NDM Research Building

Job description and selection criteria

<table>
<thead>
<tr>
<th>Job title</th>
<th>Postdoctoral Researcher in Mass Spectrometry &amp; Clinical Proteomics</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</td>
</tr>
<tr>
<td>Location</td>
<td>Target Discovery Institute (TDI), NDM Research Building, Headington, Oxford</td>
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<tr>
<td>Grade and salary</td>
<td>Grade 7: £31,076 - £38,183 p.a</td>
</tr>
<tr>
<td>Hours</td>
<td>Full time</td>
</tr>
<tr>
<td>Contract type</td>
<td>Fixed term for 2 years in the first instance</td>
</tr>
<tr>
<td>Reporting to</td>
<td>Prof Benedikt Kessler</td>
</tr>
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<td></td>
<td>Prof John Todd</td>
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<tr>
<td>Vacancy reference</td>
<td>130075</td>
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</tbody>
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Introduction

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.
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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)… fostering your career in science

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.

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: http://www.ndm.ox.ac.uk/home

The Nuffield Department of Clinical Medicine has been presented with a Departmental Athena SWAN Silver award in recognition of the commitment made to promote gender equality through our organisational and cultural practices and our efforts to improve
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the working environment for both men and women. For more information please see our Departmental Athena SWAN pages: http://www.ndm.ox.ac.uk/athena-swan.

The NDM Research Building

Situated on the Old Road Campus this new building represents the latest phase in continued development of the Medical Research Campus. This £22M new building allows the development of the Target Discovery Institute and expansion of existing research groups of NDM with research synergies. The building is 5,300 sq m (GIA) laboratory and office space housing some 160 research and support staff.

The NDM Research Building constructed for the Nuffield Department of Medicine includes many academic partners including the Department of Cardiovascular Medicine and BHF Centre of Research Excellence (BHF Centre for Cardiovascular Target Discovery), Department of Radiation Oncology and Biology, Ludwig Cancer Institute, Kennedy Institute of Rheumatology, Structural Genomics Consortium and the Department of Chemistry. Research facilities include high-throughput cell-based screening facility, cell-based assay development program, proteomics facility, medicinal chemistry and chemical biology programs and containment level three laboratories. There is support space for the scientists including a 90 seat seminar room, advanced IT and AV infrastructure and additional meeting rooms and break out spaces.

Job description

Overview of the role

We seek a highly-motivated individual for the combined role of a mass spectrometry specialist in the Mass Spectrometry Laboratory of the Target Discovery Institute (TDI) at the University of Oxford (Nuffield Department of Medicine).

Within the Kessler group, together with the Discovery Proteomics Facility (led by Dr. Roman Fischer), the candidate will help developing multiple-reaction monitoring (MRM) workflows to measure low-abundance proteins in human biofluid samples. This MS quant technology will be applied to two main areas:

The successful candidate will be involved in a scientific collaboration with Prof. John Todd focused on type 1 diabetes (T1D) and extra-neuronal tauopathies, for which a defined set of biomarkers shall be measured using an optimised MRM-MS approach.

In addition, the successful candidate will be involved in a scientific collaboration with Bayer (Bayer-Oxford Alliance for research in women’s health). The multi-target collaboration
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focuses on a proteomics analysis of endometriosis and uterine fibroids from women suffering from endometriosis. Shotgun and MRM-based mass spectrometry will be applied with the goal of discovering novel molecular signatures associated with disease progression. 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 organized and structured work ethic.

Responsibilities/duties

- Development of MRM/SRM/PRM (MS-quant) quantitative workflows
- Optimising MS-quant workflows for the detection of low-abundant samples
- Participation in the day-to-day operation of one of the mass spectrometers in the TDI Mass Spectrometry Laboratory
- Preparation of MS samples from a variety of sample types including sample pre-fractionation and proteolytic digestion
- Preparation of very different samples (i.e. patient tissue biopsies, cell cultures)
- Sample analysis and fractionation using HPLC techniques
- Standard laboratory quality control in order to produce reliable and precise data to support scientific investigations
- Accurate performance of laboratory tasks and sample processing with high precision
- Record keeping of all laboratory activities
- Tracking project status and incoming funds for a multitude of projects/collaborators
- Report to both Prof. John Todd and Prof. Benedikt Kessler on a regular basis to monitor progress

Education and Training

- Attendance of appropriate scientific seminars, training opportunities and meetings within the research team, in the Mass Spectrometry Laboratory and the University.
- Participation in the education and training of other staff as necessary and appropriate.

General Responsibilities

- Ensuring good laboratory practice and acting within the interest of the department
- Accountability for personal professional conduct within the project.
- Ensuring safety for all work carried out in the laboratory and applying appropriate safety procedures in the dedicated areas for that work.
- Agreement to the University Equal Opportunities and Data Protection policies.
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- Participation in and Support of 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.

All employees will have to 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.

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:

- Night working (11pm-6am)
- Lone Working
- Work in hot or cold environments
- Driving on University business
- Working with category 3b or 4 lasers (laser safety class)
- Working with blood, human products and human tissues
- Work with any substance which has any of the following pictograms on their MSDS:

  ![Pictograms]

- Manual handling
- Travel outside of Europe or North America on University Business

Selection criteria

Essential

- Qualification (PhD) in biology, chemistry, biochemistry or analytical chemistry
- Basic knowledge of operating an HPLC and mass spectrometer (LC-MS)
- Experience in shotgun proteomics experiments
- A responsible nature with a methodical and careful approach to working in the laboratory independently
- The ability to communicate results clearly and effectively and to discuss scientific ideas both within the work environment
- An active interest in undertaking and supporting scientific research
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- The ability to work on several projects in parallel
- Excellent record keeping and precision driven work approach
- The ability to work in a team
- Experience in sample preparation for mass spectrometry analysis

Desirable

- Experience with MS quantitative workflows such as MRM/SRM/PRM
- Bioinformatics knowledge using MaxQuant, Proteome Discoverer, Skyline
- Previous experience in operating LC and mass spectrometry equipment (e.g. Thermo, ABSciex)

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 https://www.ox.ac.uk/about/jobs/research/

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).

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

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)
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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 for all academic and academic-related posts (grade 6 and above), for which the retirement date is the 30 September immediately preceding the 68th birthday. 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/

There is no normal or fixed age at which support staff in posts at grades 1–5 have to retire. Support staff may retire once they reach the minimum pension age stipulated in the Rules of the pension scheme to which they belong.

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