



<b>Job title</b>	Cloud Engineer, Oxford-GSK Institute of Molecular and Computational Medicine
<b>Division</b>	Medical Sciences
<b>Department</b>	Nuffield Department of Medicine
<b>Location</b>	Wellcome Centre for Human Genetics, Roosevelt Drive, Old Road Campus, Headington, Oxford, OX3 7BN  And the Big Data Institute, Old Road Campus, Headington, Oxford, OX3 7LF  There are opportunities for flexible and hybrid working.
<b>Grade and salary</b>	Grade 8: £45,585 - £54,395 with a discretionary range to £59,395 per annum  Whilst this role is a Grade 8 position, we would be willing to consider less experienced candidates who might be suitable for the role with adjusted duties to then be offered as an under fill at Grade 7: £36,024 – £44,263 with discretionary range to £48,350 per annum  This would be discussed with applicants at interview/appointment where appropriate.
<b>Hours</b>	Full time
<b>Contract type</b>	Fixed-term contract until 30 <sup>th</sup> September 2028
<b>Reporting to</b>	Adam Huffman, Research Computing Manager, and Associate Professor Brian Marsden, Director of Data Management and Research Informatics
<b>Vacancy reference</b>	163731
<b>Additional information</b>	Funding provided by GSK



## The role

This post provides an exciting opportunity to join the newly established multidisciplinary Oxford-GSK Institute of Molecular & Computational Medicine (IMCM) operating within Nuffield Department of Medicine (NDM) in collaboration with Nuffield Department of Clinical Neuroscience (NDCN), Nuffield Department of Population Health (NDPH) and Department of Physiology, Anatomy and Genetics (DPAG). The Institute is bringing together the very best scientific, clinical, technological and computational expertise from Oxford University and GSK in a unique industry/academic partnership. The aim of the Institute is to improve tools in, and knowledge from, genetics, genomics, molecular and single cell biology, spatial imaging, machine learning and novel methods of data handling to study the pattern of diseases in new ways. The Institute is developing disease agnostic platforms to change the clinical practise of pathology, helping to identify and validate early potential drug targets, and biomarkers to predict disease progression.

The Institute is built around fellows and Oxford-GSK project teams located across different departments within the Medical Sciences Division of the University. Initial projects focus on neurodegeneration and the central nervous system, specifically Alzheimer's disease, Parkinson's disease and amyotrophic lateral sclerosis but it is anticipated the range of activities will expand into other research areas in future.

A highly motivated and ambitious Cloud Engineer is required to help establish and support the IMCM Data Platform, reporting to Adam Huffman, Research Computing Manager in the Biomedical Research Computing (BMRC) team based at the Big Data Institute (BDI) and working closely with the IMCM Data Management and Data Science teams. The vision for the Data Platform is to be a Trusted Research Environment (TRE) where datasets are safely stored with appropriate access controls, and where IMCM researchers from both Oxford and GSK will carry out their research collaboratively. You will be responsible for ensuring it meets those researchers' requirements as they evolve, while satisfying the governance obligations arising from the datasets they are using. This will entail close and regular collaboration and consultation with Data Managers, Bioinformaticians, researchers, Public Cloud providers, information security and compliance teams, and colleagues in Oxford and GSK.

Close and ongoing engagement will be needed with the TRE vendor. You will create and track the progress of feature requests to supply new or modified functionality on the platform. Similarly, you will report faults or issues with the platform, and track their resolution.

You will be responsible for monitoring and optimising the costs of public cloud hosting, keeping up to date with service and pricing changes, making use of alerts and capacity planning tools, and looking for opportunities to work more cost effectively.

While some use of and exposure to public cloud services and technologies is expected, we see this as a role well suited to someone looking to build their experience in this area as a focus for their career. As such, we will consider applications that do not meet all the essential requirements.

## Responsibilities

You will:

- Lead the design, planning, provisioning, ongoing maintenance and development of the IMCM Data Platform.
- Create and update documentation for the IMCM-specific aspects of the Data Platform.
- Identify then swiftly and effectively resolve problems reported on the Platform.
- Setup monitoring of the Platform to inform capacity planning and help spot potential problems before they affect researchers.
- Setup cost monitoring using all appropriate tools to maximise cost-effectiveness of the Platform.
- Work with the data management and data science teams to ensure IMCM researchers' software requirements on the Platform are met.
- Ensure the security of the Platform, applying updates and configuration checks, arranging penetration tests if needed.
- Provide reporting on Data Platform usage as requested by the IMCM Leadership.
- Collaborate with Data Managers, Information Compliance and Information Security teams to ensure datasets are safely and appropriately managed.
- Communicate effectively with colleagues at all levels both within Oxford and at GSK to identify needs, risks and develop appropriate solutions, escalating where appropriate.
- Perform other relevant duties as required to support IMCM's activities
- 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

- Educated to degree level, or equivalent relevant experience
- Extensive experience of deploying workloads across virtualisation platforms at scale
- Experience of cloud platform engineering for production services. GCP experience is essential; experience with an additional provider preferred (Azure).
- Demonstrable experience of the fundamentals of cloud security and security compliance.
- Experience designing for scale and troubleshooting scaling and performance problems.
- Good understanding of technology stacks from networks up to applications.
- Shell scripting and related tooling (awk, sed, grep etc).
- Containerisation
- Hands-on experience with infrastructure-as-code tools such as Terraform, Ansible, Pulumi.
- Good experience coding and automating tasks in a high-level language, preferably Python.
- Excellent written and verbal communication skills, including the ability to communicate deeply technical concepts to non-technical audiences and contribute to strategic discussions
- Strong interpersonal skills and the ability to contribute to a supportive, helpful culture and work very closely with end users
- Enjoy working independently in a small team
- Self-motivated with a drive for performance and quality improvement
- Strong work ethic, strong professionalism, and the ability to quickly become an effective member of the team

### Desirable

- PhD in computer science or bioinformatics
- Experience of biomedical research environments, either academic or industrial
- Experience with Trusted Research Environments (Terra.bio, AzureTRE)



## 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>



## 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](http://www.ox.ac.uk/about/organisation).

## About the Nuffield Department of Medicine (NDM)

The Nuffield Department of Medicine aims to improve healthcare internationally through its research and teaching. Over the last fifty years, it has pioneered the use of genetics, structural and cellular biology to understand susceptibility to human disease; at the same time, it remains a department of clinical medicine with a clinical interface at the core of its success. The NDM is the largest department in the University of Oxford and the largest department of medicine in Europe by research income.

The department is organised around a series of strong and identifiably unique institutes, centres and units; but its aim is to be as non-hierarchical and closely-knit as possible, to encourage the very best interactions and the exchange of ideas between its staff. It supports teaching to encourage the very best students to join academic research. It maintains a £800m portfolio of externally funded research from over 140 different sponsors/funders, and has an annual turnover approaching £200m. The department's activity is run directly through the University, but also through a series of subsidiary companies and other legal vehicles, tailored to the activity and the countries within which it operates. Across these vehicles and partnerships, the department has over 3,000 staff and students working solely on, or supporting, its research and teaching; and 1,000 of these staff are based in Oxford. The NDM holds collaborative grants with ~40 other departments or centres in the University of Oxford.

The NDM is recognised for its diverse impacts in the field of healthcare. These range from the discovery of the mechanism of hypoxic gene regulation (Sir Peter Ratcliffe, Nobel Prize 2019) to the worldwide introduction of artemisinin and combination therapy for malaria (Sir Nick White and others). The underlying strength of the department, and its ability to bring together disciplines, has been evident through its contributions to the pandemic response, including: ISARIC and its overseas activity, IDDO and TGHN, the work of the Africa-Asia Programmes, the Oxford-AZ vaccine, elucidating the structural biology of variants and neutralising antibodies, the Office of National Statistics study, the UK Serology Surveillance platform, the standard testing of commercial assays for the Government, Mobile Apps, RECOVERY trial leading to the worldwide use of dexamethasone, the NHS cohort studies, the COMBAT study. This activity has certainly saved more than 2m lives during the pandemic.



The major strategic plans of the NDM are built around, (1) establishing a step-change in to clinical pathology and the study of human disease in all clinical specialities; (2) accelerating the discovery of new medicines; and (3) addressing the burden of worldwide infectious disease, including emerging threats. The GSK-Oxford Molecular and Computational Medicine Institute (MCMI) is aligned with this vision and will be primarily based in its Wellcome Centre for Human Genetics and Big Data Institute with strong links to other departments and its overseas activity.

The NDM has a strong commitment to careers and equality of opportunity and treatment. The Department holds an 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 the NDM pages of [Equality, Diversity and Inclusion](#).

For more information on NDM please visit: <https://www.ndm.ox.ac.uk>

## **Wellcome Centre for Human Genetics (WHG)**

The mission of the Wellcome Centre for Human Genetics is to integrate approaches in genetics, structural biology, proteomics and molecular and cellular biology to study the patterns of disease. Its aim is to change clinical practice, with a focus on identifiable and treatable mechanistic pathways. Its major clinical themes include the CNS, Autoimmunity and Inflammation, Infectious Disease, Cancer Biology, Human Genetics, and Cardiometabolic Disease. The Centre's estate is undergoing a major remodelling refurbishment in 2022. The Centre is committed to providing its investigators with the most appropriate cutting-edge technology and tools. For example, its world-renowned structural biology unit is at the forefront of developing high containment cryo-EM tomography for human tissues. It is committed to providing a strong interface with clinical practice, access to national resources and data management. The technology platforms in the Wellcome Centre are underpinned by a series of commercial collaborations, with Thermo-Fisher Scientific and others. The MCMI will benefit from these resource platforms and the wide variety of existing collaborations.

WHG is situated in the University of Oxford's Biomedical Research Campus in Headington, which is one of the largest concentrations of biomedical expertise in the world. It hosts more than 400 active researchers and around 70 employed in administrative and support roles. It benefits from strong links to the UK National Facilities at the nearby Harwell, including Diamond Light Source and Rosalind Franklin Institute, with several shared appointments

The WHG is partnered locally by the NDM Big Data Institute, Centre for Medicines Discovery and other institutes.

For more information please visit: <https://www.well.ox.ac.uk>

## **Oxford Big Data Institute**

The Big Data Institute is an interdisciplinary research centre, located within Oxford's Old Road Campus, bringing together researchers from core biology, computer science, statistics and engineering to develop the field of big data applied to biomedical research. Scientists working in the institute are at the centre of an analytical hub connected to the wider experimental and clinical community in Oxford and external partners. This includes the use of machine-learning and novel methods of data handling. The BDI provides core

facilities in high performance computing and house about 250 researchers drawn from a wide range of departments.

For more information please visit: <https://www.bdi.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>.

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/professionalandmanagement/](http://www.ox.ac.uk/about_the_university/jobs/professionalandmanagement/)

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](mailto:recruitment@ndm.ox.ac.uk)

To return to the online application at any stage, please go to: [www.recruit.ox.ac.uk](http://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 70<sup>th</sup> 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.



# 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.admin.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](http://www.club.ox.ac.uk) and <https://www.sport.ox.ac.uk/>.

## 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 <https://staffimmigration.admin.ox.ac.uk/visa-loan-scheme>

## 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 the Work+Family Space, 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/my-family-care>

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 <https://childcare.admin.ox.ac.uk/>

## Disabled

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](http://www.newcomers.ox.ac.uk).