

Job title	Research Assistant – Protein Purification
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 6: Salary in range £32,332 - £38,205 per annum
Hours	Full time
Contract type	Fixed-term contract until 31 October 2026 Funding is provided by the Department
Reporting to	Dr Eleanor Williams, Protein Production SRF Co-ordinator
Vacancy reference	174004

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	<ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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

The Biotechnology protein production small-research facility (SRF) recombinantly expresses, purifies and characterises proteins for projects within the CMD and for external customers from both academia and industry. While maintaining its support of the ongoing research within the CMD, it also supports academics across Oxford and further afield to deliver high quality proteins for cutting edge research. The platform established by the Biotechnology facility over the past 18 years has enabled the CMD to generate over 450 novel human protein structures and 20 integral membrane protein structures and enabled the development of over 40 chemical probes. Currently the group has expression systems and processes in place for producing proteins in *E. coli*, baculovirus/insect cells and mammalian cells in order to address challenging proteins. Optimising existing and introducing new methods is key to our success.

To support this work, the Biotechnology group's small-research facility is seeking a Research Assistant with experience of protein purification, cloning and maintaining eukaryotic cell cultures for expression. You will be responsible for the production of purified recombinant protein for a variety of projects with end uses including crystallography, assays and cellular studies. You will work as part of a team to manage insect and mammalian cell cultures, expand virus stocks and produce recombinant proteins by infection as needed. You will help to maintain the infrastructure for baculovirus-based expression, including shared responsibility for the cell culture laboratory, instrumentation, supplies and consumables. You will also assist with the development of protein assays and the cloning of expression constructs.

You will be joining a team of 8 highly motivated and enthusiastic scientists, who work closely together to achieve the objectives of the group. You will take a proactive role in projects, working to develop methods to solve the scientific questions posed by clients of the SRF. Projects vary greatly and bring opportunities to learn multiple new skills. The group collaborates and interacts very closely with the other CMD teams, to provide support in the production of high-quality proteins, on-boarding new methods for protein expression and purification, and driving throughput.

You will be highly organised, with experience in a laboratory environment in a similar role.

Responsibilities

You will:

- Carry out purification of proteins from large scale (1–10 litres) cultures using FPLC systems (e.g. Äkta).
- Generate recombinant baculoviruses and manage large-scale expression of proteins from baculovirus clones.
- Generate expression constructs using high-throughput cloning methods.
- Maintain cultures and stocks of insect, mammalian cells and other cell lines and to assist with the maintenance of the cell culture laboratory, instrumentation, supplies and consumables.
- Manage own research and administrative activities as directed. Including executing bench level experiments with the expectation that you will be able to write protocols and contribute to the choice, design and adaptation of experimental plans.
- Make detailed experimental observations and communicate critical input on experimental designs and approaches.
- Carefully analyse data, report the results and suggest a plan moving forward.



- Contribute to scientific reports and journal articles and the presentation of data/papers at conferences.
- Maintain an electronic laboratory notebook according to CMD guidelines and submit data into our electronic database.
- Order supplies, be aware of laboratory inventory and maintain laboratory equipment and lab cleanliness.
- Effectively communicate on a day-to-day basis, in formal written reports, and in oral presentations is required.
- Carry out any other relevant duties as may reasonably be associated with the post and which may be required from time to time.
- Ensure that their work in the laboratory is conducted safely at all times and, in particular, that work is undertaken following the appropriate health and safety policies and procedures for the particular area, without compromise to their own safety or that of others who may be affected.
- 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 BSc degree in molecular biology, biochemistry or chemistry.
- Experience of large-scale protein purification and troubleshooting.
- Experience of protein expression in bacterial or eukaryotic systems.
- Ability to work independently or as part of a team and to collaborate with colleagues on a range of projects.
- Excellent oral, presentation and written communication skills in order to provide reliable and precise reports and contribute sections to scientific manuscripts.
- A flexible attitude, with the ability to work with little supervision managing multiple tasks in a milestone-oriented project.
- Well organised, familiar with good laboratory techniques, practices and safety requirements.
- Familiarity with MS Office products, such as Word, Excel, and PowerPoint.

Desirable

- Experience working with insect and/or mammalian cell lines.
- Experience of molecular cloning including PCR amplification.
- Experience of running simple assays for measuring protein function.



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
- Regular manual handling
- 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.

