**Job title** | Postdoctoral Research Scientist in Geospatial Modelling of Epidemiology
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**Division** | Medical Sciences
**Department** | Nuffield Department of Medicine
**Location** | Big Data Institute, Li Ka Shing Centre for Health Information and Discovery, Old Road Campus, Oxford, OX3 7LF
**Grade and salary** | Grade 7: £31,604- £38,833 per annum (with a discretionary range up to £42,418)
**Hours** | Full time
**Contract type** | Fixed term for 2 years in the first instance
**Reporting to** | Dr Ewan Cameron
**Vacancy reference** | 133538
**Additional information** | Funded by the Bill and Melinda Gates Foundation

**Research topic** | The geospatial mapping of incidence and prevalence of malaria

**Principal Investigator / supervisor** | Professor Peter Gething

**Project team** | Malaria Atlas Project

**Project web site** | [www.map.ox.ac.uk](http://www.map.ox.ac.uk)

**Funding partner** | The Bill and Melinda Gates Foundation

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 2015/16 exceeded £537.4m and we rank first in the UK for university spinouts, 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: https://www.ndm.ox.ac.uk/working-for-ndm/aboutndmatheneswan/

**Oxford Big Data Institute (BDI)**

The Big Data Institute (BDI), is a newly opened, interdisciplinary research centre located within the University of Oxford’s Old Road Campus. The Institute will combine researchers from genomics, epidemiology and infectious disease alongside those from computer science, statistics and engineering to develop the field of big data as applied to biomedical research. Scientists working in the Institute will form an analytical hub, deeply connected to the wider experimental and clinical community in Oxford and beyond, working to solve some of the major challenges in medical research. The BDI aims to develop, evaluate and deploy efficient methods for acquiring and analysing information at scale and for exploiting the opportunities presented by large-scale studies. The Institute will provide core facilities in high-performance computing and high-capacity data management. When fully occupied it will house over 350 researchers.

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

**Overview of the role**

The Malaria Atlas Project (MAP) is seeking to appoint a scientist with a strong background in any field of geospatial modelling who will contribute to our mission of mapping global burdens of *Plasmodium falciparum* and *Plasmodium vivax* malarias. The roles will involve the development and application of cutting edge geospatial approaches to modelling across a wide range of epidemiological settings.

You will work collaboratively with other scientists within the wider MAP group to develop statistical methods to produce global estimates of the burden of malaria. An understanding of spatiotemporal modelling and expertise in geostatistics, random-field models, or equivalent are essential. An understanding of the epidemiology a vector-borne disease such as malaria is desirable but not essential. You will be expected to follow and contribute to coding and data-management standards. You will be expected to follow best-practice in writing code, including the use of source-control and a commitment to thorough documentation.

You will contribute to and, as appropriate, lead in the preparation of scientific reports and journal articles for publication of research findings from this work in open access journals. Travel to collaborators in Europe, the United States, Africa, and Asia will be part of the role and you will be expected to present the findings from your work at selected international conferences.

**Responsibilities/duties**

- Under the supervision of Dr Cameron, help develop and implement MAP’s spatiotemporal modelling infrastructure to predict malaria transmission and burden, adapting and existing and developing new research methodologies as necessary.

- Work collaboratively with other scientists within the wider MAP group to produce estimates of malaria, acting as a source of information and advice to other members of the group.
• Apply due-diligence by scrutinizing model results for all deliverables, reviewing and refining theories as appropriate.

• Maintain rigorous data- and code-management practices, including thorough documentation and version control, to ensure data replicability and cross-compatibility with past and future MAP products.

• Contribute to and, as appropriate, lead, in the preparation of scientific reports and journal articles for publication of research findings from this work in open access journals.

• Present the research findings from this work at selected international conferences.

• Travel to collaborators in Europe, the United States, Africa, and Asia.

• Contribute ideas for new research projects and for generating research income

• Manage own academic research and administrative activities, including small-scale project management to co-ordinate multiple aspects of the work to meet deadlines.

• Participate in and support public engagement activities on behalf of the Centre. This is anticipated to be around 2 days per year

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:

• Travel outside of Europe or North America on University Business

Selection criteria

Essential

• PhD or equivalent experience in mathematics, statistics, or a similar quantitative discipline

• Expertise in spatiotemporal modelling, geostatistics, random-field models, or equivalent

• Demonstrable commitment to using best practices in writing code, including the use of source control, documentation, and coding standards

• Ability to manage own academic research and meet defined milestones on time

• Demonstrable evidence of having worked successfully within a collaborative, team-based research setting

• Excellent communication skills (oral and written)

Desirable

• Knowledge of vector-borne disease epidemiology

• Competitive publication record for career stage

• Knowledge of and experience with the R programming language
• Experience writing software for others to use

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_the_university/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 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.

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 (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.
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](http://www.club.ox.ac.uk) and [www.sport.ox.ac.uk/oxford-university-sports-facilities](http://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/](http://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/](http://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](http://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/](http://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](http://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/](http://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](http://www.admin.ox.ac.uk/personnel/staffinfo/benefits)