Job description

Post	Postdoctoral Research Assistant
Department	Biology
Division	Mathematical, Physical and Life Sciences Division (MPLS)
Locations	Sir William Dunn School of Pathology, South Parks Road, Oxford, OX1 3RE Rodney Porter Building, Sibthorp Rd, off South Parks Road, Oxford, OX1 3QU 11a Mansfield Road, Oxford, OX1 3SZ
Grade and salary	Grade 7: £36,024 - £44,263 per annum
Hours	Full time
Contract type	12 month fixed term contract
Reporting to	Dr Kirsty Sands
Application deadline	12 noon (GMT) on Monday 22nd January
Vacancy reference	169037
Recruitment contacts	HR: **hr@biology.ox.ac.uk**

Research topic	AVIAR project: https://www.ineosoxford.ox.ac.uk/research/areas-of-focus/amr-burden
Principal Investigator / supervisor	Kirsty Sands/Timothy Walsh
Project team	Ineos Oxford Institute
Project web site	Ineos Oxford Institute
Funding partner	The funds supporting this research project are provided by the Ineos Oxford Institute

The role

This is a Postdoctoral Research Associate position, working under the supervision of Professor Tim Walsh. Research will be based in in the Ineos Oxford Institute for antimicrobial research (IOI) and examine the role of bacteria in responding to new animal and human antimicrobials.

The postholder will be responsible for providing microbiological data to facilitate the drug design of molecules being undertaken in Organic and Medicinal Chemistry, Oxford. This post is funded by the new Ineos Oxford Institute for antimicrobial research. The IOI was created on 1st January 2021 and is closely linked with both the Department of Chemistry and the Department of Biology. Bespoke lab and office space for the IOI will be designed into the new Life and Mind Building, due to open in early 2024.

Responsibilities

- Responsible for providing high-quality microbiological data on the response of bacteria to new and established antimicrobials.
- Test hypotheses and analyse scientific data from a variety of sources, reviewing and refining working hypotheses as appropriate, and adapt existing and develop new synthetic techniques and synthetic methodology.
- 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
- Contribute ideas for new research projects
- Develop ideas for generating research income, and present detailed research proposals to senior researchers
- Undertake comprehensive and systematic literature reviews and write up the results for publication in peer-reviewed journals
- 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
- Actively participate in journal club meetings
- Embed the principles of mutual respect, equality, diversity, inclusivity and sustainability in all aspects of your work; undertake training as and when asked to do so.
- Teach or undertake ad-hoc paid teaching (this may include lecturing, demonstrating, small group teaching, tutoring of undergraduates and graduate students and supervision of projects).

Selection criteria

Essential selection criteria

- Hold, or be close to completion of, a PhD in Microbiology and/or Molecular biology or equivalent experience.
- Have extensive expertise in standard microbiological techniques including antimicrobial susceptibility testing.
- Have extensive expertise in molecular microbiology techniques including bacterial conjugation, PCR and qPCR.
- Be able to evidence experience with microbial bioinformatics and analysis of bacterial sequences, including plasmid sequences.
- Be able to demonstrate competence and success in the thesis research area (and postdoctoral work if appropriate), e.g. as judged by publications (or papers in press) in high quality peer reviewed journals.
- Evidence will be sought of a deep understanding of the applicant's previous fields of research and evidence of independent intellectual and practical contributions to previous research projects, as indicators that such attributes can be brought to bear on the present project.
- Be viewed as a motivated, enthusiastic, organised self-starter; one who can work with a minimum of supervision but at the same time extract the benefits of an excellent research environment.
- Have an excellent general knowledge of related areas through reading of the literature, online database searching, and attendance at seminars and conferences.
- Be willing to learn new techniques and apply them in an interdisciplinary research environment. Be willing to participate in group journal clubs and workshops as a means to continuously improve technical and theoretical knowledge.
- Communicate well in English in writing and in oral and visual presentations.
- Be able to keep detailed laboratory records and report on progress at regular intervals.

- Show an ability to work supportively in a laboratory environment, and to supervise and educate junior co-workers and take part in joint projects through co-operation and the exchange of information, skills and reagents.
- Be willing to play a role in keeping the laboratory running by assuming a share of group responsibilities.
- Must be able to work in a team and adjust thinking and techniques accordingly.

Desirable selection criteria

- Experience in antimicrobial drug development.
- Experience in working with high volumes of samples.

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. 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:

- Regular manual handling
- Working with infectious pathogens (hazard group 2/3) - Hazard Group 3 pathogens
- Work with any substance which has any of the following pictograms on their MSDS:

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.

The Department of Biology

You will be joining us at an exciting time: just as the Departments of Zoology and Plant Sciences merge to form a new Department of Biology, and two to three years before we move into a major new building dedicated to the science of life and mind.

The Departments of Plant Sciences and Zoology are recognised internationally for our research in a wide range of fields spanning all levels from molecules to ecosystems, and tackling fundamental problems in evolutionary ecology, disease biology, evolutionary mechanisms, conservation biology, biodiversity, evolutionary developmental biology, plant biology and animal behaviour. Over time, the research interests of the department have diversified so that much of the research focusses on bacteria, viruses, animal-plant interactions and global biodiversity as well as more traditional models. Research is conducted in all spheres from laboratory and *in silico* analysis to theoretical and field-based research; at all times we seek to reinforce the connections between research and graduate and undergraduate education. The Departments jointly teach the four-year undergraduate degree course in Biology, with fourth-year students doing a Masters-level research project.

External research income to the Departments is derived from over 50 different funding agencies, with the principal current funders being the European Research Council, the Royal Society, the Wellcome Trust, BBSRC and NERC. The Departments have a significant track record in enabling the broader societal impact of research, including the provision of policy to government at the highest level, as well as supporting the commercialisation of research through spin-out companies and licensing arrangements that have generated hundreds of millions of pounds' worth of innovation.

The main Departments are located in the University's Science Area, and will move into a new £200m building in 2024 that will include extensive laboratory provision with controlled environment rooms, glasshouses and an imaging suite. We will share this building with the Department of Experimental Psychology, opening new avenues for collaboration and exploration of the life and mind sciences. The Departments also have extensive facilities the John Krebs Field Station at Wytham (with Wytham Woods nearby).

For more information please visit: www.biology.ox.ac.uk

The Ineos Oxford Institute

The Ineos Oxford Institute (IOI) was created following a gift of £100 million pounds from INEOS to the University of Oxford. The Institute will rapidly advance research, education and collaboration in search of solutions to the growing threat of antimicrobial resistance (AMR). The IOI will become a centre of world-class scientific talent, working collaboratively with a growing number of bodies focusing on AMR and infection prevention control across the world. It will seek to stimulate innovation and collaboration within academia and with industry and government. Ultimately, it aims to become the world's leading institution for the discovery of novel antibiotics and new approaches to combatting antimicrobial resistance.

Scientists at the IOI apply state of the art medicinal chemistry and microbiology approaches to antibacterial drug discovery to enable and promote the development of breakthrough new treatments for human bacterial infections. Our science-focused approach is interdisciplinary and highly collaborative, both within Oxford and internationally.

We also undertake international collaborative studies with global surveillance and assessment programmes to understand the impact of antibiotic resistance on low-middle income country health and agricultural structures. We aim to develop important actionable estimates of the AMR burden that will impact global and regional policy decisions.

Addressing antimicrobial resistance requires a global effort. It will be critical to develop the pipeline of talent to undertake research and pursue scientific discovery in the field in the years to come. The IOI are committed to training a cohort of scientists in the fields of antimicrobial resistance and drug discovery. This will include on-going training of laboratory scientists, and a range of opportunities including a PhD initiative, short courses and seminar series.

The Mathematical, Physical and Life Sciences Division

The Mathematical, Physical, and Life Sciences (MPLS) Division is one of the four academic divisions of the University. Oxford is widely recognised as one of the world's leading science universities. The disciplines within the MPLS Division regularly appear at the highest levels in world rankings and have been evaluated as conducting world-leading and internationally excellent research in UK research assessments, and Mathematical, physical and life sciences research at Oxford is the best in the country according to the 2014 Research Excellence Framework (REF) assessment exercise carried out by HEFCE.

The MPLS Division is home to the non-medical sciences at Oxford and its 10 departments and 3 interdisciplinary units span the full spectrum of the mathematical, computational, physical, engineering and life sciences, and undertake both fundamental research and cutting-edge applied work. Our research tackles major societal and technological challenges – whether developing new energy solutions or improved cancer treatments, understanding climate change processes, or helping to preserve biodiversity, and is increasingly focused on key interdisciplinary issues. We collaborate closely with colleagues in Oxford across the medical sciences, social sciences and humanities, and with other universities, research organisations and industrial partners across the globe in pursuit of innovative research geared to address critical and fundamental scientific questions.

MPLS is proud to be the home of some of the most creative and innovative scientific thinkers and leaders working in academe. Our senior researchers have been awarded some of the most significant scientific honours (including Nobel prizes and prestigious titles such as FRS and FREng) and we have a strong tradition of attracting and nurturing the very best early career researchers who regularly secure prestigious fellowships. The Division is also the proud holder of ten Athena Swan Awards (5 Silver and 5 Bronze) illustrating our commitment to ensure good practice and to encourage women in science at all levels in the division.

We have around 6,000 full and part-time students (including approximately 1900 graduate students) and play a major role in training the next generation of leading scientists. Oxford's international reputation for excellence in teaching is reflected in its position at the top of the major league tables and subject assessments. MPLS academics educate students of high academic merit and potential from all over the world. Through a mixture of lectures, practical work and the distinctive college tutorial system, students develop their ability to solve major mathematical, scientific and engineering problems.

MPLS is dedicated to bringing the wonder and potential of science to the attention of audiences far beyond the world of academia. We have a strong commitment to supporting public engagement in science through initiatives including the Oxford Sparks portal (www.oxfordsparks.net) and a large variety of outreach activities; these are crucial activities given so many societal and technological issues demand an understanding of the science that underpins them. We also endeavour to bring the potential of our scientific efforts forward for practical and beneficial application to the real world and our desire is to link our best scientific minds with industry and public policy makers.

For more information please visit: www.mpls.ox.ac.uk

How to apply

Applications are made through our e-recruitment system and you will find all the information you need about how to apply 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 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.

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

Help and support is available from: https://hrsystems.admin.ox.ac.uk/recruitment-support

If you require any further assistance please email recruitment.support@admin.ox.ac.uk.

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: 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 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: https://hr.admin.ox.ac.uk/the-ejra

For **existing** employees, 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 **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 https://hr.web.ox.ac.uk/staff-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 https://www.sport.ox.ac.uk/home.

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 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 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 https://hr.admin.ox.ac.uk/family-friendly-benefits.

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 https://edu.admin.ox.ac.uk/disability-support.

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 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.