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DEPARTMENT OF BIOCHEMISTRY

**Job Description**

<b>Job title</b>	Postdoctoral Research Associate in Mechanisms of Cell Signalling
<b>Division</b>	Medical Sciences
<b>Department</b>	Biochemistry
<b>Location</b>	New Biochemistry, South Parks Road, Oxford, OX1 3QU
<b>Grade and salary</b>	Grade 7: £41,997 - £46,913 per annum
<b>Hours</b>	Full time (37.5 hours per week)
<b>Contract type</b>	Fixed term contract for up to 3 years in the first instance, with a possibility of further extension.
<b>Reporting to</b>	Dr Michael Ranes
<b>Vacancy reference</b>	179455
<b>Additional information</b>	You are required to submit a CV and a supporting statement with your application, outlining how you meet each of the selection criteria for the role (see below for details). Your application will not be processed if you do not include both documents.

<b>Research topic</b>	Molecular mechanisms in Wnt signal transduction
<b>Principal Investigator / supervisor</b>	Dr Michael Ranes
<b>Project team</b>	Ranes Lab
<b>Project web site</b>	<a href="http://www.bioch.ox.ac.uk/research/ranes">www.bioch.ox.ac.uk/research/ranes</a>
<b>Funding partner</b>	The funds supporting this research project are provided by the Wellcome Trust
<b>Recent publications</b>	Ranes, M., Zaleska, M., Sakalas, S., Knight, R. & Guettler, S. "Reconstitution of the destruction complex defines roles of AXIN polymers and APC in $\beta$ -catenin capture, phosphorylation, and ubiquitylation." <i>Mol Cell</i> 81, 3246-3261 (2021).

## The role

The Raney Lab is seeking a talented Postdoctoral Research Associate to investigate the molecular mechanisms driving the Wnt/beta-catenin signalling pathway at the plasma membrane. The lab undertakes a multidisciplinary approach spanning biochemistry/biophysics, cell biology and structural biology to address our research questions. The successful candidate will build on our previous success in the biochemical reconstitution of beta-catenin destruction complex, to investigate the mechanisms underpinning Wnt pathway activation and termination at the plasma membrane using both *in vitro* and cell-based approaches. In this endeavour the position is for a Postdoc with expertise in cell signalling pathways, protein biochemistry and *in vitro* cell biology. You will be responsible for studying the regulation and recruitment of cytoplasmic signal transduction proteins to the Wnt receptor complexes using state-of-the-art tools and resources, such as *in vitro* protein reconstitution to dissect discrete transduction steps, CRISPR approaches and super-resolution microscopy.

It is expected that the successful candidate will work independently yet collaboratively with the rest of the team, and external stakeholders, to synergise our efforts to understand mechanisms of Wnt signal transduction in health and disease. Therefore, excellent communication skills are essential. This post provides an outstanding training opportunity for candidates with a passion to tackle complex scientific problems with curiosity and creativity.

The lab provides an inclusive environment to empower lab members to express themselves, propose novel ideas and give actionable feedback. In addition, lab members will be provided with the guidance and tools to maximise their potential to advance in both their professional and personal development. This is an opportunity to play an integral role within a team of researchers in a clinically important field of biology, which is supported both by the world-class facilities in the Department of Biochemistry and broader Oxford research environment.

## Responsibilities

- Manage own research and administrative activities and keeping accurate records of all experimental results. Gather, analyse, and present scientific data from a variety of sources.
- Contribute to wider project planning, including ideas for new research directions.
- Determine the most appropriate methodologies to test hypotheses and troubleshoot, adapt, or identify suitable alternatives if technical problems arise.
- To develop and to keep an up-to-date knowledge of the literature in the subject area.
- Contribute to written and oral dissemination of the research through scientific publications and presentations within the lab/department and at external conferences.
- Collaborate effectively with other team members and collaborators to achieve collective goals.
- Contribute to the supervision of junior lab members, discuss research results, and provide advice as appropriate.
- To seek appropriate training, including taking an active part in any training programmes organised for postdoctoral fellows.
- To be accountable for personal and professional conduct and contribute to fostering a positive working environment within the lab and wider department.
- Participate in any shared general laboratory duties with other lab members to ensure smooth running of experimental work for all.
- Comply with departmental health and safety regulations and undertake mandatory training as required by the University and Department.

## Selection criteria

### Essential

1. Hold a PhD/DPhil or be near completion of a PhD/DPhil in biochemistry, cell biology, or related discipline.
2. Substantial experience in basic molecular biology techniques in particular recombinant DNA techniques.
3. Experience in the expression and purification of recombinant proteins, with relevant experience in biochemical and biophysical characterisation methods.
4. Possess sufficient specialist knowledge and experience in mammalian cell culture and associated cell-based techniques such as, reporter assays, confocal microscopy, live cell imaging.
5. Demonstrate strong organisational skills with the ability to effectively and efficiently prioritise and multi-task lab duties, both independently and as part of a team within set deadlines.
6. Excellent oral and written communication skills, demonstrating ability to write for publication, present research proposals and results at internal and external meetings.
7. Proven track record of producing high quality data leading to peer-reviewed publications (at least one first author publication in an expert journal).

### Desirable selection criteria

1. Prior experience working with membrane proteins.
2. Experience in super-resolution imaging techniques and associated data-analysis methods.
3. Experience in CRISPR gene editing techniques.

## 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
- Regular manual handling
- Working with Ionising Radiation

- 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:



## 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).

## Department of Biochemistry

The Department of Biochemistry in Oxford was established in 1920 and is now one of the largest in Europe. Situated in an attractive area close to the University Parks and River Cherwell, the Department is housed in the University Science Area and is currently undergoing a major expansion programme centred on the recently completed and award-winning New Biochemistry Building. The Science Area includes the Radcliffe Science Library and the Natural History Museum, and is conveniently located for easy access to the town centre and colleges.

The department includes research laboratories working in the areas of Cell Biology, Development and Genetics; Chromosomal and RNA Biology; Infection and Disease Processes; Microbiology and Systems Biology; and Structural Biology and Molecular Biophysics. It is particularly well equipped with an extensive computer network, all the basic hardware essential in today's research, together with an excellent range of state-of-the-art specialist equipment.

For more information please visit: <http://www.bioch.ox.ac.uk/>

**The University of Oxford is a member of the [Athena SWAN Charter](#) and holds an institutional Bronze Athena SWAN award. The Department of Biochemistry is strongly committed to equality and valuing diversity and we operate a flexible working policy for all staff. The Department holds a departmental Silver Athena SWAN award to recognise advancement of gender equality: representation, progression and success for all.**

## 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. It includes 15 clinical departments and 5 non-clinical departments.

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:** [http://www.ox.ac.uk/divisions/medical\\_sciences.html](http://www.ox.ac.uk/divisions/medical_sciences.html)

## 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 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.

If you currently work for 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
- 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.

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## 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).

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## 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  
[recruitment@bioch.ox.ac.uk](mailto:recruitment@bioch.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 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 70<sup>th</sup> 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.

### The University's Policy on Information Security Awareness

The information security awareness training is **compulsory** for all University staff; and as part of our responsibility as a Department, **ALL** employees of the Department will be required to complete the [online information security awareness module](#), which provides a combination of information, case studies and links to additional resources relating to information security. You will be expected to complete this course as part of your induction process, on your first day working in the Department of Biochemistry. This training will also need to be completed in order to successfully complete your probationary period.

In order to ensure that we are compliant and up-to-date with the information security awareness training, we need to ensure that all staff members have completed the latest course, which may be accessed from the Information Security's website by using the following link:  
<https://www.infosec.ox.ac.uk/guidance-policy/training-and-awareness>

**You will also be required to undertake this course on an annual basis, in order to satisfy the security awareness training requirements of the University's Information Security Policy.**

## Benefits of working at the University

### Employee benefits

University employees enjoy 38 days' paid holiday, generous pension schemes, flexible working options, travel discounts including salary sacrifice schemes for bicycles and electric cars and other discounts. Staff can access a huge range of personal and professional development opportunities. See <https://hr.admin.ox.ac.uk/staff-benefits>

### Employee Assistance Programme

As part of our wellbeing offering staff get free access to Health Assured, a confidential employee assistance programme, available 24/7 for 365 days a year. Find out more <https://staff.admin.ox.ac.uk/health-assured-eap>

### 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](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 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

We are a family-friendly employer with one of the most generous family leave schemes in the Higher Education sector (see <https://hr.web.ox.ac.uk/family-leave>). 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://childcare.admin.ox.ac.uk/>.

### 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. Information about the University's Staff Disability Advisor, is at <https://edu.admin.ox.ac.uk/disability-support>. For information about how we support those going through menopause see <https://hr.admin.ox.ac.uk/menopause-guidance>

### 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. Find out more at <https://edu.admin.ox.ac.uk/networks>

### 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](http://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-researchers/researcher-hub>

Oxford's Research Staff Society is a collective voice for our researchers. They also organise social and professional networking activities for researchers. Find out more <https://www.ox.ac.uk/research/support-researchers/connecting-other-researchers/oxford-research-staff-society>