

# Job description

Job title	IT System Administrator (China Kadoorie Biobank)
Division	Medical Sciences Division
Department	Oxford Population Health (Nuffield Department of Population Health, University of Oxford)
Location	Old Road Campus, Headington, Oxford, OX3 7LF
Grade and salary	Grade 7: £36,024 - £44,263 per annum (with a discretionary range to £48,350)
Hours	Full time (part time considered)
Contract type	Fixed-term (3 years in the first instance)
Reporting to	Xiaoming Yang, Programmer
Vacancy reference	172887



## About Oxford Population Health

Oxford Population Health (the Nuffield Department of Population Health) provides an excellent environment for multi-disciplinary research and teaching and for professional and support staff. We work together to answer some of the most important questions about the causes, prevention and treatment of disease.

The Department has around 900 staff, students and academic visitors working in a number of world-renowned population health research groups, including the Clinical Trial Service Unit and Epidemiological Studies Unit (CTSU), the Cancer Epidemiology Unit (CEU), the National Perinatal Epidemiology Unit (NPEU) and other groups working on public health, health economics, ethics and health record linkage. It is also a key partner in the Oxford University's Big Data Institute.

In the 2021 Research Excellence Framework (REF), 96% of the research submitted to Unit of Assessment 2: Public Health, Health Services and Primary Care, was ranked either 4\* (world-leading in terms of originality, significance and rigour) or 3\* (internationally excellent in terms of originality, significance and rigour). This comprised research from Oxford Population Health and research from the Nuffield Department of Primary Care Health Sciences. We scored particularly well for having an environment that is conducive to producing research of world-leading quality and enabling outstanding impact, in terms of its vitality and sustainability.

In addition to its research activities, the Department is home to the [MSc in Global Health Science and Epidemiology](#), the [MSc in Clinical Trials](#), and a variety of short courses. Students also come to undertake research for [DPhil degrees](#). Teaching is provided for undergraduates reading for Medicine and for public health doctors in specialist training.

For more information please visit the [Oxford Population Health website](#).

## About the Medical Sciences Division

The Medical Sciences Division is an internationally recognised centre of excellence for biomedical and clinical research and teaching, and 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 the [Medical Sciences Division website](#).

## 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 the [Oxford University website](#).

## The China Kadoorie Biobank Study

The China Kadoorie Biobank (CKB) Study ([www.ckbiobank.org](http://www.ckbiobank.org)) is a uniquely rich and powerful global resource for investigating the environmental and genetic determinants of common chronic diseases. It is a long-term prospective cohort study of >512,000 men and women aged 30-79 years who were recruited during 2004-08 from ten geographically diverse urban and rural regions across China. The study aims to investigate the lifestyle, behavioural, environmental and genetic factors contributing to the aetiology of common chronic diseases, including heart disease, stroke, cancer and respiratory disease.

An extensive range of data on environmental, physiological and lifestyle risk factors were collected at time of recruitment, with periodic resurveys of a subset of participants every 4-5 years. The health of participants is actively monitored through electronic linkages with the established morbidity and mortality registries, and with the national health insurance system for any episodes of hospitalisation. To date, >60,000 deaths and >1.2 million ICD-10-coded hospitalised disease events have been recorded in the study, including >65,000 strokes, >55,000 heart disease, >30,000 cancers and >35,000 new cases of diabetes. These exposure and health outcome data are complemented by assays of the stored samples in a subset of participants, including clinical biochemistry, NMR metabolomics, proteomics, red cell fatty acids, and chronic infection markers. Moreover, >100,000 CKB participants have been genotyped, using a custom designed Affy 800K SNP panel optimised for Chinese, and whole genome sequencing of the first 10,000 participants has recently been completed. It is planned that much larger scale, or cohort-wide, assays of the stored samples will take place over the next several years, using high throughput omics technologies. This uniquely rich, complex and multi-dimensional resource will allow scientists to undertake a wide range of research about disease aetiology, risk prediction, prognosis, and development of new treatments over the next few decades.

The study is conducted jointly by the NDPH in Oxford, and the Chinese Academy of Medical Sciences and Peking University in Beijing. It was established with initial funding from the Kadoorie Charitable Foundation in Hong Kong, with further long-term core support from the Wellcome Trust, the Medical Research Council, the British Heart Foundation and Cancer Research UK, as well as various funding bodies in China. While the study is taking place in China, much of the design, development and support of the project is being handled and

managed in Oxford. A comprehensive range of IT systems have been developed by CKB IT group in Oxford, using various programming languages and tools, to provide logistic and operational support for the conduct and management of the project. In total, these involve >100 different IT systems covering all aspects of the project, from data collection and sample handling and transport, through long-term follow-up and outcome adjudication, to study monitoring, quality control and remote system management.

The Oxford CKB team now has >40 staff, plus >15 DPhil students and academic visitors. Since February 2017, the CKB team has been based in the Big Data Institute (BDI; [www.bdi.ox.ac.uk](http://www.bdi.ox.ac.uk)), bringing opportunities for interaction and collaboration with world leaders in the analysis of complex multidimensional datasets.

## The role

This post provides an exciting opportunity for a highly motivated and suitably qualified person to join the CKB team based at the Big Data Institute in Oxford. The successful candidate will be working within the dedicated CKB IT group, and will interact closely with a larger team of epidemiologists, statisticians, clinicians, study administrators and laboratory staff to support the continuation and further development of the study.

CKB is a world-leading resource containing extensive data collected or generated from a wide range of sources. CKB has complex IT infrastructures and an extensive network of computers (incl. desktop PCs, laptops, tablet PCs and servers) distributed across more than a dozen study sites in China and UK. Each study computer serves well-defined functions and are fully integrated through secure internet collection and data communication/exchanging servers at various locations. The post holder will be responsible for managing, maintaining and enhancing the study IT infrastructures and systems, and will report to the CKB IT Coordinator.

## Responsibilities

- Manage and maintain study IT infrastructure, including selection, procurement, installation, maintenance and upgrading of study computers, servers, and networks.
- Provide IT services to the CKB group in Oxford and China, including data synchronisation, software updating, remote monitoring, and local network services.
- Ensure security and integrity of study IT infrastructure in compliance with relevant Information Security Policy and regulations, including management of users' accounts, regular upgrading of anti-virus software, encryption of devices, and secure transmitting and exchanging of data.
- Develop, maintain and update relevant documentations for fieldwork staff and IT group, including installation guides and scripts, operational procedures, user manuals, and administrative credentials and certificates.
- Assist researchers with planning, acquiring, storing, backing-up and accessing research datasets in compliance with regulations and following best practice procedures.

- Liaise with departmental IT support team on matters relevant for project and staff; and provide support to other members of CKB IT team in Oxford and IT support team in China.
- Carry out any other duties that may arise during the course of the projects.

The above list is not exhaustive and the role-holder is required to undertake such duties as may reasonably be requested within the scope of the post. All staff are required to act in a professional, cooperative and flexible manner, in line with the requirements of the post.

## **Selection criteria**

### **Essential**

- A bachelor's degree in computing, a numerate discipline, or a relevant subject.
- Proven work experience as a System Administrator or in a similar role.
- Strong knowledge of Windows and operating systems, including configuration and troubleshooting
- Experience with Linux operating systems
- Proficiency in scripting languages such as PowerShell and Bash, with the ability to write efficient automation scripts.
- Experience with the SQL language and practical knowledge of database administration, preferably with PostgreSQL or MySQL/MariaDB.
- Solid understanding of security best practices, including implementing and maintaining security measures.
- Familiarity with computer networking principles, hardware, protocols, and security practices.
- The ability to work effectively both within a team and independently, with excellent communication skills in oral and written English, and the ability to work under pressure and to a deadline.
- An enthusiastic and imaginative approach to new tasks, actively seeking opportunities to apply emerging technologies.

### **Desirable**

- Experience with virtualization technologies such as KVM or VirtualBox, including provisioning and management of virtual machines.
- Familiarity with the software development cycle and practical knowledge of programming languages.
- Interest in or experience with medical/epidemiological research, showcasing a keenness to apply technical skills in a relevant domain.
- Knowledge of the Chinese language.

## **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.

## 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](#).

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 your CV and supporting statement **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 departments.

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 the [HR Systems Recruitment support webpage](#). If you require any further assistance please [email the Recruitment Support team](#).

To return to the online application at any stage, please go to the [University's recruitment website](#). 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](#). The University's Policy on Data Protection is available on the [University's Compliance webpages](#).

### 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.

## 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.

## 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. There is also a [visa loan scheme](#) to cover the costs of UK visa applications for staff and their dependents.

## 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 the [Work+Family Space](#), 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.

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 the [Childcare Services webpages](#).

## 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 the [Disability Support webpages](#).

## 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 on the [Equality and Diversity at Oxford webpages](#).

## 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.