



Job Description



Summary

Job title	Postdoctoral Research Assistant in Compound Specific Radiocarbon Dating
Division	Social Sciences
Department	School of Archaeology
Location	The School of Archaeology, ORAU Research Laboratory for Archaeology, Dyson Perrins Building, South Parks Rd, Oxford OX1 3QY
Grade and salary	Grade 7: £36,024 - £44,263 per annum
Hours	Full time (37.5 hours per week)
Contract type	Fixed-term contract for 3 years
Reporting to	Dr Rachel Wood, Director of ORAU
Vacancy reference	172070
Additional information	<p>Possibility for a contract extension depending on funding.</p> <p><i>Whilst the role is a grade 7 (£36,024 - £44,263 p.a.) position, we would be willing to consider candidates with potential but less experience who are seeking a development opportunity, for which an initial appointment would be at grade 6 (£32,332- £38,205 p.a.) with the responsibilities adjusted accordingly. This would be discussed with applicants at interview/appointment where appropriate.</i></p>

Research topic	Compound Specific AMS Radiocarbon Dating
Supervisor	Dr Rachel Wood
Project team	ORAU
Project web site	https://c14.arch.ox.ac.uk/
Funding partner	The funds supporting this research project are provided by NERC - National Environmental Isotope Facility (NEIF)



The role

Reporting to the Principal Investigator (PI) Dr Rachel Wood. A Postdoctoral Research Assistant in Compound Specific Radiocarbon Dating is required to work in an analytical chemistry role specialising in the extraction and isolation of amino acids and lipids by LC and GC respectively for radiocarbon dating at the Oxford Radiocarbon Accelerator Unit (ORAU). The postholder will be responsible for implementing the compound specific radiocarbon dating component of NERC's National Environmental Isotope Facility (NEIF) programme (www.isotopesuk.org), which provides state-of-the-art isotopic services to the UK's research community. The ORAU provides radiocarbon dates for the UK archaeological and paleoenvironmental communities through this facility. The post holder will also provide guidance to less experienced members of the research group, including postdocs, research assistants, technicians, and PhD and project students.

Responsibilities

- Adapt existing and develop new scientific techniques and experimental protocols and work to improve laboratory methodologies for the dating of specific compounds. This will include protocols to isolate individual amino acids using LC (liquid chromatography) and lipids using GC (gas chromatography) with colleagues in the School of Archaeology, Chemistry Research Laboratory and other international groups and colleagues, in particular the testing of these with respect to material from archaeological contexts.
- Manage the analysis and assessment of samples for radiocarbon dating of single amino acid and lipids from archaeological contexts on behalf of sample submitters for NEIF funded projects and a variety of other funding sources. It is possible that samples from non-archaeological contexts will also be analysed. A number of these projects will be collaborative in nature and will require involvement from project design to publication.
- Undertake FTIR and other techniques (eg. GC/MS, stable isotope analysis) where applicable to characterise the materials dated.
- Manage own academic research and administrative activities. This involves small scale project management to co-ordinate the multiple aspects of this role to meet deadlines.
- Contribute ideas for new research projects, and develop ideas for generating new research income. Apply for funding where appropriate and consistent with the role, and undertake small scale research projects within the field of compound specific radiocarbon dating.
- Lead and collaborate as appropriate in the preparation of scientific reports and journal articles.
- Present the outcome of research projects at conferences, and represent the research group at external meetings/seminars.
- Act as a source of information and advice to other members of the group, department and wider NEIF user group on scientific and experimental protocols (in particular LC and GC methods as used in radiocarbon dating) through a range of formats, including but not limited to laboratory supervision and class-based teaching.
- Occasionally lecture, tutor, and/or conduct practical classes using laboratory or workshop equipment, and supervise undergraduate and postgraduate students as well as engage in assessment and university examining when requested including creating lecture notes and associated materials when needed.
- Work on other novel methods that will benefit the ORAU.

Selection criteria

Essential selection criteria

- Hold a relevant PhD/DPhil in analytical science, chemistry or biochemistry' with the possibility to underfill if they instead Hold a Bachelor's Degree (or Master's) in analytical science, chemistry or biochemistry.
- Have relevant proven experience and strength in the day-to-day use of HPLC and/or GC, with method development and application experience, and an interest in applying these skills to develop improved radiocarbon dating techniques.
- Possess sufficient specialist knowledge in the discipline to work within established research programmes.
- Ability to manage own academic research and associated activities, including keeping organised and accurate records of results.
- Ability to contribute ideas for new research projects and research income generation.
- Excellent communication skills, including the ability to write for publication and present research proposals and results and represent the research group at meetings.
- Ability to work within a team.

Desirable selection criteria

- Experience in the use of HPLC for analytical and preparative separation of amino is preferable.
- Experience in the use of prep-GC and radiocarbon dating.
- Experience with Super Critical Fluid Extraction would also be beneficial.
- Experience of actively collaborating in the development of research articles for publication.

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:

- Work with any substance which has any of the following pictograms on their MSDS:



- Travel outside of Europe or North America on University Business

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 School of Archaeology

The School - the main units of which are the Institute of Archaeology and the Research Laboratory for Archaeology - is made up of three main research and teaching groups: prehistoric archaeology, classical and historical archaeology, and science-based archaeology. Oxford is one of few places in the world where these three aspects of archaeology exist within the same School, something that we see as a key strength and distinguishing feature. Research in the School concentrates on the last 10,000 years; we seek, however, to set these developments against a longer-term record of environmental, biological and climatic change. In the study of historic periods -- the Bronze and Iron Age Aegean, classical Greece and Rome, the Byzantine world and early Medieval Europe -- research focuses on combining archaeological and written evidence, as well as on the study of material culture, using approaches which range from the scientific analysis of pottery, glass and metal, to those which relate more closely to art history and anthropology. Recently, the School secured funding from the Wellcome Trust Institutional Strategic Support Fund and the University of Oxford to re-equip the Henry Wellcome Ancient Biomolecules Centre.

The School is based across several buildings in the centre of Oxford, including the Institute of Archaeology in Beaumont Street, 1-2 South Parks Road and the Dyson Perrins building in the Science area.

Further information about the School of Archaeology, its component units, its staff, courses and research activities can be found on its website at www.arch.ox.ac.uk.

Oxford Radiocarbon Accelerator Unit (ORAU), RLAHA, School of Archaeology

The ORAU is one of the world's leading radiocarbon laboratories, helping pioneer much of the methodology that lies behind radiocarbon dating. Amongst several significant contributions the Unit has led the application of radiocarbon dating to archaeology, developed calibration and statistical modelling of radiocarbon dates for

environmental sequences and archaeological sites (the widely used OxCal software), led novel developments in the chemical pre-treatment of samples for dating, notably bone, including latterly the development of AMS dating single amino acids and a range of other material types (eg insect remains), developed and improved the technique of AMS including the use of gas ion sources for small samples and pioneered GC/AMS for compound specific measurements. The ORAU has an international reputation for the quality of its research projects. Over the last decade projects funded by the NERC, Leverhulme Trust and others, have revolved around projects ranging from construction of older sections of the international calibration curve, dating of the Mid-Upper Palaeolithic transition and deciphering the chronology of Ancient Egypt and the Near East. The Unit is part of the Research Laboratory for Archaeology and the History of Art, which was established in 1955 and has been at the forefront of research into the application of scientific methods to the archaeological record.

For more information please visit: <https://c14.arch.ox.ac.uk>

The Social Sciences Division

The School of Archaeology is a department in the Social Sciences Division, one of four academic divisions in the University, each with considerable devolved budgetary and financial authority; and responsibility for providing a broad strategic focus across its constituent disciplines. Thirteen departments, one faculty, and two cross-divisional research units come under the aegis of the division, which spans the full range of social science disciplines with links into the humanities and physical sciences. There are over 700 academic staff, 2,700 graduate students (postgraduate taught and postgraduate research), and 1,900 undergraduates working and studying in the division.

The division is established as a world-leading centre for research in the social sciences and regularly sits at the highest levels of international league tables of one form or another. It is the largest grouping of social science disciplines in the UK and it is also home to several of Oxford's most widely recognised teaching programmes, such as PPE, the BCL, the MPhils in International Relations, in Economics, and in Development Studies, and the nationally regarded PGCE. We believe that excellence in teaching and research is synergistic and remain committed to sustaining and developing the high quality of our activities in both these areas. Our departments are committed to research which develops a greater understanding of all aspects of society, from the impact of political, legal and economic systems on social and economic welfare to human rights and security. That research is disseminated through innovative graduate programmes and enhances undergraduate courses.

For more information please visit: www.socsci.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.

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

hr@arch.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, 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. 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/>. We also subscribe to the Work+Family Space, a service that provides practical advice and support for employees who have caring responsibilities for dependants of all types. See <https://hr.admin.ox.ac.uk/my-family-care>

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>