

Huge 'biobank' for research into major diseases to be set up by Qatar and Imperial College London

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A "biobank" of samples and clinical measurements from tens of thousands of people is to be established in Qatar to help scientists understand the causes of major diseases and develop new treatments, it is announced today.

The Qatar Biobank is being established by Qatar Foundation for Education, Science, and Community Development (QF) and Qatar's Supreme Council of Health, with the assistance of experts from Imperial College London. The project was announced at the Royal Society today in the presence of Her Highness Sheikha Mozah bint Nasser Al-Missned, during the Qatari state visit to the UK.

The biobank will collect a wealth of medical data from up to 100,000 volunteers and store samples of their blood and urine in a high-tech storage facility over many years. This will allow scientists to look at diseases already present in the population as well as following up the participants to see who develops disease in the future. Researchers will compare data, including [genetic information](#) and data on environmental exposures and lifestyles, from participants who develop illnesses with data from those who remain healthy. In this way, they aim to identify early markers that can indicate when someone is likely to develop a particular disease, so that people will be able to receive early treatment or take measures to prevent a disease developing.

The Qatar Biobank will be the first very large population-based study involving the collection of biological samples in an Arabic country. It will provide scientists with an invaluable resource for improving the prevention, diagnosis and treatment of a wide range of [chronic diseases](#), such as diabetes and heart disease, which are placing increasing demands on Qatar's free public health service.

The initiative builds on other large national and international biobanking projects such as the UK Biobank, set up in 2006, which is the most advanced project of its type in the world.

Public health experts from Imperial College London are playing a crucial role in the design and implementation of the project.

Professor Elio Riboli, Director of the School of Public Health at Imperial College London, said: "At the very beginning of the study, healthy participants will be examined using top-level technology, such as MRI scans, so that later we can pick out aspects of the imaging data that may look today normal but might actually be predictive of diseases. The results will be invaluable not only for the Qatar population but for medical science in general.

"Qatar is an extremely interesting population from a medical point of view. It's a population in rapid transition towards more Western lifestyles. Qatar is home to residents from different regions of the world, which means we can look at disease risk factors in multiethnic populations in detail and on a very large scale."

Professor Paul Elliott, Head of the Department of Epidemiology and Biostatistics at Imperial College London, said: "This is a fantastic opportunity to set up a world-leading project, following up the health of a population over many years, and really try and understand the causes of disease, both genetic and environmental.

"We will be using state-of-the-art technology to collect and analyse samples from an extremely large set of participants. We also plan to carry out imaging of the whole body with MRI – this has never been done before on such a huge scale."

Professors Riboli and Elliott bring to the project a wealth of expertise in conducting large population studies. Professor Riboli is the co-ordinator of the European Prospective Investigation of Chronic Diseases (EPIC), which has collected data from over 500,000 people over 15 years. Professor Elliott is part of the steering committee of UK Biobank.

Dr Hanan Al Kuwari, Chair of the Qatar Biobank Steering Committee and Managing Director of Hamad Medical Corporation, said: "By developing transparent data access and ethical standards, the Biobank will provide a framework for industry and academia to share expertise and conduct collaborative research. The Biobank will work very closely with government at identifying health targets or areas where further investments are required. This will enable Qatar not only to practice evidence based medicine but also evidence based public health."

QF President Dr. Fathy Saoud said "The launch of Qatar Biobank opens up a unique opportunity for Qatar-based scientists to become part of and contributors to international networks of researchers working on biobanks worldwide. Association with other, similar resources and the sharing of scientific data and opinions will significantly enhance Qatar Biobank's value as a research resource nationally and internationally."

Provided by Imperial College London

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