Qatar Biobank Concludes "Qatar Genome Project" Summer Internship

The interns comprised of 5 students and graduates from Qatar University and Weill Cornell Medical College New York City

Doha, 5 September 2015: Qatar Biobank, a member of Qatar Foundation for Education, Science and Community Development, concluded its month-long summer internship on the "Qatar Genome Project," attended by 5 female interns who are students and graduates of Qatar University and Weill Cornell Medical College in New York City.

After a competitive selection process which screened 22 applicants, 5 students were handpicked: Mariam Yasser Ali, Tala Hussam Ismail, and Tanzila Zenith enrolled in the biomedical sciences programme at Qatar University, in addition to Tasnim Fadl, a Qatar University medical science graduate and Njoud Al-Naama, a Weill Cornell Medical College in New York City graduate currently working at Sidra Medical and Research Center.

Qatar Biobank supports Qatar Foundation's mission to enhance national innovation in technology through medical research on prevalent health issues in Qatar and to encourage the local community to embrace a healthy lifestyle. Through its collection of samples and information on the health and lifestyles of a large number of the nation's population, Qatar Biobank is making vital medical research possible for scientists in Qatar, the region, and the world.

The Qatar Genome Project was 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 on Health (WISH) 2013. The project seeks to assist in creating a roadmap for the study of genetics and its functions, and heralds a deep change in the future approach to treatment through personalised medicine.

Dr Asmaa Al-Thani, PhD, Head and Associate Professor of Biomedical Sciences and Vice Chairperson of the Board of Trustees of Qatar University said, "The internship represents the start of summer training series in Qatar Biobank, which offers a wealth of opportunities for students of different majors. In the future, the summer internship will include a scope of different fields such as science, law and IT."

The summer internship, the first of its kind, created an opportunity for the interns to work on the pioneer Qatar Genome Project in which Qatar Biobank contributes as a member of Qatar's National Genome Committee. A group of professors and researchers oversaw the summer training programme, headed by Dr Khalid A. Fakhro, Principal

Investigator at Sidra Medical and Research Center and Assistant Professor at Weill Cornell Medical College in Qatar, along with Dr Nahla Afifi, Scientific and Education Director of Qatar Biobank.

Dr Nahla Afifi noted, “Qatar Biobank aims at serving the Qatari citizens by working towards discovering how life, the environment and genetics affect public health in the state. Such discoveries will help develop effective medical treatment and disease prevention, which will improve the health of future generations in Qatar.”

“Through the Qatar Genome Project, Qatar Biobank works to create a roadmap for the future of treatment through personalised medicine. We organised this internship programme to provide an opportunity for students and graduates to be a part of the future by working on the Qatar Genome Project,” Dr Afifi added.

On her motivation to participate in this internship, Njoud Al-Naama said, “The main reason that drove me to apply is that it is an entirely new experience for me, one that centres on a highly important and significant project – the Qatar Genome Project - in which Qatar Biobank participates. It is an opportunity not to be missed by anyone who wants to pursue a career in biomedicine and be part of a ground-breaking project.”

During the internship period, the interns had the opportunity to participate in research based on the Qatari society’s perception and understanding of the Qatar Genome Project. Participants were also introduced to the ethical and legal aspects of the project. The interns worked on tracking and analysing genome projects around the world to learn about similar experiences and understand how other communities perceive them. Participants also researched better communication tactics that can be adopted to clarify the nature of this project and all its components to the Qatari community in the best way possible.

Mariam Yasser Ali explained the benefits gained from her participation in the programme, “This internship was really beneficial and exceeded my expectations in every way. The research was not limited to the field of scientific study, but also included the legal and moral consideration of the subject, which allowed us to explore additional aspects that would not be possible without this research.”

"Moreover, we never imagine we would be a part of such a ground-breaking project. The programme enriched our experience and fuelled our passion for biomedical research," said Tala Ismail, a first year student in biomedical sciences at Qatar University.

During the internship, students and graduates attended lectures delivered by doctors and professors on *Genome Ethics*, *Science of Genome*, *History of Human Genome* and *Personalised Medicine* and were introduced to working methodology of Qatar Biobank and the latest technologies and protocols used in the Genome Project.

Dr Fakhro commented, "We are currently living in the genome era where progress in technological developments has allowed us a unique opportunity to examine the human genome sequence directly. This technological renaissance will usher in a new phase in personalised medicine where we will be able to diagnose diseases and their genetic causes and not just the symptoms. This will significantly contribute to improving the means of treatment and prevention of genetic diseases in the future."

The results from the research conducted by the interns will be stored in a question bank, which will be of vital importance for studies conducted by researchers in the future.

The insight and information gathered by Qatar Biobank enables scientists to better understand why approximately 17 per cent of our adult population suffers from type-2 diabetes, and customise the treatment that suits the unique genetic characteristics of each person in the coming years.

Image Caption

Image 1: Interns from Qatar University and Weill Cornell Medical College in New York City conduct experiments as part of Qatar Biobank's internship on the Qatar Genome Project.

Image 2: Select interns took part in Qatar Biobank's month-long internship on the Qatar Genome Project

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About Qatar Biobank: Qatar Biobank is a member of Qatar Foundation for Education, Science, and Community Development. Working with the Supreme Council of Health, Hamad Medical Corporation and scientists from Imperial College London, Qatar Biobank enables medical research on prevailing health issues in Qatar. It gathers biological samples and health information from the vast majority of Qatar's population, which makes it possible for vital health research to take place locally, regionally and globally. Qatar Biobank is a unique resource that will raise Qatar's international profile in biomedical research.

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