

## Job description and selection criteria

<b>Job title</b>	Senior Postdoctoral Research Scientist in Mucosal Immunology
<b>Division</b>	Medical Sciences
<b>Department</b>	Paediatrics
<b>Location</b>	Oxford Vaccine Group, Centre for Clinical Vaccinology and Tropical Medicine & Institute of Developmental and Regenerative Medicine, Headington, Oxford
<b>Grade and salary</b>	Research Grade 8: £48,235 - £57,255 per annum (with a discretionary range to £64,228 per annum)
<b>Hours</b>	Full-time
<b>Contract type</b>	Fixed-term (2 years)
<b>Reporting to</b>	Daniela Ferreira, Professor of Vaccinology
<b>Vacancy reference</b>	178408
<b>Additional information</b>	<i>Applications are to be made online, please see the advert for the closing date.</i>

<b>Research topic</b>	Immune responses to respiratory human challenge and vaccination
<b>Principal Investigator / supervisor</b>	Prof Daniela Ferreira
<b>Project team</b>	Controlled human infection models and mucosal immunity
<b>Project web site</b>	<a href="https://www.ovg.ox.ac.uk/">https://www.ovg.ox.ac.uk/</a>
<b>Funding partner</b>	The funds supporting this research project are provided by CEPI

## The role

Controlled human infection models (CHIMs) are pivotal to advance the development of vaccine as they are used for proof of concept, pathogenesis, down-selection and immunogenicity studies. Using the CHIM with *Streptococcus pneumoniae* (pneumococcus), RSV and Flu the team has conducted over 30 independent clinical studies, including vaccine studies, genetic modified strains, at risk populations and co-infection studies with over 2000 participants inoculated to date.

We have an exciting opportunity for a Senior Postdoctoral Research Scientist in Mucosal Immunology to work on CHIMs with respiratory pathogens (pneumococcus, RSV, influenza) on projects funded by Horizon, Wellcome Trust and industry. Each project involves the identification of mucosal mechanisms involved in protection and susceptibility to disease as well as vaccine-induced immune responses. The potholder will lead development of several assays for mucosal immunity assessment including antigen specific T cell assays and transcriptomic analysis across several ongoing projects: NOSEVAC (Horizon EU2020 programme), Wellcome Trust research grant on lung and nose immunity to respiratory viruses and respiratory virus/ pneumococcus human challenge models. As the postholder you will join the team of Professor Daniela Ferreira at the Oxford Vaccine Group.

You will have a background in immunology and ideally prior experience working with mucosal tissue (i.e nose and/or lungs) and other human tissue, including peripheral blood mononuclear cells (PBMC). We are welcoming candidates with experience in single cell sequencing and spatial transcriptomics.

Be experienced and independent working with immunological assays including but not limited to ELISAs, ELISpot, multiparameter flow cytometry, intracellular cytokine secretion (ICS), activation induced marker (AIM) assays.

You must have a proactive and adaptable approach to work and willingness to collaborate. You will have the opportunity to interact with other members of the Oxford Vaccine Group, including Prof Sir Andrew Pollard and several other OVG PIs as Prof Maheshi Ramasamy, Prof Kat Pollock, Prof Daniel O'Connor and experts in computational biologists. You should thrive on scientific challenges associated with generating and analysing complex immunological data sets, be keen to learn, test and develop new analytical tools and methods. You must be capable of learning and working independently and be able to train junior team members. Excellent record keeping, code and data management skills and the ability to meet deadlines are essential. You will be expected to document all work thoroughly, to provide manuscript-level reporting of interim and final analyses and results, and to substantially contribute to presentation preparation, grant and manuscript writing.

## Responsibilities

- Develop research questions within a specific context, conduct individual research, analysing detailed and complex qualitative and/or quantitative data related to humoral and cellular immunity induced in the context of vaccination, natural infection and control human infection models, and generate original ideas by building on existing concepts.
- Agree clear tasks objectives, organise, and delegate work to other members of the team and coach other members of the group on specialist methodologies or procedures
- Work closely with bioinformaticians on the projects in interrogating and integrating functional and single cell and spatial transcriptomics datasets. Contribute to code and data sharing and deposition via appropriate portals.

- Develop, establish, and pursue appropriate analytical protocols and techniques to support research, working collaboratively with team members to overcome issues.
- Keep abreast of advances in the field, disseminating these to the team and implementing them as required.
- Keep detailed and comprehensible records of your work, preparing accurate reports that communicate results clearly and effectively to a range of stakeholders, and ensure that project members are kept up to date with progress and any difficulties encountered.
- Regularly write research articles at a national level for peer-reviewed journals. Present papers at national/international conferences and lead seminars to disseminate research findings.
- Share responsibility for shaping the research group's plans and the writing of group-funding applications for new research projects
- Raise research funds through grant applications as leading and/or co-applicant and manage own area of a larger research budget.
- Be accountable for personal professional conduct within the project and agree to the University Equal Opportunities and Data Protection policies.
- Participate in and support of the public engagement and widening access activities of the Department and the University.
- 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 in Immunology, or other closely related immunological subject.
- Post-qualification research experience.
- Possess sufficient specialist knowledge to independently design, plan, execute, analyse and present data from wet laboratory immunology experiments using human tissue. Examples of techniques where you will be proficient include ELISA, ELISpot, multiparameter flow cytometry, ICS, AIM assays and single cell/bulk/spatial transcriptomic experiments.
- Possess sufficient specialist knowledge in respiratory infectious disease and vaccine development.
- Ability to deliver high-calibre analytical outputs as evidenced through a strong publication record in high-quality peer-reviewed journals and a high degree of ambition and self-motivation
- Excellent interpersonal skills and capacity to work collaboratively, including the ability to communicate results clearly and effectively by oral and written means, and to discuss scientific ideas
- Ability to independently plan and manage a research project, including a research budget
- Experience of providing technical advice and intellectual support to others including PhD Students, Research Assistants, Postdoctoral Scientists and Clinicians.

- A responsible nature with a methodical and careful approach with the ability to independently plan and manage a research project, including a research budget whilst also contributing towards grant research proposals.
- Ability to raise research funds through making grant applications.

## Desirable

- Experience in controlled human infection models
- Experience of supervising staff
- Experience of working to GCP and Knowledge of Human Tissue Authority regulations
- Experience of 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. If you have previously worked for the University we will also verify key information such as your dates of employment and reason for leaving your previous role with the department/unit where you worked. 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:

- Working with infectious pathogens (hazard group 2/3) - Hazard Group 3 pathogens
- Working with blood, human products and human tissues
- Work with any substance which has any of the following pictograms on their MSDS:



## **Additional security pre-employment checks**

This job includes duties that will require additional security pre-employment checks:

- Enhanced Level Screening as this role includes conducting research with access to/ knowledge of the location of certain pathogens, toxins, irradiators.
- A satisfactory enhanced Disclosure and Barring Service check (adults' barred list)
- University security screening (e.g. identity checks)

## **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 and we rank first in the UK for university spin-outs, and in recent years we have spun out 15-20 new companies every year. 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](http://www.ox.ac.uk/about/organisation).

## **Oxford Vaccine Group**

The Oxford Vaccine Group (OVG) is led by Andrew J Pollard, Professor of Paediatric Infection, and Immunity. Staff are based within a purpose-built centre on the Churchill Hospital site and form part of the Centre for Clinical Vaccinology and Tropical Medicine (CCVTM). The aim of OVG is to co-ordinate expertise in the study of microbial diseases and the immune response to microbes, to facilitate research on the development and implementation of vaccines. This may include new, improved or combined vaccines for the adult and paediatric population. Core group members include two Consultants in Vaccinology, a Director of Clinical Trials, a Senior Clinical Trials Manager, adult and paediatric clinical research fellows, adult and paediatric research nurses, project managers, QA manager, IT manager, and an administration team. The Infection and Immunity Laboratory includes post doctorate scientists, research assistants and DPhil students. Wider group members include professionals from a range of specialities including immunologists, microbiologists, statisticians, a community paediatrician, the local Health Protection team and a bioethicist. Recent studies carried out by the group include; Development and deployment of a licensed vaccine against COVID-19 · Vaccines against RSV · Pneumococcal nasopharyngeal carriage epidemiology · Meningococcal B vaccine development and evaluation · Development of a typhoid challenge model

More information about OVG may be found at the website: <http://www.ovg.ox.ac.uk>.

## **Department of Paediatrics**

The Department of Paediatrics is a world leader in child health research and hosts internationally renowned research programmes in drug development, gastroenterology, haematology, HIV, immunology, neuroimaging, neuromuscular diseases and vaccinology. Our work spans from early proof-of concept fundamental science, all the way up to its application in clinical settings.

We continue to shape the landscape of medical science through positively impacting the lives of millions of children from our global research programmes, academic resources, and commitment to success. Our broad research base positions the department in a pivotal role and subsequently a world leader in child health. With research facilities in the UK and abroad, we work on a global scale, building a paediatric network in the medical science community. We are committed to inform and inspire external audiences worldwide through our public engagement and outreach activities.

In 2021, we successfully administered a grant value of £130,895,28 obtained through 168 projects. Our strong relationship with funding bodies have also been a contributor to the successes and milestones in children's health research. With strong support from the Wellcome Trust, NIH, Cancer Research UK, UKRI, MDUK, Bill & Melinda Gates Foundation, Academy of Medical Sciences and the NIHR, we have employed 360+ staff, researchers, and students. These figures continue to grow as we expand our activities to overcome the multitude of challenges within children's research health.

For more information please visit: <http://www.paediatrics.ox.ac.uk/>

The Department of Paediatrics holds a Gold Athena Swan award to recognise advancement of gender equality: representation, progression and success for all.

## **Medical Sciences Division**

We are an internationally recognized centre of excellence for biomedical and clinical research and teaching, and 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: <http://www.medsci.ox.ac.uk/>



## How to apply

Applications are made through our online recruitment portal. Information about how to apply is available on our jobs website <https://www.jobs.ox.ac.uk/how-to-apply>.

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

As part of your application you will be asked to provide details of two/three 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).

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

All applications must be received by **midday** UK time on the closing date stated in the online advertisement.

If you currently work for the University please note that:

- as part of the referencing process, we will contact your current department to confirm basic employment details including reason for leaving
- although employees may hold multiple part-time posts, they may not hold more than the equivalent of a full time post. If you are offered this post, and accepting it would take you over the equivalent of full-time hours, you will be expected to resign from, or reduce hours in, your other posts(s) before starting work in the new post.

### 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 at [recruitment@paediatrics.ox.ac.uk](mailto:recruitment@paediatrics.ox.ac.uk) or using the contact details in the online advertisement.

To return to the online application at any stage, please go to: [www.recruit.ox.ac.uk](http://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: <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** of 30 September before the 70<sup>th</sup> 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.

## Benefits of working at the University

### Employee benefits

University employees enjoy 38 days' paid holiday, generous pension schemes, travel discounts including salary sacrifice schemes for bicycles and electric cars and other discounts. Staff can access a huge range of personal and professional development opportunities. See <https://hr.admin.ox.ac.uk/staff-benefits>.

### Employee Assistance Programme

As part of our wellbeing offering staff get free access to Health Assured, a confidential employee assistance programme, available 24/7 for 365 days a year. Find out more <https://staff.admin.ox.ac.uk/health-assured-eap>.

### 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](http://www.club.ox.ac.uk) and <https://www.sport.ox.ac.uk/>.

### Information for staff new to Oxford

If you are relocating to Oxfordshire from overseas or elsewhere in the UK, the University's Welcome Service includes practical information about settling in the area, including advice on relocation, accommodation, and local schools. See <https://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 <https://staffimmigration.admin.ox.ac.uk/visa-loan-scheme>.

### Family-friendly benefits

We are a family-friendly employer with one of the most generous family leave schemes in the Higher Education sector (see <https://hr.web.ox.ac.uk/family-leave>). Our Childcare Services team provides guidance and support on childcare provision, and offers a range of high-quality childcare options at affordable prices for staff. In addition to 5 University nurseries, we partner with a number of local providers to offer in excess of 450 full time nursery places to our staff. Eligible parents are able to pay for childcare through salary sacrifice, further reducing costs. See <https://childcare.admin.ox.ac.uk/>.

### Supporting disability and health-related issues (inc menopause)

We are committed to supporting members of staff with disabilities or long-term health conditions, including those experiencing negative effects of menopause. Information about the University's Staff Disability Advisor, is at <https://edu.admin.ox.ac.uk/disability-support>. For information about how we support those going through menopause see <https://hr.admin.ox.ac.uk/menopause-guidance>.

### Staff networks

The University has a number of staff networks including for research staff, BME staff, LGBT+ staff, disabled staff network and those going through menopause. Find out more at <https://edu.admin.ox.ac.uk/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](http://www.newcomers.ox.ac.uk).

## Research staff

The Researcher Hub supports all researchers on fixed-term contracts. They aim to help you settle in comfortably, make connections, grow as a person, extend your research expertise and approach your next career step with confidence. Find out more <https://www.ox.ac.uk/research/support-researchers/researcher-hub>.

Oxford's Research Staff Society is a collective voice for our researchers. They also organise social and professional networking activities for researchers. Find out more <https://www.ox.ac.uk/research/support-researchers/connecting-other-researchers/oxford-research-staff-society>.