# Job description and selection criteria

<table>
<thead>
<tr>
<th>Job title</th>
<th>Research Assistant in CRISPR/Cas9 Cell Based High Throughput Screening</th>
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<tbody>
<tr>
<td>Division</td>
<td>Medical Science Division</td>
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<tr>
<td>Department</td>
<td>Nuffield Department of Medicine</td>
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<tr>
<td>Location</td>
<td>Target Discovery Institute, NDM Research Building, Old Road Campus, Headington, Oxford, OX3 7FZ</td>
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</table>
| Grade and salary | Grade 7: £31,604 - £38,833 per annum  
An appointment at Grade 6 (£28,098 – £33,518 p.a), with appropriate adjustment in the duties will be considered based on the applicants skills and experience. |
| Hours     | Full time                                                           |
| Contract type | Fixed term for 2 years in the first instance                       |
| Reporting to | Daniel Ebner, Head of Cellular Screening Facility                   |
| Vacancy reference | 135361                                                             |
| Research topic | CRISPR/Cas9 Cell Based High Throughput Screening                   |
| Principal Investigator / supervisor | Daniel Ebner                                                      |
| Project team | Cellular Screening Facility                                         |
| Project web site | [http://www.tdi.ox.ac.uk/crispr-pooled-screening](http://www.tdi.ox.ac.uk/crispr-pooled-screening) |
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. 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 2016/17 exceeded £564m 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
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](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 the working environment for both men and women. For more information please see our Departmental Athena SWAN pages: [https://www.ndm.ox.ac.uk/working-for-ndm/aboutndmatheneswan/](https://www.ndm.ox.ac.uk/working-for-ndm/aboutndmatheneswan/)

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 the Target Discovery Institute (TDI) with many academic partners such as 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.

TDI research facilities include high-throughput cell-based screening facility, cell-based assay development program, proteomics laboratory, 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.
Target Discovery Institute (TDI) & British Heart Foundation Centre for Cardiovascular Target Discovery

This is a new initiative (a >£20M program) by the University of Oxford dedicated to the accurate ascertainment and initial validation of drug targets, and is directed by Professor Peter Ratcliffe FRS, Head Nuffield Department of Medicine.

Partners in the Target Discovery Institute include;

- Nuffield Department of Medicine
- 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
- Department of Chemistry.

The Target Discovery Institute is based in the Nuffield Department of Medicine Research Building (NDMRB). The components include the following:

- High-throughput cell-based screening facility (managed by Daniel Ebner, making available liquid handling robotics, multimodal plate readers, high-content screening microscopy, core siRNA, shRNA and small molecule libraries)
- Proteomics facility (Dr Benedikt Kessler)
- Chemical Biology
- Medicinal Chemistry (Dr Paul Brennan)
- Cell-based assay development program (Prof. Shoumo Bhattacharya) in the WTCHG.
- Medicinal chemistry and chemical biology programs (Prof. Chris Schofield, Dr Angela Russell)

For more information please visit: http://www.tdi.ox.ac.uk/home

Job description

Overview of the role

We are seeking a Research Assistant who will be responsible for all steps of CRISPR/Cas9 screening across multiple pathologies as an integral member of the TDI Cellular Screening Facility. You will be a highly organized and productive member of a growing high throughput screening team responsible for developing and producing several genome wide screens per year. We actively encourage scientists from all research backgrounds, but with the necessary experience to apply.
Responsibilities/duties
Your main responsibility will be to execute all steps of CRISPR/Cas9 screens, from library production to assay development and production, across multiple pathologies in arrayed or pooled formats at the TDI High Throughput Screening Facility.

Your duties will include:
- Growing bacterial stocks, maintaining relevant cell lines for CRISPR production, and efficient transfection of CRISPR into various screening cell types.
- You will be responsible for organising and maintaining relevant plasmid libraries, creating, titrating, curating lentivirus stocks and creating sub-pools as necessary.
- You will liaise with suppliers of libraries, users of the resource, and with screening facility personnel as well as stay current with developments in the field of CRISPR screening.
- You will develop and produce genome-wide CRISPR/Cas9 screens across multiple pathologies in collaboration with scientists from the University of Oxford.
- You will also liaise and coordinate very closely with the Cell Screening Officer of the TDI (Daniel Ebner) who manages all arrayed and pooled based screens.
- You will liaise with the WTCHG regarding NextGen sequencing (NGS).
- You will routinely meet with the Principal Investigators and other members of the projects to discuss progress.
- To participate and support public engagement activities on behalf of the centre, and working with the Centre’s Public Engagement and Communications Officer. This is anticipated to be around 2 days per year.

Additional Responsibilities/duties for appointment at grade 7

- Share the responsibility for shaping the research group’s plans to support group-funding applications for new research projects.
- Responsible for training students and other staff in these screens.
- Develop standard operating protocols and GMO applications.

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:
Nuffield Department of Medicine

- Long working
- Work with any substance which has any of the following pictograms on their MSDS:

![Pictograms]

**Essential**

- BSc or Master’s Degree (with a first or higher degree) in molecular/cell biology, biochemistry or a related subject, together with significant professional experience in a research laboratory
- Experience with CRISPR/Cas9 editing or screening
- Experience with culturing and manipulation of cell lines especially lentiviral production, transduction, and transfection.
- High content imaging or microscopy experience with imaging analysis experience.
- In-depth knowledge of molecular biology techniques, especially advanced cloning (e.g. Golden Gate, Gibson assembly) and PCR (e.g. site-directed mutagenesis), as well as biochemical and cell biological techniques (e.g. western blotting, immunofluorescence, qRT-PCR).
- Highly organised, excellent attention to detail and the ability to work flexibly to manage their time and a varied workload under pressure to meet deadlines
- Experience in various tissue culture techniques.
- Ability to manage in an organised manner the day-to-day tasks of experimental research.
- Ability to work independently using their own initiative, and also as part of a team, supporting colleagues where necessary.
- Familiarity with the existing literature and research in the field.
- Good IT skills and experience with Microsoft Office programmes and web searches

**For appointment at grade 7 the candidate should also have:**

- PhD or equivalent in in molecular/cell biology in molecular biology, biochemistry or a related subject, together with significant professional experience in a research laboratory
- Extensive experience with CRISPR/Cas9 editing or screening
- Extensive experience with culturing and manipulation of cell lines especially lentiviral production, transduction, and transfection.
- Past examples of proposing, initiating and leading of research projects.
- Demonstrable experience contributing to or independently writing components of a research grant proposal.
Desirable at both grades

- Familiarity with next generation sequencing, statistics or bioinformatics
- Experience in high throughput screening and related equipment
- Excellent interpersonal and communication skills

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)

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.
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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.
Nuffield Department of Medicine

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 and 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/

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/

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.

Family-friendly benefits

The University subscribes to My Family Care (www.admin.ox.ac.uk/personnel/staffinfo/benefits/family/mfc/) and staff are eligible to register for emergency back-up childcare and adultcare 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 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/

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