

INNOVATIVE TECHNIQUE TO DIAGNOSE BLOOD CANCER DEVELOPED BY WISH AND HMC RESEARCHERS

World-first Genomics-based Innovation Supports Move Towards Development of a Precision Medicine Agenda within Qatar's Healthcare System

Doha, Qatar, November 21, 2017: Researchers from the World Innovation Summit for Health (WISH), an initiative of Qatar Foundation, and Hamad Medical Corporation (HMC) have developed a molecular diagnostic technique that enables cancer testing at the genetic level for the first time. The Molecular Diagnostic Kit (MDx), which has been completely funded and developed in Qatar, is a novel technology that provides personalized diagnosis of blood cancer. The newly-developed kit can determine the severity of the cancer and monitor a patient as they undergo treatment.

Blood cancer is currently the most prevalent type of cancer in the region. The MDx prototype has been entirely developed in Qatar by Dr. Nader Al-Dewik, Qatar Medical Genetic Center at HMC, in collaboration with Dr. Walid Qoronfleh, Director of Research and Policy, WISH, as part of the Applied Biomedicine Initiative, funded by Qatar Science & Technology Park's Accelerator Program. The goal of the Applied Biomedicine Initiative is to leverage data collected by the Qatar Genome Programme in the future, to develop further diagnostic kits applicable to hereditary and metabolic disorders. These types of initiatives have ramifications for Qatar's healthcare management at a policy level.

This prototype was designed specifically for the population of Qatar and the region, as it takes into account the unique genetic makeup of people from the region. The MDx Kits will further facilitate progression towards precision medicine that offers tailored therapeutic treatment to patients.

Both Qatar-based researchers have recently published an article titled '*Genomics Medicine Innovations: Trends Shaping the Future of Healthcare and Beyond*', highlighting the development of the innovative bespoke kit, in the *International Journal of Advanced Research*.

Commenting on the implications of using the MDx Kit on Qatar's healthcare system, Dr. Qoronfleh said: "The innovative Qatar-developed MDx prototype kit improves the ability of physicians to make informed decisions about managing their patients' health in a timely manner, while also providing convenience and financial value to the healthcare system. It positions Qatar as a hub for certified laboratory testing, and helps pave the way towards there being a significant increase in the use of precision medicine when dealing with forms of diseases that specifically affect the region."

Dr. Qoronfleh has also developed, in collaboration with MS Bioworks LLC (USA), and NextGen Sciences, Inc. (USA), the concept of a novel mass spectrometry workflow that measures multiple proteins simultaneously, thereby making the process cost- and time-effective. The workflow permits protein biomarker discovery and confirmation, and may be used in critical decision-making processes such as patient and drug dose selection. The multiplex panel can process up to a 100 proteins simultaneously and has positive implications for scientists and medical practitioners looking to use bodily fluids to

diagnose not only cancer but diseases affecting the central nervous system, particularly Alzheimer's disease, Parkinson's disease, and multiple sclerosis.

To view the article on the MDx Kit, '*Genomics Medicine Innovations: Trends Shaping the Future of Healthcare and Beyond*', please visit: bit.ly/2B1ucm5

Photo caption:

Image 1: Dr. Walid Qoronfleh, Director of Research and Policy Development at the World Innovation Summit for Health.

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About the World Innovation Summit for Health:

The World Innovation Summit for Health (WISH) is a global healthcare community dedicated to capturing and disseminating the best evidence-based ideas and practices. WISH is an initiative of Qatar Foundation for Education, Science and Community Development (QF) and is under the patronage of Her Highness Sheikha Moza bint Nasser, its Chairperson.

The inaugural WISH Summit took place in Doha in 2013 and convened more than 1,000 global healthcare leaders. Through international summits and a range of ongoing initiatives, WISH is creating a global community of leading innovators in healthcare policy, research and industry.

Together, they are harnessing the power of innovation to overcome the world's most urgent healthcare challenges and inspire other stakeholders to action.

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.



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World Innovation Summit for Health

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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 <http://www.qf.org.qa>