Job title | Research Assistant
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Division | Medical Sciences Division
Department | Nuffield Department of Medicine – Structural Genomic Consortium (SGC)
Location | Old Road Campus, Headington, Oxford, OX3 7DQ
Grade and salary | Grade 6: £29,176 - £34,804 per annum
Hours | Full time
Contract type | Fixed-term to 31 December 2021
Reporting to | PI, Genome Integrity and Neurodegeneration Group
Vacancy reference | 145753
Additional information | This position is funded by Chordoma Foundation

The role

Genetic and sequencing studies are revealing a growing number of genes with clear links to human disease. Yet, in many cases, the role of these genes, the impact of mutations, and the relevance to future therapy is unclear. The SGC aims to decipher the function of genes involved in human disease using structural, biochemical, and chemical approaches. Our central activity is purification, crystallization and structure determination by X-ray crystallography. In parallel, we develop biochemical activity assays to study the function of the proteins, and (in selected cases) drive the development of small-molecule inhibitors to test the suitability of the proteins as drug targets. The SGC is committed to an open access policy, in which all our results are published and all reagents are made available without restrictions. The Genome Integrity group (headed by Dr. Opher Gileadi) has focussed on genes involved in DNA repair and its regulation, but also on various other genes (often of unknown function) implicated in human diseases.

You will work under the guidance of the Principal Investigator and a postdoctoral scientist on all aspects of the research in the group. You will purify a variety of proteins, pursue crystallization projects, will test the quality of the proteins and crystals, perform biophysical characterization (e.g. mass spec, ITC), and perform activity assays. After learning the core techniques, you will be expected to drive the optimization and development of research methods, and to help in tutoring new students and members of staff in your areas of expertise. The job involves use of sophisticated equipment and extensive electronic documentation.
Responsibilities

- Expression of human proteins in bacteria and baculovirus/insect cells.
- Purification of proteins from large scale (1–10 litres) cultures using ÄKTA-Xpress/pure systems.
- Quality control and activity screening of proteins by mass spectrometry.
- Management and supply of protein stocks for biochemical (enzymatic) and biophysical assays and medium-throughput screening of compound libraries.
- Involvement in development and execution of biochemical and cell-based assays.
- Execute bench level experiments with the expectation that you will in time be able to write protocols and contribute to the design of experimental plans.
- Make detailed experimental observations and communicate critical input on experimental designs and approaches.
- Carefully analyse data and report the results and suggest a plan moving forward.
- Maintain an electronic laboratory notebook according to SGC guidelines and submit data into our electronic database.
- Order supplies, be aware of laboratory inventory and maintain laboratory equipment and lab cleanliness.
- Effective communication on a day-to-day basis, in formal written reports, and in oral presentations is required.
- Participate in and support the public engagement and widening access activities of the Department and the University. This is anticipated to be not more than 2 days per year.
- Manage own research and administrative activities, within guidelines provided by senior colleagues
- Contribute to wider project planning, including ideas for new research projects
- Determine the most appropriate methodologies to test hypotheses, and identify suitable alternatives if technical problems arise
- Select, follow, and adapt experimental protocols
- Gather, analyse, and present scientific data from a variety of sources
- Contribute to scientific reports and journal articles and the presentation of data/papers at conferences
- Responsible for general laboratory management and administration, including stock control of laboratory consumables
- Use specialist scientific equipment in a laboratory environment
• Represent the research group at external meetings/seminars, either with other members of the group or alone

• Carry out any other relevant duties as may reasonably be associated with the post and which may be required from time to time.

• Participate in and support the public engagement and widening access activities of the Department and the University. This is anticipated to be not more than 2 days per year.

• Undertake mandatory training as required by the University, Division and Department. The specific list of training courses may change from time-to-time, in response to both legal and internal University requirements.

Pre-employment screening
All offers of employment are made subject to standard pre-employment screening, as applicable to the post.

If you are offered the post, you will be asked to provide proof of your right-to-work, your identity, and we will contact the referees you have nominated. You will also be asked to complete a health declaration (so that you can tell us about any health conditions or disabilities so that we can discuss appropriate adjustments with you), and a declaration of any unspent criminal convictions.

We advise all applicants to read the candidate notes on the University’s pre-employment screening procedures, found at: www.ox.ac.uk/about/jobs/preemploymentscreening/.

Hazard-specific / Safety-critical duties
This job includes the following hazards or safety-critical activities which will require successful pre-employment health screening through our Occupational Health Service before the successful candidate will be allowed to start work:

• Regular manual handling

• Work with any substance which has any of the following pictograms on their MSDS:

Selection criteria
Essential

• A degree or equivalent combination of training and experience in molecular biology, biochemistry or chemistry

• Previous experience in protein expression in bacterial and/or baculoviral or mammalian systems

• Previous experience in protein purification.

• Previous experience in animal cell culture.
• Capable of managing multiple tasks in a milestone-oriented project with minimum supervision

• Excellent communication skills, including the ability to write text that can be published, present data at conferences, and represent the research group at meetings

• Experience of following and adapting protocols and selecting appropriate experimental methodologies

• Highly organised, with a strong attention to detail

• Flexible attitude in order to work within a dynamic team environment

• Familiarity with MS Office products, such as Word, Excel, and PowerPoint, and able to learn other software packages

Desirable

• Experience in protein crystallization

• Experience in biophysical or biochemical assays

• Experience of contributing to reports and articles for publication

About the University of Oxford

Welcome to the University of Oxford. We aim to lead the world in research and education for the benefit of society both in the UK and globally. Oxford’s researchers engage with academic, commercial and cultural partners across the world to stimulate high-quality research and enable innovation through a broad range of social, policy and economic impacts.

We believe our strengths lie both in empowering individuals and teams to address fundamental questions of global significance, while providing all our staff with a welcoming and inclusive workplace that enables everyone to develop and do their best work. Recognising that diversity is our strength, vital for innovation and creativity, we aspire to build a truly diverse community which values and respects every individual’s unique contribution.

While we have long traditions of scholarship, we are also forward-looking, creative and cutting-edge. Oxford is one of Europe’s most entrepreneurial universities. Income from external research contracts in 2016/17 exceeded £564m and we rank first in the UK for university spin-outs, with more than 130 companies created to date. We are also recognised as leaders in support for social enterprise.

Join us and you will find a unique, democratic and international community, a great range of staff benefits and access to a vibrant array of cultural activities in the beautiful city of Oxford.

For more information, please visit www.ox.ac.uk/about/organisation.

Medical Sciences

The Medical Sciences Division is an internationally recognized centre of excellence for biomedical and clinical research and teaching. We are the largest academic division in the University of Oxford

World-leading programmes, housed in state-of-the-art facilities, cover the full range of scientific endeavour from the molecule to the population. With our NHS partners we also foster the highest possible standards in patient care.
Nuffield Department of Clinical Medicine (NDM) …fostering your career in science

The Nuffield Department of Clinical Medicine (NDM) is one of the largest departments of the University of Oxford and is part of the Medical Sciences Division, with responsibility for a significant part of the teaching of clinical students within the Medical School.

NDM has significant financial turnover and complexity, resulting from its diverse research portfolio, its geographical spread and its close links with NHS funding and strategic teams involved in the development and delivery of increasingly integrated clinical research platforms. For more information please visit: http://www.ndm.ox.ac.uk/home

The Nuffield Department of Clinical Medicine has been presented with a Departmental Athena SWAN Silver award in recognition of the commitment made to promote gender equality through our organisational and cultural practices and our efforts to improve the working environment for both men and women. For more information please see our Departmental Athena SWAN pages: www.ndm.ox.ac.uk/working-for-ndm/aboutndmatheneswan/.

Structural Genomics Consortium (SGC)

The Structural Genomics Consortium (SGC), a not-for-profit, public-private partnership funds pre-competitive research that contributes to new hypotheses in understanding and treating human disease, and the subsequent identification of new targets for drug discovery. The SGC supports pioneering research at the University of Oxford (UK), University of Toronto (Canada), University of Campinas (Brazil), and University of North Carolina (USA). The reagents and knowledge related to human proteins that the SGC supports are made openly accessible to researchers around the world to accelerate the discovery of new medicines in order to bring potentially life-saving drugs to market faster and at a lower cost.

SGC Oxford, a part of the Nuffield Department of Clinical Medicine, receives funding from public, charitable and private sector organisations such as the European Commission, UK Research Councils, Wellcome Trust, and pharmaceutical companies. Research in SGC Oxford is focused on the production and characterisation of the 3-dimensional structures of soluble and of integral membrane proteins, the discovery of selective chemical probes that can modulate protein function, and the development of target enabling packages that transform genetic hits into starting points for drug discovery. SGC Oxford shares its research outputs through collaborations with researchers worldwide.

For more information please visit: http://www.thesgc.org/scientists/groups/oxford/

How to apply

Before submitting an application, you may find it helpful to read the ‘Tips on applying for a job at the University of Oxford’ document, at http://www.ox.ac.uk/about_the_university/jobs/research/

If you would like to apply, click on the Apply Now button on the ‘Job Details’ page and follow the on-screen instructions to register as a new user or log-in if you have applied previously. Please provide details of two referees and indicate whether we can contact them now.

You will also be asked to upload a CV and a supporting statement. The supporting statement must explain how you meet each of the selection criteria for the post using examples of your
skills and experience. This may include experience gained in employment, education, or during career breaks (such as time out to care for dependants).

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

Please upload all documents as PDF files with your name and the document type in the filename. All applications must be received by midday on the closing date stated in the online advertisement.

Information for priority candidates

A priority candidate is a University employee who is seeking redeployment because they have been advised that they are at risk of redundancy, or on grounds of ill-health/disability. Priority candidates are issued with a redeployment letter by their employing department(s).

If you are a priority candidate, please ensure that you attach your redeployment letter to your application (or email it to the contact address on the advert if the application form used for the vacancy does not allow attachments).

Should you experience any difficulties using the online application system, please email recruitment.support@admin.ox.ac.uk. Further help and support is available from www.ox.ac.uk/about_the_university/jobs/support/. To return to the online application at any stage, please go to: www.recruit.ox.ac.uk.

Please note that you will receive an automated email from our e-recruitment system to confirm receipt of your application. Please check your spam/junk mail if you do not receive this email.

Important information for candidates

Data Privacy

Please note that any personal data submitted to the University as part of the job application process will be processed in accordance with the GDPR and related UK data protection legislation. For further information, please see the University's Privacy Notice for Job Applicants at: www.admin.ox.ac.uk/councilsec/compliance/gdpr/privacynotices/job/. The University’s Policy on Data Protection is available at: www.admin.ox.ac.uk/councilsec/compliance/gdpr/universitypolicyondataprotection/.

The University’s policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for all academic posts and some academic-related posts. The University has adopted an EJRA of 30 September before the 69th birthday for all academic and academic-related staff in posts at grade 8 and above. The justification for this is explained at: www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/

For existing employees, any employment beyond the retirement age is subject to approval through the procedures: www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/

There is no normal or fixed age at which staff in posts at grades 1–7 have to retire. Staff at these grades may elect to retire in accordance with the rules of the applicable pension scheme, as may be amended from time to time.

Equality of Opportunity

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job
will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.
Benefits of working at the University

**Employee benefits**

University employees enjoy 38 days’ paid holiday, generous pension schemes, travel discounts, and a variety of professional development opportunities. Our range of other employee benefits and discounts also includes free entry to the Botanic Gardens and University colleges, and discounts at University museums. See www.admin.ox.ac.uk/personnel/staffinfo/benefits.

**University Club and sports facilities**

Membership of the University Club is free for all University staff. The University Club offers social, sporting, and hospitality facilities. Staff can also use the University Sports Centre on Iffley Road at discounted rates, including a fitness centre, powerlifting room, and swimming pool. See www.club.ox.ac.uk and www.sport.ox.ac.uk/oxford-university-sports-facilities.

**Information for staff new to Oxford**

If you are relocating to Oxfordshire from overseas or elsewhere in the UK, the University's Welcome Service website includes practical information about settling in the area, including advice on relocation, accommodation, and local schools. See www.welcome.ox.ac.uk. There is also a visa loan scheme to cover the costs of UK visa applications for staff and their dependents. See www.admin.ox.ac.uk/personnel/permits/reimburse&loanscheme/.

**Family-friendly benefits**

With one of the most generous family leave schemes in the Higher Education sector, and a range of flexible working options, Oxford aims to be a family-friendly employer. We also subscribe to My Family Care, a service that provides practical advice and support for employees who have caring responsibilities. The service offers a free telephone advice line, and the ability to book emergency back-up care for children, adult dependents and elderly relatives. See www.admin.ox.ac.uk/personnel/staffinfo/benefits/family/mfc/.

**Childcare**

The University has excellent childcare services, including five University nurseries as well as University-supported places at many other private nurseries. For full details, including how to apply and the costs, see www.admin.ox.ac.uk/childcare/.

**Disabled staff**

We are committed to supporting members of staff with disabilities or long-term health conditions. For further details, including information about how to make contact, in confidence, with the University’s Staff Disability Advisor, see www.admin.ox.ac.uk/eop/disab/staff.

**Staff networks**

The University has a number of staff networks including the Oxford Research Staff Society, BME staff network, LGBT+ staff network and a disabled staff network. You can find more information at www.admin.ox.ac.uk/eop/inpractice/networks/.

**The University of Oxford Newcomers’ Club**

The University of Oxford Newcomers' Club is an organisation run by volunteers that aims to assist the partners of new staff settle into Oxford, and provides them with an opportunity to meet people and make connections in the local area. See www.newcomers.ox.ac.uk.