

Nuffield Department of Surgical Sciences

Job title	Postdoctoral Research Associate in Metastasis Metabolism
Division	Medical Sciences
Department	Nuffield Department of Surgical Sciences
Location	Botnar and Radiobiological Research Institute
Grade and salary	Grade 7: £36,024 - £44,263 per annum
Hours	Full time
Contract type	Fixed-term (2 years) externally-funded
Reporting to	<i>Dr Edward O'Neill and Prof. Claire Edwards</i>
Vacancy reference	NDSA914B
Additional information	<p>If you have caring responsibilities (childcare or medical/elder care) and need to hire professional services to enable you to attend your interview with NDS, we will be happy to reimburse you for these costs in full*.</p> <p>*Any amount must have prior agreement.</p>

Research topic	Imaging metabolic resistance mechanisms towards radionuclide therapy in prostate cancer bone metastases
Principal Investigator / supervisor	Dr Edward O'Neill and Professor Claire Edwards
Funding partner	Prostate Cancer Foundation



The role

Radionuclide therapies such as ^{177}Lu -PSMA are an exciting new treatment that show promise to systemically deliver therapeutic doses of radiation selectively to prostate cancer metastases, but due to the biological heterogeneity of prostate cancer, a high uptake of ^{177}Lu -PSMA cannot yet promise a response in the clinic. This project seeks to decode this lack of dose-response by imaging the metabolic fingerprint of prostate cancer within the bone microenvironment using both existing PET imaging agents and imaging mass spectrometry to identify and target metabolic radioresistance mechanisms with tailored drug combinations. The bone microenvironment in particular is known to affect prostate cancer metabolism and this project will investigate how these metabolic changes affect radioresistance and the potential to sustain or awaken prostate cancer from dormancy.

We are looking to appoint a post-doctoral research associate, for a well-resourced project funded by Prostate Cancer Foundation, to study the role of metabolism in the radionuclide treatment of prostate cancer bone metastasis. You will work within Prof. Edwards' and Dr. O'Neill's research teams focused on bone metastasis and radionuclide therapy respectively. The radiopharmaceutical industry worldwide is rapidly expanding beyond our current understanding of radionuclide radiobiology and currently presents an exciting opportunity for candidates from diverse backgrounds to develop a career in radionuclide therapy research. It is anticipated that the rich datasets from this project will inform the design of an image guided theranostics early clinical trial and also provide support for independent research fellowships and additional projects.

Responsibilities

- Study of murine models of prostate cancer bone metastasis using PET/SPECT/CT, imaging mass spectroscopy, histology, and histomorphometry.
- Cell culture, functional assays, metabolomic analysis (LC-MS), and molecular studies using prostate cancer cells and bone cells
- Manage own academic research and administrative activities. This involves small scale project management, to co-ordinate multiple aspects of work to meet deadlines
- Adapt existing and develop new scientific techniques and experimental protocols, test hypotheses and analyse scientific data from a variety of sources, reviewing and refining working hypotheses as appropriate
- Contribute ideas for new research projects and generating research income, and present detailed research proposals to senior researchers
- Collaborate in the preparation of scientific reports and journal articles and present papers and posters
- Use specialist scientific equipment in a laboratory environment
- Represent the research group at external meetings/seminars, either with other members of the group or alone
- To interact with other members of the Bone Oncology and Prostate Cancer Biology Groups and external collaborators, where appropriate offer help and advice, including supervision of technical staff and students.
- Undertake other duties as may be required from time to time that are commensurate with the grade and responsibilities of the post.

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>

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 (OHS), and the offer of employment will be subject a successful outcome of this assessment.

The hazards or safety-critical duties involved are as follows:

- Working with Ionising Radiation
- Working with blood, human products and human tissues
- Work with allergens, Eg laboratory animals, pollen, dust, fish or insects etc.
- Work 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 (eg identity checks)

Selection criteria

Essential selection criteria

- Hold or be near completion of a PhD in a medical/biological subject or equivalent (or PhD submitted)
- Substantial previous laboratory experience and high level of technical competence in a similar research field (e.g. metabolomics, bone biology, radiobiology, oncology)
- Willingness to work with in vivo animal models.
- Willingness to handle open-sourced radiation safely.
- Ability to manage own academic research and associated activities
- Be able to demonstrate competence and success in their research area, e.g; as judged by first name publications (or papers in press) in high quality peer-reviewed journals, oral presentations at national/international meetings, awards etc.
- Ability to contribute ideas for new research projects and research income generation
- Excellent communication skills, including the ability to write for publication, present research proposals and results, and represent the research group at meetings
- Ability to work effectively as part of a team, as well as independently and be prepared to take initiative to offer help and advice to colleagues and external collaborators where needed

Desirable selection criteria

- Personal Home office licence
- Experience of independently managing a discrete area of a research project
- Experience of metabolism research

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.

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.

For more information please visit: www.medsci.ox.ac.uk

Nuffield Department of Surgical Sciences

At the Nuffield Department of Surgical Sciences (NDS), we don't just talk about valuing our staff: we back it up with action. From flexible working to our generous family policies, we prove on a daily basis our commitment to supporting our staff and allowing them to decide how they work best.

NDS is one of the few remaining academic surgical departments in the UK, currently hosting academics from every surgical discipline who undertake both basic and translational research, reflecting our true multidisciplinary dimension and integrating surgical practice with cutting-edge science. The research environment in NDS includes a long-established immunology, tolerance and transplantation group, alongside well-established groups in bone cancer biology, islet-cell isolation and transplantation, cardiovascular, functional neurosurgery, high intensity focused ultrasound and urological oncology. In recent years, the department has expanded in areas of basic cancer research, pathology, bioinformatics and artificial intelligence. In addition, NDS is home to multiple biobanks, a clinical trials centre and a group of research nurses underpinning the research we do in the department.

We also host two taught master's courses and offer opportunities for research training for clinical and non-clinical graduates. In addition, we are responsible for delivering the surgical training to the University of Oxford Medical School undergraduates.

For more information please visit: www.nds.ox.ac.uk

Equality, Diversity and Inclusion

NDS is proud to have an Athena Swan Silver award, recognising the work we have undertaken to establish a culture of inclusivity and flexibility.



The EDI Committee oversees the department's equality, diversity and inclusion strategy. This includes all activity relating to NDS' Athena Swan submission, and making the department fair accessible to all. We understand the systemic barriers that exist for those from marginalised communities and are constantly working to identify and remove those barriers to ensure everyone in our department has access to the same opportunities. We are committed to:

- establishing an open, supportive and family-friendly working culture
- supporting career progression through departmentally funded training opportunities, career conversations and mentoring.
- proactive communication of flexible working options, support for carers and wellbeing resources available within the department.

NDS actively promotes **family-friendly policies** to help foster a family-friendly working environment, including provision of family leave (including shared parental, carers and adoption leave), flexible/part-time working and scheduling meetings within core hours that are compatible with personal/family commitments.

The University's **childcare services** support staff with Tax Free Childcare to help staff save tax and national insurance on childcare costs, and we offer information on nursery providers and a nursery fee Salary Sacrifice Scheme. Our partnership with playscheme providers helps to support families during school holidays and signpost staff to parenting, local authority and other organisations that help support families and parents.

The Department is committed to ensuring that staff undertaking **part-time or flexible working** receive the same access to benefits and entitlements as full-time staff, including the same opportunities for training and promotion, a pro-rata entitlement to leave including bank holidays and careful consideration of requests to work part-time (particularly for those by staff returning from maternity leave).

For more information please visit:

<http://www.admin.ox.ac.uk/personnel/staffinfo/benefits/family/> and
<http://www.admin.ox.ac.uk/personnel/during/flexible/>

The best indication of how we value our people comes directly from our staff's comments in the 2022 NDS staff experience survey:

"The department is so supportive to the staff, very kind and generous. Trusting to work flexibly while work still gets done."

"I like the inclusivity of our department, forward thinking and progressive, it makes me feel comfortable where I work."

"[NDS] is a great place to work at in terms of the overall support, relationships with peers, departmental management and senior leadership. Thank you all for putting all the effort and hard work in trying to make the department a better place of work."

"The interest towards employee's wellbeing is real. There is a will to implement changes aimed at improving inclusiveness and equality."

We encourage applications from candidates regardless of gender identity, race, disability, age, neurodivergence, sexual orientation, religion or belief, marital status, or pregnancy and maternity. To learn more about EDI in our department, visit [our website](#).

Potential applicants may contact recruitment@nds.ox.ac.uk to discuss any aspect of EDI in the Department.



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 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 at: recruitment@nds.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.