Job description

Post	Postdoctoral Research Associate
Department	Department of Biology
Division	Mathematical, Physical and Life Sciences Division (MPLS)
Location	Life and Mind Building, South Parks Road
Grade and salary	Researcher Grade 7: £40,178 - £44,829 per annum
Hours	Full time
Contract type	Fixed term (3 years)
Reporting to	Laurence Belcher (line manager)
Application deadline	12 noon on Friday 11 December 2026
Vacancy reference	189905
Recruitment contacts	HR: recruitment@biology.ox.ac.uk
Additional information	Individuals who are close to PhD completion and have submitted their thesis but not yet been awarded their PhD may be appointed to the role at a grade 6 and receive a salary equivalent to a grade 7.1. It is expected that the PhD will be awarded in the 12-month period following appointment. Promotion to the substantive grade will be actioned upon receipt of confirmation that the PhD has been awarded.

Research topic	Comparative genomics
Principal Investigator / supervisor	Steven Kelly (PI), Laurence Belcher (supervisor)
Project web site	stevekellylab.com
Funding partner	The funds supporting this research project are provided by Wellcome Trust
Recent publications	Emms, Liu, Belcher, Holmes, and Kelly (2026) OrthoFinder: improved phylogenetic orthology inference with enhanced accuracy and scalability. Nature Methods. Emms and Kelly (2019) OrthoFinder: phylogenetic orthology inference for comparative genomics. Genome Biology. Emms and Kelly (2015) OrthoFinder: solving fundamental biases in whole genome comparisons dramatically improves orthogroup inference accuracy. Genome Biology.

The role

Reporting to Dr Laurence Belcher, who leads OrthoFinder in the Kelly Group, the post holder will be responsible for carrying out research to improve the accuracy, functionality, scalability and usability of OrthoFinder. Specifically, the post holder will develop and evaluate new comparative genomic and molecular evolution methods, write software for these methods, and apply them to biological questions. They will work collaboratively with software development colleagues to incorporate newly developed methods into the OrthoFinder pipeline.

Responsibilities

- Develop and evaluate new comparative genomic and molecular evolution methods and software that collectively aim to improve the accuracy, scalability, functionality, and/or usability of OrthoFinder
- Provide scientific and methodological support to the OrthoFinder community
- Work with software development colleagues to implement the addition of newly developed comparative genomic methods to the OrthoFinder pipeline
- 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 research methodologies and materials.
- Prepare working theories and analyse qualitative and/or quantitative data from a variety of sources, reviewing and refining theories 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 research publications and book chapters.
- Present papers at conferences or public meetings
- Act as a source of information and advice to other members of the group on methodologies or procedures.
- 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.
- Teach or undertake ad-hoc teaching (this may include lecturing, demonstrating, small group teaching, tutoring of undergraduates and graduate students and supervision of projects).
- Embed the principles of mutual respect, equality, diversity, inclusivity and sustainability in all aspects of your work; undertake training as and when asked to do so.

Selection criteria

Essential selection criteria

- Hold a relevant PhD/D.Phil. in comparative genomics, molecular evolution, bioinformatics, or a closely related field
- Extensive research experience in phylogenetics.
- Possess sufficient specialist knowledge in the discipline to work within established research programmes
- Ability to manage own academic research and associated activities
- Previous experience of contributing to publications/presentations
- Ability to contribute ideas for new research projects and research income generation.
- Strong experience using comparative genomics and phylogenomic analysis to address biological questions, for example relating to gene function or phenotypic change.
- Experience working directly with large public genome resources such as Ensembl, NCBI and UniProt.
- Strong Python and Linux experience developing bioinformatics tools, including on high-performance computing.
- Excellent analytical and communication skills, including the ability to write for publication, present research proposals and results, and represent the research group at meeting
- Experience in delivering project goals.
- A commitment to ensuring the Department/Faculty provides a positive, supportive and inclusive environment for all.

Desirable selection criteria

- Experience of independently managing a discrete area of a research project
- Experience of actively collaborating in the development of research articles for publication
- Experience in algorithm development.
- An understanding of the applications of protein language models, sequence embeddings or protein structures for homology detection or functional inference.
- Experience of actively collaborating in the development of research articles for publication.

- Experience using AI-assisted or agentic coding tools in research software development, including validating and testing their input

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 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.

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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.

The Department of Biology

You will be joining the Department of Biology at an exciting time; established in August 2022 following a merger between the Departments of Zoology and Plant Sciences, we have now moved into the new state-of-the-art Life and Mind Building in 2025.

We are recognised internationally for our research in a wide range of fields, spanning all levels from molecules to ecosystems, and tackling global challenges through fundamental bioscience research. Research interests have been focused in five primary areas: Behaviour & Biomechanics; Ecology & Conservation; Evolutionary Biology; Microbiology & Infectious Disease; and Molecular Plant Biology. Research is conducted in all spheres from laboratory and in silico analysis to theoretical and field-based research.

We seek to reinforce the connections between research and our education offering, at both graduate and undergraduate level. We teach a four-year undergraduate degree MBiol course in Biology, with fourth-year students undertaking a Masters-level research project. We also support a variety of graduate placements and host the University's DPhil and MSc in Biology.

External research income is derived from over 50 different funding agencies, with the principal current funders being the European Research Council, the Royal Society, the Wellcome Trust, BBSRC, and NERC. We have a significant record in integrating broader societal impacts of its research, including the provision of policy to government at the highest level, as well as supporting the commercialisation of research through spin-out companies and licensing arrangements that have generated hundreds of millions of pounds' worth of innovation.

The Department is located in the University's Science Area in the new £200m Life and Mind Building, which includes extensive laboratory provision with controlled environment rooms, glasshouses, and an imaging suite. We also benefit from extensive facilities at the John Krebs Field Station at Wytham, with Wytham Woods nearby, as well as partnerships with organisations in the area such as the Oxford Botanic Gardens and Oxford Museum of Natural History.

For more information please visit: https://www.biology.ox.ac.uk

The Department of Biology holds a bronze Athena Swan award to recognise advancement of gender equality: representation, progression, and success for all.

About the Mathematical, Physical, and Life Sciences (MPLS) Division

The Mathematical, Physical, and Life Sciences (MPLS) Division is one of the four academic divisions of the University, alongside the Humanities, Social Sciences and Medical Sciences Divisions. It is led by an academic Head of Division (Professor Jim Naismith) and an administrative Divisional Registrar (Dr Tracy Gale) and comprises nine of the University's academic departments – Biology, Chemistry, Computer Science, Earth Sciences, Engineering Science, Materials, the Mathematical Institute, Physics, and Statistics – as well as Begbroke Science Park, the multidisciplinary Ineos Oxford Institute for Antimicrobial Research and an interdisciplinary Doctoral Training Centre.

MPLS is proud to be home to some of the most creative and innovative scientific thinkers and leaders in academia, whose interdisciplinary research is tackling major societal and technological challenges, from new energy solutions or improved cancer treatments to understanding climate change processes and helping to preserve biodiversity, tackling antimicrobial resistance, advancing AI and quantum technologies and space exploration, and much more. The quality and impact of our work have been recognised by successive rounds of the national Research Excellence Framework and Teaching Excellence and Student Outcomes Framework exercises, and our departments frequently top the major higher education league tables. We teach around 7,300 students (including around 3,400 graduate students) and are playing a key part in training the next generation of leading scientists.

Divisional activity is co-ordinated and represented by the MPLS Divisional Office based at 9 Parks Road, in the heart of Oxford's Science Area. The Divisional Office, which is led by the Divisional Registrar, has around 55 dedicated members of staff, as well as a number of colleagues who are embedded in divisional teams but based in central University services (e.g. in Finance, HR and Development).

To find out more, please visit: www.mpls.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.

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 at Recruitment@Biology.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: The EJRA

For **existing** employees on these grades, any employment beyond the retirement age is subject to approval through the procedures: 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, 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: Staff benefits

Employee Assistance Programme

As part of our wellbeing offering staff get free access to Spectrum Life, a confidential employee assistance programme, available 24/7 for 365 days a year. Find out more Spectrum.Life

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/

Reimbursement Policy: Reimbursement Policy

There is also a visa loan scheme to cover the costs of UK visa applications for staff and their dependants. See 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 Parental 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 Menopause in the workplace

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