

QPHI Advances Precision Health with Release of 25,000 New Genomic Data and New Opportunities for Research Collaborations



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New developments set to advance Qatar's role in precision medicine globally

24 October 2024 – The Qatar Precision Health Institute (QPHI), a center for research and implementation under Qatar Foundation (QF), gathered members of Qatar's healthcare and research community for a special event to unveil groundbreaking genomic data and announce

new research initiatives.

Held at Qatar Foundation's headquarters, the seminar invited leading members of Qatar's healthcare ecosystem. The attendees included Sheikh Dr. Mohammed Al-Thani, director of non-communicable diseases prevention programmes department, (MoPH); Dr. Khalid Fakhro, Chief of Research and Chair of the Precision Medicine Program at Sidra Medicine; Dr. Hilal Lashuel, Research, Development and Innovation Advisor to the Chairperson of QF; Dr. Ahmed Elmagarmid, Executive Director, Qatar Computing Research Institute (QCRI), and Dr. Omar Albagha, Acting Executive Director of Qatar Biomedical Research Institute (QBRI), along with representatives from Qatar's wider academic and research community.

Opening the event, Dr. Said Ismail, Acting President and Chief Scientific Operations Officer at QPHI, highlighted the significance of the genomic data release and its impact on collaborative efforts to advance precision health.

He noted, "Today we mark a significant milestone with the release of the largest genomic dataset in Qatar and the region. This data forms the foundation for groundbreaking research, positioning Qatar at the forefront of precision medicine. This is not just data—it's the foundation for groundbreaking research that will make Qatar a hub in genomics and translational work."

Building on this, Dr. Chadi Saad, QPHI Lead Bioinformatician, presented the 25,000 Genome Release, explaining how this new dataset will enable advancements in areas including cancer genetics, cardiovascular diseases, and mental health. He emphasized how advanced analysis tools are being used to reduce the cost and time of research, creating new opportunities for discoveries in precision health and groundbreaking discoveries in precision health.

As part of the event's focus on advancing research access, Dr. Eleni Fthenou, Scientist at QPHI, introduced the updated data catalog. She explained how the new platform is designed to make genomic data more accessible to researchers, streamlining the process of exploring genetic data and enabling the development of targeted treatments.

"We empower researchers, foster synergies, and listen to the needs of the academic and research community to enable them to build innovative health solutions," she said, highlighting the platform's potential to foster further collaborations and innovations in precision medicine.

Sneha P. Chandran, Warehouse Specialist at QPHI, gave an overview of QPHI's research studies and introduced a new tool that allows researchers to explore and analyze the available data more easily. Explaining its properties, she said, "Researchers can filter and apply specific criteria for demographics, conduct advanced filtering, build their cohort, and conduct advanced analysis for their research projects."

Continuing the discussion, Dr. Hamdi Mbarek, Director of Research and Partnerships at QPHI, announced the launch of the second round of the Qatar Precision Health Research Consortium (QPHRC). He provided an overview of the consortium's key focus areas, including genomics of cancer, cardiovascular diseases, reproductive health, and mental health, along with genomics AI, and other strategic projects.

Dr. Mbarek emphasized QPHRC's role in bringing together researchers across institutions to tackle these critical health challenges and stated, "The consortium is designed to foster multi-institutional collaboration, bringing together experts to tackle the most pressing challenges in health. We want to see multi-institutional and multi-disciplinary teams, which involve PhD students to build local capacity."

He further added, "This is an opportunity for researchers to work with cutting-edge genomic data and create breakthroughs that can transform patient care".

In closing, Dr. Mbarek expressed his gratitude to the stakeholders including MoPH, Hamad Medical Corporation, Sidra Medicine, Qatar Science and Technology Park, Qatar University, Qatar Research Development and Innovation Council, Weill Cornell Medicine – Qatar, University of Doha for Science and Technology, Carnegie Mellon University in Qatar, Aspetar, Anti-Doping Lab Qatar, Hamad Bin Khalifa University and its research centers, QCRI and QBRI, emphasizing that their collaboration and support have been instrumental in driving these groundbreaking efforts forward.

These new initiatives underscore QPHI's ongoing commitment to transforming healthcare through precision medicine. As the institute continues to collaborate with local and global partners, it is shaping the future of healthcare, driving advancements that will benefit both Qatar and the global precision medicine community.