Job description and selection criteria

<table>
<thead>
<tr>
<th>Job title</th>
<th>Team Leader: XChem</th>
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</thead>
<tbody>
<tr>
<td>Division</td>
<td>Medical Sciences</td>
</tr>
<tr>
<td>Department</td>
<td>Nuffield Department of Medicine (NDM), Structural Genomics Consortium (SGC)</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 8: £40,792 - £48,677 per annum</td>
</tr>
<tr>
<td>Hours</td>
<td>Full time</td>
</tr>
<tr>
<td>Contract type</td>
<td>Fixed-term to 30th June 2020</td>
</tr>
<tr>
<td>Reporting to</td>
<td>Professor Frank von Delft (SGC, Diamond Light)</td>
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<tr>
<td>Vacancy reference</td>
<td>139916</td>
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The role

XChem is a collaborative project between the University of Oxford’s Department of Chemistry and Structural Genomics Consortium (SGC), and Diamond Light Source (DLS) – [www.diamond.ac.uk/Beamlines/Mx/Fragment-Screening.html](http://www.diamond.ac.uk/Beamlines/Mx/Fragment-Screening.html). It enables high-throughput generation of protein-ligand structures using X-ray crystallography. The experimental screening process is now well-established, and efforts within the team have moved toward rationalised follow-up chemistry (fragment-based drug design - FBDD). This has led to the development of Fragalysis – an open source cloud infrastructure for follow-up compound selection ([https://fragalysis.diamond.ac.uk](https://fragalysis.diamond.ac.uk)), with future work aiming to capture and guide best practice for hypothesis generation and decision making. Synthetic chemistry efforts are currently exploring how robotic synthesis can be combined with the XChem experiment to allow evaluation of hundreds rather than tens of follow-up compounds.

The XChem project leader, assisted by a small team, will ensure the XChem follow-up project meets its goal of establishing an open-source, robust and cost-effective user-programme for follow-up chemistry. This involves ensuring exploitation of current collaborations, and the desire and drive to forge new collaborations, with world leaders in both computational and synthetic chemistry. The project leader will be tasked with the pooling of knowledge from all of these sources, and effectively coordinating the direction and
success of the project’s current overall goals, whilst also directing its future success and
development.

The successful applicant should have a strong background in strategies for follow-up
chemistry in FBDD, with a strong desire to drive and deliver a game-changing user
programme in this area. The candidate should also be familiar with open-source
computational resources (cloud-based) and should be an expert in either synthetic chemistry
strategies, or computational strategies, with a focus or interest in automation in their expert
area.

Responsibilities

- Lead a small project team toward the overall goal of developing the XChem follow-up
  chemistry programme.
- Establish and develop collaboration with academic and industrial partners to pool
  computational and synthetic knowledge that will strengthen the follow-up programme
- Liaise with XChem users and academic partners to work on target-specific strategies
  for follow-up chemistry
- Supervise a computational team in the development of the fragalysis platform.
- Direct the future development of the XChem follow-up programme
- Communicate frequently and effectively with the rest of the XChem team at regular
  project and group meetings.
- Publish research articles in leading academic journals.
- Present findings at national and international meetings/conferences.
- Take a formal or informal role (as required) in the supervision of research students
  and other junior members of the research group on a daily basis, including
  recruitment, mentorship and career development.
- Provide motivation and supportive leadership in a team-working environment.
- Develop research questions within a specific context, conduct individual research,
  analysing detailed and complex qualitative and/or quantitative data from a variety of
  sources, and generate original ideas by building on existing concepts
- Agree clear task objectives, organise, and delegate work to other members of the
  team and coach other members of the group on specialist methodologies or
  procedures
- Raise research funds through grant applications, and manage own area of a larger
  research budget
- Share responsibility for shaping the research group’s plans and the writing of group-
  funding applications for new research projects
- Participate in and support the public engagement and widening access activities of
  the Department and the University.
- Work closely with the lead academic scientists on the project (Frank von Delft
  (DLS/SGC), Martin Smith (Chem), Darren Dixon (Chem), Chris Schofield (Chem),
  Paul Brennan (SGC), Garrett Morris (Stats)) and the XChem crystallographer at DLS
  to ensure the project meets its goals.
• 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.

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:
• Occasional night working (11pm-6am)
• Occasional lone Working
• Driving on University business
• Work with any substance which has any of the following pictograms on their MSDS:

![Pictograms]

• Travel outside of Europe or North America on University Business

Selection criteria

Essential selection criteria

1. Hold a relevant Ph.D/D.Phil in synthetic or computational chemistry with post-qualification research experience
2. Strong publication record and familiarity with the existing literature and research in the field.
3. Experience with small molecule drug discovery, with expertise in either synthetic or computational strategies.
4. Knowledge of computational methods in small molecule drug discovery (e.g. docking, small molecule property-prediction)
6. Well-organised, with the ability to work as part of a team and to collaborate with colleagues on a range of diverse projects.
7. Ability to keep accurate and thorough records
8. Good communication skills with scientists from varied backgrounds
9. Ability to rapidly adapt to changing project priorities

Desirable selection criteria

1. Experience with fragment- based drug discovery
2. Experience of having worked in an integrated discovery group
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 2014/15 exceeded £522.9m 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.

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](https://www.athenswan.ac.uk/) 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: [https://www.ndm.ox.ac.uk/working-for-ndm/aboutndmatheneswan/](https://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/](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 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). It must also explain your interest in this post and how it fits into your career ambitions.

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**

**University Club and sports facilities**

The University Club provides social, sporting and hospitality facilities. It incorporates a bar, café and sporting facilities, including a gym. 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](http://www.club.ox.ac.uk) and [www.sport.ox.ac.uk/oxford-university-sports-facilities](http://www.sport.ox.ac.uk/oxford-university-sports-facilities).

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

If you are relocating to Oxfordshire from overseas, or elsewhere in the UK, the University's International Staff website includes practical information related to moving to and settling in Oxford such as advice on immigration, relocation, accommodation, or registering with a doctor.

See: [www.internationalstaffwelcome.admin.ox.ac.uk/](http://www.internationalstaffwelcome.admin.ox.ac.uk/)

**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 to settle into Oxford and to provide them with an opportunity to meet people in the area. See [www.newcomers.ox.ac.uk/](http://www.newcomers.ox.ac.uk/)

**Childcare**

The University has excellent childcare services with 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](http://www.admin.ox.ac.uk/childcare).

**Family-friendly benefits**

The University subscribes to My Family Care ([www.admin.ox.ac.uk/personnel/staffinfo/benefits/family/mfc/](http://www.admin.ox.ac.uk/personnel/staffinfo/benefits/family/mfc/)) and staff are eligible to register for emergency back-up childcare and adult care services, a 'speak to an expert' phone line and a wide range of guides and webinars through a website called the Work + Family space.

**Disabled staff**

We are committed to supporting members of staff with disabilities or long-term health conditions. Please visit [www.admin.ox.ac.uk/eop/disab/staff](http://www.admin.ox.ac.uk/eop/disab/staff) for further details including information about how to make contact, in confidence, with the University’s Staff Disability Advisor.

**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/](http://www.admin.ox.ac.uk/eop/inpractice/networks/).

**Other benefits**

Staff can enjoy a range of other benefits such as free visitor access to the University’s colleges and the Botanic Gardens as well as a range of discounts.

See [www.admin.ox.ac.uk/personnel/staffinfo/benefits](http://www.admin.ox.ac.uk/personnel/staffinfo/benefits).