

Job description and selection criteria

Job title	Bioinformatician/Computational Biologist - VALIDATE Vaccinology
Division	Medical Sciences
Department	Nuffield Department of Medicine (NDM), Jenner Institute
Location	Old Road Campus Research Building / Centre for Clinical Vaccinology and Tropical Medicine, Headington, Oxford
Grade and salary	Grade 7: £32,236 - £39,609 per annum with discretionary range to £43,267 p.a.
Hours	Full time
Contract type	Fixed-term for 18 months in the first instance, with a possibility of a further extension up to two years.
Reporting to	Professor Helen McShane
Vacancy reference	142032

The role

This role is an excellent postdoctoral opportunity at University of Oxford for a proactive bioinformatician or computational biologist to advance their career and become part of a large, engaged international network of researchers. This is an exciting opportunity to work on varied datasets and lead in their analysis as a crucial member of the VALIDATE Network, with the aim of advancing vaccine development for neglected diseases.

Background to VALIDATE

VALIDATE ("Vaccine development for complex Intracellular neglected pATHogEns") aims to bring together human and veterinary academics, industry partners, and governmental and non-governmental agencies in the UK and LMICs to accelerate vaccine development for *Mycobacterium tuberculosis*, which causes TB, *Mycobacterium leprae*, which causes leprosy, *Leishmania* spp, causing leishmaniasis, and *Burkholderia pseudomallei*, causing melioidosis. These diseases have enormous impact on Low and Middle Income Countries (LMICs): 1.8 million people die of TB every year, while leishmaniasis affects ~150m people in 98 countries. Development of efficacious vaccines is the most cost-effective way to control these diseases.

VALIDATE aims to make significant progress towards vaccine R&D for these neglected diseases through maximising the sharing and dissemination of data and knowledge; encouraging increased collaboration across institutes, disciplines and pathogens; and by distributing pump-priming funding. To date VALIDATE has over 250 members from 42 countries across the globe, and this will continue to increase. We are proud that our network has a good gender balance, with 47.5% of our members identifying as female.

The VALIDATE Vaccinology Postdoctoral Bioinformatician/Computational Biologist is crucial to the success of this Network, by ensuring that VALIDATE maximises the outputs and lessons learned from the immunology, animal model, clinical trial and other vaccine-related data available from its collaborating members around the world.

We are looking for a post-doctoral computational biologist, bioinformatician, mathematician, statistician or epidemiologist with an interest in immunology (experience in immunology would be a plus). You will be responsible for generating additional learnings and outputs from the data held by our members worldwide – for instance, comparing different data sets across pathogens, or across different species. You will look for data synergies and differences, generate new findings and peer-reviewed journal publications (on which you will be an author). In addition, you will engage with our Network researchers to encourage sharing of published and unpublished data via the VALIDATE Data Portal, which you will manage with support from the staff at Oxford University's Big Data Institute.

You must be proactive, a creative problem-solver, have excellent communication skills, be a team-player, and be comfortable working closely with scientists and clinicians in diverse geographical locations who possess a wide range of skillsets and knowledge. It is expected that the work will involve a range of complex and original scientific work and requires a high degree of personal motivation.

The VALIDATE Vaccinology Postdoctoral Bioinformatician/Computational Biologist will work closely with Prof Helen McShane (VALIDATE Director, University of Oxford), Prof Helen Fletcher (VALIDATE Co-Director, LSHTM) and Samantha Vermaak (VALIDATE Network Manager, University of Oxford).

Responsibilities

1. Proactively use your skill set to use our members' data sets to combine, analyse, and interpret cross-pathogen, cross-species, and cross-country data, spotting synergies and differences, and generating new findings and peer-reviewed journal publications
2. Build relationships with VALIDATE researchers to encourage data sharing, and maximisation of data outputs, including attending the VALIDATE annual meeting
3. Manage and continue to improve the VALIDATE data sharing portal
4. Contribute to the wider dissemination of scientific findings through both specialist and non-specialist publications
5. Participation in, and support of, the public engagement and widening access activities of NDM and the University. This is anticipated to be not more than 2 days per year
6. Any other duties consistent with the grade and role

The job description is not intended to be rigid or inflexible and may include other duties and responsibilities as may be determined. The post-holder is expected to work flexibly and respond positively to changing needs.

Selection criteria

Essential selection criteria

1. Possess a PhD in bioinformatics, computational biology, mathematics, or statistics, with a scientific background in biology or a keen desire to move into immunology using transferable skills
2. Knowledge of, or ability to learn, immunological assay and early phase clinical trial outputs and data
3. Experience of, or ability to learn, analysing Next generation sequencing and microarray data
4. Programming using statistical and omics packages (e.g. R, Python, or Matlab)
5. Experience of, or willingness to learn, how to manage a data sharing portal
6. Experience of, or willingness to learn, building and working with relational databases, including querying with SQL
7. Proven publication record
8. Excellent organisational skills with the ability to manage multiple projects with a range of stakeholders
9. Excellent verbal and written communication skills
10. Ability to proactively and creatively use your knowledge to solve data challenges
11. Ability to both work independently and be a strong team player

Desirable selection criteria

1. Experience of information governance processes related to data processing and sharing
2. Ability to travel to international conferences
3. Experience of working with collaborators based in developing countries

Please note that the appointment of the successful candidate will be subject to standard compulsory pre-employment screening, such as right to work 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. 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

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/.

The Jenner Institute - Centre for Clinical Vaccinology and Tropical Medicine (CCVTM), Churchill Hospital, Oxford

Scientists at the Jenner Institute, University of Oxford, have developed new candidate vaccines for malaria, tuberculosis, HIV, influenza and a wide range of other pathogens. Clinical trials are in progress for eight infectious disease areas. The Jenner Institute is one of the largest university based vaccine institutes globally.

Over the last three years a new cancer vaccine immunotherapy programme, including a multi-site trial in prostate cancer, has been in progress in close collaboration with the departments of oncology and surgery.

For more information please visit: <http://www.jenner.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/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.

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/](http://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.