



NUFFIELD DEPARTMENT OF  
**CLINICAL NEUROSCIENCES**

West Wing, Level 6, John Radcliffe Hospital, Oxford, OX3 9DU

Web: [www.ndcn.ox.ac.uk](http://www.ndcn.ox.ac.uk) | Tel: +44(0)1865 234702 | Email: [hr@ndcn.ox.ac.uk](mailto:hr@ndcn.ox.ac.uk)



UNIVERSITY OF  
**OXFORD**

<b>Job title</b>	Post-doctoral Researcher in Stem Cell Brain Models
<b>Division</b>	Medical Sciences Division
<b>Department</b>	Nuffield Department of Clinical Neurosciences (NDCN)
<b>Location</b>	<b>Weatherall Institute of Molecular Medicine (WIMM)</b>
<b>Grade and salary</b>	Grade 7: £31,604 - £38,833 per annum
<b>Hours</b>	Full time
<b>Contract type</b>	Fixed-term until 31/05/2023
<b>Reporting to</b>	Zameel Cader
<b>Vacancy reference</b>	150093
<b>Additional information</b>	N/A

<b>Research topic</b>	Molecular mechanisms of epileptogenesis in Tuberous Sclerosis Complex
<b>Principal Investigator / supervisor</b>	Zameel Cader
<b>Project team</b>	The Postdoctoral Fellow will become part of the Oxford Translational Molecular Neuroscience team, led by Zameel Cader, a highly active research group consisting of approximately 12 post-doctoral research scientists, technicians and DPhil students. You will be part of the Innovative Medicines Initiative AIMS-2-TRIALS research grant to develop stratified therapies in Autism.
<b>Project web site</b>	<a href="https://www.ndcn.ox.ac.uk/research/translational-molecular-neuroscience-group">https://www.ndcn.ox.ac.uk/research/translational-molecular-neuroscience-group</a> <a href="https://www.aims-2-trials.eu">https://www.aims-2-trials.eu</a>
<b>Recent publications</b>	<ol style="list-style-type: none"> <li>1: High glucose concentrations mask cellular phenotypes in a stem cell model of tuberous sclerosis complex. Rocktäschel P, Sen A, Cader MZ. <i>Epilepsy Behav.</i> 2019 Dec;101(Pt B):106581.</li> <li>2: Reproducibility of Molecular Phenotypes after Long-Term Differentiation to Human iPSC-Derived Neurons: A Multi-Site Omics Study. Volpato V et al. <i>Stem Cell Reports.</i> 2018 Oct 9;11(4):897-911.</li> <li>3: Handel AE et al. Assessing similarity to primary tissue and cortical layer identity in induced pluripotent stem cell-derived cortical neurons through single-cell transcriptomics. <i>Hum Mol Genet.</i> 2016 Mar 1;25(5):989-1000.</li> </ol>





NUFFIELD DEPARTMENT OF  
CLINICAL NEUROSCIENCES

West Wing, Level 6, John Radcliffe Hospital, Oxford, OX3 9DU

Web: [www.ndcn.ox.ac.uk](http://www.ndcn.ox.ac.uk) | Tel: +44(0)1865 234702 | Email: [hr@ndcn.ox.ac.uk](mailto:hr@ndcn.ox.ac.uk)



---

## Overview of the role

We are seeking to appoint a talented, hard-working Molecular and Cell Biologist at the level of Post-Doctoral Research Associate, to work on the molecular mechanisms of tuberous sclerosis complex (TSC). This will require differentiation of iPSC lines from patients with TSC2 mutations into different types of cortical neurons and astrocytes, to investigate how the mutation affects neurodevelopment and increases liability to seizures.

You will be part of the Innovative Medicines Initiative AIMS-2-TRIALS research grant to develop stratified therapies in Autism. You will be expected to provide support and guidance to research students where appropriate. You will also have opportunities to develop novel disease models and assays such as cerebral organoid cultures and single cell omics.

## Responsibilities

- Develop stem cell disease models for the agreed research project/s.
- Keep abreast of the literature relating to neurodevelopmental disorders, molecular and cellular phenotypes, epigenetics and stem cell models and related methodologies.
- Support and maintain collaborations of the Cader group research programmes
- Contribute to Cader lab meetings.
- Disseminate research results through the publication of peer-reviewed papers and oral/poster presentations at national and international scientific meetings.
- Assist in the supervision of research students and provide technical advice/guidance to other members of the group.
- Adhere to good laboratory practice and safety procedures within the University Department.
- Contribute to the public communication of science and to the application or exploitation of the research findings.





NUFFIELD DEPARTMENT OF  
**CLINICAL NEUROSCIENCES**

West Wing, Level 6, John Radcliffe Hospital, Oxford, OX3 9DU

Web: [www.ndcn.ox.ac.uk](http://www.ndcn.ox.ac.uk) | Tel: +44(0)1865 234702 | Email: [hr@ndcn.ox.ac.uk](mailto:hr@ndcn.ox.ac.uk)



## Selection criteria

### Essential

- Hold, or be working towards completion of, a PhD / DPhil in molecular or cellular biology or neuroscience.
- Skilled in human stem cell tissue culture and molecular biology techniques
- Experience with iPSC derived neuronal assays such as calcium imaging, multi-electrode arrays, ELISAs, immunofluorescence
- Good publication track record and experience of presenting work at meetings.
- Excellent interpersonal skills, communication and organisational skills
- Able to work independently and within a team.

### Desirable

- Experience of developing stem cell disease models in neurological or neurodevelopmental disorders
- Demonstrably skilled with performing cellular assays - electrophysiology, multi-electrode arrays, calcium imaging
- Accustomed to planning experiments, capturing data and meeting reporting deadlines

## 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>





NUFFIELD DEPARTMENT OF  
**CLINICAL NEUROSCIENCES**

West Wing, Level 6, John Radcliffe Hospital, Oxford, OX3 9DU

Web: [www.ndcn.ox.ac.uk](http://www.ndcn.ox.ac.uk) | Tel: +44(0)1865 234702 | Email: [hr@ndcn.ox.ac.uk](mailto:hr@ndcn.ox.ac.uk)



## 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).

## Medical Sciences Division

The Medical Sciences Division is an internationally recognized centre of excellence for biomedical and clinical research and teaching, and 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 visit: [www.medsci.ox.ac.uk](http://www.medsci.ox.ac.uk)

## The Nuffield Department of Clinical Neurosciences

The Nuffield Department of Clinical Neurosciences (NDCN), led by Prof Kevin Talbot, has over 400 staff and 150 postgraduate students. NDCN has an established research and teaching portfolio with a national and international reputation for excellence.

NDCN is based in high quality research and clinical facilities in the West Wing of the John Radcliffe Hospital, alongside the Department's world-class Oxford Centre for Functional MRI of the Brain (FMRIB), the Weatherall Institute of Molecular Medicine (which houses 3 of our research groups) and provides the ideal facilities to translate research from bench to bedside. In keeping with the award of NIHR Comprehensive Biomedical Research Centre status, to a partnership between Oxford University and the Oxford Radcliffe Hospitals NHS Trust, we have developed a highly integrated and interdisciplinary environment in which research, teaching, clinical training and clinical care interact. This enables us to establish new approaches to the understanding, diagnosis and treatment of brain diseases. To this end the Department fosters collaborations worldwide and warmly welcomes visiting scientists, clinical fellows and students. The Department comprises six sections:

For more information visit: [www.ndcn.ox.ac.uk](http://www.ndcn.ox.ac.uk)





NUFFIELD DEPARTMENT OF  
**CLINICAL NEUROSCIENCES**

West Wing, Level 6, John Radcliffe Hospital, Oxford, OX3 9DU

Web: [www.ndcn.ox.ac.uk](http://www.ndcn.ox.ac.uk) | Tel: +44(0)1865 234702 | Email: [hr@ndcn.ox.ac.uk](mailto:hr@ndcn.ox.ac.uk)



## **Medical Research Council Brain Network Dynamics Unit**

The MRC BNDU is directed by Professor Peter Brown and is exceptionally multidisciplinary, integrating research programmes that span clinical, experimental and computational neuroscience. The Unit's collective goal is to understand and exploit the moment-to-moment interactions between nerve cells that are critical for brain functions, with a special focus on the brain circuits underlying movement and memory.

For more information visit: [www.mrcbndu.ox.ac.uk](http://www.mrcbndu.ox.ac.uk)

## **Nuffield Division of Anaesthesia**

NDA is led by Associate Professor Andrew Farmery. The NDA is committed to the development and maintenance of internationally competitive research programmes in pain and consciousness; respiration and hypoxia; adult and neuro-intensive care; simulation and human factors training.

For more information visit [www.nda.ox.ac.uk](http://www.nda.ox.ac.uk)

## **Division of Clinical Neurology**

DCN is led by Professor David Bennett. DCN is committed to the development of research programs that improve understanding of the nervous system in health and disease.

For more information visit [www.dcn.ox.ac.uk](http://www.dcn.ox.ac.uk)

## **Centre for Functional Magnetic Resonance Imaging of the Brain**

FMRIB is led by Professor Heidi Johansen-Berg. FMRIB is an internally recognised human neuroimaging centre housing both 3T and 7T scanners. The Centre has strong programmes of research in MR physics, image analysis and the applications of neuroscience in health and disease.

For more information visit [www.fmrib.ox.ac.uk](http://www.fmrib.ox.ac.uk)

## **Nuffield Laboratory of Ophthalmology**

NLO is led by Professor Russell Foster, who leads the Sleep & Circadian Neuroscience Institute. NLO pursues scientific and clinical research into a range of areas related to vision, the eye and circadian neuroscience.

For more information visit [www.nlo.ox.ac.uk](http://www.nlo.ox.ac.uk)

## **Centre for the Prevention of Stroke & Dementia**

CPSD is led by Professor Peter Rothwell. The centre carries out research that increases understanding of the causes of cerebrovascular disease. Its aims are to improve prevention of stroke and dementia by earlier diagnosis, more reliable prognostication, and more effective use of existing preventive treatments in routine clinical practice.

For more information visit [www.cpsd.ox.ac.uk](http://www.cpsd.ox.ac.uk)

## **Working at NDCN**

NDCN actively promotes a healthy work life balance amongst employees through a number of family friendly policies. See <https://hr.admin.ox.ac.uk/staff-benefits> for further information.

The University of Oxford is a member of the [Athena SWAN Charter](#) and holds an institutional Bronze Athena SWAN award. The Department of Clinical Neurosciences holds a departmental







NUFFIELD DEPARTMENT OF  
CLINICAL NEUROSCIENCES

West Wing, Level 6, John Radcliffe Hospital, Oxford, OX3 9DU

Web: [www.ndcn.ox.ac.uk](http://www.ndcn.ox.ac.uk) | Tel: +44(0)1865 234702 | Email: [hr@ndcn.ox.ac.uk](mailto:hr@ndcn.ox.ac.uk)



Silver Athena award in recognition of its efforts to introduce organisational and cultural practices that promote advancement of gender equality: representation, progression and success for all.

## 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>.

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 three 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

Help and support is available from: <https://hrsystems.admin.ox.ac.uk/recruitment-support>

If you require any further assistance please email [recruitment.support@admin.ox.ac.uk](mailto:recruitment.support@admin.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 e-recruitment system to confirm receipt of your application. **Please check your spam/junk mail** if you do not receive this email.





NUFFIELD DEPARTMENT OF  
CLINICAL NEUROSCIENCES

West Wing, Level 6, John Radcliffe Hospital, Oxford, OX3 9DU

Web: [www.ndcn.ox.ac.uk](http://www.ndcn.ox.ac.uk) | Tel: +44(0)1865 234702 | Email: [hr@ndcn.ox.ac.uk](mailto:hr@ndcn.ox.ac.uk)



## 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 all academic posts and some academic-related posts. The University has adopted an EJRA of 30 September before the 69<sup>th</sup> birthday for all academic and academic-related staff in posts at **grade 8 and above**. The justification for this is explained at: <https://hr.admin.ox.ac.uk/the-ejra>

For **existing** employees, 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 **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.





NUFFIELD DEPARTMENT OF  
CLINICAL NEUROSCIENCES

West Wing, Level 6, John Radcliffe Hospital, Oxford, OX3 9DU

Web: [www.ndcn.ox.ac.uk](http://www.ndcn.ox.ac.uk) | Tel: +44(0)1865 234702 | Email: [hr@ndcn.ox.ac.uk](mailto:hr@ndcn.ox.ac.uk)



UNIVERSITY OF  
OXFORD

## 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 My Family Care, 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](http://www.newcomers.ox.ac.uk).

