

## **Qatar Genome Programme and QCBio to collaborate on heart disease study**

*QF member and QCBio to involve Qatari patients in genome sequencing*

Qatar Genome Programme (QGP), a member of Qatar Foundation (QF), has embarked on a research collaboration with the Qatar Cardiovascular Biorepository (QCBio) at the Heart Hospital of Hamad Medical Corporation (HMC), involving whole genome sequencing of a large cohort of Qatari patients.

The collaboration forms part of QGP's mission to work with various local institutions on improving the future of healthcare in Qatar. The project, involving Qatar Biobank, also a member of QF, will analyze the underlying genetic determinants related to heart problems in the Qatari population, and aims to lead to the discovery of protein biomarkers, and effective prevention and treatment measures.

Around 1,000 Qatari patients and their families have participated in the QCBio initiative to date. In preparation for phase 2, participant samples were sent for whole genome sequencing. Analysis of the resulting data will shed light on heart disease pathways and will reveal new and targeted approaches for individualized treatment of heart disease in Qatar.

In recent years, coronary heart disease (CHD) has increased dramatically in the Arabian Gulf region and worldwide. The World Health Organization estimates that by the year 2020, cardiovascular diseases will be the major cause of morbidity and mortality. CHD presentations and symptoms vary greatly and could be anywhere from abnormal heartbeats (palpitations) to sudden death at a young age.

Professor Asma Al-Thani, Chairperson of the Qatar Genome Programme Committee, and Board Vice Chairperson of Qatar Biobank, explained the aims of the collaboration: "Our vision is to improve the quality of future health for the local society, and to be pioneers in genomic research that translates into tangible outcomes, and impacts our people directly. This cannot happen without a strong partnership with the main clinical arm of healthcare in Qatar, which is HMC. This collaboration with QCBio is one of our various initiatives focusing on genomics of national disease priorities, to improve the quality of life for the local society through the implementation of precision medicine".

Dr Jassim Al Suwaidi, Director of Cardiovascular Research at Hamad General Hospital, and his team started the QCBio initiative, which is a biorepository of samples from both patients and healthy individuals, and is the first of its kind in the region.

Dr Al Suwaidi explained the project, saying: "In the cardiovascular research center at HMC, we are excited about this collaboration with Qatar Genome Programme and Qatar Biobank and we hope that this project paves the way for opportunities for personalized medicine therapies for the most common cause of death in Qatar and worldwide, both in men and women."

The role of Qatar Genome Programme lies in being a national genomics research initiative working in collaboration with many local stakeholders and researchers, to map the genome of the local population, and study the wealth of data collected and held by Qatar Biobank.

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#### **About Qatar Genome Programme:**

The Qatar Genome Programme is a population-based initiative using specimen and population samples to map the local population. Announced by Her Highness Sheikha Moza bint Nasser, Chairperson of Qatar Foundation and Vice Chairperson of the Supreme Council of Health during the World Innovation Summit for Health 2013, the Qatar Genome Programme is currently in its pilot phase.

Managed by the Qatar Genome Committee, and incubated by Qatar Biobank, Qatar Genome Programme uses a collection of samples and information from Qatar Biobank contributors to identify individual genome coding gaining unique insight and enabling the development of personalized healthcare in Qatar.

#### **About Qatar Foundation:**

##### **Qatar Foundation – Unlocking Human Potential**

Qatar Foundation for Education, Science and Community Development (QF) is a non-profit organization that supports Qatar on its journey to becoming a diversified and sustainable economy. QF strives to serve the people of Qatar and beyond by providing specialized programs across its innovation-focused ecosystem of education, science and research, and community development.

QF was founded in 1995 by His Highness Sheikh Hamad bin Khalifa Al Thani, the Father Emir, and Her Highness Sheikha Moza bint Nasser, who shared the vision to provide Qatar with quality education. Today, QF's world-class education system offers lifelong learning opportunities to community members as young as six months through to doctoral level, enabling graduates to thrive in a global environment and contribute to the nation's development.

QF is also creating a multidisciplinary innovation hub in Qatar, where homegrown researchers are working to address local and global challenges. By promoting a culture of lifelong learning and fostering social engagement through programs that embody Qatari culture, QF is committed to empowering the local community and contributing to a better world for all.

For a complete list of QF's initiatives and projects, visit [www.qf.org.qa](http://www.qf.org.qa)

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