Job title	Lead Genomic Epidemiologist
Division	Medical Sciences
Department	Nuffield Department of Medicine
Location	Pandemic Sciences Institute, Li Ka Shing Centre for Health and Information Discovery, Old Road Campus, Headington, Oxford, OX3 7LF
Grade and salary	Grade 9: £52,815 - £61,198 with a discretionary range to £66,857 per annum
Hours	Full time
Contract type	Fixed-term contract until 31 May 2027 Funding is provided by the NIHR
Reporting to	Prof. David Aanensen, Professor and Director, Centre for Genomic Pathogen Surveillance
Vacancy reference	172975

Additional information	This role meets the eligibility requirements for a Skilled Worker Certificate of Sponsorship or a Global Talent Visa under UK Visas and Immigration legislation. Therefore, the Nuffield Department of Medicine welcomes applications from international applicants who require a visa.
About us	• University of Oxford - www.ox.ac.uk/about/organisation • Nuffield Department of Medicine (NDM) - https://www.ndm.ox.ac.uk • Unit - www.psi.ox.ac.uk
What we offer	https://hr.admin.ox.ac.uk/staff-benefits • An excellent contributory pension scheme • 38 days annual leave • A comprehensive range of childcare services • Family leave schemes • Cycle loan scheme • Discounted bus travel and Season Ticket travel loans • Membership to a variety of social and sports clubs • A welcoming and diverse community

Research topic	Genomic Epidemiology and Surveillance, Bioinformatics, Data Science
Principal Investigator / supervisor	Prof. David Aanensen
Project team	Centre for Genomic Pathogen Surveillance

Project web site	https://ghru.pathogensurveillance.net/
Funding partner	The funds supporting this research project are provided by NIHR
Recent publications	https://academic.oup.com/cid/issue/73/Supplement_4

The role

We are seeking a Lead Genomic Epidemiologist to join the Centre for Genomic Pathogen Surveillance (CGPS) in the Nuffield Department of Medicine. Within CGPS we focus on public health impact, data flow and the use of genome sequencing and allied data for surveillance of microbial pathogens through a combination of web application and software engineering, methods development and large-scale structured pathogen surveys and sequencing of microbes with delivery of information for decision making. Working with major public health agencies such as the US CDC, the European CDC, Public Health England and the WHO, systems are utilised to interpret and aid decision-making for infection control.

As the Lead Genomic Epidemiologist, you will bring scientific expertise, a strong background in the informed utility of genomics to aid infection control, a deep scientific understanding of the challenges around translating scientific insight into translational public health information and a drive to deliver distilled and rapid insight gleaned from increasingly large datasets for major bacterial and viral pathogens for decision making. You will be expected to generate and lead research projects with public health impact and output and to drive scientific questions pertinent to large-scale data and biological interpretation.

This role will primarily lead the delivery of the Digital Epidemiology workstream within the NIHR Global Health Research Unit on Genomics and enabling data for the Surveillance of Antimicrobial Resistance (GHRU). This project builds upon work with partners embedding genomic surveillance of AMR within national control programmes in Nigeria, India, the Philippines and Colombia (see https://academic.oup.com/cid/issue/73/Supplement_4). The current project trench focuses on enhancing genomics and data science to improve AMR surveillance for decision. The Digital Epidemiology workstream is pivotal to both assessing current genomic AMR surveillance ecosystems and in planning and implementing improvements in data flow to inform intervention and health-policy decisions more effectively using genomic AMR data.

This role entails supervision of students and junior staff and responsibility for generating project structure and strategy. You will be expected to contribute to the delivery of grant proposals and raise grant funding to further the aims of the Centre.

Responsibilities

You will:

- Lead the Digital Epidemiology workstream within the GHRU2 project in assessing and implementing data flow interventions into national genomic AMR ecosystems.
- Train and collaborate with our international collaborators in Digital Epidemiology approaches including gap analysis, stakeholder analysis, and implementation approaches.
- Identify, define, and plan projects that contribute to the centre's aims and align with the team's and institute's strategy.
- Contribute broad expertise and experience to developing methods for large-scale processing/visualisation of population-level data of microbial pathogens and antimicrobial resistance.
- Feed user needs into data tool development teams.
- Plan, decide prioritise and execute research studies by setting the context for research, identifying the best procedures to gather and analyse data, and establishing new methods or models when needed.
- Manage and mentor less experienced members of the team working in similar projects, such as students, post-docs and visiting workers, motivating and providing leadership and direction.

- Contribute to the efforts of the CGPS in resource mobilisation through developing and submitting proposals to funding agencies as lead applicant.
- Present regular updates and tailor research plan to the team's and project's objectives.
- Build and drive community uptake of methods developed – act as champion within the microbial genomics and microbiology community.
- Write and publish manuscripts and technical reports on scientific analytics and outputs.
- Contribute to the design and delivery of internal/external courses to train scientists in centre tools and promote collaboration.
- Attend and present at scientific seminars and meetings to disseminate results as appropriate.
- Communicate regularly with the principal investigator and the project managers on progress and developments, ensuring they are kept entirely up to date with progress and difficulties in the research projects.
- Participate in and support the public engagement and widening access activities of the Department and the University. This is anticipated to be not more than 2 days per year.
- 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/DPhil in a relevant subject (biological sciences, bioinformatics, computer sciences) with post-qualification research experience.
- Demonstrable experience, ability and practical success in pathogen genomics, antimicrobial resistance, bioinformatics, applications of genomics to public health or similar.
- Experience in high-throughput data analysis, integration and interpretation in pathogen genomics and antimicrobial resistance across a broad range of WHO priority pathogens.
- Extensive research experience and an ability to develop research projects and work on a large number of priorities simultaneously.
- A strong publication record in relevant fields.
- The ability to work closely with others while taking personal responsibility for assigned tasks.
- Ability to collaborate effectively with other computational and wet-lab scientists.
- The proven ability to communicate technical advice and intellectual support and assist others in data processing, analysis and interpretation.
- Excellent interpersonal skills, communication skills, and the ability to self-guide and work collaboratively with team members.

Desirable

- Experience in supervising and mentoring others within a team.
- Experience in working with international collaborators and building networks.
- Experience in writing grant applications.
- Experience in liaising with grant managers and other personnel to cost and oversee grant budgets.

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:

- Travel outside of Europe or North America on University Business

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.

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.

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). 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. Please note using a long file name may prevent you from uploading your documents.

- http://www.ox.ac.uk/about_the_university/jobs/research/

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

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 recruitment@ndm.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 online recruitment portal 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**, which with effect from 1 October 2023 will be 30 September before the 70th 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.