DEPARTMENT OF BIOCHEMISTRY
Job Description

Job title	Postdoctoral Research Associate in flow cytometric preparation and analysis of mitotic chromosomes
Division	Medical Sciences
Department	Biochemistry
Location	Dorothy Crowfoot Hodgkin Building, South Parks Road, Oxford, OX1 3QU
Grade and salary	Grade 7: £41,997 - £46,913 per annum
Hours	Full Time (37.5 hours per week)
Contract type	Fixed Term Contract for up to 6 months in the first instance
Reporting to	Professor Amanda Fisher
Vacancy reference	178712
Additional information	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. *This role meets the criteria for sponsorship under the Skilled Worker visa. The University will meet the cost of the Skilled Worker (or if suitable, a Global Talent) visa and NHS surcharge for applicants that require a visa.*

Research topic	Flow cytometric preparation and analysis of mitotic chromosomes
Principal Investigator / supervisor	Amanda Fisher (with technical support from Bhavik Patel)
Project team	Cell identity and Epigenetic Inheritance group (@bioch.ox.ac.uk) Epigenetic Memory group (@lms.mrc.ac.uk)
Project web site	https://fishergroup.web.ox.ac.uk/home
Funding partner	MRC (Medical Research Council)
Recent publications	Djeghloul D, Patel B, Kramer H, Dimond A, Whilding C, Brown K, Kohler A, Feytout A, Veland N, Elliott J, Bharat TAM, Tarafder AK, Löwe J, Ng BL, Guo Y, Guy J, Huseyin MK, Klose RJ, Merkenschlager M, Fisher AG. (2020). Identifying proteins bound to

	native mitotic ESC chromosomes reveals chromatin repressors are important for compaction. ***Nature Communications*** 11, 4118 https://doi.org/10.1038/s41467-020-17823-z Djeghloul D, Dimond A, Kramer H, Brown K, Patel B, Wang Y-F, Futschik ME, Whilding C, Montoya A, Veland N, Cheriyamkunnel S, Montavon T, Jenuwein T, Merkenschlager M, Fisher AG. (2022) Loss of H3K9 tri-methylation alters chromosome compaction and transcription factor retention during mitosis ***bioRxiv*** 2022.02.01.478684; doi: https://www.nature.com/articles/s41594-023-00943-7 (NSMB in press).

The role

We are looking for a creative, collaborative and reliable Postdoctoral Research Associate who wants to support an interdisciplinary team working at the intersection between chromosome biology, flow cytometry, microfluidics and molecular/epigenetic analysis. The group's current work focuses on determining the repertoire and role of proteins that remain bound to mitotic chromosomes through cell division. This uses molecular, genetic and biochemical approaches to disrupt and/or degrade mitotic proteins and evaluate the relevance of such factors in determining chromosome structure and the transmission of cellular identity. To do this we develop new ways of isolating and manipulating native mitotic chromosomes from different organisms using flow cytometry and microfluidic approaches, and then interrogate the function of proteins postulated to 'bookmark the genome through mitosis. We are looking for a dedicated individual to lead the development of technology in this area, supported by existing close collaborations with staff at the MRC LMS. The post is ideally suited to someone wishing to learn how to apply and extend their knowledge and skills to develop innovative technologies in chromosome biology.

Responsibilities

- Use flow cytometry to pioneer new approaches in molecular genetics by purifying chromosomes (training will be available).
- Responsible for preparing and sorting chromosomes using flow cytometry; data analysis, maintenance, and fine tuning of equipment, and keeping accurate records.
- 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
- Develop ideas for generating research income, and present detailed research proposals to senior researchers
- Collaborate in the preparation of scientific reports and journal articles and occasionally present papers and posters
- Use specialist scientific equipment in a laboratory environment
- Act as a source of information and advice to other members of the group on scientific protocols and experimental techniques
- Represent the research group at external meetings/seminars, either with other members of the group or alone
- Carry out collaborative projects with colleagues in partner institutions, and research groups

Selection criteria

Essential selection criteria

1. Hold a PhD/DPhil or be near completion of a PhD/DPhil in a relevant subject area related to biology, biotechnology, or biophysics.
2. Possess sufficient specialist knowledge in the discipline to work within the established research programme.
3. Knowledge and experience in areas of molecular, cellular or chromosome biology
4. Capacity to learn and develop skills in flow cytometry.
5. Rigorous approach to data collection and reproducibility
6. Capacity to communicate with others and convey information concisely and clearly.
7. Experimental and analysis skills, including problem-solving, planning experiments and organisation.
8. Excellent verbal and written communication skills are required, and a capacity to work both as part of a team and individually.

Desirable selection criteria

1. Experience in flow cytometry is desirable, although training will be available.

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:

- Working with category 3b or 4 lasers (laser safety class)
- Working with cultured human cells
- Work with potentially harmful substances - any of the pictograms below:

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.

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

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.

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.

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
recruitment@bioch.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.

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 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.

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