

NUFFIELD DIVISION OF CLINICAL LABORATORY SCIENCES

Job title	Postdoctoral Research Assistant in Gene Therapy
Division	Medical Sciences Division
Department	Nuffield Division of Clinical Laboratory Sciences, Radcliffe Department of Medicine
Location	John Radcliffe Hospital, Headington, Oxford
Grade and salary	Grade 7.1-7.3: £31,076- £32,958 per annum
Hours	Full time
Contract type	Fixed-term (36 months)
Reporting to	Associate Professor Deborah Gill & Associate Professor Steve Hyde (Co-Directors of Gene Medicine Research Group)
Vacancy reference	128770

Research topic	Use of recombinant lentiviral vectors for expression of therapeutic monoclonal antibodies to treat Influenza
Principal Investigator / supervisor	Associate Professor Deborah Gill & Associate Professor Steve Hyde
Project team	Gene Medicine Research Group
Project web site	http://www.genemedresearch.ox.ac.uk/
Funding partner	The funds supporting this research project are provided by The Wellcome Trust
Recent publications	Alton EW, <i>et al</i> (2017) Preparation for a first-in-man lentivirus trial in patients with cystic fibrosis. <i>Thorax</i> . 2017 Feb;72(2):137-147. doi: 10.1136/thoraxjnl-2016-208406. Epub 2016 Nov 16. PMID: 27852956



Overview of the role

Background: Influenza A is a major worldwide health risk causing >500,000 deaths each year. Neither prior infections, nor current vaccinations, provide lasting protection from seasonal epidemics. The seasonal vaccine must be continually reformulated in an attempt to keep pace with the viral evolution and, in addition, suffers from reduced efficacy in the elderly and immunosuppressed, groups that constitute the majority of seasonal influenza deaths. Importantly, available vaccines also fail to provide protection when highly diverged viral strains emerge to initiate human pandemics. We have exploited the recent ability to clone monoclonal antibodies (mAbs) that neutralise widely diverse strains of influenza from single human B cells to use passive immunity to protect against a wide range of strains of influenza.

Our Aim: We plan is to utilize our lentiviral platform to provide long-lasting passive immunity. Using recombinant lentiviral vector, which is pseudotyped for efficient targeting of the airways (rSIV.F/HN), we aim to express mAbs from the lung. In collaboration with Professor Alain Townsend (University of Oxford), who provides access to novel human mAbs targeting influenza, we will use animal models of influenza challenge to demonstrate protection against infection. We anticipate that rSIV.F/HN vector-dependent long-term passive immunity could be valuable in two settings: (i) acute treatment of high-risk, immune-compromised individuals suffering from seasonal flu; and (ii) rapid and widespread protection of high-risk essential personnel (such as first responders and other health care workers) during forecast pandemics of highly pathogenic flu.

The Position: Applicants are invited for a Postdoctoral Research Assistant position at the Oxford University Radcliffe Department of Medicine (NDCLS) to participate in this new collaborative project. The position is available for 36 months.

Key Tasks:

The successful applicant will lead:

- (a) Design and testing of lentiviral vector genomes incorporating multiple vector configurations to express candidate mAb sequences;
- (b) Production and testing of high purity lentiviral vectors;
- (c) Evaluation of mAb expression in animal models of influenza challenge;
- (d) Assessment and selection of lead candidate for future translation.

Responsibilities

- To participate in the Gene Medicine Research Group programme to investigate the use of lentiviral gene delivery to the lung for disease treatment.
- To specifically focus on meeting the research project objectives to assess the expression of monoclonal antibodies against influenza in the lung.
- To perform research, using techniques required for vector design and construction, including, large-scale vector expression and testing in animal models.
- To investigate and establish new methodologies for evaluation of immunity to influenza challenge.
- To assist laboratory supervision and training of new students and junior research assistants in lab methods.
- To analyse and report the results of work undertaken to the team and collaborators.
- To perform any comparable duties that may be required for the smooth running of the laboratory including being responsible, with others, for the biological safety of the laboratory.

Communication

- To communicate with Profs Deborah Gill and Steve Hyde and other members of the group as required, to ensure they are kept fully up to date with scientific progress.
- To help prepare data for scientific papers and reports and verbal presentations at meeting and conferences.
- To maintain confidentiality regarding research data.

Education and Training

- To attend appropriate scientific seminars, training opportunities and meetings in the Institute and University.
- To participate in the education and training of other staff as necessary and appropriate.
- Once trained, the post holder's performance will be continually monitored to ensure that the required standard of accuracy and efficiency is maintained.

Further Responsibilities

- To act at all times in the interests of the Institute to ensure good laboratory practice.
- To be accountable for personal professional conduct within the project.
- To undertake such other duties as may be required from time to time that are commensurate with the grade and responsibilities of this post.
- To ensure that work in the laboratory is conducted safely and using appropriate safety procedures and in the dedicated areas.

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:

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



Additional security pre-employment checks

This job includes the following duties which will require additional security pre-employment checks:

- Working with or conducting research involving *in vivo* experiments.
- Access to certain pathogens/toxins/irradiators

Pre-employment checks include:

- A satisfactory Disclosure Scotland check
- University Enhanced Level security screening

Selection criteria

Essential

1. Hold, or be near the completion of, a PhD in Gene Therapy
2. Experience in recombinant virus and mammalian cell culture.
3. Expertise in design and construction of lentiviral vectors.
4. Experience in production and purification of lentiviral vectors.
5. Excellent written and verbal communication skills including presentation of research proposals and results.

Desirable

1. Specialist knowledge in influenza and/or other respiratory infections/diseases.
2. Expertise in monoclonal antibodies.
3. Home Office Licence with experience in gene delivery *in vivo*.

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, and in providing all of our staff with a welcoming and inclusive workplace that supports everyone to develop and do their best work. Recognising that diversity is a great strength, and 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 ranked first in the UK for university spin-outs, with more than 130 spin-off 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

Nuffield Division of Clinical Laboratory Sciences (NDCLS)

Led by Professor Alison Banham, the Nuffield Division of Clinical Laboratory Sciences brings together all of the clinical laboratory-based disciplines within the Oxford Medical School (Microbiology, Genetics, Cellular Pathology, Haematology and Clinical Biochemistry). The original Nuffield Departments date from Lord Nuffield's original benefaction to the Oxford Medical School in 1938.

As well as the teaching of Undergraduate and Clinical Medical Student courses, NDCLS has an active research programme, holding more than £5.3m per annum (£25m in total) of research grants from Research Councils and charities.

For more information please visit www.ndcls.ox.ac.uk

Radcliffe Department of Medicine

The Radcliffe Department of Medicine (RDM) within the Medical Sciences Division is one of the largest departments in the University of Oxford. Headed by Professor Hugh Watkins, RDM is a multi-disciplinary department with research interests that span the translational spectrum, from basic biological research through to clinical application. The Department was formed in 2012 and includes:

- The Division of Cardiovascular Medicine (CVM)
- The Investigative Medicine Division (IMD)
- The Nuffield Division of Clinical Laboratory Sciences (NDCLS)
- The Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM)
- The majority of research groups from the MRC Weatherall Institute of Molecular Medicine (WIMM)

The Department has internationally renowned programmes in a broad range of sciences related to medicine, from cardiovascular, diabetes, endocrinology, and stroke research, to molecular medicine, immunology, haematology and pathology, including programmes in stem cell & regenerative medicine.

The Department employs in the region of 700 staff, has around 125 postgraduate research students and an annual turnover of around £59m.

RDM supports a culture that is inclusive and supportive of all members, including those with caring responsibilities and those who work flexibly for other reasons. We are proud to be a [family friendly department](#), and are committed to creating a working environment that offers opportunities for working parents/carers to achieve their professional goals and develop their careers without having a detrimental effect on family life. To support this, we have a range of family friendly policies and practices including maternity, paternity and adoption leave, shared parental leave, unpaid parental leave, flexible/part-time working and scheduling departmental meetings and seminars within core hours (9.30 a.m. -2.30 p.m.). Many of our staff work flexibly, with arrangements managed informally or formally.

The Department currently holds a Silver Athena SWAN award in recognition of its efforts to introduce organisational and cultural practices that promote gender equality in SET and create a better working environment for both men and women.

For more information on the Department please visit: www.rdm.ox.ac.uk

Medical Sciences Division

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: <http://www.medsci.ox.ac.uk>

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 should explain how you meet 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 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.

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.

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.

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 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/.

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/.

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/.

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 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.

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/. **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.

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 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/.

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/.