Job description and selection criteria

<table>
<thead>
<tr>
<th>Job title</th>
<th>Postdoctoral Scientist, Structural biology x2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division</td>
<td>Medical Sciences</td>
</tr>
<tr>
<td>Department</td>
<td>Nuffield Department of Medicine (NDM)</td>
</tr>
<tr>
<td>Location</td>
<td>Structural Genomics Consortium, Old Road Campus Research Building, Headington, Oxford</td>
</tr>
<tr>
<td>Grade and salary</td>
<td>Grade 7: Salary in the range £31,604 - £33,518 per annum</td>
</tr>
<tr>
<td>Hours</td>
<td>Full time</td>
</tr>
<tr>
<td>Contract type</td>
<td>Fixed-term to 31st August 2019 in the first instance</td>
</tr>
<tr>
<td>Reporting to</td>
<td>Dr. Opher Gileadi, Principal Investigator</td>
</tr>
<tr>
<td>Vacancy reference</td>
<td>132792</td>
</tr>
</tbody>
</table>

The role

Neurodegenerative diseases are one of the greatest medical and social challenges in the coming century. Despite a large investment and increasing understanding of disease processes, there are still no safe and effective treatments. The Accelerating Medicines Partnership - Alzheimer's Disease (AMP-AD, https://www.nia.nih.gov/research/amp-ad) is a 5-year project funded by the US National Institute of Health, pharmaceutical companies and non-profit organizations. It integrates data from RNA, protein and metabolomics measurements in brain samples, network analysis and pathway modelling, to identify potential new drug targets and biomarkers for Alzheimer treatment and prevention. In its second phase, a selected set of targets are moved forward to further validation studies.

The SGC group in Oxford has been funded to test the druggability of the prioritized targets, and to develop the knowledge and tools to allow the development of small molecules that will allow critical testing of therapeutic hypotheses. These include the purification, crystallization and structure determination of candidate target proteins; development of biochemical and cell-based assays for the activity of these proteins (and, where relevant, of genetic variants); and the development of initial chemical matter, which can form the basis for development of potent and selective inhibitors.
The group has extensive experience in structure and chemical biology of novel human proteins, and enjoys access to technologies for structure-guided chemical development for new target classes, including the crystallography-based fragment screen (http://www.diamond.ac.uk/Beamlines/Mx/Fragment-Screening.html).

The SGC is committed to an open science policy, which includes rapid deposition of data and reagents in the public domain.

**Responsibilities**

- Assume responsibility for a diverse set of novel candidate target genes. Read the literature and formulate research goals and strategies.
- Develop, establish, and pursue appropriate analytical protocols and techniques to support research. In particular, develop methods for expression and purification of the target proteins, structural analysis by crystallography and other methods, biochemical activity assays, and identification of ligands by screening and structure-guided approaches.
- Perform X-ray data collection, analysis and structure determination of individual crystals and fragment screens. Flexible hours and some night and weekend shifts may be required.
- Record data meticulously and in a timely manner in an electronic lab notebook.
- Regularly write research articles peer-reviewed journals, book chapters, and reviews. Present papers at conferences.
- Coach and supervise research assistants in the group, and participate in the tutoring of graduate students.
- Carry out collaborative projects with colleagues in partner institutions, and research groups.
- Any other communal duties associated with the role (e.g. responsibility for instruments or departmental housekeeping, interaction with visitors and funders).

**Selection criteria**

**Essential selection criteria**

- A PhD degree in Structural Biology or equivalent experience (or close to completion of a PhD).
- Proven experience in protein biochemistry and crystallography
- Ability to plan and perform experiments independently.
- Curiosity and flexibility to work on diverse, novel targets.
- Ability to work as part of a multidisciplinary team.
• Ability to proactively collaborate with researchers in other departments and organisations
• Well-organized in planning and documenting experiments.
• Excellent communication skills and English language skills.

Desirable selection criteria

Experience in one or more of the following:
• Protein engineering
• Structure-guided ligand discovery
• Biophysical techniques.
• Cellular assays, including reporter gene assays, target engagement, gene expression profiling etc.

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, and in providing all of our staff with a welcoming and inclusive workplace that supports everyone to develop and do their best work. Recognising that diversity is a great strength, and 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 2014/15 exceeded £522.9m and ranked first in the UK for university spin-outs, with more than 130 spin-off 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.

For more information please visit: www.medsci.ox.ac.uk

**Nuffield Department of Clinical Medicine (NDM)**

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. The Department also has a substantial research programme which requires high quality administrative management.

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.

. . .fostering your career in science

For more information please visit: www.ndm.ox.ac.uk/home

The University of Oxford is a member of the Athena SWAN Charter and holds an institutional Bronze Athena SWAN award. The Nuffield Department of Medicine holds a Silver Athena SWAN award to recognise advancement of gender equality: representation, progression and success for all.

For more information please visit: www.ndm.ox.ac.uk/athena-swan

**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 www.ox.ac.uk/about/jobs/supportandtechnical/.

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 should explain how you meet 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 departments.

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 be notified of the progress of your application by automatic emails from our e-recruitment system. Please check your spam/junk mail regularly to ensure that you receive all emails.

Important information for candidates

Pre-employment screening

Please note that the appointment of the successful candidate will be subject to standard pre-employment screening, as applicable to the post. This will include right-to-work, proof of identity and references. 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/.
The University’s policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for all academic posts and some academic-related posts. From 1 October 2017, 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/revisedejra/revaim/.

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

Form 1 October 2017, 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

Training and Development

A range of training and development opportunities are available at the University. Further details can be found at www.ox.ac.uk/staff/working_at_oxford/training_development/index.html.

For research staff only: Support for Research Staff

There is a particularly wide range of support for career development for research staff. Please visit: www.ox.ac.uk/research/support-researchers to find out more.

Pensions

The University offers generous occupational pension schemes for eligible staff members. Further details can be found at www.admin.ox.ac.uk/finance/epp/pensions/pensionspolicy/.

Information for international staff (or those relocating from another part of the UK)

A wealth of information is available on the University's International Staff website for staff who are relocating to Oxford from abroad, at www.admin.ox.ac.uk/personnel/staffinfo/international/.

The University of Oxford Newcomers' Club

The Newcomers’ Club is aimed at helping partners of newly-arrived visiting scholars, graduate students and academic members of the University to settle in and to meet people in Oxford.

Transport schemes

The University offers a range of travel schemes and public transport travel discounts to staff. Full details are available at www.admin.ox.ac.uk/estates/ourservices/travel/.

University Club and University Sports Facilities

The University Club provides social, sporting and hospitality facilities. It incorporates a Club bar, a cafe and sporting facilities, including a gym. See www.club.ox.ac.uk for all further details.
University staff can use the University Sports Centre at discounted rates, and have the chance to join sports clubs. Please visit [www.sport.ox.ac.uk/oxford-university-sports-facilities](http://www.sport.ox.ac.uk/oxford-university-sports-facilities).

**Childcare and Childcare Vouchers**
The University offers quality childcare provision services at affordable prices to its employees. For full details about the services offered, please visit [www.admin.ox.ac.uk/childcare](http://www.admin.ox.ac.uk/childcare). **NB: Due to the high demand for the University’s nursery places there is a long waiting list.**

The University also offers nursery fee payment schemes to eligible staff as an opportunity to save tax and national insurance on childcare costs. Please visit [www.admin.ox.ac.uk/childcare](http://www.admin.ox.ac.uk/childcare).

**Disabled staff**
The University is committed to supporting members of staff with a disability or long-term health condition and has a dedicated Staff Disability Advisor. Please visit [www.admin.ox.ac.uk/eop/disab/staff](http://www.admin.ox.ac.uk/eop/disab/staff) for further details.

**BUPA - Eduhealth**
Bupa Eduhealth Essentials private medical insurance offers special rates for University of Oxford staff and their families [www.eduhealth.co.uk/mini-site](http://www.eduhealth.co.uk/mini-site/).

**All other benefits**
For other benefits, such as free entry to colleges, the Botanic Gardens and staff discounts offered by third party companies, please see [www.admin.ox.ac.uk/personnel/staffinfo/benefits](http://www.admin.ox.ac.uk/personnel/staffinfo/benefits/).