UNIVERSITY OF CAMBRIDGE

MRC Mitochondrial Biology Unit

Research Associate

ARIA Precision Mitochondria Programme

MRC Mitochondrial Biology Unit

Closing date: 29 November 2026

Job Reference: SM51607









Race Equality Charter Bronze Award

We are a Living Wage Employer

disability confident COMMITTED

Athena SWAN Silver Award

Research Associate

Salary:
£38,448 - £46,970

Contract:
Fixed Term until 30 November 2029

Location:
Cambridge Biomedical Campus

Faculty / Department:
MRC Mitochondrial Biology Unit

Responsible to:
Professor Edmund Kunji

Working Pattern:
Full Time

The University of Cambridge has a Hybrid Working Policy that aims to enable as many staff as possible to work in a hybrid way if they so wish, whilst recognising that some roles will include tasks that can only be performed on University premises.



Purpose of the role

The work within our programme is focused on developing transformative technologies for precision engineering of the mitochondrial genome. Mitochondrial diseases affect approximately 1 in 5,000 individuals and remain largely untreatable because efficient methods for introducing genetic material into mitochondria do not currently exist.

Together with Prof Aleksandra Filipovska (University of Western Australia) and Prof Oliver Rackham (Curtin University) we aim to build new ways to get DNA into mitochondria by utilising custom protein "pores". Bringing together expertise in membrane transport, synthetic biology, and mitochondrial genetics, we will design and screen these pores to thread DNA from the cytoplasm, across both mitochondrial membranes, into the matrix. We will draw on a range of natural channel proteins and our own cutting-edge protein engineering capability. We will also tune the imported genes to be read efficiently once inside the mitochondria, tracking delivery and expression with molecular and fluorescent reporters. If it works, this work would lay the delivery-and-expression groundwork for the programme's longer-term goal: writing engineered sequences into the mitochondrial genome and keeping them there stably.

The successful candidate will maintain mammalian cell models and mitochondrial preparations and develop assays for mitochondrial localisation and import, sub-mitochondrial distribution, membrane integrity and function. Methods will include molecular biology, biochemical fractionation and protease protection, imaging, sequencing, single-cell analysis and bioenergetics.

Key responsibilities

- Develop and maintain standardised mammalian cell models and mitochondrial preparations for testing mitochondrial nucleic acid delivery and function.
- Establish biochemical and cellular assays for mitochondrial localisation and import, sub-mitochondrial distribution and membrane integrity, including fractionation and protease-protection approaches.
- Apply molecular, sequencing and single-cell approaches to assess mitochondrial DNA and RNA changes, gene expression and translation.
- Evaluate mitochondrial integrity and function using complementary readouts including mtDNA copy number, respiration, membrane potential, morphology and stress responses.
- Contribute to programme milestones, publications and collaborative activities.

Person Specification

Criteria	Essential	Desirable
Education		
PhD in mitochondrial, cell or MtDNA/RNA biology, biochemistry, genetics or a related discipline.	✓	
Relevant experience		
Strong research experience in mitochondria, mitochondrial RNA/DNA and cell biology.	✓	
Experience working with mammalian cell culture systems.	✓	
Experience independently designing and executing complex experiments.	✓	
Evidence of scientific productivity through publications and presentations.	✓	
Experience with mitochondrial isolation, fractionation or organelle-targeting assays.	✓	
Experience with mitochondrial physiology or bioenergetics.	✓	
Experience in protein engineering	✓	
Experience collaborating across multidisciplinary teams.		✓
Specialist knowledge and skills		
Experience in molecular/cellular biology and mammalian genome engineering.	✓	
Experience with mitochondrial purification and fractionation.	✓	
Experience in quantitative analysis of sequencing and functional datasets.	✓	
Experience with sequencing (including long-read where relevant), single-cell methods, and/or flow cytometry.		✓
Strong problem-solving and experimental design skills.		✓
Ability to independently develop and optimise experimental methodologies.		✓
Additional requirements		
Motivated individual with a strong desire for learning and self-development.	✓	
Ability to work effectively both independently and in a team.	✓	

Declaration on Research Assessment

The University of Cambridge is a signatory to the San-Francisco Declaration on Research Assessment (DORA), and in recruitment or promotion evaluations will assess research on the basis of its merits rather than the journal or venue in which it is published. Applicants should not include Journal Impact Factors or uncontextualized metrics in their applications. Full details are at: https://www.research-strategy.admin.cam.ac.uk/research-policy/DORA

Behavioural Attributes

This section summarises the behavioural attributes (or competencies) that we expect the role holder to be able to demonstrate, at what level and whether this is an essential or desirable requirement. Full definitions are at: https://www.hr.admin.cam.ac.uk/policies-procedures/behavioural-attributes

Please review these and provide specific examples in your application of how you have demonstrated these attributes in your work, education or other experience. It will assist your application if you explain the situation, what you did and what the outcomes were.

Attribute	Level
Valuing Diversity	A
Achieving Results	B
Communication	C
Innovation and Change	C
Negotiating and Influencing	C
People Development	C
Relationship Building	B
Strategic Focus	C

UNIVERSITY OF CAMBRIDGE

MRC Mitochondrial Biology Unit

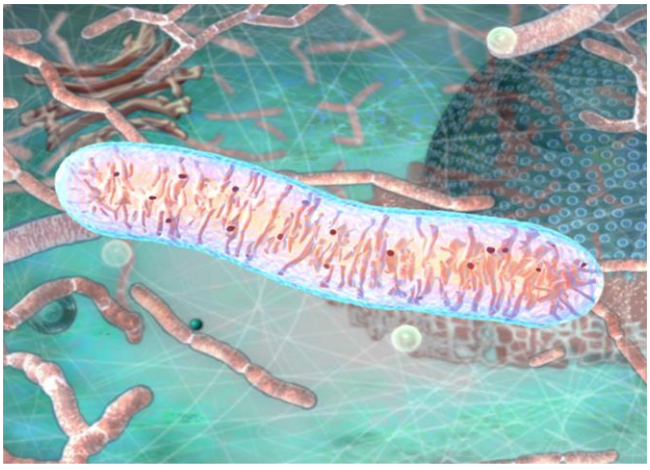
MRC Mitochondrial Biology Unit

Research at the Medical Research Council - Mitochondrial Biology Unit (MBU) is focussed on the involvement of mitochondria and their dysfunction in an ever-increasing range of human diseases, and even, perhaps, in the process of ageing.

Our Unit has three major scientific aims:

- To understand the fundamental processes taking place in mitochondria
- To understand the involvement of these processes in human diseases
- To exploit knowledge of these fundamental processes for the development of new therapies to treat human diseases

We have eleven independent research groups. Their activities are focussed on understanding the fundamental biochemical and biological processes which occur in mitochondria. Via collaborations with clinical colleagues in several countries, we are building on our fundamental knowledge to try to understand how mitochondrial dysfunction leads to human disease. In addition, we are engaged in collaborations with pharmaceutical companies, to exploit our fundamental knowledge to generate new therapies.



The MBU occupies spacious modern laboratories equipped with state-of-the-art instrumentation, with access to further large-scale facilities as required for our research. scientists in the School of Clinical Medicine.



We share our building with the Cambridge Institute for Medical Research (CIMR) which like the MBU is part of the University of Cambridge School of Clinical Medicine, this proximity has helped us to develop excellent relations with both CIMR's clinical and non-clinical scientists, and with other clinical The building is part of the Cambridge Biomedical Campus, which is expanding rapidly into the largest Biomedical campus in Europe.

Although scientific endeavour and success in research are the main reasons why we enjoy working at the MRC Mitochondrial Biology Unit, the beauty of the city and the University of Cambridge, and the cultural and social activities of the University, provide additional important dimensions.

All our post-graduate students are members of Cambridge Colleges, and many Colleges now provide opportunities for post-doctoral scientists to become associated with them also. The Colleges themselves provide social contact and routes into cultural activities, for example into music and drama.



Professor Judy Hirst
Director, MRC Mitochondrial Biology Unit

The School of Clinical Medicine

Doing great work in a great place to work

About the School

The School of Clinical Medicine currently employs nearly 3,000 people, spanning all varieties of staff type from Academic Professors to administrative support.

In 1976 in response to the recommendation of the Royal Commission on Medical Education in the late 1960's, a complete medical course was re-established in Cambridge with the opening of the School of Clinical Medicine at the new Addenbrooke's Hospital site.

On 21st November 1980, HRH The Duke of Edinburgh, the Chancellor of the University of Cambridge, officially opened the Clinical School Building which presently accommodates the medical library, lecture theatres and seminar rooms.

The University of Cambridge School of Clinical Medicine aspires to change the practice of medicine and improve biological understanding in a wide range of clinical specialties and scientific disciplines. Collaborative research, both within biomedicine and crossing the boundaries to the mathematical, physical and social sciences, is key to our approach. The School also supports key enabling technologies and facilities in imaging, bioinformatics and biological systems. The main areas of research interest are:

- Cancer research
- Cardio-Respiratory Medicine
- Cellular mechanisms of disease
- Diabetes, Endocrinology and Metabolism Epidemiology, Public Health and Primary Care Genetics and Genetic Medicine Haematological and Transplantation Medicine
- Infection and Immunity
- Neurosciences and Mental Health
- Stems Cells and Regenerative Medicine.



Professor Patrick Maxwell, Regius Professor of Physic and Head of the School of Clinical Medicine

The School aims to provide leadership in education, discovery and healthcare. It will achieve this through; inspirational teaching and training, outstanding basic and clinical research and integration of these to improve medical practice for both individual patients and the population.

The School will:

Through inspirational teaching and training, educate individuals who:

- will become exceptional doctors or biomedical scientists
- combine a depth of scientific understanding with outstanding clinical and communication skills demonstrate a caring, compassionate and professional approach to patients and the public and
- are equipped to become future international leaders of their profession.

Through its commitment to the pursuit of excellence, support scientists of international standing in basic and clinical research aiming to:

- understand fundamental biology and thereby the mechanisms underlying disease integrate basic and clinical research
- apply a rigorous mechanism-based approach to clinical problems and
- innovate to solve the health challenges of our society.

Terms of Appointment

Tenure and probation

Appointment will be made on a 3-year fixed-term basis due to limited funding for a specific purpose. Appointment will be subject to the satisfactory completion of a six-month probationary period.

Hours of work/Working Pattern

The hours of work for the position are 37 hours per week, working Monday – Friday.

Pension

You will automatically be enrolled to become a member of USS (Universities Superannuation Scheme) – a hybrid pension scheme. For further information please visit: www.pensions.admin.cam.ac.uk

Annual leave

Full time employees are entitled to annual paid leave of 41 days inclusive of public holidays. For new part-time employees, annual leave will be pro rata'd based on days worked.

Pre-employment checks

Right to work in the UK: We have a legal responsibility to ensure that you have the right to work in the UK before you can start working for us.
If you do not have the right to work in the UK already, any offer of employment we make to you will be conditional upon you gaining it.

Health declaration: Once an offer of employment has been made the successful candidate will be required to complete a work health declaration form.

Qualifications: The person specification for this position lists qualifications that are essential and/or desirable. Please note that if you are offered the post you will be asked to provide your relevant original certificates of these qualifications.

References: Offers of appointment will be subject to the receipt of satisfactory references.

Screening Checks: This role may require a security check and where this is required, any offer of employment we make, or the successful outcome of the probationary period, will be conditional upon the satisfactory completion of this check. Whether an outcome is satisfactory will be determined by the University.

The successful candidate may also need to undergo a health assessment if required by the nature of the role.

Equality and Diversity

We particularly encourage women and /or candidates from a Black, Asian and Minority Ethnic background to apply for this vacancy as they are currently under-represented at this level within our University.

Information if you have a disability

The University welcomes applications from individuals with disabilities. We are committed to ensuring fair treatment throughout the recruitment process. We will make adjustments to enable applicants to compete to the best of their ability wherever it is reasonable to do so and, if successful, to assist them during their employment.

Information for disabled applicants is available at http://www.admin.cam.ac.uk/offices/hr/staff/ disabled/

We encourage you to declare any disability that you may have, and any reasonable adjustments that you may require, in the section provided for this purpose in the application form. This will enable us to accommodate your needs throughout the process as required. However, applicants and employees may declare a disability at any time.

If you prefer to discuss any special arrangements connected with a disability, please contact- Irina James, the Unit Manager, who is responsible for recruitment to this position. Alternatively, you may contact the HR Business Manager responsible for the department you are applying to via hrenquiries@admin.cam.ac.uk.

The University

The University of Cambridge is consistently ranked one of the best universities in the world, achieving academic excellence through its Faculties, Departments and other Institutions, together with the 31 Colleges.

The University is renowned for its record of discovery and innovation. It is one of the great institutions, with a regional, national and global reach, attracting the very best and brightest minds. Our staff and students shape the world around us for the better: we attract and partner with like-minded people.

Whether contributing to the development of new anti-cancer drugs, adding to the understanding of how black holes are formed, revolutionising the study of ancient settlements, convening academic expertise to offer solutions to the climate crisis, or analysing public attitudes towards democracy around the world, the University's research is remarkable in its breadth, quality and impact. The University also sits at the heart of Europe's largest technology cluster and has catalysed more than 1,500 high-tech companies. And yet what inspires our 24,000 students and 13,000 staff is not what has already been achieved, but what is possible in the future.

The education and experience of our students, based on a partnership between the University's academic Departments and Faculties and the 31 Colleges, is second to none. Every student is a member of one of the Colleges, each a community of students, academics and staff drawn from across the University's comprehensive range of subject areas.



The University is a self-governing community, with a system for decision-making that provides a high degree of accountability and transparency to its members. Each Department and Faculty is part of one of six academic Schools, but each of them, and each individual academic, has a great deal of autonomy. The Colleges are independent and self-governing, working in a symbiotic relationship with the University.

The University has a number of Institutions that are independent of any Faculty or Department and are not part of the academic Schools. These include the Institute of Continuing Education (which provides high-quality education to adults throughout their lives), the Fitzwilliam Museum, Kettle's Yard (an historic house and gallery that holds important collections of modern art) and the University Library. In addition to their diverse contributions to University and public life, these non-School Institutions are also important centres of teaching and research.

Cambridge University Press & Assessment provides academic publishing, examinations and learning materials worldwide, supporting the dissemination of research, academic development at school and in higher education, and international student mobility. Legally, the Press & Assessment is a department of the University. It provides very important funds to invest in the academic purposes of the University.

The University has made truly remarkable contributions to the sum of human understanding, with breakthrough ideas and discoveries that have changed the way we understand ourselves, our planet, and the universe around us. Yet the global and national contexts in which it operates are fast-changing and increasingly filled with uncertainty. In a world that is becoming - politically, economically, socially, and technologically – ever more interconnected but even less equal, the University's mission – "to contribute to society through the pursuit of education, learning and research at the highest international levels of excellence" – has never been more relevant.



About Us

The University is one of the world's leading academic centres. It comprises 150 faculties and departments, together with a central administration and other institutions. Our institutions, museums and collections are a world-class resource for researchers, students and members of the public representing one of the country's highest concentrations of internationally important collections.

The University has an annual income of £2 billion. Research income, won competitively from the UK Research Councils, the European Union (EU), major charities and industry, exceeds £500 million per annum and continues to grow.

The Colleges and the University remain committed to admitting the best students regardless of their background and to investing considerable resources both in widening access and financial support. The 31 Colleges are self-governing, separate legal entities which appoint their own staff. Many academic staff are invited to join a College as a Teaching Fellow, which provides a further social and intellectual dimension. The Colleges admit undergraduate students, provide student accommodation and pastoral support and deliver small group teaching for undergraduates.

The University awards degrees and its faculties and departments provide lectures and seminars for students and determine the syllabi for teaching.

Our instinct for seeking out excellence and setting up enduring and mutually beneficial collaborations has led us to establish strategic partnerships across the globe. Whether it is the successful Cambridge-Africa Programme involving universities in Ghana, Uganda and elsewhere on the African continent; or the close association with the government of India to pursue new research in crop science; or the creation, with Germany's Max Planck Institutes, of a Cambridge-based centre for the study of ethics, human economy and social change – international partnerships are now an inextricable part of the University's make-up.

"Through its outstanding education, research and innovation, the University of Cambridge has made – and continues to make – a lasting contribution to human knowledge and is flourishing. By working at the University of Cambridge, you will be joining a vibrant community of students, scholars and professional services staff committed to supporting and enhancing the University's mission to contribute to society."

Professor Deborah Prentice,

Vice Chancellor 2023



Working at the University

Working at Cambridge you will join a diverse, talented and innovative community, with more than 24,000 students and over 13,000 staff from all walks of life and corners of the world.

The University continually explores strategies to attract and retain the best people. It is committed to supporting its staff to achieve their best. We are a fair, diverse and inclusive society and we believe our staff are our greatest asset. There is strong commitment to developing institutional leadership and supporting and encouraging staff development at all levels.

The University offers a variety of roles including academic, research, professional, managerial and support roles. We also offer extensive benefits and excellent learning opportunities within a stimulating working environment.

The University's estate is undergoing the most significant transformation in its history. Cambridge has been able to create a science and technology campus to the west of the city centre, and is expanding further to the north west of Cambridge including investing in affordable homes for University key workers and community facilities. Even with their continued development, the University remains within walking or cycling distance across the campus. The University is a major partner on the Cambridge Biomedical Campus and continues to redevelop its historic city centre sites demonstrating a clear determination to ensure that we can offer the best facilities and opportunities for our staff and students.



Equality, Diversity and Inclusion

The University has built its excellence on the diversity of its staff and student community. We aim to be a leader in fostering equality and inclusion, and in promoting respect and a sense of belonging for all. We encourage applications from all sections of society. All appointments are made on the basis of merit. We have an Equal Opportunities Policy, along with a range of diversity groups, including the Women's Staff Network, Race Equality Network and LGBT+ Staff Network. More details are available here: http://www.equality.admin.cam.ac.uk/

The University has a bronze Race Equality Charter award, with a framework for improving the representation, progression and success of minority ethnic staff and students within higher education. Furthermore, the University's silver Athena swan award recognises and celebrates good practice in recruiting, retaining and promoting gender equality.

Living in Cambridge

Cambridge is rich in cultural diversity. From beautiful University and College buildings, museums and art galleries, quaint gardens and punts on the River Cam, to a vibrant restaurant and café scene, our employees are surrounded by the wonderful features of this unique city.

You can find a wide-range of high street shops and 3 shopping centres, with independent alternatives at the historic market and nestled within the passageways in the city centre. You will find a cinema, bowling alley, a nightclub and various live performances at the Cambridge Leisure Park, with further entertainment options at the Corn Exchange, Arts Theatre and the ADC Theatre. Further information can be found on the Visit Cambridge website.

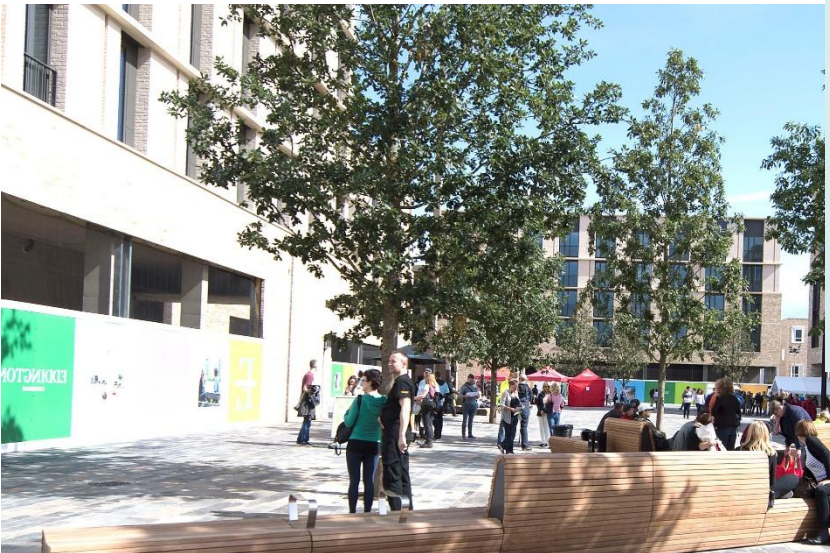
If you prefer the faster pace of life, London is a 45-minute train journey away. For those travelling from overseas, Stansted Airport is just 45 minutes away and Heathrow Airport under 2 hours away. The University is a short distance from a host of other attractions such as Ely Cathedral, Newmarket Races and various wildlife parks and stately homes. Cambridge is also within easy reach of the beautiful Broads and coastlines of Norfolk and Suffolk.

Relocation Support

The University recognises the importance of helping individuals to move and settle into a new area. We provide support and guidance to those relocating internationally or domestically to take up a post at the University of Cambridge, liaising with other University offices and selected partners to ensure comprehensive relocation support is available. This includes: accommodation, childcare, schools, banking, immigration and transport. If you would like further information, please visit https://www.accommodation.cam.ac.uk/RelocationService/. The Shared Equity Scheme and the Reimbursement of Relocation Expenses Scheme provide financial assistance to qualifying new members of

Accommodation Service

The University Accommodation Service helps staff, students and visiting scholars who are affiliated to the University in their search for suitable accommodation in Cambridge. The dedicated accommodation team can provide access to a wide range of University-owned furnished and unfurnished properties, and has a database of private sector accommodation available for short and long-term lets. For further information and to register with this free service please visit: https://www.accommodation.cam.ac.uk/





What Cambridge can offer

We offer a comprehensive reward package to attract, motivate and retain high performing staff at all levels and in all areas of work.

The University offers a wide range of competitive benefits, from family leave entitlement, to shopping and travel discount schemes. Our generous annual leave package contributes to the positive wellbeing of our University employees. Sabbatical leave enables academics to focus on research and scholarship, whilst still maintaining their full salary. The University also has a career break scheme for academic and academic-related staff, with additional flexible working policies for all other staff.



Pay and benefits

The University salary structure includes automatic service-related pay progression in many of its grades and an annual cost of living increase. In addition to this, employees are rewarded for outstanding contribution through a number of regular pay progression schemes. The University offers attractive pensions schemes for employees, with an additional benefit of a salary exchange arrangement providing tax and national insurance savings.



CAMbens employee benefits

The University offers employees a wide range of competitive benefits, known as CAMbens. CAMbens offers something for everyone across a range of categories, including:

- Financial Benefits, including shopping discounts (both local and national) and a Payroll Giving scheme;
- Relocation and Accommodation Benefits, including relocation assistance and interest-free Rental Deposit Loans;
- Travel Benefits, including Cycle to Work, discounts on train season tickets and interest-free Travel to Work loans;
- Family Friendly and Lifestyle Benefits, including support with childcare and family friendly policies;
- Health and Wellbeing Benefits, including a University Staff Counselling Service, discounts at the University Sports Centre, and other local gyms, and healthcare schemes.

What Cambridge can offer

Family-friendly policies

The University recognises the importance of supporting its staff. We have a range of family-friendly policies to aid employees' work-life balance including a generous maternity, adoption and shared parental leave entitlement of 26 weeks' full pay, and paid emergency leave for parents and carers.

Other family-friendly support includes:

Our highly regarded workplace nurseries, a childcare salary exchange scheme and a high-quality holiday Playscheme are available to help support University employees with caring responsibilities (subject to demand and qualifying criteria). Further childcare information can be found here: https://www.childcare.admin.cam.ac.uk/

The Newcomers and Visiting Scholars Group (https://www.nvs.admin.cam.ac.uk/) is an organisation within the University that welcomes the partners and families of visiting scholars and new members of the University. Run by volunteers, the group offers opportunities to visit interesting Cambridge venues, learn about the community, take part in social events and gain local knowledge while developing a strong support network of both residents and other newcomers.



Your wellbeing

The University's Sport Centre, Counselling Services and Occupational Health are just some of the support services available to University employees to promote their physical and mental wellbeing. The University delivers The Festival of Wellbeing annually, which is a programme of stimulating talks and activities, which aim to promote wellbeing and good mental and physical health. The University also hosts the Cambridge Festival, which is a great opportunity to get your first taste of public engagement, through volunteering, supporting hands-on activities or proposing a talk.

Development opportunities

We support new employees to settle in through various activities as well as supporting their professional and career development on an ongoing basis. Our Personal and Professional Development (PPD) team provide development opportunities for all University employees, including face-to-face sessions, online learning modules and webinars. All employees also have unlimited access to LinkedIn Learning to support their development. Both new and existing employees can undertake funded Apprenticeships, which lead to a range of vocational and professional qualifications. We offer reduced staff fees for University of Cambridge graduate courses and the opportunity to attend lectures and seminars held by University departments and institutions. A range of University training providers also offer specialist learning and development in their own areas e.g. teaching and learning, digital literacy, finance, health and wellbeing, safety.

How to apply

Applications should be submitted online via the University of Cambridge jobs page www.jobs.cam.ac.uk by clicking “Apply online” in the job advert. You will need an email address to register for our online system.

Conversations about flexible working are encouraged at the University of Cambridge. Please feel free to discuss flexibility prior to applying (using the contact information below) or at interview if your application is successful.

Informal enquiries are welcomed and should be directed to:
Professor Edmund Kunji
Email: ersk2@cam.ac.uk

If you have any queries regarding the application process, please contact:
Irina James, Unit Manager
Tel: 01223 331462
Email: ij211@cam.ac.uk

The closing date for applications is: 29 November 2026

The interview date for the role is: w/c 14 December 2026

