

Research Fellow (Human Chromosome Maintenance)

SCHOOL OF MEDICINE, MEDICAL SCIENCES AND NUTRITION

Closing date: 16 September 2022

Interview date: To Be Confirmed

Reference number: IMS208RXY



INTRODUCTION

We seek a Research Fellow to work on mechanisms of mammalian 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 group of laboratories sharing an interest in chromosome biology.

Reliable 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 uses yeast and human cell lines to investigate molecular roles of conserved genome stability components required for eukaryotic chromosome maintenance. We have successfully combined cell biology studies in human cell lines with molecular genetic analysis of budding yeast, to build understanding of eukaryotic chromosome maintenance. This position is funded by Cancer Research UK, and our long-term aim is to translate our discoveries into opportunities for cancer treatment.

JOB DESCRIPTION

MAIN PURPOSE OF THE ROLE:

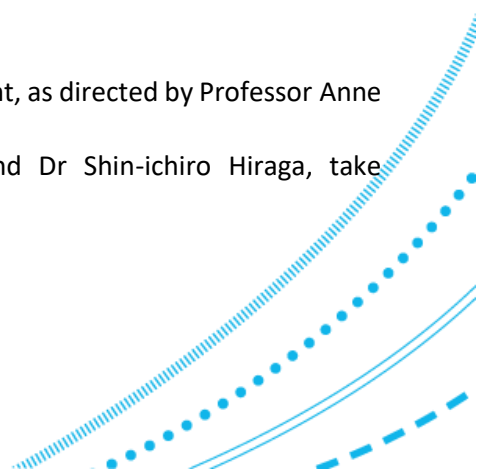
The researcher appointed will examine how the human RIF1 protein acts during DNA replication to ensure correct chromosome maintenance, taking forward recent unpublished breakthroughs concerning how RIF1 regulates DNA replication, the cellular components it targets, and whether RIF1 acts through a similar molecular mechanism in its various cellular functions. Our current analyses have provided new insight into how RIF1 is recruited to sites of replication, providing a timely and unique opportunity to understand this key regulator of fundamental genome maintenance mechanisms. The position would particularly suit a postdoctoral researcher interested in combining molecular, biochemical, proteomic, and genomic approaches to address fundamental cellular processes. Applicants with prior experience in analysis of chromosome maintenance, DNA replication, genome stability, and/or cytological studies of genome maintenance are particularly welcome.

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) or Dr Shin-ichiro Hiraga (s.hiraga@abdn.ac.uk).

KEY RESPONSIBILITIES:

Key duties of the role include:

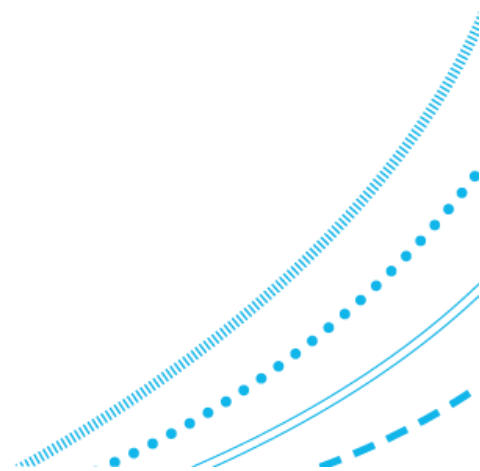
- Carry out research within the context of Cancer Research UK Programme grant, as directed by Professor Anne Donaldson.
 - Together with the Principal Investigators Professor Anne Donaldson and Dr Shin-ichiro Hiraga, take responsibility for the planning and production of research papers.
 - Record accurately all results and communicate results at meetings.
 - Participate in undergraduate teaching as appropriate.
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- 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.

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

CANDIDATE BACKGROUND

We are seeking a well-motivated, enthusiastic individual with experience in molecular, biochemical, or cytological analysis and clear 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: mammalian cell genome stability analyses, genomic engineering, proteomic analysis, protein expression and purification, chromatin analysis methods (e.g. chromosome fibre analysis, ChIP and related techniques), and functional assays for chromosome stability (e.g. DNA repair and/or replication assays).



TERMS OF APPOINTMENT

Salary will be at the appropriate point on the Grade 6, £34,304- £37,467 per annum and negotiable with placement according to qualifications and experience.

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.

Due to the nature of the requirements of this post, homeworking is not considered appropriate.

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) for further information.

AT A GLANCE

SALARY:

Grade 6

£34,304- £37,467 per annum

HOURS OF WORK:

Full-Time, 37.5 hours per week

CONTRACT TYPE:

Project-Limited for 36 months

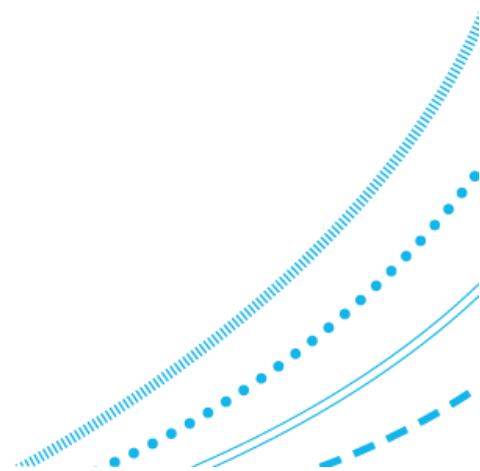
LOCATION:

Aberdeen



PERSON SPECIFICATION

	ESSENTIAL	DESIRABLE
Education/Qualifications Academic, technical and professional education and training	• 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. • Demonstrated interest in the biology of chromosome maintenance	
Work and Other relevant experience (including training) e.g. Specialist knowledge, levels of experience, supervisory experience, research	• Experience in working in a molecular biology research laboratory. • Track record of publication in a relevant research field	• Experience in methods of human cell analysis and chromosome stability is highly desirable. • Experience in cell cycle research. • Track record of publication in chromosome biology and/or cell cycle research fields
Personal qualities and abilities e.g. initiative, leadership, ability to work on own or with others, communication skills	• A strong, demonstrated interest in the field of yeast chromosome stability, DNA repair, and/or DNA replication. • Ability to successfully complete research objectives. • Ability to think and work independently and as part of a team (including establishing experimental procedures, and supervising/training other scientists). • Able to work outside normal hours on occasion as experiments require. • Able to travel to scientific meetings, training workshops etc. as required.	
Other e.g. special circumstances (if any) appropriate to the role such as unsocial hours, travelling, Gaelic language requirements etc.	• Ability to meet the travel needs of the post nationally and internationally on occasion	



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.



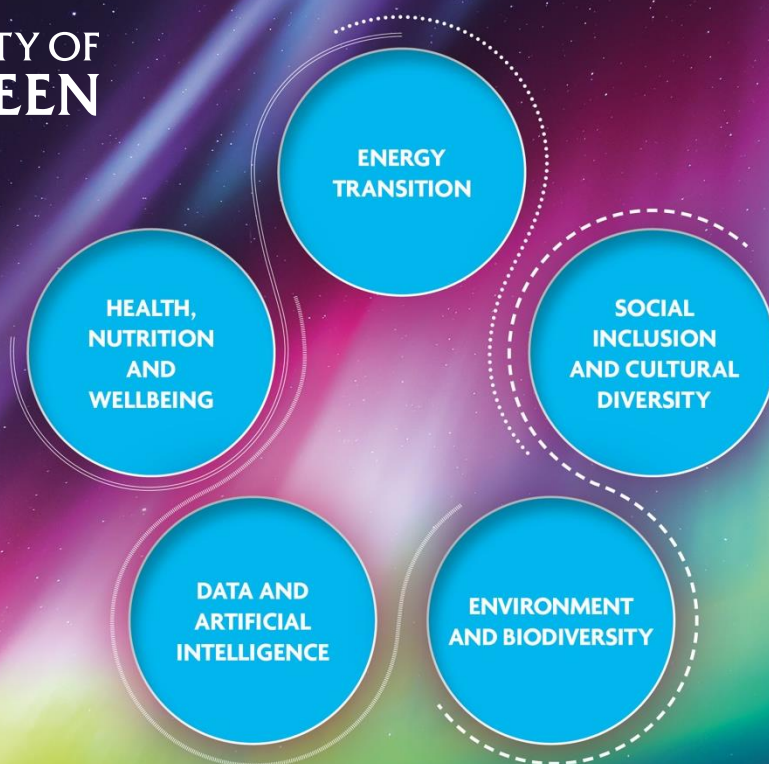
CURRENT CONTEXT

The University continues to build on its achievements. 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 in 2020 launched five interdisciplinary, cross-institution Research Centres that will catalyse world-leading research in our areas of strength. Our five Interdisciplinary Challenges are: Energy Transition; Social Inclusion and Cultural Diversity; Environment and Biodiversity; Data and Artificial Intelligence; and Health, Nutrition and Wellbeing.

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 in e.g. Qatar, China, North America, Europe. We feature in the top 50 institutions worldwide for international students¹ and have been named 32nd in the world for International Outlook². 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 www.abdn.ac.uk/qatar.

IMPACT

Our dedication to building a sustainable future is reflected in the Times Higher Education Impact Rankings 2021 where we were ranked in the top 60 Universities worldwide for positive impact on society.

In 2020 the University signed the United Nations Sustainable Development Goals accord, solidifying our commitment to developing the world in a sustainable way. In 2021 we were listed in the global Top 50 for 6 of these goals and in the UK Top 20 for all 17³.

¹ Times Higher Education World University Rankings 2021

² QS World University Rankings 2021

³ Times Higher Education Impact Rankings 2021



THE 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 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.

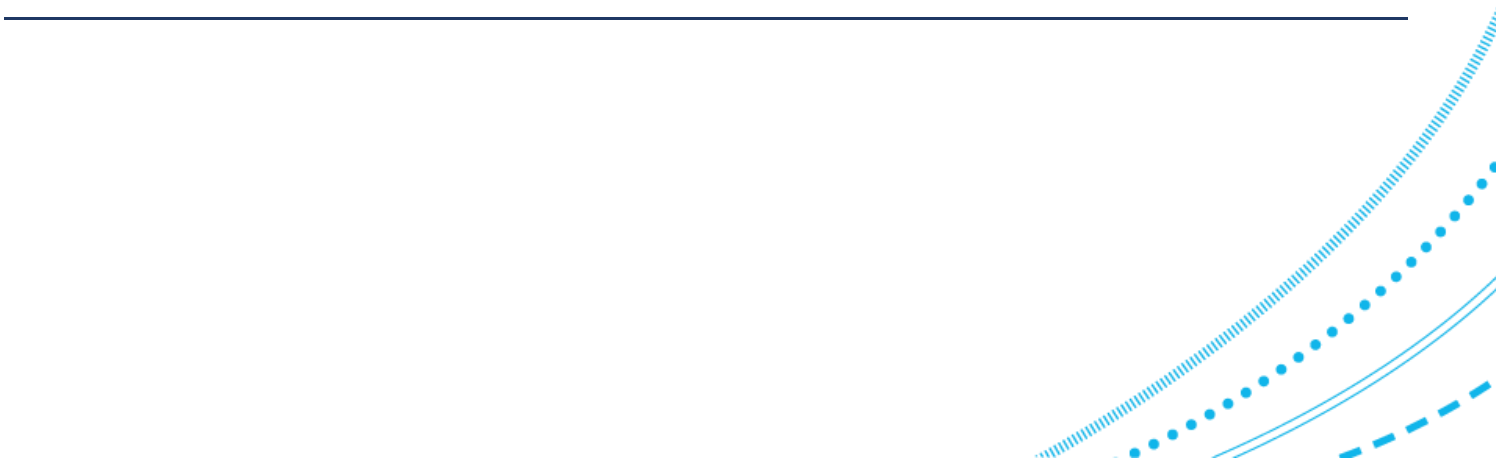
We have a number of specialist Centres representing areas of particular research strength and capacity within the School all of which are willing to support colleagues on projects in their areas. More information is available at the following websites.

- 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 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 at <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 an 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) users 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.

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 **16 September 2022**.

Informal enquiries are very welcome, please contact Professor Anne Donaldson (a.d.donaldson@abdn.ac.uk) or

Dr Shin-ichiro Hiraga (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 **IMS208RXY** on all correspondence

