**BIG DATA INSTITUTE**

<table>
<thead>
<tr>
<th>Job title</th>
<th>Bioinformatician/Computational Biologist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division</td>
<td>Medical Sciences</td>
</tr>
<tr>
<td>Department</td>
<td>Nuffield Department of Medicine</td>
</tr>
<tr>
<td>Location</td>
<td>Big Data Institute Building, Li Ka Shing Centre for Health Information and Discovery, Old Road Campus, Oxford, OX3 7LF</td>
</tr>
<tr>
<td>Grade and salary</td>
<td>Grade 7: £31,604 - £38,833 p.a (with a discretionary range to £42,418)</td>
</tr>
<tr>
<td>Hours</td>
<td>Full time</td>
</tr>
<tr>
<td>Contract type</td>
<td>Fixed term for 2 years in the first instance</td>
</tr>
<tr>
<td>Reporting to</td>
<td>Prof Cecilia Lindgren</td>
</tr>
<tr>
<td>Vacancy reference</td>
<td>133462</td>
</tr>
</tbody>
</table>

**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](http://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 state-of-the-art building at Oxford University's Old Road Campus, which opened in March 2017. This interdisciplinary research centre focuses on the analysis of large, complex, heterogeneous data sets for research into the causes and consequences, prevention and treatment of disease. To this end, BDI researchers will develop, evaluate and deploy efficient methods for acquiring and analysing information for large clinical research studies. These approaches will be invaluable in identifying the associations between lifestyle exposures, genetic variants, infections and health outcomes around the globe.

Research is conducted in 4 general themes: genomics, population health, infectious disease surveillance, and methodology (including informatics, statistics, and engineering). Big Data methods could transform the scale (breadth, depth and duration) and efficiency (data accumulation, storage, processing and dissemination) of large-scale clinical research. The work of the BDI requires people and projects that span traditional departmental boundaries and scientific disciplines, supported by technical resources to handle the vast quantities of data they generate.

Under the leadership of Professor Gil McVean (Director) and Professor Martin Landray (Deputy Director), the BDI will comprise around 350 researchers (approx. 30 research groups) drawn
from a wide range of departments and will form an analytical hub, deeply connected to the wider experimental and clinical community in Oxford and beyond.

Overview of the role

The Lindgren Lab, within the Oxford Big Data Institute, is in search of a highly motivated and capable individual to join our group as a Bioinformatician/Computational Biologist. In this role, the successful candidate will provide computational assistance and infrastructure management for the many projects occurring within the lab.

The group's research focuses on the integration and analysis of large-scale genetic and genomic data to understand the biological factors underlying risk of obesity traits and reproductive conditions. The successful candidate will be responsible for assisting the team in pursuing research projects that align with the group’s vision, and will give computational support to ensure the team reaches its goals and deadlines. Specifically, the role will require computational skills and familiarity with maintaining code (e.g., in GitHub). Importantly, the successful candidate will be familiar with genetic and genomic data types (including ATAC-Seq, Chip-Seq, RNA-Seq, and genotyping arrays), and standard quality control procedures, among others. A keen desire to work with team members in helping them to deliver high-impact science is essential. You will focus on assisting team members with analysis, data collection and processing, infrastructure & storage management/organization, as well as data visualization and figure production.

The successful candidate will be team-oriented and results-focused, demonstrating strong communication and interpersonal skills to enable collaboration with project teams, peers, and the larger computing community at the Big Data Institute.

Responsibilities/duties

- Help team members on a day-to-day basis to complete or assist analysis based around genetic and functional genomic data.
- Run analyses, such as genetic association analysis, fine-mapping, phenome-wide association scans.
- Write and document pipelines (e.g., to perform data quality control, run analyses, and visualize results).
- Maintain (commented) scripts and supporting documentation in GitHub for the teams’ broader use.
- Summarize and visualize results (particularly through tables and figures) and communicate results to the team
- Help train new members of the group in learning to use pipelines, work on high-performance compute clusters, and access data.
- Manage and document group data, including: creating a data structure that is easy to navigate, document this data structure and the data itself, archive data when necessary, help in minimizing data duplication.
- Support data and analysis logistics within the group.
- Track and log data in a way that the group and others can easily access and use. This includes, but is not limited to: posting data on dbGAP, making figures accessible on Figshare, and describing pipelines either internally or for group publications on arXiv.
Selection criteria

Essential

- B.Sc. in biology, computer science, engineering or any other quantitative STEM field(s).
- Working knowledge of genomic data, including genotyping (SNP array) data, sequencing data, and other data related to genome-wide association studies.
- Bioinformatics experience, including DNA/RNA alignment and data quality control.
- Experienced programmer: R, Python, code versioning (git).
- Experience with high-performance computing environments (e.g., SGE/OpenStack/AWS compute).
- Advise team members working on relevant projects, and to assist others in their work where appropriate.
- High level of self-motivation and results focused.
- To work independently and have ability to work well within a team.
- Strong communication and interpersonal skills.

Desirable

- Machine learning experience (Tensorflow/Keras/Theano).
- Web development experience.

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/acrelretire8+/

For existing employees, any employment beyond the retirement age is subject to approval through the procedures: www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/

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 and 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/

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/

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.

Family-friendly benefits
The University subscribes to My Family Care (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 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/

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