

Summary

Job title	Senior Researcher in Clinical Epidemiology and Real World Evidence
Division	Medical Sciences Division
Department	Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences
Location	Botnar Research Centre, Old Road, Headington, Oxford, OX3 7LD
Grade and Salary	Grade: 8 £44,585 - £54,395 p.a.
Hours	Full time
Contract type	Fixed term for 2 years in first instance
Reporting to	Dr Albert Prats-Urbe
Vacancy reference	173885



The role

Project details

The Health Data Sciences section at the Botnar Research Centre is involved in a number of national and international studies exploring the conditions of use (adherence, compliance, off and on-label use) of a number of licensed drugs, devices, and vaccines for the prevention and treatment of human disease in 'real world' (routine practice) conditions.

We collaborate with researchers from around the globe to improve our understanding of the safety and effectiveness of new and long-licensed medications and devices for the prevention and treatment of arthritis, osteoporosis, infectious disease/s, cancer, and other conditions. We are also studying both the benefits and the potential risks of the use of such health technologies in special subgroups of the population under-represented in previous trials.

Our research team has four key areas of research:

- a) To study the descriptive epidemiology of multiple diseases as represented in real world data, including primary care records, hospital records, and health claims
- b) To characterize the use of vaccines, medicines, medical devices and surgeries in real world (routinely collected) data
- c) To compare the (beneficial and harmful) effects of vaccines, medicines, devices and surgeries when used in actual practice conditions
- d) To characterize the presentation and treatment of multiple conditions using routinely collected health data (electronic medical records and health claims) globally
- e) To test and improve the existing methods for the study of the safety and effectiveness of drugs, vaccines, and medical devices using observational data

In addition, we have an increasing interest into clinical applications of causal inference and pharmaco-epidemiology methods, including work for regulatory authorities on the risk-benefit of medicinal products. Our growing portfolio of such studies requires the addition of a senior clinical researcher to support Prof Prieto-Alhambra with these projects.

Overview of the role

As a Senior Research Fellow, you will have responsibility for:

1. Leading the phenotyping of exposures (e.g. use of a medicinal product or undergoing a specific surgical procedure) and outcomes (e.g. health events) in real world data from the UK and international data sources
2. Leading research studies into the natural history and descriptive epidemiology of multiple diseases, with a particular focus on infectious disease, inflammatory conditions, metabolic disorders, and cancer
3. Supervising the work of more junior staff working on phenotyping tasks
4. Contributing to the analysis of real world data
5. Leading research studies in collaboration with international projects and federated data networks, including OPTIMA (www.optima-oncology.eu), HIPPOCRATES (www.hippocrates-imi.eu), OHDSI (www.ohdsi.org), and DARWIN EU® (www.darwin-eu.org)
6. Supervising or providing support to medical student/s and/or more junior fellows within the group
7. Writing study protocols for clinical projects within the group's remit
8. Representing the group in international collaboration/s and related meeting/s

Responsibilities

Research responsibilities

- To generate clinical descriptions based on existing medical knowledge, handbooks and/or online resources, and maintaining quality control of this process
- To investigate and implement novel methods for the phenotyping of multiple diseases as represented in multiple real world data assets, including national and international primary care records, hospital records, registries, and health claims
- To contribute to the identification of clinical (e.g. SNOMED, ICD10) codes used for the recording of medical diagnoses in electronic medical records, health claims and similar data
- To contribute to the identification of pharmaceutical (e.g. BNF, RXNorm, ATC) codes used for the prescription or dispensation of medicines, medical devices, vaccines, or other medical products
- To keep a log of all activity completed for the generation of code lists, which will occasionally contribute to small sections (methodology, appendices) of publications that they will be offered to co-author where applicable
- To lead studies on the natural history and/or epidemiology of infectious diseases, inflammatory conditions, metabolic disease and cancer using real world data
- To contribute to the review of real world evidence, and to the interpretation of their face validity compared to existing medical knowledge
- To adhere to ICH Good Clinical Practice guidelines at all times.
- To provide advice to members of the multi-disciplinary team regarding research studies on the group's portfolio
- To write research papers for submission to peer-reviewed journals, reports for submission to funders, and abstracts for submission to national and international conferences
- To liaise with senior staff and assist in the maintenance of the resulting catalogue or library of phenotypes
- To participate in group seminars and other departmental activities as required, represent the research group at external meetings/seminars
- Adapt existing and develop new research methodologies and materials
- Manage own academic research and administrative activities
- Contribute ideas for new research projects, and develop ideas for generating research income, sharing responsibly for shaping the research group's plan and strategic direction
- Carry out collaborative projects with colleagues in partner institutions, and research groups

General responsibilities

- Supervise more junior staff (e.g. Phenotyping assistants and research fellows) in their work creating and/or validating clinical phenotypes
- Write and review standard operating procedures related to the processes described above
- To be involved in student teaching and supervision
- Keep up to date with the necessary information governance training
- Work within the multidisciplinary team to deliver the strategic aims of the group and the delivery of the trial portfolio of studies according to time and target.
- Act as source of information and expert advice on clinical epidemiology and related issues
- Contribute to the resolution of administrative and practical problems arising during the execution of ongoing research studies with all involved parties.
- Plan your own workload and take responsibility for managing and planning your research activities
- Promote effective communication within our multi-disciplinary team and other research groups to ensure collaborative working practices

- Assist with maintenance of complete, accurate and organised files and logs

The job description is not intended to be rigid or inflexible and may include other duties and responsibilities as may be determined. The post-holder is expected to work flexibly and respond positively to changing needs.

Selection criteria

Essential selection criteria

- Degree in Medicine
- A PhD (completed or close to completion) in Epidemiology, Public Health, Biostatistics, Data Sciences, or a related field
- Ability to independently plan and manage a research project, including a research budget
- Ability to raise research funds through making grant applications
- Ability to write clinical descriptions based on existing medical knowledge
- Strong attention to detail
- Strong publication record and familiarity with the existing literature and research in the field
- Interest in academic clinical, epidemiological, or health data science research together with sufficient specialist knowledge in the discipline to develop research projects and methodologies
- Ability to write up activity logs and results, ability to write up study reports, manuscripts, and abstracts
- IT skills including a knowledge of Word, Excel and Powerpoint
- Knowledge of R (or other statistical package) programming
- Ability to organise own workload and take initiative as appropriate
- Team player with excellent communication skills and ability to work within the team but also independently
- Demonstrate an understanding of data protection and other statutory requirements and professional guidelines, such as ICH Good Clinical Practice guidelines

Desirable selection criteria

- Experience of academic research
- Understanding of real world data governance and methods
- A good track record of publications
- Evidence of previous participation in research
- Knowledge of the OMOP Common Data Model

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>

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 recognised 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 Orthopaedics, Rheumatology and Musculoskeletal Sciences

The Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDORMS) is part of the Medical Sciences Division and is the largest European academic department in its field, running a globally competitive programme of research and teaching.

Our mission is to discover the causes of musculoskeletal and inflammatory conditions to deliver excellent and innovative care that improves people's quality of life. Our highly skilled teams have expertise in a broad range of areas, including orthopaedic surgery, inflammation, immunology, rheumatology, medical statistics, epidemiology, and clinical trials.

We currently have 480 staff, approximately 120 post-graduate students and have a grant portfolio worth over £180 million.

The **Botnar Research Centre** enables and encourages research and education into the causes of musculoskeletal disease and their treatment.



The Centre provides world-class facilities for scientists in the field of musculoskeletal research. It takes a multidisciplinary approach, encompassing orthopaedic, rehabilitation and rheumatology clinical scientists, bone oncologists, laboratory scientists, epidemiologists, engineers and statisticians. The Botnar also hosts the Oxford Clinical Trials Research Unit (OCTRU) and the Centre of Statistics in Medicine (CSM), providing excellent statistical support to all aspects of clinical research.

The Botnar opened in 2002, with a large annex completed in 2013. The Botnar is now home to around 300 staff and postgraduate students enjoying the international and friendly atmosphere of this workplace and benefits from the vast knowledge of leading experts in the field of musculoskeletal research.

To accommodate its rapid growth, the Centre has opened another wing in early 2022. The new space provides additional 1000m² of office and 1000m² of laboratory space. The laboratory space includes a GMP clean room facility suitable for the manufacturing of biomaterials for human implantation.

Sharing the site of the Nuffield Orthopaedic Centre, the largest specialist academic musculoskeletal hospital in the UK, puts the Botnar in a unique position to foster the collaboration between basic scientists and clinicians, which is essential to success in medical research.

The Kennedy Institute is a biomedical research centre uniquely bringing together discovery science and early-stage clinical research, to develop transformative new therapies for chronic inflammatory and musculoskeletal conditions.



Broadly focused on the thematic areas of immunity and microbiome, inflammation biology and tissue remodelling and repair, the Institute's research is relevant for a range of common diseases such as arthritis, inflammatory bowel disease, fibrosis and cancer.

The Institute has capacity for up to 260 staff and students who work collaboratively across 25 research groups. This enables a multidisciplinary approach of molecular and cellular biology, combined with analysis of disease models, patient tissue samples and longitudinal clinical data. Collectively, these studies seek to uncover the biological processes that maintain tissue health and how these pathways break down in disease.

Research at the Institute is supported by a suite of core technology platforms, as well as through strategic partnerships with other basic and clinical research centres in Oxford, across the UK and internationally. These state-of-the-art technologies include the Oxford-Zeiss Centre for Excellence and other advanced microscopy and imaging facilities, mass and flow cytometry, as well as capabilities for microbial genomics and functional microbiome studies made available through the Oxford Centre for Microbiome Studies.

Complementing a strong programme of lab-based research, the Institute has established a core of expertise and technologies in data science including single cell genomics, statistical genetics, computational biology, and research informatics. A recent extension to the Institute building with a new third floor creates additional space purposely designed for computationally intensive research.

A true trendsetter in innovative and transformational research, the Kennedy also boasts a relaxed and friendly atmosphere, revolving around its bright and airy atrium that provides a space for colleagues to meet over coffee and tea to talk about their research and beyond throughout the day.

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

Athena Swan

The Athena SWAN Awards specifically recognise success in developing employment practices to further and support the careers of women in science, technology, engineering, maths and medicine (STEMM) departments in academia. In May 2015 the charter was expanded to recognise work undertaken in arts, humanities, social sciences, business and law (AHSSBL), and in professional and support roles. Within NDORMS, we feel that we have an established



culture of equality but are using the process to spur on-going improvement that benefits everyone involved in the Department. Our on-going progress was rewarded in May 2014 with an Athena Swan Bronze Award and in October 2015 with a Silver Award.

Our development in this area has resulted in a number of commitments to our staff, central to which are:

- establishing an open, supportive and family-friendly research environment
- supporting career progression through teaching programmes, personal development reviews and mentoring
- proactive communication of support policies such as flexible working, provision of leave, promotion and careers support schemes

NDORMS aims to actively promote the implementation of the University's family-friendly policies to help foster a family friendly working environment, including provision of family leave (such as policies for maternity, paternity, parental, carers and adoption leave), flexible/part-time working and scheduling inclusive meetings.

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

The Department is also 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/>

We are also actively working to uphold the University's aim of providing an inclusive environment and equal career opportunities by promoting equality, valuing diversity and

maintaining a working, learning and social environment in which the rights and dignity of all staff are respected. Separate University policies are also in place to ensure race, disability and gender equality. For more information, please visit: <http://www.admin.ox.ac.uk/eop/>

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

Help and support is available from: <https://hrsystems.admin.ox.ac.uk/recruitment-support>
If you require any further assistance please email recruitment.support@admin.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 e-recruitment system 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 all academic posts and some academic-related posts. The University has adopted an EJRA of 30 September before the 69th birthday for all academic and academic-related staff in posts at **grade 8 and above**. The justification for this is explained at: <https://hr.admin.ox.ac.uk/the-ejra>

For **existing** employees, 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 **grades 1–7** 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 dependents. 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 My Family Care, 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> Childcare.

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.