



UNIVERSITY OF  
CAMBRIDGE

# Senior NGS Scientist

Department of Medical Genetics

CLOSING DATE: 5<sup>th</sup> January 2025  
Job Reference: SS44311



# Senior NGS Scientist

**Salary:**

£33,966 - £44,263

**Contract:**

Fixed Term

**Location:**

Cambridge

**Faculty / Department:**

Medical Genetics

**Responsible to:**

Dr Ana Toribio

**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**

An exciting opportunity has arisen in the Stratified Medical Core Laboratory (SMCL) for a Senior NGS Scientist. This role is primarily focused on implementing the Olink Explore pipeline in the lab, with comprehensive training and support provided. The workflow involves the use of multiple liquid handlers and the Illumina sequencing platform. Additionally, the role includes participation in other NGS activities within the lab as needed.

**Key responsibilities**

- Management of the NGS activities within the Department. Manage the flow of work requests to ensure timely delivery of materials and samples to end users using a request system
- Allocate and oversee work of research laboratory/technical services and junior scientists and technicians to ensure projects are completed on time and to budget.
- Manufacture and prepare specimens requiring specialist skills from verbal instruction to technical specifications, especially high-throughput NGS. Perform complex cellular and molecular biological procedures (e.g. sanger sequencing, qPCR, DNA/RNA sequencing, etc.), conducting experiments on behalf of collaborators and customers of the facility.
- Analyse and interpret results in order to make changes to experimental processes. Be able to efficiently operate liquid handlers to plan and oversee high-throughput NGS projects.
- Provide highly specialist technical advice to students/researchers/industry partners on the design of NGS experiments and the specification of equipment or chemicals required to undertake experimental activity, source suppliers and new highly specialist equipment or solutions as required. Mentor and train junior scientists, technicians, and students in NGS techniques and data analysis.



- Provide highly specialist technical advice to students/researchers/industry partners on the design of NGS experiments and the specification of equipment or chemicals required to undertake experimental activity, source suppliers and new highly specialist equipment or solutions as required. Mentor and train junior scientists, technicians, and students in NGS techniques and data analysis.
- Ensure all NGS experiments and processes meet high standards of quality and reproducibility.
- Develop and implement quality control protocols and standard operating procedures and ensure compliance with regulatory and ethical guidelines related to NGS-based research projects (genomics and proteomics).
- Stay abreast of the latest advancements in NGS technologies and methodologies, identifying opportunities for technological advancements and process improvements and leading efforts to implement new technologies and innovative approaches in the lab.
- Provide support to students/researchers and others in practical sessions. Assess the practical class requirements (e.g. chemicals, apparatus and services) and organise their provision, demonstrate to undergraduates as part of an undergraduate module or course. Provide training (1:1 sessions or workshops) in the use of equipment, instruments/chemicals, techniques and safe handling of equipment and substances.
- Design and maintain lab databases so that the research/teaching group's work is up to date, accessible and easy to archive records for current and future members of staff.
- Management of laboratory budgets, equipment and consumables. Resolve queries and problems with orders and invoices liaising with Accounts, monitor expenditure against budget. Oversee equipment maintenance, make arrangements for routine checks and repair of all the equipment, negotiate service contracts as required.
- Coordinate with cross-functional teams, including bioinformaticians, molecular biologists, and software engineers, to integrate NGS data with broader research initiatives, presenting findings in clear and concise reports, publications, and presentations.
- Occasional national and international travel to scientific meetings, and out of hours work due to the nature of the lab work.
- Contribute to the positive culture of the Department.

# Person Specification

Criteria	Essential	Desirable
<b>Education</b>		
Postgraduate education in a relevant subject eg Genomics, Molecular Biology, Bioinformatics	✓	
<b>Skills</b>		
Expertise in every step of the NGS pipeline, with a particular focus on library preparation and sequencing.	✓	
Demonstrate advanced knowledge of Next Generation Sequencing involving a critical understanding of relevant theory and/or principles	✓	
Strong experience with automated NGS solutions	✓	
Specialist knowledge of relevant regulations and practice Good IT skills	✓	
High degree of precision and accuracy	✓	
Demonstrated ability to foster a friendly, inclusive, and collaborative working environment.	✓	
<b>Experience and achievements</b>		
Extensive experience with specialised Next Generation Sequencing (NGS) laboratory activities, methodologies, and equipment, particularly with the Illumina platform	✓	
Experience in providing training to groups and on a one-to-one basis.	✓	
Experience of supervising staff	✓	
Experience of Laboratory management/ co-ordination		✓
Strong experience with liquid-handling robots and NGS automation solutions	✓	
Experience with high-throughput NGS pipelines.		✓
Experience with Olink proteomics NGS-based technology.		✓
Experience in a leadership role within a research/commercial setting.		✓
Experience with clinical applications of NGS		✓

# 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

# Professional Services Values

Developed by professional services staff, our values underpin everything we do. By living the values in the work we do, we hope to foster an environment where staff feel empowered. The values encourage staff to; work together and share skills to create a sense of community, act with integrity, take an inclusive and fair approach and develop honest and open relationships that are underpinned by our shared values. We encourage applicants to consider these values within their application.





# The Faculty / Department

The Cambridge University Department of Medical Genetics was established in 1995. The Head of Department is Professor Marc Tischkowitz. Medically qualified members of the University Department also have clinical duties in the NHS Clinical Genetics Department and there are four academic clinical fellows that also work between the clinical and research components of the Department.

## About the faculty

Our research is wide-ranging and includes the identification of genetic causes of human diseases using state-of-the-art genome-wide DNA sequencing techniques, and studies to elucidate the mechanisms whereby genetic variations cause major human diseases. Our aim is to develop novel diagnostic and therapeutic strategies for inherited disorders.

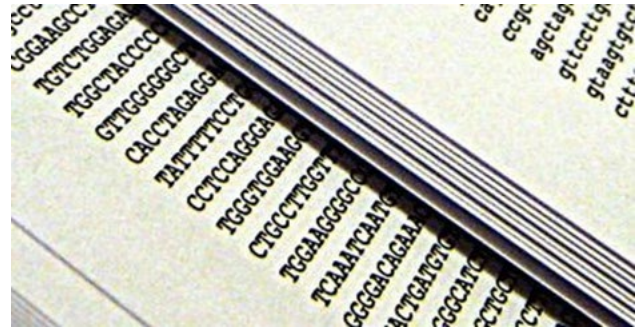
## Main Research Themes

### Whole genome and exome sequencing

Advances in genome technologies, such as whole genome and exome sequencing, have transformed medical genetics research and are impacting on the practice of genomic medicine. We are utilising whole genome (WGS) and exome sequencing to understand the genetic and other causes of inherited and sporadic cancers and neurodevelopmental disorders.

### Transcriptomics and epigenomics

We are home to the Stratified Medicine Genomics Core Laboratory (SMCL), which provides access to clinical grade genomic, epigenomic and transcriptomic analysis to aid our research, experimental medicine investigations and clinical trials.



## Translational research

Our translational research is facilitated by a variety of multidisciplinary clinical activities. For instance, in order to define the molecular mechanisms of neurogenetic disorders we use state-of-the-art cellular biology models to identify pathways of disease and potential therapeutic strategies.



**Professor Marc Tischkowitz, Head of Department**

# 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 fixed-term basis until 28/02/2027 due to limited funding

<https://www.hr.admin.cam.ac.uk/policies-procedures/guidance-use-fixed-term-and-open-ended-contracts/recruitment-and-objective>. Appointments will be subject to satisfactory completion of a probationary period which will be set dependant on the length of tenure.

## Hours of Work and 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/](http://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.

## General information

### 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.

### 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/>

to this position.



# 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.

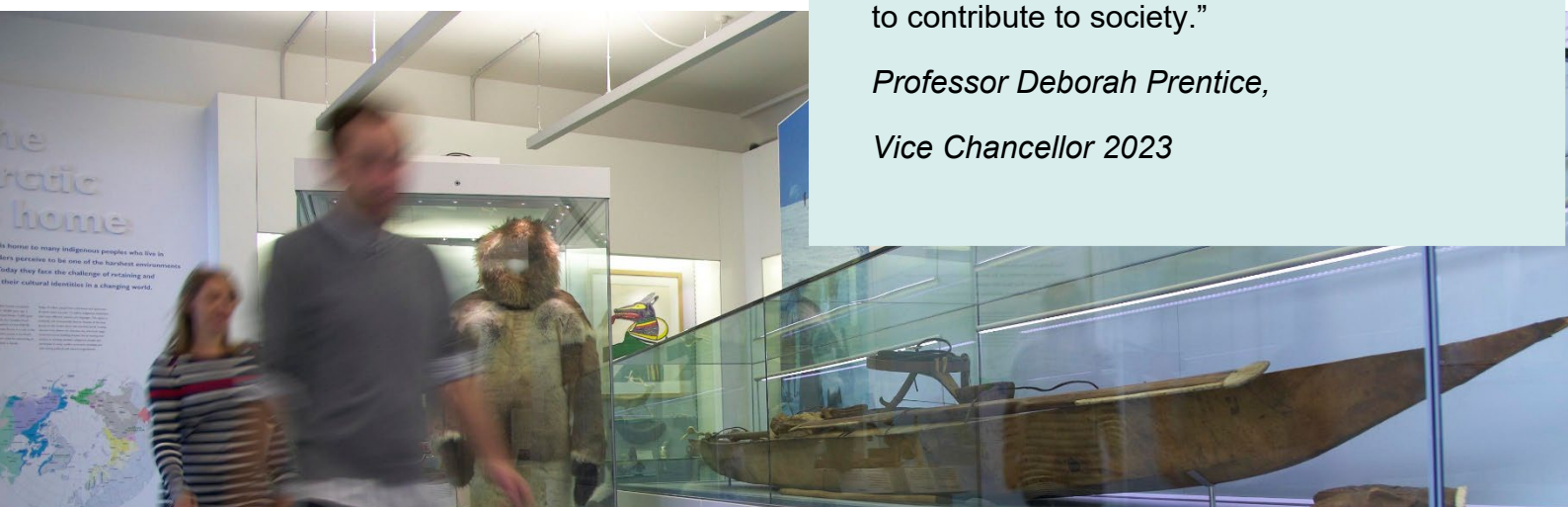
The Colleges and the University remain committed to admitting the best students regardless of their background and to investing considerable resources both in widening access and financial support. The 31 Colleges are self-governing, separate legal entities which appoint their own staff. Many academic 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.

## 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'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.



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.

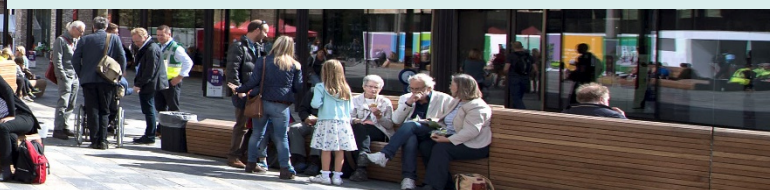
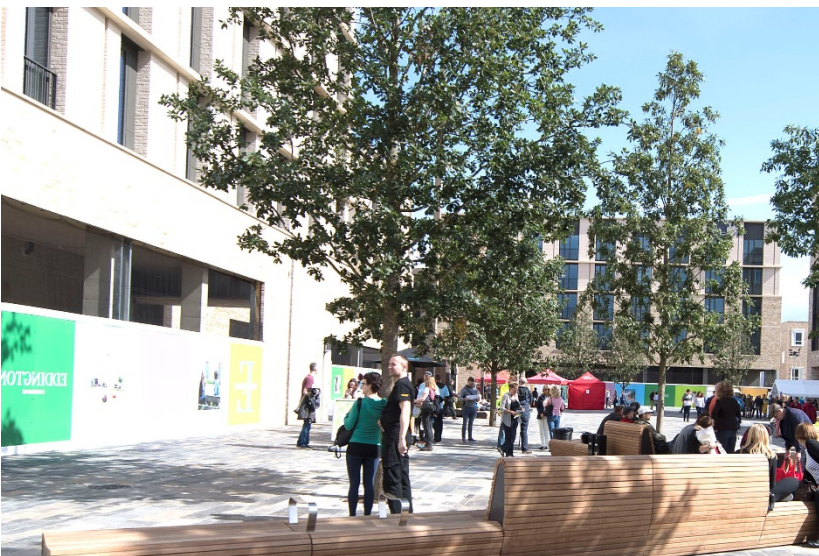
## Relocation Support

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](http://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: Dr Ana Toribio

**Email:** [alt45@cam.ac.uk](mailto:alt45@cam.ac.uk)

If you have any queries regarding the application process, please contact:

**ClusterHR@medschl.cam.ac.uk**

The closing date for applications is: 5 January 2025

The interview date for the role is: 9-14 January 2025

