

Job title	Postdoctoral Researcher - Protein Biochemist and Physicist
Division	Medical Sciences
Department	Nuffield Department of Medicine
Location	Centre for Medicines Discovery, NDM Research Building, Old Road Campus, Headington, Oxford, OX3 7FZ
Grade and salary	Grade 7: £37,524 - £45,763 with a discretionary range to £49,850 per annum. This is inclusive of a pensionable Oxford University Weighting of £1,500 per year (pro rata).
Hours	Full time
Contract type	Fixed-term contract until 31 July 2026 Funding is provided by the Department
Reporting to	Oleg Fedorov, Group Leader
Vacancy reference	175445

Additional information	This role meets the eligibility requirements for a Skilled Worker Certificate of Sponsorship or may be eligible for Global Talent Visa under UK Visas and Immigration legislation.
About us	- University of Oxford - www.ox.ac.uk/about/organisation - Nuffield Department of Medicine (NDM) - https://www.ndm.ox.ac.uk - Unit - www.cmd.ox.ac.uk
What we offer	https://hr.admin.ox.ac.uk/staff-benefits - An excellent contributory pension scheme 38 days annual leave - A pensionable Oxford University Weighting allowance of £1,500 per annum (pro rata) - A comprehensive range of childcare services - Family leave schemes - Cycle loan scheme - Discounted bus travel and Season Ticket travel loans - Membership to a variety of social and sports clubs - A welcoming and diverse community

The role

We are seeking a Postdoctoral Researcher to join the Centre for Medicines Discovery (CMD) and its Biochemistry and Biophysics Group led by Dr Oleg Fedorov. You will work alongside structural biologists and molecular biologists in the CMD and to discover novel therapeutic approaches to various human diseases.

The Centre for Medicines Discovery (CMD) is a multi-disciplinary Institute within the University of Oxford's Nuffield Department of Medicine with a mission to accelerate the translation of basic science into the discovery and development of novel medicines. The CMD is based on two sites at the University of Oxford's Old Road Campus, at the heart of Oxford's biomedical research and clinical capabilities, and within the new Biochemistry building in the city centre, and is directed by Prof. Paul Brennan. The CMD represents over a hundred staff split across: Structural and Functional Biology; Technologies (including proteomics, chemical biology and crystallography); Drug Discovery (including medicinal chemistry, high throughput screening and the Oxford Drug Discovery Institute; Research Informatics (data management, target informatics and computational chemistry). Together these units drive several major collaborative initiatives, involving the CMD and other academic or industrial partners, as well as their own research programmes.

CMD mission is to de-risk novel therapeutic approaches and discover novel agents fit for further discovery investment. Consequently, we work closely with pharma and biotech companies and operate industry-style project teams to deliver our target validation and translational goals.

The CMD offers an exciting and uniquely collaborative academic department in which to work; the freedom and flexibility, offered by an academic research environment, in which to train and develop your own initiatives and capabilities. This post provides an opportunity to work on a variety of projects in all biology areas. We have a proud record of past-team members going on to win senior posts in industry or academia. In addition, university employees benefit from access to a wide range of professional and social opportunities, either through the teaching departments or colleges.

Responsibilities

You will:

- Execute bench level experiments with the expectation that you will be able to write protocols, design experimental plans and develop new scientific techniques.
- Develop biochemical, biophysical and target engagement assays, and utilise them to identify and evaluate ligands for the proteins of interest.
- Be responsible for the troubleshooting of molecular biology issues to ensure rapid delivery of SRF projects, which includes providing training and day-to-day guidance to junior group members and other CMD staff.
- Independently use and manage specialist scientific equipment in a laboratory environment, such as Echo (automated liquid handling), Pherastar plate readers, Biacore (SPR), ITC, Octet (BLI), RapidFire mass spectrometry (Agilent).
- Manage own research on a number of diverse drug discovery projects and administrative activities, such as data entry into electronic lab notebook databases. Carefully analyse data, report the results and devise plans to progress.
- Test hypotheses and analyse scientific data from a variety of sources, reviewing and refining scientific hypotheses as appropriate.
- Contribute ideas for new research projects; develop ideas for generating research income, and present detailed research proposals to senior researchers.



- Contribute to writing of scientific reports and the presentation of data/papers to funders and at conferences.
- 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.

Selection criteria

Essential

- Hold a PhD/DPhil (or be close to completion) in Biochemistry, Biophysics, Pharmacology, or other similar subject.
- Previous experience of *in vitro* assay development including one or more of: biochemical, biophysical assays, protein-protein interaction assays and/or cellular target engagement assays (e.g. HTRF, enzyme activity assays, BLI, SPR, mass spectrometry).
- Background in protein biochemistry/enzymology with experience of determination of drug mechanism of action and analysis of thermodynamics and kinetics.
- Research experience applicable to molecular pharmacology and the understanding of structure/function and the modulating effects of disease mutations or of ligands with pharmacological effects.
- Reliable, well organised, showing meticulous attention to detail, including at the practical level of statistical analysis and scientific controls.
- Track record of scientific publications.
- Possess excellent interpersonal, oral and written communication skills.
- Ability to communicate well and to collaborate effectively within a dynamic team and matrix environment.

Desirable

- Analysis of cellular protein function using recombinant models.
- Experience in protein production using bacteria, insect cells and mammalian expression systems.
- Experience with Mass Spectroscopy.
- Previous experience in using robotic liquid handling equipment.
- Experience of working in a screening environment and with assay automation.
- Previous experience managing people.



Pre-employment screening

Standard checks

If you are offered the post, the offer will be subject to standard pre-employment checks. You will be asked to provide: proof of your right-to-work in the UK; proof of your identity; and (if we haven't done so already) 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 for which you may need us to make appropriate adjustments.

Please read the candidate notes on the University's pre-employment screening procedures at: <https://www.jobs.ox.ac.uk/pre-employment-checks>

Hazard-specific / Safety-critical duties

This job includes hazards or safety-critical activities. If you are offered the post, you will be asked to complete a health questionnaire which will be assessed by our Occupational Health Service, and the offer of employment will be subject a successful outcome of this assessment.

The hazards or safety-critical duties involved are as follows:

- Night working (11pm-6am)
- Lone Working
- Regular manual handling

How to apply

Applications are made through our e-recruitment system and you will find all the information you need about how to apply on our Jobs website <https://www.jobs.ox.ac.uk/how-to-apply>.

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.

As part of your application you will be asked to provide details of two referees and indicate whether we can contact them now. You will 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. Please note using a long file name may prevent you from uploading your documents.

- http://www.ox.ac.uk/about_the_university/jobs/research/

All applications must be received by **midday** UK time 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).

If you need help

Application FAQs, including technical troubleshooting advice is available at: <https://staff.web.ox.ac.uk/recruitment-support-faqs>. Non-technical questions about this job should be addressed to the recruiting department directly recruitment@ndm.ox.ac.uk

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 online recruitment portal 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: <https://compliance.admin.ox.ac.uk/job-applicant-privacy-policy>. The University's Policy on Data Protection is available at: <https://compliance.admin.ox.ac.uk/data-protection-policy>.

The University's policy on retirement



The University operates an Employer Justified Retirement Age (EJRA) for very senior research posts at **grade RSIV/D35 and clinical equivalents E62 and E82**, which with effect from 1 October 2023 will be 30 September before the 70th birthday. The justification for this is explained at: <https://hr.admin.ox.ac.uk/the-ejra>.

For **existing** employees on these grades, any employment beyond the retirement age is subject to approval through the procedures: <https://hr.admin.ox.ac.uk/the-ejra>.

There is no normal or fixed age at which staff in posts at other grades 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.

