
Oxford Centre for Diabetes, Endocrinology and Metabolism

Summary

Job title	Research Assistant
Division	Medical Sciences Division
Department	Radcliffe Department of Medicine (RDM) - Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM)
Location	OCDEM, Churchill Hospital, Headington, Oxford, OX3 7LE
Grade and salary	Grade 6: £32,332 - £38,205 per annum
Hours	Full time
Contract type	Fixed-term until 28/02/2029
Reporting to	Professor David Hodson
Vacancy reference	172064
Additional information	Interviews are scheduled to be held on 22/05/2024

Research topic	Type 1 diabetes
Principal Investigator / supervisor	Professor David Hodson
Project team	
Project web site	https://www.rdm.ox.ac.uk/people/david-hodson
Funding partner	The funds supporting this research project are provided by the "Steve Morgan Foundation Type 1 Diabetes Grand Challenge" by Diabetes UK and Steve Morgan Foundation.
Recent publications	doi: 10.1021/jacsau.2c00130 10.1038/s41467-022-35716-1



	doi: 10.1172/jci.insight.140288 doi: 10.1038/s41467-020-20632-z 10.1016/j.celrep.2020.107761 doi: 10.1038/s41467-020-14309-w
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The role

The successful applicant will join Prof. David Hodson's research group at the Oxford Centre for Diabetes, Endocrinology and Metabolism, University of Oxford. The lab has recently been awarded Steve Morgan Foundation Type 1 Diabetes Grand Challenge funding, together with partners at the University of Birmingham (Dr Ildem Akerman) and FMP Leibniz Berlin (Dr Johannes Broichhagen). The overarching aims of our Grand Challenge are to: 1) produce better functioning stem cell-derived beta cells to ensure long-lasting insulin-independence following transplantation into people living with T1D; 2) precision deliver therapy to the pancreatic beta cell surface that can fend off immune attack in the early stages of T1D; and 3) coax alpha cells, which survive immune destruction during T1D, to convert into insulin-positive cells to provide a new supply of beta cells without the need for transplantation. To allow this, we will target two receptors expressed by alpha cells and beta cells, GIPR and GLP1R, which have become the mainstay of type 2 diabetes and obesity treatment. Our major goal is to help improve stem cell-derived beta cell survival and function, allow immunotherapy to work better for longer with fewer side effects in patients, and provide more evidence that endogenous beta cells can be regenerated, together making beta cell replacement a more realistic possibility for the majority of people living with T1D.

Responsibilities

Laboratory

- Culture of primary cells (e.g. mouse and human islets) and cell lines (e.g. MIN6, HEK293):
- Culture of stem cell-derived beta cells.
- Contribution to rota for generation of stem cell-derived beta cells.
- Specific immunoassays for insulin, glucagon, etc.
- Amplification and maintenance of viral vectors containing biosensors.
- Isolation of RNA and quantification of gene expression, including for RNASeq, ATAC-seq and Chip-seq.
- Flow cytometry for cell sorting.
- Isolation of protein for quantification (e.g. Western blotting).
- Immunohistochemistry of fixed/frozen sections for various protein markers.
- Assisting with the generation, breeding, maintenance of genetically-modified animal colonies including genotyping.
- Mouse metabolic phenotyping (IPGTT, ITT, OGTT, body weights), with support and training from experienced lab members.
- Confocal microscopy and live imaging.
- Data and image analysis, including the use of common software packages (e.g. Graphpad Prism, ImageJ).
- To liaise with service engineers and to be responsible for them when on site.
- Analysis of data as required.
- Contribute to and write papers as required.
- Trouble-shooting and method development.

- To liaise with the PI on technical problems, workload, equipment and facility problems.
- To follow the University of Oxford safety guidelines and to adhere to OCDEM risk assessments and COSHH regulations concerning the handling of chemicals.

Communication

- Reporting any problems with equipment or services to the line manager as appropriate.
- Communicating with collaborators and contributing to these projects as required.

Education and Training

- To continuously broaden, deepen and consolidate technical knowledge and skill.
- To attend appropriate scientific seminars, training opportunities and meetings.
- To actively engage in the Personal Development Process.

General Responsibilities

- Ensuring that the facilities are maintained in a clean, functional and safe condition, reporting any problems through the appropriate channels.
- Ensuring the best use of equipment through booking systems, if appropriate.
- To contribute at a level appropriate with the grade, to internal and external audit procedures, and to regulatory inspections.
- To assist in supervising responsibilities in the lab.
- Budgetary/Finance awareness.
- Any other duties commensurate with the grade and skill base of the post holder as directed by either the Principle investigator for research based activities or the Technical Managers for non-research based activities.

Selection criteria

Essential selection criteria

- Hold a first degree, together with some relevant experience.
- Practical experience of relevant techniques required for the post, as listed.
- Positive service attitude and shows courtesy in dealing with others.
- Ability to organise and manage own work load after consultation with supervisor and demonstrate flexibility in terms of work practices/requirements.
- Ability to work as part of a team but to perform under minimum supervision.
- Flexibility to work on-site at collaborators in the UK and EU.
- Awareness of current relevant H&S policies.
- Proficiency in commonly used software packages.

Desirable selection criteria

- Manuscript writing skills.
- Proven communication skills in a multi-disciplinary team.
- Knowledge of physiology and metabolism.
- Experience in primary tissue cultures.

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.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:

- Lone Working
- Working with category 3b or 4 lasers (laser safety class)
- Working with infectious pathogens (hazard group 2/3) - Hazard Group 3 pathogens.
- Working with blood, human products and human tissues.
- Working with allergens, e.g. laboratory animals, pollen, dust, fish or insects etc.

- Working with any substance which has any of the following pictograms on their MSDS:



Additional security pre-employment checks

This job includes duties that will require additional security pre-employment checks:

- University security screening (e.g., identity 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.

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. Headed by Professor Keith Channon, RDM is a multi-disciplinary department which aims to tackle some of the world's biggest health challenges by integrating innovative basic biology with cutting edge clinical research. The Department was formed in 2012 and comprises:

- The Division of Cardiovascular Medicine (CVM)
- The Investigative Medicine Division (IMD)
- The Nuffield Division of Clinical Laboratory Sciences (NDCLS)
- The Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM)
- The majority of research groups from the MRC Weatherall Institute of Molecular Medicine (WIMM)

The Department has internationally renowned programmes in a range of areas, including cardiovascular sciences, diabetes and endocrinology, immunology, haematology and pathology. Our work is underpinned by excellence in molecular medicine, stem cell biology, genomics and clinical laboratory science.

The Department employs in the region of 535 staff, has around 140 postgraduate research students and has an annual turnover of around £63m, of which £42m is externally funded grants and contracts.

RDM supports a culture that is inclusive and supportive of all members, including those with caring responsibilities and those who work flexibly for other reasons. We are proud to be a [family friendly department](#), and are committed to creating a working environment that offers opportunities for working parents/carers to achieve their professional goals and develop their careers without having a detrimental effect on family life. To support this, we have a range of family friendly policies and practices including maternity, paternity and adoption leave, shared parental leave and unpaid parental leave, flexible/part-time working and scheduling meetings within core hours (9.30 a.m. -2.30 p.m.). Many of our staff work flexibly, with arrangements managed informally or formally.

The University of Oxford is a member of the Athena SWAN Charter and holds an institutional Bronze Athena SWAN award. RDM holds a departmental Silver Athena SWAN award in recognition of our efforts to introduce organisational and cultural practices that promote gender equality in SET to create a better working environment for both men and women



For more information on the Department please visit:

www.rdm.ox.ac.uk

Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM)

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.jobs.ox.ac.uk/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 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 (*ocdem.personnel@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** of 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.

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 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 dependants. 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 staff

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.

Oxford Research Staff Society (OxRSS)

A society run by and for Oxford University research staff. It offers researchers a range of social and professional networking opportunities. Membership is free, and all researchers employed by Oxford University are welcome to join. Subscribe at researchstaff-subscribe@maillist.ox.ac.uk to join the mailing list to find out about upcoming events and other information for researchers, or contact the committee on committee@oxrss.ox.ac.uk. For more information, see www.ox.ac.uk/oxrss, Twitter @ResStaffOxford, and Facebook www.facebook.com/oxrss.