<ul style="list-style-type: none"> <li>• <i>Experience in working in a molecular biology research laboratory.</i></li> <li>• <i>Track record of publication in a relevant research field</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Experience in methods of yeast molecular genetics and chromosome stability is highly desirable.</i></li> <li>• <i>Experience in cell cycle research.</i></li> <li>• <i>Track record of publication in chromosome biology and/or cell cycle research fields</i></li> <li>• <i>Ability to work with, process and interpret large genomic datasets (e.g. ChIP-seq, RNA-seq).</i></li> </ul>
<b>Personal qualities and abilities</b>	<ul style="list-style-type: none"> <li>• <i>A strong, demonstrated interest in the field of yeast chromosome stability, DNA repair, and/or DNA replication.</i></li> <li>• <i>Ability to successfully complete research objectives.</i></li> <li>• <i>Keep abreast of the relevant literature and methodology developments.</i></li> <li>• <i>Ability to think and work independently and as part of a team (including establishing experimental procedures, and supervising/training other scientists).</i></li> <li>• <i>Able to work outside normal hours on occasion as experiments require.</i></li> <li>• <i>Able to travel to scientific meetings, training workshops etc. as required.</i></li> </ul>	
<b>Other</b> eg special circumstances (if any)	<ul style="list-style-type: none"> <li>• <i>Ability to meet the travel needs of the post nationally and internationally on occasion.</i></li> </ul>	

## UNIVERSITY OF ABERDEEN

*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 centre of everything it does. 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 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.

### 2019 HIGHLIGHTS

SCOTTISH UNIVERSITY OF THE YEAR (TIMES & SUNDAY TIMES)

70TH IN THE WORLD FOR RESEARCH CITATIONS (THE)

32ND IN THE WORLD FOR CONTRIBUTION TO THE UN SUSTAINABLE DEVELOPMENT GOALS (THE)

28TH MOST INTERNATIONAL UNIVERSITY IN THE WORLD (THE)

15TH EQUAL IN THE UK FOR OVERALL STUDENT SATISFACTION (NSS)

11TH BEST STUDENT INTAKE IN THE UK (TIMES & SUNDAY TIMES)

PERCENTAGE OF SCOTTISH INTAKE FROM MOST DEPRIVED AREAS UP FROM 4.5% IN 2018/19 TO 9% IN 2019/20

### CURRENT CONTEXT

The University will build on the significant achievements above in 2020 and beyond. Underpinning our high performance and significant growth is a £100m investment in Aberdeen's estate which will include the completion of a new Science Teaching Hub, the regeneration of the historic King's Quarter, and a new Business School building. The University has also invested in 50 new academic posts, and 2020 will see the launch of 5 Interdisciplinary, cross-institution Research Centres that will catalyse world-leading research in our areas of research strength. The 5 Interdisciplinary Challenges are: Energy Transition; Social Inclusion and Cultural Diversity; Environment and Biodiversity; Data and Artificial Intelligence; and Health, Nutrition and Wellbeing.

The University of Aberdeen is a recent recipient of The Queen's Anniversary Prize, awarded to recognise world-class excellence in innovation and practical benefit to people and society. The University was given this award for health service research leading to improvements in academic and clinical practice and delivery of health care.

### INTERNATIONAL

Aberdeen is also increasing its international presence, positioning the University as a global organisation, and building on its established partnership in Qatar with new partnerships in Sri Lanka, with the International Institute of Health Sciences, and in China, with Shanghai University and SCNU.

The University of Aberdeen is proud to be the first UK University to operate on a dedicated campus in Qatar. Phase 1 of this partnership with AFG College has successfully recruited over 600 students. Phase 2 will see the creation of a substantially larger campus, with capacity for at least 5,000 students and research activity. For further information on our Qatar campus, visit <https://www.abdn.ac.uk/qatar/>.



## ABERDEEN 2040

On Founders' day in 2020, our 525th anniversary as a University, we launched our new strategy 'Aberdeen 2040'. Over the next 20 years, four strategic themes will shape our learning, discovery and strategic actions:

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

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

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

**SUSTAINABLE:** We understand and nurture our environment, and take care of our resources, including our people and our 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 and become change-makers across the globe. 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.



## NHS GRAMPIAN

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**NHS GRAMPIAN** incorporates Aberdeen Royal Infirmary, Royal Aberdeen Children's Hospital and Aberdeen Maternity Hospital and the Aberdeen Dental Hospital on the Foresterhill site, together with the adjacent Royal Cornhill Hospital. Together these form one of the largest single site teaching hospitals in Europe. Other sites include Woodend Hospital in Aberdeen and Dr Gray's Hospital in Elgin, as well as terminal care facilities at Roxburghe House.

**ABERDEEN ROYAL INFIRMARY (ARI)**, Foresterhill, has a complement of 922 beds and is situated to the north-west of Aberdeen city on the teaching hospital site with the Medical School of the University of Aberdeen. This is the principal adult acute hospital of the Grampian Area providing a complete range of medical and surgical specialities including General Medicine and allied specialities (Cardiology, Respiratory, Gastroenterology, Infectious Diseases, Neurology, Diabetes & Endocrinology, Haematology, Nephrology, Oncology, Dermatology, Blood Transfusion, Rheumatology and Geriatrics), General Surgery and allied specialities (Cardiothoracic, Vascular, Orthopaedics, Neurosurgery, Plastics, Dental, ENT, Burns, Transplantation, Ophthalmology), ITU, A & E, Radiotherapy and Anaesthetics. Aberdeen Royal Infirmary is also a major tertiary referral centre for the North and North East of Scotland in a number of specialities.

**ROYAL ABERDEEN CHILDREN'S HOSPITAL** is the major tertiary referral centre for children in the North-East Scotland. The new Royal Aberdeen Children's Hospital (RACH) provides a comprehensive range of paediatric services. The facility, which opened on 25th January 2004, replaced the previous children's hospital built in 1929 and is sited on the existing hospital campus with a direct bridge link to Aberdeen Royal Infirmary on the Foresterhill site. The Combined Child Health Service provides acute and community child health services across Grampian and to some children from Tayside, Highland, Orkney and Shetland. The Service was established in 1999 and provides all secondary and tertiary acute paediatric services.

**ABERDEEN MATERNITY HOSPITAL** is the tertiary referral centre for maternity care for North-East Scotland, in addition to a long history of delivering excellent clinical services, the hospital continues to have worldwide impact in developing and improving maternity care. Clinically based studies can benefit from the population based Aberdeen Maternity and Neonatal Databank, which has prospectively recorded information about all Aberdeen city births for more than fifty years, and ongoing interests in fertility and aetiology of congenital malformations.

## DEVELOPMENTS IN PROGRESS

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**THE BAIRD FAMILY HOSPITAL** and **THE ANCHOR CENTRE PROJECT** are exciting initiatives delivering two new health facilities at the Foresterhill Health Campus by 2022/2023.

The Baird Family Hospital brings together all Maternity, Neonatal, Reproductive Medicine, Breast and Gynaecology services. It will also house a Patient Hotel and dedicated teaching and research facilities. 'The Baird' will be located on the site formerly occupied by the Breast Screening Centre and Foresterhill Health Centre, facing the Aberdeen Royal Infirmary and the Royal Aberdeen Children's Hospital.

The ANCHOR Centre brings all Haematology, Oncology and Radiotherapy Day and Outpatient services under one roof. There will also be a dedicated lounge for teenage and young adult patients, an Aseptic Pharmacy for the production of chemotherapy treatments, and dedicated teaching and research facilities. 'The ANCHOR' will attach to the existing Radiotherapy Centre, forming a single larger building.

Both buildings will open to patients in 2022/2023, building started in 2019. The project has a £163.7 million in Capital funding from the Scottish Government.

Please visit the project website for more details and artist's impressions of these new facilities: [www.bairdanchor.org](http://www.bairdanchor.org).

Updates are also available on Facebook: [www.facebook.com/bairdANCHOR](https://www.facebook.com/bairdANCHOR) and Twitter: [twitter.com/bairdANCHOR](https://twitter.com/bairdANCHOR).

Further information about NHS Grampian is available from <http://www.nhsgrampian.org/>.

Healthcare in Scotland is devolved from UK Government, and the strategic direction of NHS Scotland policy and funding comes to NHS Grampian from Scottish Government. A key difference between Scottish and rest of the UK services at this time is that service funding is not dependent upon the number of patients seen.

## SCHOOL OF MEDICINE, MEDICAL SCIENCES AND 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 for Medical and Dental Sciences (IEMDS) 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 for Medical and Dental Sciences <https://www.abdn.ac.uk/iemds/>
- 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 IEMDS 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 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 2000+ 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

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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 energy capital of Europe, Aberdeen nevertheless retains its old-fashioned charm and character making it an attractive place in which to live.

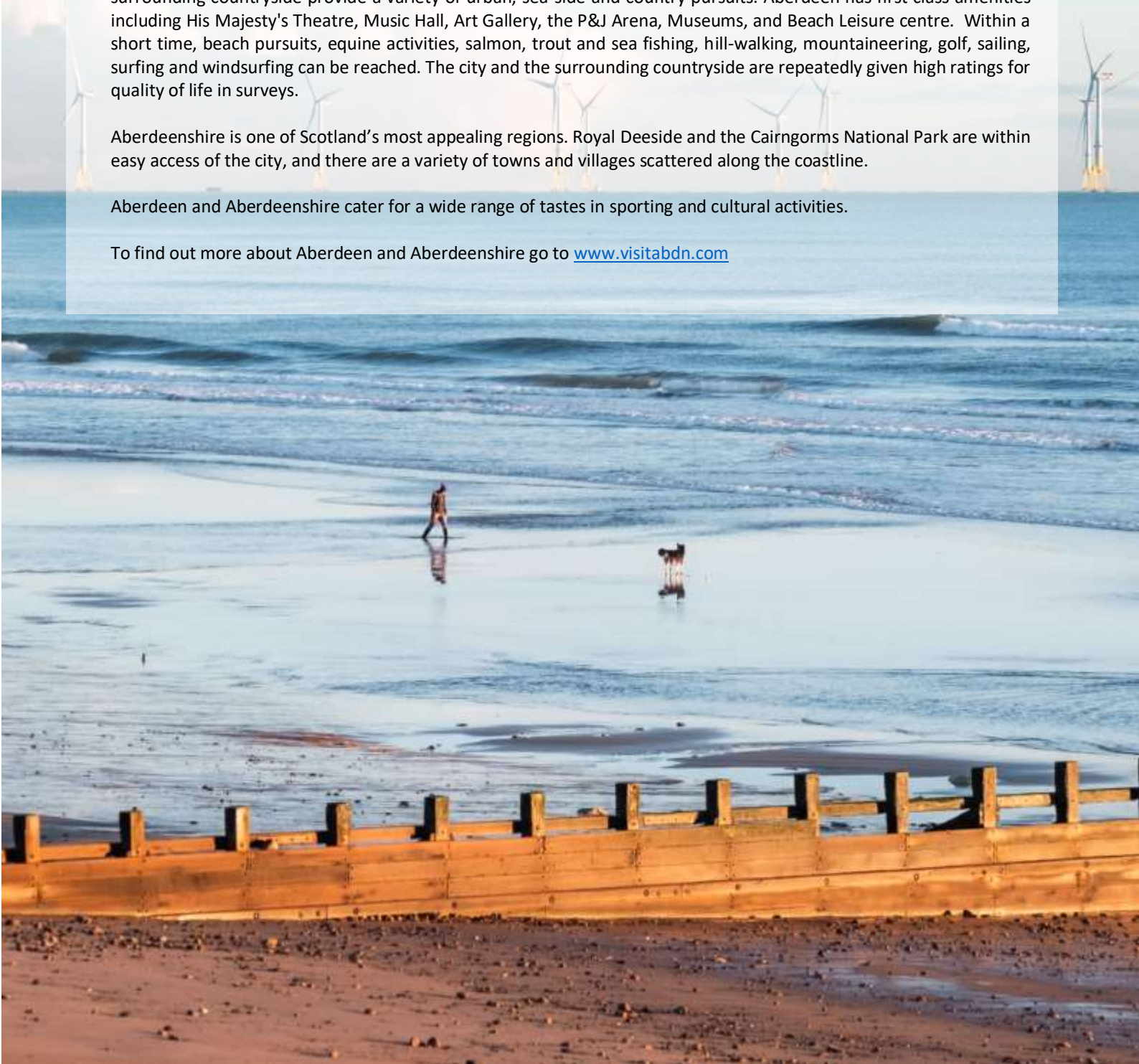
Aberdeen enjoys excellent communication services with other European cities - e.g. flying time to London is just over one hour with regular daily flights. There are direct air links to London (City, Heathrow, and Luton), Manchester, Birmingham, Leeds, Southampton, Belfast and East Midlands within the 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 P&J Arena, 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)



## EQUALITY & DIVERSITY

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

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 at institutional level and across all its subject areas. The University is also a Stonewall Diversity Champion to further LGBT+ equality.

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 minority ethnic staff and students within higher education.

Candidates who are British Sign Language (BSL) user can contact us directly by using [contact SCOTLAND-BSL](#)

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.

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

## HOW TO APPLY

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

The closing date for receipt of applications is **13 May 2021**

Informal enquiries are welcome, please contact Professor Anne Donaldson ([a.d.donaldson@abdn.ac.uk](mailto:a.d.donaldson@abdn.ac.uk)) or Dr Shin-ichiro Hiraga ([s.hiraga@abdn.ac.uk](mailto:s.hiraga@abdn.ac.uk)).

Please do not send application forms to Professor Donaldson or Dr Hiraga: formal applications must be made through the University of Aberdeen website.

**Please quote reference number IMS209R on all correspondence**