Job title	Research Assistant in Functional Genomics of Sepsis
Division	Medical Sciences
Department	Nuffield Department of Medicine
Location	Centre for Human Genetics, Old Road Campus, Roosevelt Drive, Headington Oxford, OX3 7BN
Grade and salary	Grade 6: Salary in range £32,332 - £38,205 per annum (pro rata)
Hours	Full time
Contract type	Fixed-term contract until 1 October 2027 Funding is provided by the Danaher Corporation
Reporting to	Julian Knight, Group Head/ Principal Investigator
Vacancy reference	170243

Hybrid working arrangements	**The successful person will need to work on site for a minimum of 3 days per week**
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.well.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	Genomics of Sepsis
Principal Investigator	Professor Julian Knight
Project web site	https://www.well.ox.ac.uk/research/research-groups/julian-knight-group
Funding partner	The funds supporting this research project are provided by the Danaher Corporation
Recent publications	Kwok AJ, Allcock A, Ferreira RC, Cano-Gamez E, Smee M, Burnham KL, Zurke Y-X, Emergency Medicine Research Oxford (EMROx), McKechnie S, Mentzer AJ, Monaco C, Udalova I, Hinds CJ, Davenport EE, Todd JA, Knight JC (2023). Neutrophils and emergency granulopoiesis drive immune suppression and an extreme response endotype during sepsis. Nature Immunology 24, 767-779 Cano-Gamez E, Burnham KL, Goh C, Malick ZH, Kwok A, Smith DA, Peters-Sengers H, Antcliffe D, Investigators G, McKechnie S, Scicluna BP, van der Poll T, Gordon AC, Hinds CJ, Davenport EE and Knight JC (2022). An immune dysfunction score for stratification of patients with acute infection based on whole blood gene expression. Science Translational Medicine 14, eabq4433

The role

Applications are invited for a Research Assistant in the Genomics of Sepsis at the University of Oxford. You will be based at the Wellcome Centre for Human Genetics (WHG) within the group of Professor Julian Knight, joining an established team with a track record of innovation and high impact research in functional genomics, sepsis and susceptibility to multi-factorial disease.

You will have the opportunity to join a programme of research that is being further advanced through a new collaboration with the Danaher corporation and its subsidiary Cepheid. This research is part of the Beacon programme 'Development and prospective evaluation of point-of-need test for sepsis subtyping based on gene expression using the Cepheid GeneXpert platform'. The programme seeks to advance precision medicine for patients with sepsis by developing a point-of-care test to stratify patients based on their immune response profiles. We aim to use an integrated approach which leverages the host transcriptome, immune profiling, and electronic health records, in combination with the GeneXpert system for mRNA quantification. Our goal is to deliver a precision medicine approach for managing patients with severe infections. The work is highly collaborative with clinical teams, company partners, and expert investigators across the UK, the US, and Sweden. You will facilitate exciting new collaborative links with Danaher, which may involve travel to Sweden (Cepheid) and the United States (Danaher).

We seek to develop a point-of-care test and associated algorithms which could distinguish between individuals at different levels of immune dysfunction. We also aim to identify decision points along the patient journey where this test could be most useful upon deployment.

You will be responsible for managing on-going sample collection from recruited patients with sepsis. Key tasks include sample processing and extraction, maintaining the sample biobank and associated databases, liaison with research nurse teams and researchers at Cepheid, running, supporting and validating the GeneXpert test, performing functional genomic assays including RNA-sequencing, and other work as required including immunological assays.

You will have relevant research experience in cell purification and tissue culture, immunology, molecular biology and genomics. Experience of management of sample collections will also be part of your skills set. You will be motivated by a stimulating and ambitious research environment with a desire to deliver high quality cutting-edge science and work in a laboratory offering the opportunity for career development and acquiring new expertise.

You will be part of a dynamic research team lead by Professor Julian Knight who has extensive experience in the functional genomics of immunity and sepsis. The team includes postdoctoral scientists with significant expertise in both wet lab and functional genomic analysis.

Responsibilities

You will:

- Manage sample collection from recruited individuals through excellent team communication and record keeping skills.
- Maintain and manage the project sample database.
- Support clinical phenotyping and related data management
- Perform cell and tissue culture including isolation of primary human cells and nucleic acids.
- Prepare and analyse blood samples for GeneXpert assay and relevant immunological, molecular biology and -omic assays.
- Work closely with the research nurse team and our collaborators in Danaher and Cepheid to ensure samples and data is shared in a timely and appropriate manner, and project milestones are met.
- Plan and monitor project deadlines. Multi-task and prioritise your own workload. Work with other members of the laboratory on related projects.
- Help in the education and training of staff and students as necessary and appropriate.

- Keep detailed, accurate and comprehensible records of experimental plans and work, aid in writing of reports and contribute to the publication of research findings in high quality journals.
- Attend appropriate scientific seminars and meetings and to remain up to date with developments in the relevant fields.
- Work as part of an interdisciplinary team, contribute fully to laboratory meetings and discussion of the aims and objectives of the group's work.
- Participate and support public engagement activities on behalf of the Centre, working with the Centre's Public Engagement and Communications Officer. This is anticipated to be around 2 days per year.
- Work closely with the group head and keep him up-to-date with progress and difficulties in the research project and undertake such other duties as may be required from time to time that are commensurate with the grade and responsibilities of this post.
- 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

- A degree in biology, genetics, immunology, biochemistry, molecular biology or related field.
- Demonstrable interest in the research described in the job description.
- Experience of patient blood or tissue sample processing in the laboratory and management of sample collections.
- Demonstrable high level of communication skills both written and oral.
- Ability to organise and prioritise work efficiently delivering results to required standard and to an agreed schedule.
- Evidence of working with accuracy, self-motivation and integrity.
- Evidence of sound decision-making, problem-solving, planning and organisation.
- Ability to work within a team effectively.

Desirable

- Experience in tissue culture and working with primary human cells.
- Experience of standard molecular biology techniques.
- Experience of maintaining databases for study sample collections and phenotyping data.
- Experience of functional genomic protocols.
- Knowledge of the principles and application of bioinformatics, statistical genetics and/or high throughput sequencing data analysis.

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:

- Working with blood, human products and human tissues
- Work with any substance which has any of the following pictograms on their MSDS:

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.