

Roundtable on GENOMICS AND PRECISION HEALTH

2020 ANNUAL REPORT

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About the Roundtable

The Roundtable on Genomics and Precision Health brings together leaders from government, academia, industry, foundations, associations, patient communities, and other stakeholder groups to meet and discuss global issues surrounding the translation of genomics and genetics research findings into medicine, public health, education, and policy. The primary purpose of the Roundtable is to foster dialogue across sectors and among interested parties and institutions, and to illuminate and scrutinize critical scientific and policy issues where Roundtable engagement and input will help further the field.

The Roundtable membership identifies scientific and policy issues where discussion and collaboration will help enable the translation of genomics into health care applications. Specific issues and agenda topics are determined by the Roundtable members, and span a broad range of areas relevant to the translation process. Current areas of emphasis are described in greater detail below and include innovations in the discovery and development of precision therapeutics and technologies, clinical implementation of genomic medicine, inequities in the research database, workforce, and access to genetic services, and fostering a dialogue across stakeholders within genomics and precision health.

To achieve its objectives, the Roundtable conducts structured discussions, meetings, public workshops, enters into information-gathering activities, develops authored viewpoints and perspectives, organizes and supports collaboratives, and publishes workshop proceedings.

nationalacademies.org/GenomicsRT

Strategic Plan & Areas of Interest

During 2020, the members and staff of the Roundtable on Genomics and Precision Health committed to the development of a new multi-stakeholder strategic plan for their work. Roundtable members considered exciting developments including innovative partnerships and advances in implementation, and factored in emerging challenges such as inequities in genomics research and access to technologies.

VISION	Realizing the full potential of health for all through genomics and precision health.
MISSION	Bring together diverse voices to encourage innovation and actions that foster the wide adoption of and equitable access to the benefits of genomics and precision health.

As part of this new strategic plan, the work of the Roundtable will center around four priority areas: Innovation, Dialogue, Equity, and Adoption (IDEA). The Steering group will continue to oversee the progress of all of the working groups in achieving the vision of the Roundtable.

INNOVATION

The Innovation group explores competing barriers and facilitators of innovation for genomics based diagnostics, risk assessment tools, and therapies, and leverages opportunities to learn from and promote innovative approaches that can accelerate commercialization and integration to drive impact of genomics on precision health. Currently, the group is focusing on lessons learned from case studies of successful innovation that could help in the development of an innovation "playbook."

DIALOGUE

The Shaping the Dialogue working group accelerates the dissemination of actionable knowledge to shape practice and increase public awareness. Currently, the group is focusing on developing materials to promote the new strategic plan and working group projects as they begin to implement their plans for 2021.

EQUITY

The Equity group fosters action related to underrepresentation and inequities in genomic research, workforce, and access to genomic services, and examines opportunities to improve the processes and practices that the Roundtable employs to achieve its mission. Currently, the group is focusing on developing educational sessions for members to increase awareness of the current challenges and opportunities for increasing diversity of the genomic workforce and to develop a deeper understanding of structural racism in the fields of medicine and genetics/genomics.

ADOPTION

The Adoption group's goal is to cultivate evidence-based practices across the health care and public health systems for adoption of genomics and precision health, and draws attention to gaps in adoption and their root cases in an effort to highlight potential solutions. Currently, the group is focusing on learning from health systems that have implemented genomics about barriers and facilitators of adoption as well as utilization of genomics.

STEERING GROUP

The Steering group provides strategic input and coordination across working groups and oversees progress toward the Roundtable's vision and mission. Currently the group is focusing on ways to monitor and evaluate internal processes and external impacts of the Roundtable's work.

PUBLIC WORKSHOPS & MEETINGS

The Role of Digital Health Technologies in Drug Development: A Workshop March 24, 2020

This workshop, co-hosted with the Forum on Drug Discovery, Development, and Translation, discussed challenges and opportunities in using digital health technologies to improve the probability of success in drug development. Workshop participants considered key components for an evidence-based framework for applying digital health technologies towards drug research and development (R&D). Discussions at the workshop highlighted critical barriers or "pain points" along the drug R&D lifecycle that digital health technologies may be uniquely suited to address as well as lessons learned from currently validated digital health technology applications that could be generalizable for newer digital health technologies.

PUBLICATIONS



The publication of the proceedings can be found here.

Released: August 28, 2020

Exploring the Current Landscape of Consumer Genomics: A Workshop October 29, 2019

This workshop looked at the current landscape of consumer genomics and implications for how genetic test information is used or may be used in research and clinical care.



The publication of the proceedings can be found here.

Released: March 19, 2020

Meetings

March 25, 2020

The Roundtable debriefed following the workshop on digital health technologies in drug development and explored the decision-making process for identifying and integrating digital health technologies in health systems with invited leaders from those health systems. Speakers from the LawSeq Project briefed Roundtable members on the work that the group is doing around privacy, regulation, and data sharing. Strategic planning activities were initiated with the full membership.

June 22-23, 2020

The Roundtable began to refine their mission, vision, and guiding principles over the next 3-5 years. Members discussed priority areas to pursue as part of the Roundtable's new strategic plan including equity, adoption, innovation, and shaping policy and dialogue.

July 1, 2020

The Roundtable met virtually with the Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats to explore innovative approaches for studying host (human) genetic and genomic factors associated with susceptibility and severity related to COVID-19. Discussion at the meeting examined scientific challenges being encountered in genomics research and opportunities for data collection and sharing.

November 10 & 12, 2020

Roundtable members adopted the new strategic plan and began implementing it and discussing alignment of the Roundtable's plans with several groups in the genomics and precision health community. Working groups held breakout sessions to develop goals and strategic priorities that could be pursued over the course of the following year. Members learned from invited speakers on issues of equity, diversity, and systemic racism related to genomics and precision health.

Roundtable Membership

Geoffrey S. Ginsburg, M.D., Ph.D. (Co-Chair) Duke University

Michelle Penny, Ph.D. (Co-Chair) Goldfinch Bio

Naomi Aronson, Ph.D. Blue Cross and Blue Shield Association

Aris Baras, M.B.A. Regeneron Pharmaceuticals

Vence Bonham, Jr., J.D. National Human Genome Research Institute

Bernice Coleman, Ph.D., ACNP-BC, FAHA, FAAN:
American Academy of Nursing

Robert B. Darnell, M.D., Ph.D. The Rockefeller University

Stephanie Devaney, Ph.D., All of Us Research Program

W. Gregory Feero, M.D., Ph.D. JAMA

Caroline Fox, M.D., Merck & Co.

Jennifer Goldsack, M.Chem., M.A., M.B.A. Digital Medicine Society (DiMe)

Jill Hagenkord, M.D., FCAP Optum Genomics

Richard Hodes, M.D. National Institute on Aging

Mira Irons, M.D. American Medical Association

Praduman Jain, M.S. Vibrent Health

Sally John, Ph.D., Biogen Sekar Kathiresan, M.D. Massachusetts General Hospital

Muin Khoury, M.D., Ph.D. Centers for Disease Control and Prevention

David Ledbetter, Ph.D. Geisinger

Charles Lee, Ph.D., FACMG
The Jackson Laboratory for Genomic
Medicine

Thomas Lehner, Ph.D., M.P.H. National Institute of Mental Health

Debra Leonard, M.D., Ph.D. College of American Pathologists

James Lu, M.D., Ph.D. Helix

Mona Miller, M.P.P.
American Society of Human Genetics

Jennifer Moser, Ph.D.
Department of Veterans Affairs

Maximillian Muenke, M.D., FACMG, American College of Medical Genetics and Genomics

Susan E. Old, Ph.D. National Institute of Nursing Research

Anna Pettersson, Ph.D. Pfizer Inc.

Victoria M. Pratt, Ph.D., FACMG Association for Molecular Pathology

Murray Ross, Ph.D. Kaiser Foundation Health Plan, Inc.

Wendy Rubinstein, Ph.D. U.S. Food and Drug Administration Nadeem Sarwar, Ph.D. Eisai Inc.

Joan A. Scott, M.S., C.G.C. Health Resources and Services Administration

Sam Shekar, M.D., M.P.H. American College of Preventive Medicine

Nonniekaye Shelburne, C.R.N.P., M.S., A.O.C.N. National Cancer Institute

Nikoletta Sidiropoulos, M.D. The University of Vermont Health Network Medical Group

Katherine Johansen Taber, Ph.D. Myriad Women's Health

Ryan Taft, Ph.D. Illumina

Jacquelyn Taylor, Ph.D. Columbia University

Sharon F. Terry, M.A. Genetic Alliance

Joyce Tung, Ph.D. 23andMe

Jameson Voss, M.D., M.P.H. Air Force Medical Support Agency

Catherine A. Wicklund, M.S., C.G.C. National Society of Genetic Counselors

Huntington F. Willard, Ph.D. Genome Medical

Sarah Wordsworth, Ph.D. University of Oxford

Alicia Zhou, Ph.D. Color Genomics

(AS OF DECEMBER 2020)

Roundtable Sponsors

23andMe, Inc.

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American College of Medical Genetics and Genomics

American Medical Association

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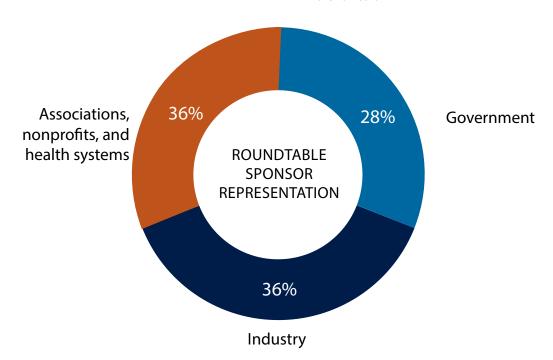
Pfizer Inc.

Regeneron Pharmaceuticals

United States Air Force Medical Service

The University of Vermont Health Network Medical Group

Vibrent Health



Roundtable Timeline

2007

July 11-12: Meeting 1

December 4: Diffusion and Use of Genomic Innovations in Health and Medicine Workshop

December 5: Meeting 2

2008

April 1-2: Meeting 3

July 28: Innovations in Service Delivery in the Age of Genomics Workshop

July 29: Meeting 4

October 6-7: Meeting 5

2009

February 12: Systems for Research and Evaluation for Translating Genome-Based Discoveries for Health Workshop

February 13: Meeting 6

June 9-11: Meeting 7

August 31-September 1: Direct-to-Consumer Genetic Testing Workshop

November 16-17: Meeting 8

2010

March 22: The Value of Genetic and Genomic Technologies Workshop

March 23: Meeting 9

May 24: Challenges and Opportunities in Using Newborn Screening Samples for Translational Research Workshop; Meeting 10

July 22: Establishing Precompetitive Collaborations to Stimulate Genomics- Driven Drug Development Workshop

July 23: Meeting 11

November 17: Generating Evidence for Genomic Diagnostic Test Development Workshop

November 18: Meeting 12

2011

February 22–23: Meeting 13

July 19: Integrating Large-Scale Genomic Information into Clinical Practice Workshop

July 20: Meeting 14

November 15: Facilitating Development and Utilization of Genome-Based Diagnostic Technologies Workshop

November 16: Meeting 15

2012

March 21: New Paradigms in Drug Discovery: How Genomic Data Are Being Used to Revolutionize the Drug Discovery and Development Process Workshop

March 22: Meeting 16

May 24: Evidence for Clinical Utility of Molecular Diagnostics in Oncology Workshop

July 17–18: Assessing the Economics of Genomic Medicine Workshop

July 18: Meeting 17

October 4–5: Sharing Clinical Research Data Workshop

December 3: Improving the Efficiency and Effectiveness of Genomic Science Translation Workshop

December 4: Meeting 18

2013

February 27: Refining Processes for the Co-Development of Genome-Based Therapeutics and Companion Diagnostic Tests Workshop

February 28: Meeting 19

June 5: Conflict of Interest and Medical Innovation: Ensuring Integrity While Facilitating Innovation in Medical Research Workshop

June 24: Genomics-Enabled Drug Repositioning and Drug Repurposing Workshop

June 25: Meeting 20

December 4-5: Meeting 21

2014

February 3: Assessing Genomic Sequencing Information for Health Care Decision Making Workshop

February 4: Meeting 22

August 18: Improving Genetics Education in Graduate and Continuing Health Professional Education Workshop

August 19: Meeting 23

December 8: Genomics-Enabled Learning Health Care Systems: Gathering and Using Genomic Information to Improve Patient Care and Research Workshop

December 9: Meeting 24

2015

March 10-11: Meeting 25

July 14-15: Meeting 26

November 19: Applying an Implementation
Science Approach to Genomic Medicine Workshop

November 20: Meeting 27

2016

March 22: Deriving Drug Discovery Value from Large-Scale Genetic Bioresources Workshop

March 23: Meeting 28

July 19-20: Meeting 29

November 9: Meeting 30

2017

March 8: Enabling Precision Medicine: The Role of Genetics in Clinical Drug Development Workshop

March 9: Meeting 31

July 17-18: Meeting 32

November 1: Implementing and Evaluating Genomic Screening Programs in Health Care Systems Workshop

November 2: Meeting 33

2018

March 20: Meeting 34

June 27: Understanding Disparities in Access to Genomic Medicine Workshop

June 28: Meeting 35

October 5: Virtual Meeting on Return of Research Results

2019

January 23-24: Meeting with Keystone Symposia and American College of Cardiology

March 27-28: Meeting 36

June 25-26: Meeting 37

October 29-30: Meeting 38

2020

March 24: The Role of Digital Health Technologies in Drug Development Workshop

March 25: Meeting 39

June 22-23: Meeting 40: Strategic Planning

July 1: Meeting 41: Host Genomics Research and Data Collection Efforts Related to COVID-19

November 10 & 12: Meeting 42: Implementation of Strategic Plan

2021

January 28: Meeting 43

March 15-16: Meeting 44

July 14-15: Meeting 45

October 5-6: Meeting 46 2020 Annual Report | 6

Roundtable Staff

Sarah H. Beachy, Ph.D. Senior Program Officer and Roundtable Director

Siobhan Addie, Ph.D. **Program Officer**

Kelly Choi Senior Program Assistant (until July 2020)

Meredith Hackmann **Associate Program Officer**

Lydia Teferra Research Assistant

Board on Health Sciences Policy Staff

Andrew Pope, Ph.D., Senior Board Director Bridget Borel, Program Coordinator

NAM Greenwall Fellow in Bioethics

Rachel Fabi, Ph.D., Upstate Medical University

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To learn more about the Roundtable, visit national academies.org/our-work/Roundtable-ongenomics-and-precision-health