

Genomics Education

QPHI is committed to advancing the translation of genomics knowledge and creating educational opportunities in this field. The institute offers a variety of educational programs for healthcare professionals, university students, and the next generation of scientists.

Capacity Building - Health Care Professionals

QPHI aims to continuously build capacity for healthcare professionals in precision health, through seminars, as well as specialized workshops for healthcare professionals.
QPHI also launched Tanawwo, a Precision Health Networking Platform.

Next Generation

QPHI aims to cultivate the next generation of scientists, with dedicated programs for K-12, and forge impactful educational partnerships with educational and governmental organizations, with an ongoing commitment to educating Qatar's youth and students across the globe on the importance of precision health and genomic science.

In 2019, QPHI launched The Genome Heroes, a series of children's stories in Arabic designed to introduce young minds to the basics of genomics in a fun and accessible way.
Building on this, The Genome Heroes evolved into an educational game — the first of its kind to simplify the science of genetics and heredity. Available in both Arabic and English, the game serves as an engaging tool for students to learn about genetics. The Genome Heroes aims to achieve the following learning outcomes:

1. Raise awareness of genomic science through fun, interactive experiences.
2. Inspire the next generation of scientists and researchers.
3. Build a foundational understanding of genomics for children, introducing key concepts step by step, and gradually expanding their knowledge.

Pre-University and University

Specific programs to educate high school students on precision health, for study and career options, and partnerships with local universities graduate programs, to proactively fill the gap of skilled workforce in precision health.

Find out more at:
www.qphi.org.qa
qphi@qf.org.qa
+974 4454 1177

Scan the code to access our social media channels and download the **QPHI and Genome Heroes applications:**

Research and Partnerships

We drive innovation by fostering collaborations that bridge research and implementation. We actively engage in both national and international initiatives to advance genomic research and its impact on human health. Our key initiatives include:

National Research Consortium

Leading a national consortium (The Qatar Precision Health Research Consortium) focused on cutting-edge genomic research, enabling translational outcomes through collaboration among top-tier researchers and institutions. This consortium focuses on the genomics of five key areas: Cancer, Cardiovascular Disease, Artificial Intelligence, Mental Health, and Reproductive Health.

Global Collaborations

Active participation in prestigious international consortia, including: the Biobank Rare Variant Analysis (BRaVa) consortium, GenCOST consortium, Global Biobank Meta-analysis Initiative (GBMI), Global Alliance for Genomics and Health (GA4GH), and the international consortium of integrative genomics prediction (INTERVENE).

Qatar Biobank is an active participant in the Biobanking and Biomolecular Resources Research Infrastructure – European Research Infrastructure Consortium (BBMRI ERIC), the World Health Organization, and the International Agency for Research on Cancer.

Path Toward Precision Medicine (PPM) Grants

Co-funding PPM grants, supporting pioneering research projects that contribute to the advancement of personalized healthcare. These grants empower researchers to bridge the gap between genomic discoveries and their application in precision medicine.

Industry Partnerships

QPHI works closely with industry leaders to advance precision health solutions. Our strategic partnership with **Thermo Fisher Scientific** led to the development of the **QChip**, a custom genotyping array for the Qatari population, and the completion of a **Pan-Arab Genotyping Array** to support regional genomic research and healthcare.

These collaborations help deliver population-specific genomic tools, promote innovation, and accelerate the use of genetics in healthcare across Qatar and the Arab world.



Translational Research

We are committed to turning research discoveries into real healthcare benefits for people. Here are some of the ways we help:

Returning Important Genetic Information:

We have a clear and careful process in collaboration with Hamad Medical Corporation to return genetic information that could help protect health. Before sharing any results, we ask participants if they want to know this information. We only return findings when we are sure that the right medical support and advice are in place, helping participants take steps to prevent or manage certain health conditions.

The Wellness and Lifestyle Initiative:

We offer participantvs personalized reports that explain how their genetics can affect their health, diet, and lifestyle. These genomic wellness reports help raise awareness about how your genes and daily habits work together to influence your well-being. The report covers traits such as:

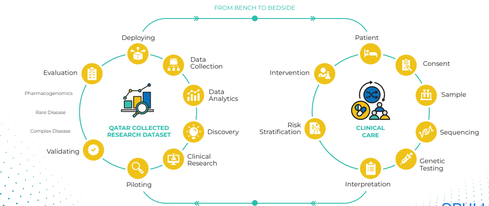


Pharmacogenomics:

At QPHI, we are running several pilot projects to return **pharmacogenomic (PGx) information** to our participants and hospital patients. These pilots focus on commonly prescribed medications, helping to ensure safer and more effective treatments by tailoring prescriptions based on each person's genetic makeup.

Screening for Reproductive Purposes:

QPHI is developing **Expanded Carrier Screening (ECS)** programs to help individuals and couples understand their risk of passing on genetic conditions. By using population-specific genomic tools, we aim to support informed reproductive choices and promote healthier future generations.



What We Do

Qatar Precision Health Institute (QPHI) advances cutting-edge research by collecting biological samples and health data from the Qatari population to support genomic and population health studies. Its mission is to translate research into impactful health interventions guided by scientific and ethical standards. QPHI enables high-quality research, promotes collaboration on genetics and lifestyle studies, ensures responsible implementation of discoveries in healthcare, and upholds strong ethical practices—positioning itself as a key driver of precision health in Qatar and the Arab region



Our Role in Advancing Biomedical Research

At Qatar Precision Health Institute (QPHI), we are committed to **advancing biomedical research in Qatar and globally** by establishing clear policies and frameworks that **promote scientific innovation while protecting the rights and interests of research participants.**

Through our **Research Access Directorate and Access Committee**, we ensure that access to biological samples and data is governed by transparent, ethical, and scientifically sound processes. These mechanisms are designed to balance open research collaboration with stringent oversight, ensuring compliance with national regulations and international best practices.

QPHI supports the research community by:

- Facilitating responsible data and biosample sharing to accelerate scientific discovery,
- Maintaining the highest quality standards, validated by **CAP accreditation, ISO 9001:2015** for Quality Management Systems, and **ISO 20387:2018** for Biobanking

QPHI's Contributions to the Community

At Qatar Precision Health Institute (QPHI), our commitment extends beyond research. We actively contribute to the well-being of the community by promoting health awareness, education, and access to precision health initiatives.

Through public engagement programs, educational workshops, and collaborative health campaigns, we empower individuals with knowledge about genetics, lifestyle, and disease prevention. Our efforts in returning clinically relevant findings to participants reflect our dedication to transforming research outcomes into personalized health benefits.

By fostering a culture of health literacy, supporting preventive care, and aligning our initiatives with national health goals, QPHI plays a vital role in building a healthier, more informed society in Qatar.

Studies Conducted at QPHI

QPHI leads a diverse portfolio of research initiatives, including population cohorts and disease focused studies that support precision health discovery. The institute plays a pivotal role in facilitating research by liaising between national centers, such as HMC, Sidra Medicine, WCM-Q, HBKU, and Qatar University to streamline communication, avoid duplication of effort, and maximize resources. These collaborative studies enable the collection of high-quality data and biospecimens to advance research, improve prevention strategies, and inform personalized healthcare solutions.

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Qatar Precision Health Institute

PERSONALIZED CARE, HEALTHIER LIVING

About Us

Qatar Precision Health Institute (QPHI) is a national center for research and implementation under Qatar Foundation.

Its primary mission is to empower genomic research through the production of a comprehensive database of genomic and multi-omics data along with extensive health-related information for Qataris and long-term residents.

QPHI is also spearheading national efforts to translate research findings into impactful clinical outcomes.

Our Story: A Decade of Innovation in Genomics and Precision Health

QPHI builds on over 12 years of groundbreaking achievements, stemming from the Qatar Biobank (QBB) and the Qatar Genome Programme (QGP).

Since the launch of QBB in 2012 and QGP in 2015, several significant milestones have been achieved. These include recruiting nearly 50,000 participants in our longitudinal study and performing whole genome sequencing in addition to fostering genomic research through the Qatar Precision Health Research Consortium (QPHRC) and the Path to Precision Medicine (PPM) research awards as well as launching several clinical implementation pilots including pharmacogenomics and reporting of actionable findings. Other milestones include launching several genomic education initiatives, the development of the Qatari and Pan-Arab genotyping arrays, and the establishment of the Disease Genomics Database (DGD).

