

Job Description

Summary

Job title	Computational Biologist
Division	Medical Sciences
Department	Radcliffe Department of Medicine (RDM) - Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM)
Location	OCDEM, Churchill Hospital, Oxford, OX3 7LE
Grade and salary	Grade 7: £39,424 - £47,779 per annum
Hours	Full-time (100% FTE)
Contract type	Fixed-term for 3 years
Reporting to	Professor Costas Christodoulides
Vacancy reference	189348
Additional information	This is a full-time, fixed-term research post funded for 3 years by the British Heart Foundation.

Research topic	Single-nucleus transcriptomics of adipose tissue, multi-omics and cardiometabolic disease.
Principal Investigator / supervisor	Professor Costas Christodoulides
Project team	Professor Costas Christodoulides (PI), Professor David Sims, Professor David Ray, Professor Fredrik Karpe, Professor Zhengming Chen and Professor Susanne Mandrup (University of Southern Denmark), with expertise spanning clinical metabolism, adipose biology, single-nucleus transcriptomics and genetic epidemiology.
Project web site	Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM) — Radcliffe Department of Medicine
Funding partner	British Heart Foundation (Project Grant PG/26/13029)
Recent publications	1. Loh NY et al. RSPO3 impacts body fat distribution and regulates adipose cell biology in vitro. Nat Commun. 2020;11:2797. PMID: 32493999.

	2. Loh NY et al. Bidirectional Mendelian randomisation highlights causal relationships between circulating INHBC and multiple cardiometabolic diseases and traits. <i>Diabetes</i>. 2024;73(12):2084–2094. PMID: 39283655. 3. Curion F et al. Panpipes: a pipeline for multiomic single-cell and spatial transcriptomic data analysis. <i>Genome Biol</i>. 2024;25:181. PMID: 38978088. Rosoff DB et al. Genetic evidence that FGF21 signaling reduces problematic alcohol use and alcohol-related liver disease. <i>J Hepatol</i>. 2026;84(6):1031–1044. doi:10.1016/j.jhep.2026.01.025. PMID: 41747774.
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Overview of the role

We are seeking a highly motivated Bioinformatician to lead the core computational analyses for a British Heart Foundation-funded three-year project investigating how RSPO3 regulates human body fat distribution and cardiometabolic risk. The study combines recall-by-genotype human phenotyping with single-nucleus RNA sequencing of abdominal and gluteal adipose tissue, large-scale proteomic datasets and genetic analyses. The postholder will analyse and integrate these data to define the cellular and molecular effects of RSPO3 and identify pathways linking adipose tissue biology to cardiometabolic disease. The appointee will bring strong computational and statistical skills and work closely with experts in adipose tissue biology, single-cell genomics and statistical genetics. The role offers substantial scope for intellectual contribution, method development, first-author publications and presentation of findings at national and international meetings.

Responsibilities/duties

- Prepare statistical and bioinformatic analysis plans and contribute to study design and planning.
- Analyse transcriptomic, genetic and proteomic datasets.
- Develop and adapt analytical methods and reproducible workflows with members of the research team.
- Provide bioinformatic and statistical advice and support to laboratory and clinical researchers, students and research staff.
- Identify and troubleshoot technical or scientific problems.
- Interpret results and plan follow-up analyses.
- Contribute to manuscripts, presentations and other research outputs.
- Present findings at project meetings and scientific conferences.
- Attend relevant scientific meetings, seminars and training.
- Contribute ideas and work effectively within a multidisciplinary team.

Selection criteria

Essential

- A degree and postgraduate qualification in bioinformatics, computational biology, statistics, computer science or a related quantitative discipline, or equivalent relevant experience.
- Demonstrable experience in transcriptomic data analysis, including RNA-seq data processing, differential expression and downstream biological interpretation.
- Strong programming skills in R and/or Python, demonstrated through analysis code, software development or equivalent computational outputs.

- Experience of working in Linux/Unix and high-performance computing environments.
- Good understanding of statistical methods relevant to genomic and transcriptomic data analysis.
- Ability to analyse complex datasets independently, troubleshoot analytical problems and interpret findings in a biological context.
- Demonstrable ability to organise and prioritise work effectively and deliver high-quality outputs to agreed timelines.
- Ability to communicate computational and statistical findings clearly to collaborators from a range of backgrounds.
- Ability to contribute to study design and analysis strategy and to work effectively within a multidisciplinary team.
- Ability to draft scientific manuscripts and present research findings at meetings and conferences.

Desirable

- A PhD, or equivalent experience, in bioinformatics, computational biology, statistical genetics or a related discipline.
- Experience of single-cell or single-nucleus RNA-seq analysis, including cell-type annotation, differential expression and pathway analysis.
- Experience of developing reproducible analytical workflows.
- Experience of Mendelian randomisation, colocalisation or related statistical genetic methods.
- Experience of working with GWAS, eQTL, pQTL or large-scale proteomic datasets.
- Experience of integrating transcriptomic, genetic, proteomic or phenotypic data.
- Knowledge of adipose tissue biology, obesity, insulin resistance or cardiometabolic disease.
- A track record of contributing to peer-reviewed publications involving bioinformatic or statistical 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. If you have previously worked for the University we will also verify key information such as your dates of employment and reason for leaving your previous role with the department/unit where you worked. 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.ox.ac.uk/about/jobs/explore-our-careers/applications-process/pre-employment-screening>

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 <https://www.ox.ac.uk/about>.

Radcliffe Department of Medicine (RDM)

The Radcliffe Department of Medicine (RDM) within the Medical Sciences Division is one of the largest departments in the University of Oxford. RDM has been delivering outstanding and impactful multi-disciplinary research since its formation in 2012. RDM's vision is to support a longer, healthier life for all. Our mission is to improve health through cross-disciplinary research to understand shared mechanisms of disease and to accelerate the transition from scientific discovery to clinical care. See our website for more details: <https://www.rdm.ox.ac.uk/about>

Strategy

Over the next five years we will:

- Deliver high impact research that generates new insights into the causes, prevention and treatment of diseases
- Drive interdisciplinary cross-cutting research themes to foster collaboration, shared platforms and capabilities
- Lead clinical trials of new treatments that impact on diagnosis and patient care
- Develop new technologies in experimental and clinical imaging that enable new research insights and clinical translation
- Develop IP leading to new spinouts and licence deals

Culture

We are passionate about supporting the career paths of all staff and students, to drive innovation and boost research capacity. We foster a positive culture that is inclusive and supportive of all staff and students, enabling them to reach their full potential.

We currently hold a Silver Athena Swan award in recognition of our efforts to introduce organisational and cultural practices that promote gender equality and create a better working environment for all. Read more: <https://www.rdm.ox.ac.uk/intranet/equality-diversity-and-inclusion>

We are particularly keen to receive applications from women and members of BAME communities who are currently under-represented at this level in the Department.

The Medical Sciences Division

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.

More information can be found here: www.medsci.ox.ac.uk

Oxford Centre for Diabetes, Endocrinology and Metabolism (RDM)

The Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM) is a pioneering centre which combines clinical care, research and education in diabetes, endocrine and metabolic diseases. By promoting world-class research, it aims to enhance understanding of these diseases, and to accelerate the search for new treatments and cures. Patients attending OCDEM are provided with a first class integrated care service.

The centre is fitted with top quality integrated laboratories and facilities for basic science and clinical research, and brings together the research and clinical expertise of groups investigating a wide range of related diseases at Oxford University. OCDEM conducts teaching and research in the context of clinical care and expedites the translation of research findings into clinical practice.

OCDEM has been awarded support from the NIHR Oxford Biomedical Research Centre, a government-funded partnership between the Oxford University Hospitals NHS Trust and the University of Oxford, to support translational research in diabetes. The goal of the BRC is to foster innovation to improve healthcare; it supports translational research that demonstrates direct patient benefit. A secondary aim is to establish the NHS as an internationally recognised centre of research excellence, by improving research, healthcare education and training. For more information, please visit: www.ocdem.ox.ac.uk

How to apply

Applications are made through our online recruitment portal. Information about how to apply is available on our Jobs website <https://www.ox.ac.uk/about/jobs/explore-our-careers/applications-process/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 internal candidates

If you currently work at the University please note that:

- as part of the referencing process, we will contact your current department to confirm basic employment details including reason for leaving and information about your performance.
- although employees may hold multiple part-time posts, they may not hold more than the equivalent of a full time post. If you are offered this post, and accepting it would take you over the equivalent of full-time hours, you will be expected to resign from, or reduce hours in, your other posts(s) before starting work in the new post.

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://www.ox.ac.uk/about/jobs/explore-our-careers/applications-process/support-with-online-applications>

Non-technical questions about this job should be addressed to the recruiting department directly.

To return to the online application at any stage, please go to: <https://www.ox.ac.uk/about/jobs/explore-our-careers/applications-process/how-to-apply>

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://www.ox.ac.uk/about/how-we-are-run/policies-and-statements/policy-hub/job-applicant-privacy-policy>. The University's Policy on Data Protection is available at: <https://www.ox.ac.uk/about/how-we-are-run/policies-and-statements/policy-hub/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** of 30 September before the 70th birthday.

For **existing** employees on these grades, any employment beyond the retirement age is subject to approval through the procedures: <https://unioxfordnexus.sharepoint.com/sites/OXINTRANET-working-here/SitePages/the-ejra.aspx>

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.

Equal Opportunity

The University of Oxford is committed to equal opportunity, and to being a place where everyone belongs and is supported to succeed. We recognise how the diversity of our community enriches our ability to deliver on our academic mission.

We welcome applications from individuals from all backgrounds, including those under-represented within higher education. No applicant or members of staff shall be unlawfully discriminated against on the basis of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

Employment with the University and progression within employment will be determined according to personal merit and the application of criteria related to the duties and conditions of the post. In all cases, the primary consideration will be the ability to perform the job.

As stated in the University's Equality Policy and Equality, Diversity and Inclusion Strategic Plan, our commitment to equality and diversity goes hand in hand with our commitment to academic freedom and free speech.

Benefits of working at the University

Employee benefits

University employees enjoy 38 days' paid holiday, generous pension schemes, flexible working options, support for sustainable travel and other discounts. Staff can also access a huge range of personal and professional development opportunities. See <https://www.ox.ac.uk/about/jobs/working-here>.

Employee Assistance Programme

As part of our wellbeing offering staff get free access to a confidential employee assistance programme, available 24/7 for 365 days a year. Find out more at <https://www.ox.ac.uk/about/jobs/life-in-oxford/healthcare-and-wellbeing>

University Club and sports facilities

Membership of the University Club is free for University staff. It 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/>.

Information for staff new to Oxford

Please see our Life in Oxford webpage for information on relocating to and settling into the Oxford area. The website offers valuable guidance, including information on where to find more details about housing, transportation, finances, healthcare, and other key aspects of living in Oxford and the surrounding region. See <https://www.ox.ac.uk/about/jobs/life-in-oxford>

There is also a visa loan scheme to cover the costs of UK visa applications for staff and their dependants. See <https://www.ox.ac.uk/about/jobs/explore-our-careers/applications-process/visas-and-immigration>

Family-friendly benefits

We are a family-friendly employer with one of the most generous family leave schemes in the Higher Education sector (see <https://www.ox.ac.uk/about/jobs/explore-our-careers/applications-process/terms-and-conditions-of-employment>). Our Childcare Services team provides guidance and support on childcare provision, and offers a range of high-quality childcare options at affordable prices for staff. In addition to 5 University nurseries, we partner with a number of local providers to offer in excess of 450 full time nursery places to our staff. Eligible parents are able to pay for childcare through salary sacrifice, further reducing costs. See <https://www.ox.ac.uk/about/jobs/life-in-oxford/childcare-and-schooling/childcare>.

Supporting disability and health-related issues (inc menopause)

We are committed to supporting members of staff with disabilities or long-term health conditions, including those experiencing negative effects of menopause. Contact the University's Staff Disability Advisor at staffdisability@admin.ox.ac.uk for further information.

Staff networks

The University has a number of staff networks including for research staff, BME staff, LGBT+ staff, disabled staff network and those going through menopause.

The University of Oxford Newcomers' Club

The University of Oxford Newcomers' Club is 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

Research staff

The Researcher Hub supports all researchers on fixed-term contracts. They aim to help you settle in comfortably, make connections, grow as a person, extend your research expertise and approach your next career step with confidence. Find out more <https://www.ox.ac.uk/research/support/researcher-hub/about>