Job title	Postdoctoral Researcher in Mass Spectrometry and Structural Proteomics
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: £36,024 - £44,263 with a discretionary range to £48,350 p.a.
Hours	Full time
Contract type	Fixed-term contract for 2 years in the first instance Funding is provided by the Department
Reporting to	Dr Darragh O'Brien, Head of Structural and Mechanistic Proteomics
Vacancy reference	174957

Additional information	This role meets the eligibility requirements for a Skilled Worker Certificate of Sponsorship under UK Visas and Immigration legislation. Therefore, the Nuffield Department of Medicine welcomes applications from international applicants who require a visa.
About us	• University of Oxford - www.ox.ac.uk/about/organisation • Nuffield Department of Medicine (NDM) - https://www.ndm.ox.ac.uk • Unit – https://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 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 highly-motivated Postdoctoral Researcher in biochemistry, proteomics and biological mass spectrometry (MS) in the Structural & Mechanistic Proteomics Laboratory of the Centre for Medicines Discovery (CMD), Nuffield Department of Medicine, University of Oxford. You will be responsible for the design, development and implementation of advanced proteomic strategies for the molecular and structural characterisation of component enzymes of the ubiquitin system. Information garnered will enhance drug discovery and design pipelines for the development of novel therapeutics relevant to human neurodegenerative conditions such as Alzheimer's and Parkinson's Diseases. For this purpose, you will primarily use Hydrogen-Deuterium eXchange MS (HDX-MS) to probe the structure and conformational dynamics of biological systems. You will report directly to the head of the laboratory, Dr Darragh O'Brien.

You will be required to work on several high-level research projects in parallel, and will work closely with partners within the CMD, the Alzheimer's Research UK-Oxford Drug Discovery Institute (ARUK-ODDI), and across the wider NDM community. You will be exposed to a dynamic research environment, with access to advanced structural biology and proteomics technologies, including cryo-Electron Microscopy and X-ray Crystallography, for example.

It is expected that you will develop your own research themes over the duration of the position and have to the ability to write and publish your own research articles, and present your findings at research conferences. You will also provide day-to-day supervision of research assistants and students, overseeing the successful completion of their projects. You must have a proactive and adaptable approach to work and willingness to tackle a variety of tasks and projects in parallel. Excellent record keeping and careful methodological work skills are essential, as well as a very organised and structured work ethic.

Responsibilities

You will:

Research

- Develop and establish cutting-edge structural proteomics workflows, including HDX-MS for drug discovery and protein target characterisation.
- Operate advanced liquid chromatography and MS equipment, with the ability to keep abreast of advances in the field.
- Analyse complex and detailed proteomic datasets and develop novel research ideas which are generated from such datasets, and which may build upon current understanding.
- Aid in the development bioinformatics pipelines and MS softwares for structural proteomics
- Adapt existing and develop new scientific techniques and experimental protocols.
- Carry out collaborative projects with colleagues in partner institutions and research groups
- Contribute ideas for new research projects.
- Develop ideas for generating research income, and present detailed research proposals to senior researchers.
- Regularly write research articles for peer-reviewed journals, book chapters, and reviews.
- Regularly present at seminars and conferences to disseminate research findings.

Education and Training

- Attend appropriate scientific seminars, training opportunities and meetings within the research team, the CMD and the University.
- Provide day-to-day supervision of junior members of staff. Set clear task objectives, organise projects and delegate work where necessary.
- Work in a team, with an active interest in undertaking and supporting scientific research.
- Act as a source of information and advice to other members of the group on scientific protocols and experimental techniques.

General Responsibilities

- Manage own academic research and administrative activities. This involves small scale project management to co-ordinate multiple aspects of work to meet deadlines.
- Ensure good laboratory practice and acting within the interest of the department.
- Account for personal professional conduct within the project.
- Ensure safety for all work carried out in the laboratory and applying appropriate safety procedures in the dedicated areas for that work.
- 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, Biology or Analytical Chemistry.
- Practical experience in HDX-MS and structural proteomics.
- Knowledge of operating HPLC and mass spectrometer systems.
- Experience in designing and implementing proteomics experiments.
- Experience with sample preparation workflows for MS analysis.
- Up-to-date knowledge of current literature and research in biochemistry, proteomics and biological MS. At least one first-author peer-reviewed article.
- Competence in independently planning and managing research projects. Ability to work on several high-level projects in parallel.
- Excellent communication skills, including the ability to write for publication, present research proposals and results, and represent the research group at meetings.
- Ability to communicate results clearly and effectively and to discuss scientific ideas.

Desirable

- Experience in ubiquitin biology.
- Experience with Trajan liquid-handling and Thermo Scientific MS instrumentation.
- Experience of writing research articles and making grant applications.

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:

- Lone Working
- Work with any substance which has any of the following pictograms on their MSDS:

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.