**Experimental Medicine Division**

<table>
<thead>
<tr>
<th>Job title</th>
<th>Postdoctoral Scientist</th>
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<tbody>
<tr>
<td>Division</td>
<td>Medical Sciences</td>
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<tr>
<td>Department</td>
<td>Experimental Medicine, Nuffield Department of Clinical Medicine (NDM)</td>
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<tr>
<td>Location</td>
<td>Peter Medawar Building for Pathogen Research, South Parks Road, Oxford, OX1 3SY</td>
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<tr>
<td>Grade and salary</td>
<td>Grade 7: £32,817 - £40,322 per annum</td>
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<tr>
<td>Hours</td>
<td>Full time</td>
</tr>
<tr>
<td>Contract type</td>
<td>Fixed-term (12 months)</td>
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<tr>
<td>Reporting to</td>
<td>Professor Paul Klenerman</td>
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<tr>
<td>Vacancy reference</td>
<td>145382</td>
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<td>Additional information</td>
<td>For Research posts: Include table below only where relevant to role.</td>
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**Research topic**
The role of CD161-expressing CD4 T-cells in mucosal host defence: characterization of different CD4 T-cell subsets and investigation of their functional capabilities during inflammatory bowel disease.

**Principal Investigator / supervisor**
Professor Paul Klenerman

**Project team**
Klenerman group

**Project web site**
https://www.medawar.ox.ac.uk/klenerman-group

**Funding partner**
The funds supporting this research project are provided by Wellcome Trust

**Recent publications**
Job description

The role

CD4 T-cells represent one of the most abundant immune cell populations in the gut and the majority of the expresses the molecule CD161. This marker has been linked to other T-cell populations with a non-conventional and diverse effector program in the past, including roles in host defence and tissue regeneration. This role arises based on previous experiments indicating that CD161-positive CD4 T-cells are impaired in inflammatory bowel disease (IBD) raising the question what their exact role in host defence and maintaining barrier function in the gut is. The studies will be conducted primarily in the Peter Medawar Building for Pathogen Research and the Translational Gastroenterology Unit and will involve the experiments on human samples derived from healthy donors and IBD patients. In addition to the scientific strengths and expertise in genetics, proteomics, cell biology and immunology that exists within the investigative team, collaborations are in place with Professor Fiona Powrie (Kennedy Institute) and Dr Francesco Boccellato (Ludwig Institute) to ensure access to additional advanced state of the art equipment and protocols. You will have skills and/or knowledge in human immunology (especially that of innate like T cells), cell culture, flow cytometry, RNA-sequencing and data analysis, and human gut cell analysis.

The focus of the project will be on the in-depth characterization of a previously identified subset of CD4 cell co-expressing CD161 and another marker, CD56 and the evaluation of the role of CD4-derived Granzyme B in regulation epithelial cells in the gut. The postholder will design and carry out an experimental programme to investigate these cells and their effector molecules in an IBD context as well as in healthy tissue by flow cytometric analyses, RNA-sequencing of bulk population and single cells and the investigation of their impact on in vitro models of human epithelia.

Responsibilities

- Manage own academic research and administrative activities. This involves small scale project management, to co-ordinate multiple aspects of work to meet deadlines
- Adapt existing and develop new scientific techniques and experimental protocols
- Test hypotheses and analyse scientific data from a variety of sources, reviewing and refining working hypotheses as appropriate
- Develop ideas for generating research income, and present detailed research proposals to senior researchers
- Collaborate in the preparation of scientific reports and journal articles and occasionally present papers and posters
- Use specialist scientific equipment in a laboratory environment
- Act as a source of information and advice to other members of the group on scientific protocols and experimental techniques
• Represent the research group at external meetings/seminars, either with other members of the group or alone

• Carry out collaborative projects with colleagues in partner institutions, and research groups

• 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.

• Participate in and support public engagement activities on behalf of Experimental Medicine, as part of a co-ordinated programme. This is anticipated to be around 2 days per year.

• Undertake further Pre-employment Checks through a third party if an honorary contract is required for access to data from the third party.

Pre-employment screening

All offers of employment are made subject to standard pre-employment screening, as applicable to the post.

If you are offered the post, you will be asked to provide proof of your right-to-work, your identity, and 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 so that we can discuss appropriate adjustments with you), and a declaration of any unspent criminal convictions.

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/.

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:

• Lone Working
• Driving on University business
• Travel outside of Europe or North America on University Business

The following will be required:

• A satisfactory basic Disclosure and Barring Service check
• University security screening (eg identity checks)

Selection criteria

Essential

• A PhD in immunology

• Possess sufficient specialist knowledge in the discipline to work within the established research programme – specifically, innate-like T cells including MAIT cells, human CD4 T cell subsets and human gut immunology studies.

• Able to demonstrate the ability to manage the day-to-day running of a research project.
• Previous experience of contributing to publications/presentations
• A willingness to show initiative in developing and planning new strategies and new techniques and to achieve research goals.
• Excellent communication skills, including the ability to write for publication, present research proposals and results, and represent the research group at meetings
• Experience in supervision of PhD student and undergraduate student projects
• Knowledge and/or experience with advanced flow cytometry and RNA-sequencing on human tissue-derived samples

Desirable
• One or more first author-articles in a leading refereed journal.
• Keen desire to be innovative and help identify new strategies and design new research proposals.

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, and the largest academic division in the University of Oxford. It includes 11 clinical departments and 5 non-clinical departments. 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

All of the Division’s departments are in receipt of Athena SWAN awards that recognise advancement of gender equality: representation, progression and success for all.

**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 the working environment for both men and women. For more information please see our Departmental Athena SWAN pages: www.ndm.ox.ac.uk/working-for-ndm/aboutndmatheneswan/.

**Experimental Medicine**

Experimental Medicine is part of the Nuffield Department of Clinical Medicine. We have staff based at the John Radcliffe Hospital, Churchill Hospital, Peter Medawar Building for Pathogen Research and the Weatherall Institute of Molecular Medicine.

Research within Experimental Medicine spans fundamental basic science to translational and experimental medicine approaches including clinical trials. We seek to understand the pathophysiology of disease and apply this knowledge to develop enhanced diagnostics and treatments for human disease.

Experimental Medicine's thematic research includes immunology, infectious diseases, gastroenterology, palliative care and respiratory medicine. The research is undertaken within different groups and research units and includes clinical trials.

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

**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 www.ox.ac.uk/about/jobs/supportandtechnical/.

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.

Please upload all documents as PDF files with your name and the document type in the filename. 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 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).

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 receive an automated email from our e-recruitment system 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: www.admin.ox.ac.uk/councilsec/compliance/gdpr/privacynotices/job/. The University’s Policy on Data Protection is available at: www.admin.ox.ac.uk/councilsec/compliance/gdpr/universitypolicyondataprotection/.

The University's policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for all academic posts and some academic-related posts. 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/acrelretire8+/

For existing employees, any employment beyond the retirement age is subject to approval through the procedures: www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/

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.
Benefits of working at the University

Employee benefits

University employees enjoy 38 days’ paid holiday, generous pension schemes, travel discounts, and a variety of professional development opportunities. Our range of other employee benefits and discounts also includes free entry to the Botanic Gardens and University colleges, and discounts at University museums. See www.admin.ox.ac.uk/personnel/staffinfo/benefits.

University Club and sports facilities

Membership of the University Club is free for all University staff. The University Club offers social, sporting, and hospitality facilities. 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 staff new to Oxford

If you are relocating to Oxfordshire from overseas or elsewhere in the UK, the University's Welcome Service website includes practical information about settling in the area, including advice on relocation, accommodation, and local schools. See www.welcome.ox.ac.uk. There is also a visa loan scheme to cover the costs of UK visa applications for staff and their dependents. See www.admin.ox.ac.uk/personnel/permits/reimburse&loanscheme/.

Family-friendly benefits

With one of the most generous family leave schemes in the Higher Education sector, and a range of flexible working options, Oxford aims to be a family-friendly employer. We also subscribe to My Family Care, a service that provides practical advice and support for employees who have caring responsibilities. The service offers a free telephone advice line, and the ability to book emergency back-up care for children, adult dependents and elderly relatives. See www.admin.ox.ac.uk/personnel/staffinfo/benefits/family/mfc/.

Childcare

The University has excellent childcare services, including 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/.

Disabled staff

We are committed to supporting members of staff with disabilities or long-term health conditions. For further details, including information about how to make contact, in confidence, with the University’s Staff Disability Advisor, see www.admin.ox.ac.uk/eop/disab/staff.

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/.

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 settle into Oxford, and provides them with an opportunity to meet people and make connections in the local area. See www.newcomers.ox.ac.uk.