
Superintendent Radiographer
Bristol
UK Biobank
Candidate Brief
September 2022

Introduction from UK Biobank's Principal Investigator/Chief Executive



Professor Sir Rory Collins

UK Biobank is scientifically unparalleled and arguably the UK's most significant scientific asset. With its unique combination of scale, depth, maturity and accessibility, more than 1,700 peer reviewed publications based on UK Biobank in 2021 alone, and an exponential increase in citations and patents, UK Biobank has become the world's most important health resource.

Its great success is testament to a visionary collaboration between successive UK Governments and scientific research funders – most notably the MRC and Wellcome Trust – who understood the significance of advances in genomics and that information from such a database could ultimately lead to improved diagnosis, treatment and prevention strategies for the most devastating diseases, benefiting millions of people in the UK and around the world.

Since inception, UK Biobank has also leveraged £227m of industry funding with increasing levels of interest in, and use of, UK Biobank by industry. UK Biobank is a major contributor to the advancement of modern medicine and treatment and has enabled many scientific discoveries that improve human health.

UK Biobank has a unique role to play in the Government's UK Life Sciences Vision, in both its Preconditions for Success and its Healthcare Missions, set out in June 2021. UK Biobank's role can be best understood both in terms of its ability to attract vital industry investment in UK Life Sciences and in enabling major scientific discoveries that improve public health.

The key focus of UK Biobank over the last five years has been on generating increasingly detailed genetic information on all 500,000 participants and making those data available to the international research community. The unprecedented scale, detail and quality of these data has enabled researchers to make unique discoveries about the relevance of genetics for disease.

For the next five years, our focus will shift to measuring the products of the genes. In particular, the levels of different proteins and metabolites in the blood, urine and saliva collected from participants more than ten years earlier. Completion of the initial whole body imaging of 100,000 participants, followed by repeat imaging of 60,000 of them, will add to the richness of the data available for studying biological changes that lead to the development of disease, or provide protection against it.

None of this would be possible without the altruism of the 500,000 British citizens who agreed to join the study some decades ago and the many tens of thousands of scientists around the world ensuring that their contributions deliver on the long-term vision of the funders to make improvements in human health and wellbeing that are of global significance.

Company Overview

UK Biobank is a uniquely detailed large-scale prospective study, containing genomic, lifestyle, imaging and health information from 500,000 UK participants. The resource is globally accessible to approved researchers to enable novel and important scientific discoveries that improve human health.

UK Biobank's database is unique, combining several powerful differentiators, including:

- scale (500,000 people);
- depth (detailed lifestyle information, genetic and other assay data, imaging data);
- maturity (large numbers of different health outcomes available for study, 15 years ahead of any comparable cohort study); and
- accessibility (with over 28,000 researchers worldwide already using the data).

Increasing awareness of UK Biobank is more important than ever as the database grows in value. With over 75% of all new researcher registrations coming from outside the UK, it truly is a global resource accessible to approved researchers undertaking health-related research.

UK Biobank is a distributed organisation, currently headquartered in Stockport, Greater Manchester, with four imaging centres delivering the world's largest multi-modal imaging study located in Stockport, Reading, Bristol and Newcastle. UK Biobank's epidemiological, health data teams and many of our systems are hosted at the Oxford Population Health (the Nuffield Department of Population Health, University of Oxford).

UK Research and Innovation have announced that subject to final approval, UK Biobank will receive an additional £128m of funding to support the next phase of our development. This transformative award will replace and enhance UK Biobank's infrastructure, creating a state-of-the-art facility in Manchester that will become the UK Biobank's headquarters from 2026.

UK Biobank's impact on research

With the addition of genetic sequencing data on a scale never seen before in health research, UK Biobank is one of the most significant resources for identifying target genes for drug discovery. Large scale genetic sequencing on the whole exome and whole genome of 500,000 participants is accelerating scientific discovery for human health. For example, scientists have identified rare protein-coding variants that have a large impact on complex traits, such as obesity. Individuals with a variant that suppresses protein production by the GPR75 gene expressed in the brain were observed to have significantly lower rates of BMI. The finding may lead to development of a drug that can inhibit GPR75 to offer a therapeutic strategy for treating obesity.

UK Biobank is also becoming increasingly important for the NHS and the public purse. Implementation of outputs derived from UK Biobank will result in significant savings of public expenditure, by improving prevention, early diagnosis and treatment, thereby improving population health and lowering NHS costs. For instance, the UK Biobank-derived polygenic risk score concept, allows a low-cost genotyping test to identify a substantial proportion of the population at high risk of one or more common conditions, such as heart disease, who could benefit from more effectively targeted prevention and screening strategies.

The unprecedented scale, detail and quality of UK Biobank's imaging project has enabled researchers to make unique discoveries about the development of many diseases in older age. These images are allowing scientists to study the impact of dementia risk factors on the brain and define early brain "signatures" of dementia that are providing clues to how cognitive decline and dementia start. When combined with the wealth of health data in UK Biobank, such as cognitive function tests, and genetics, this is allowing researchers the opportunity to spot dementia before symptoms appear.

A high degree of participant engagement within the cohort has enabled UK Biobank to play a vital role in helping to manage the global coronavirus pandemic. Surveillance studies during the COVID19 pandemic have increased researchers' understanding of the longer-term health impacts of coronavirus infection with over 237 COVID- related publications produced based on the UK Biobank resource.

Given the current pace of UK Biobank's development, coupled with the large increase in the number of researchers accessing the resource, there is likely to be an exponential growth in the impact of the discoveries that emerge that will be of global significance.

Overview of the Role

- Location: Unit G4B, Bolingbroke Way, Patchway, Bristol BS34 6FE
- Working hours: 24 hours per week (2 shifts over a 7 day period Mon - Sun)
- Contract type: Permanent

We are now looking to recruit a highly motivated Superintendent Radiographer to play a key role in supporting our existing team in Bristol. Successful applicants will have a solid background in leadership, with experience of training and mentoring junior staff. At this time MRI experience would be extremely advantageous, but we also offer a full and comprehensive training programme. Experience in DEXA and/or Ultrasound is also highly desirable. Successful applicants will be a key part of the senior team, working closely with the Centre Manager and taking charge of site operations in their absence.

Successful candidates can expect onsite training on our two Siemens MRI scanners, in brain (including fMRI), cardiac and abdominal scans. We will also train you in our DEXA and carotid ultrasound protocols and provide informative sessions delivered by subject matter experts, including our in-house MR Physicist (During the NHS secondment, the successful candidate can expect training in MRI (including brain, spine, shoulder, and knee) protocols. Training on the Clinical Radiology Information System (CRIS) and the Picture Archiving and Communication System (PACS) will also be provided)

Person Specification

Essential

- BSc or Diploma in Radiography
- State Registration with the Health Care Professions Council (HCPC)
- Participate in and provide support for CPD (Continual professional development) and CME (Continuing medical education).
- Detailed knowledge of MRI safety aspects
- Extensive MRI experience in a wide range of MRI examinations
- Demonstrable expert knowledge and a high level of competence in MRI scanning to ensure unsupervised work can be safely undertaken
- Experience of quality assurance for imaging
- Experience of training and mentoring students/radiographers
- Safety awareness of oneself and others
- Good communication skills
- Willing to develop supervision/organisational skills
- Ability to work without supervision
- Knowledge of IR(ME)R
- Knowledge of Health and Safety issues
- Willingness and ability to adopt new knowledge and research procedures
- Flexible attitude to duties
- Excellent interpersonal skills
- High professional standards
- Remain calm under pressure
- Ability and willingness to foster good working relationships
- Highly motivated and able to motivate others
- Committed to quality improvement
- Ability to identify personal development needs
- Flexible attitude with respect to hours of work
- Willingness to travel to other sites as required

Desirable

- Post graduate qualification in MRI is desirable
- Computer literate
- Manual handling knowledge
- It is highly desirable to have experience in a research environment
- It is highly desirable to have specialist technical knowledge of neuro imaging and fMRI
- It is highly desirable to have specialist technical knowledge of cardiac MRI
- It is highly desirable to have knowledge and experience of DEXA and Ultrasound
- It is desirable to be an active member of a relevant scientific society (e.g. Society for Cardiovascular Magnetic Resonance and/or International Society for Magnetic Resonance in Medicine Section for Magnetic Resonance Technologists)

Salary and Employee Benefits

- Salary: £27,703- £28,733 per annum 24 hours per week (2 shifts over a 7 day period Mon - Sun)
- 26 days annual leave (which increases with length of service) + bank holidays (including Christmas closure)
- USS salary sacrifice pension scheme (9.8% employee contribution & 21.6% employer contribution)
- Life Assurance Cover
- Enhanced maternity/paternity/adoption/shared parental leave
- Enhanced compassionate leave
- Enhanced Reserve Forces leave
- Enhanced company sick pay scheme
- Cycle to work scheme
- Health and wellbeing initiatives including Employee Assistance Programme (EAP)
- Eye-care scheme
- Annual flu vaccination
- Employee discount platform scheme
- Active social committee
- Flexible work life balance policy

How to Apply

Applications are welcome by sending both CV and covering letter to jobs@ukbiobank.ac.uk (detailing how you meet the role specifications) by 5pm on 14 September 2022 (subject to early closure upon receipt of suitable applications).

If you require assistance in applying for the role, or attending interviews, please contact our HR department via hr@ukbiobank.ac.uk so that we can make suitable arrangements.

Our passion for diversity and equality means creating a work environment for all employees that is welcoming, respectful, engaging, and enriched with opportunities for personal and professional development.

For detailed information on how we process your personal data, please review our [privacy policy](#).

In line with GDPR, we ask that you do NOT send us any information that can identify children or any of your Sensitive Personal Data (racial or ethnic origin, political opinions, religious or philosophical beliefs, trade union membership, data concerning health or sex life and sexual orientation, genetic and/or biometric data) in your CV and application documentation. Following this notice, any inclusion of your Sensitive Personal Data in your CV/application documentation will be understood by us as your express consent to process this information going forward. Please also remember to not mention anyone's information or details (e.g. referees) who have not previously agreed to their inclusion.

Please click on these links for further information on [Working for UK Biobank](#) and [Recruitment guidance for candidates](#)