



WHO Science Council

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Research for Health

Science Division

WHO

**Human Genomics for Health:
Enhancing the Impact of Effective Research**

Brasilia, May 15-16

WHO Science Division

WHO Transformation

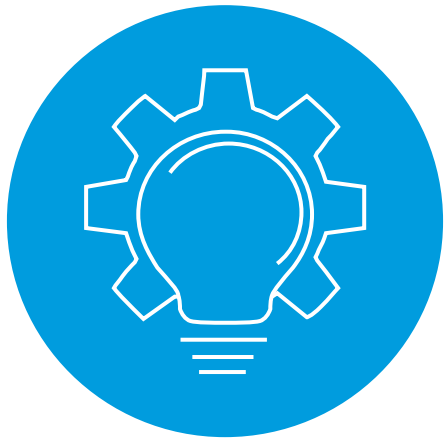
“Our goal is clear - a modern WHO, working seamlessly to make a measurable difference in people’s health at country level.”

Dr Tedros Adhanom Ghebreyesus, WHO Director-General, Executive Board, January 2018



A strategic objective of transformation is to ensure that WHO is fit-for-purpose: normative and technical work is of even higher quality ahead of the curve, vis-à-vis the latest technologies, science and innovation agile, data-driven and responsive to changing needs and circumstances.

Our positioning within WHO: A cross-cutting core function



Strengthen the **link between research and action**, and enable innovation and data

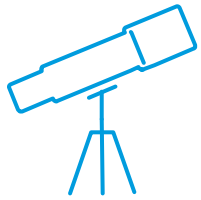
Supports WHO and Member States to stay “**ahead of the curve**” on scientific advancement and help put countries “**in the driver’s seat**”

Works closely with the global community of **researchers and scientists** to bring the best of science to improve health in Member States while at the same time **bringing the challenges faced by Member States to the global research and science community**

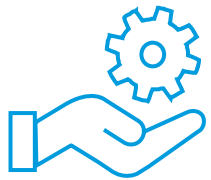
Uniquely positioned to deliver on this vision and mission because it is set up as a core cross cutting and enabling function of WHO, working across all technical teams and the three levels of the organization

Our vision, mission, approach and principles

Vision

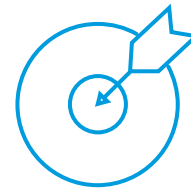


Harnessing the power of science and innovation to support Member States in achieving the health-related SDGs and emergency preparedness and response (“bringing the best of science to health”).

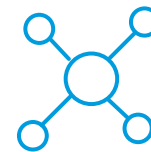


Joint ownership and accountability to support WHO and countries in the achievement of vision, mission, goals and objectives.

Mission



To provide global leadership in translating the latest in science, evidence, innovation and digital solutions to improve health and health equity for all.



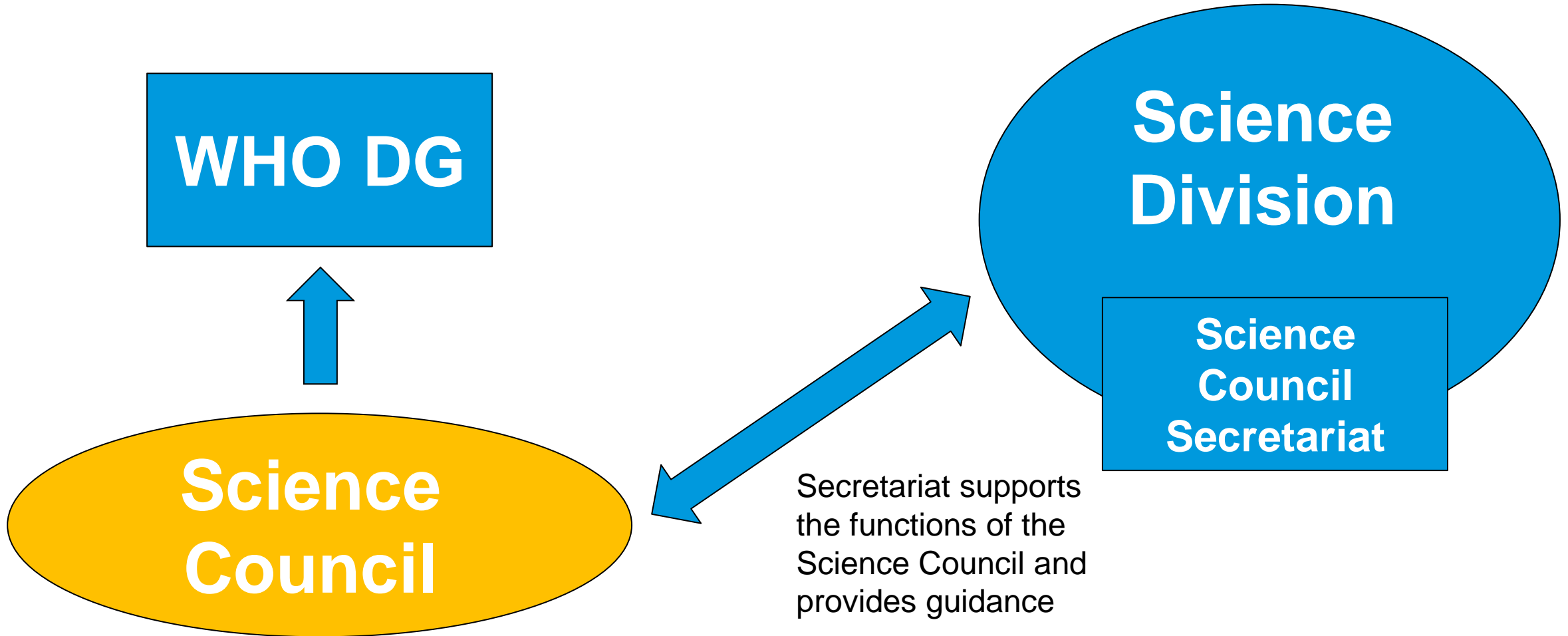
Alignment with country needs; timeliness; excellence; efficiency; cross-disease, cross-division and cross-level perspective; promotion of ethical standards.

WHO Science Council

Established in April 2021 by the Director-General of the World Health Organization to provide guidance on the science and research strategy of the organization directly advising the Director-General about high-priority scientific issues, and advances in science and technology that could directly impact global health.



WHO Science Council structure



WHO Science Council functions

- Evaluate urgent, high priority scientific issues and provide input and guidance on translating them to public health impact in furtherance of WHO's mission;
- Identify current and new science and technology issues that WHO needs to address, including global health threats, and new advances with a potential for direct or indirect impact on global health;
- Provide strategic orientation to WHO's actions in science, research and innovation;
- Participate in the rapid and confidential review of WHO normative products, when requested by the Director-General; and
- Undertake other duties and functions consistent with these Terms of Reference, when requested by the Director-General.

WHO Science Council members

Harold Varmus
Chair



Lewis Thomas University Professor of Medicine at the Meyer Cancer Center of Weill Cornell Medicine, USA

Adeeba Kamarulzaman
Vice-Chair



Director, CERIA and President, International AIDS Society, Malaysia; Professor of Medicine & Infectious Diseases, University of Malaya

Salim Abdool Karim



Director of the Centre for the AIDS program of research in South Africa (CAPRISA), South Africa

Cesar Victora



Emeritus Professor of Epidemiology at the Federal University of Pelotas, Brazil

Edith Heard



Director General of the European Molecular Biology Laboratory (EMBL), Germany and Professor College de France

Mary-Claire King



Professor of Genome Sciences and Medicine, University of Washington, Seattle, USA

Jean William Pape



Director and Founder of GHESKIO, Haiti

Firdausi Qadri



Senior Director of the Infectious Diseases Division at the International Centre for Diarrhoeal Disease Research, Bangladesh

Abla Mehio Sibai



Professor of Epidemiology and Interim Dean, Faculty of Health Sciences, American University of Beirut, Lebanon

Yongyuth Yuthavong



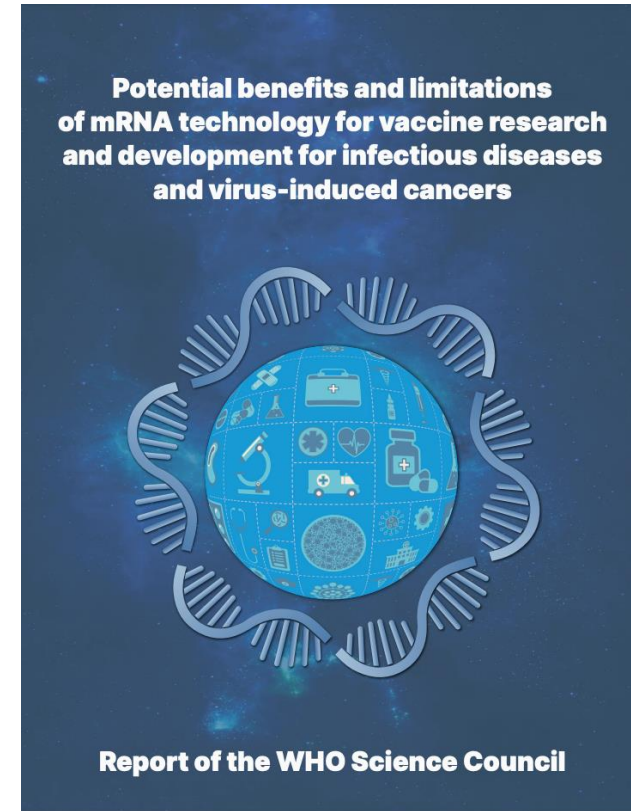
Senior Specialist, National Centre for Genetic Engineering and Biotechnology, NSTDA, Thailand

WHO Science Council work



2022

<https://www.who.int/publications/i/item/9789240052857>



2023

<https://www.who.int/publications/i/item/9789240052857>

First report on the WHO Science Council (2022)

GENOMICS FOR GLOBAL HEALTH

4 Themes

- Promotion
- Implementation
- Collaboration
- ELSI



Theme 1 - Promotion



Promote the adoption or expanded use of genomics in all Member States through advocacy by many parties

1.1 WHO should use its leadership role in global public health to **advocate for the expanded use of genomics in its Member States**. In particular, WHO should promote affordable access to genomic technology globally so that all Member States, especially LMICs, can adopt and expand the use of genomics for better health and other benefits. This will require persuading Member States, as well as commercial and non-commercial organizations, academic institutions, and others, of the medical, scientific, and economic benefits of genomic technologies.

1.2 Member States, especially LMICs, should develop and conduct **advocacy programmes** that support the adoption or expansion of genomics.

1.3 International, regional, and national professional societies in medicine, public health, and biomedical research should advocate for the uses and benefits of genomics.

1.4 **WHO should establish a Genomics Committee** to assess and report annually to the WHO DG on progress in implementing the recommendations in this report. This evaluation should encompass all four themes—promotion, implementation, collaboration, and ELSIs. The Genomics Committee should also be mandated to take up additional tasks (elaborated below in 2.1, 2.3, 2.4, and 4.1).

Theme 2 - Implementation



Identify and overcome the practical issues that impede the implementation of genomics through local planning, financing, training of essential personnel, and the provision of instruments, materials, and computational infrastructure

- 2.1 WHO should provide **guidance to Member States on best practices** for implementation of national or regional genomic programmes.
- 2.2 Member States should **establish national programmes for building or expanding genomic capabilities** or join a regional programme.
- 2.3 Organizations in the genomics **commercial sector should be convened** by the Genomics Committee to develop and execute approaches to make their products and technologies affordable in LMICs.
- 2.4 Organizations in both the public and private sectors should develop and execute plans to **enhance the training** of individuals capable of making effective use of genomic technologies.

Theme 3 - Collaboration



Foster commitments to collaborative activities to promote all aspects of national and regional programmes that advance genomics in Member States

- 3.1 WHO should **promote international collaborations** on genomics by strengthening effective existing collaborative arrangements and by helping form new ones for specific needs.
- 3.2 Funding agencies should promote collaborative arrangements and encourage the participation of investigators, health care personnel, and computational experts from a diversity of disciplines to promote the optimal use of new genomic information.
- 3.3 Industry, academia, and civil society should collaborate on the use of genomics to help solve important health problems, especially those prevalent in LMICs.

Theme 4 - ELSI



Promote ethical, legal, and equitable use and responsible sharing of information obtained with genomic methods through effective oversight and national and international rules and standards in the practice of genomics

- 4.1 WHO, working through its Genomics Committee, should be the **custodian of guidance on how to deal with the ethical and social ramifications of genomics**, including the global governance of genomic information.
- 4.2 WHO should take a leading role in the resolution of debates about policies that govern the attribution of credit for genomics research.
- 4.3 **Organizations in Member States, especially funding agencies, academic institutions, and governmental units should be attentive to ELSIs** and to efforts being made by WHO and other international bodies to develop solutions to outstanding issues related to genomic ELSIs.
- 4.4 WHO should aspire to become the global authority on ELSIs for health-related genomic applications.

Thank you

