Job description and selection criteria

<table>
<thead>
<tr>
<th>Job title</th>
<th>Research Assistant – Membrane Proteins</th>
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<tbody>
<tr>
<td>Division</td>
<td>Medical Sciences</td>
</tr>
<tr>
<td>Department</td>
<td>Nuffield Department of Medicine (NDM), Structural Genomics Consortium</td>
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<tr>
<td>Location</td>
<td>Old Road Campus Research Building, Headington, Oxford</td>
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<tr>
<td>Grade and salary</td>
<td>Grade 6: £28,098 – £33,518 per annum</td>
</tr>
<tr>
<td>Hours</td>
<td>Full time</td>
</tr>
<tr>
<td>Contract type</td>
<td>Fixed-term to 30th April 2023</td>
</tr>
<tr>
<td>Reporting to</td>
<td>Dr. Nicola Burgess-Brown &amp; Dr. Katharina Duerr</td>
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<tr>
<td>Vacancy reference</td>
<td>134759</td>
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The role

The SGC-Oxford is seeking an enthusiastic Research Assistant with experience in molecular biology, eukaryotic expression and protein production to provide support for a new grant (ReSOLUTE) to help unlock Solute Carrier Proteins (SLCs). The SLCs are important drug targets, but also challenging to express and purify. You will generate constructs in 96-well format and screen them for expression and stability using the SGC high-throughput methods. You will have excellent knowledge and experience of expressing proteins in eukaryotic (baculoviral or mammalian systems) and of protein purification from large scale cultures. You will work as part of a team, with multiple milestones; therefore, they must have the confidence and ability to communicate and collaborate effectively. The work entails achieving ambitious performance targets, in terms of number and quality of purified proteins, and creativity in devising both generic and specialised solutions for difficult proteins.
Responsibilities

- Expression of SLC proteins in baculovirus/insect cells and mammalian cells.
- To generate recombinant baculoviruses and perform small scale expression experiments by baculovirus infection, viral transduction and/or transient transfection.
- Large-scale expression of proteins from baculovirus clones and development of optimisation conditions.
- Purification of proteins from both small and large scale (1–10 litres) cultures using Dionex (high throughput gel filtration) and ÄKTA-Pure systems.
- Preparation of liposomes and nanodiscs.
- Reconstitution of purified SLCs into proteoliposomes and/or nanodiscs for antibody generation and functional assays.
- To generate expression constructs using high-throughput ligation independent cloning and optimise growth conditions for producing SLCs.
- Execute bench level experiments, suggest methods for optimisation and contribute to the design of experimental plans.
- Carefully analyse data, 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.
- To carry out any other relevant duties as may reasonably be associated with the post and which may be required from time to time.
Selection criteria

Essential selection criteria

- Hold a BSc degree or equivalent experience in molecular biology, cell biology, biochemistry or chemistry
- Previous experience in eukaryotic expression systems
- Previous experience in protein purification and troubleshooting
- Experience in PCR, cloning and mutagenesis
- A flexible attitude, with the ability to follow and adapt protocols for improvement
- Highly organised, with a strong attention to detail
- Excellent oral, presentation and written communication skills in order to provide reliable and precise reports
- The ability 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 selection criteria

- Experience in protein crystallisation
- Previous experience in Baculovirus expression
- Experience of contributing to reports and articles for publication
- Experience of working with membrane proteins

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.

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
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/](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/](http://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. *(Customise this statement to confirm the document(s) you would like the applicant to attach, but make sure that you keep the reference to PDF. See section 1.4 of QRG REC01 Creating a Vacancy (Recruitment and Personnel) for guidance on selecting the appropriate application form).*

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/premploymentscreening/.

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.

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/. 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.

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 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/.

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/.