

C G T A C G T A
A C G T A C G T

Genomics and Health Equity RFAs: Pre-Application Webinar

Lucia Hindorff, PhD, for the Genomics and
Health Equity Program Office

August 23, 2023



National Human Genome
Research Institute

Webinar agenda

- Purpose
- Summary
- Overview of IC-specific research interests
- Additional application information
- Important dates
- Q&A

Purpose

- Support R01 and R21 investigator-initiated research in genomics and health equity
 - Developing approaches, generating and disseminating data, and implementing metrics or interventions
 - Advance the equitable use of genomics to improve health in all U.S. populations
- Research spanning across scientific areas of interest to NHGRI, NIA, NCI, ORWH and AoU



Health equity

- When every person has the opportunity to attain their full health potential and no one is disadvantaged from achieving this potential because of social position or other socially determined circumstances

<https://www.cdc.gov/chronicdisease/healthequity/index.htm>

- Research considerations

- Inclusion of populations or communities experiencing health disparities is encouraged
- Research must go beyond simple inclusion to address a health equity research question
- Health equity impact should apply to U.S. populations



Activity codes (R01 and R21)

- Investigator-initiated research projects representing an investigator's specific interest and competencies and relevant to the stated program interests of participating NIH Institutes, Centers or Offices
- [RFA-HG-23-017](#) (R01): mature scientific ideas with preliminary data
- [RFA-HG-23-018](#) (R21): exploratory/developmental research



— Overview of IC-specific interests

A C G
C G T
A C G

- Access to high-quality and comprehensive genomic information
 - Maximizing the utility of genomic, social, and environmental data to address health disparities in women or health disparity or disability populations
 - Addressing challenges to genomic data sharing or data science that impact health equity
 - Integrating genomic data with fine-scale data across multiple dimensions (other -omics, precision environmental health) to better characterize health disparities
- Development of accessible technology and methods
 - Developing and implementing genomic technology for under-resourced laboratories and clinics



National Human
Genome Research
Institute



National Human
Genome Research
Institute

- Access to genomic technology or testing; quality or management of genomic testing results
 - Distinguishing the utility of race and other socially defined descriptors from genomic information in determining laboratory reference values and clinical algorithms
 - Conducting decision science, economic or healthcare utilization studies around new genomic technologies or genomic testing that impacts equitable allocation of clinical resources
- Acceptability of genomic approaches and interventions to the public
 - Developing and applying metrics of health equity in genomic research that are acceptable and useful to communities, participants, and researchers
 - Identifying and overcoming barriers that limit participation in and benefit from genomic research, particularly barriers stemming from structural and social inequities



**NATIONAL
CANCER
INSTITUTE**

- Discovery, utilization, and translation of genetic information in the prevention, detection and treatment of cancer across diverse populations through:
- Integrated analysis of diverse populations through holistic approaches (e.g., system modeling);
 - Studies of cancer types that are rare or disproportionately affect the understudied populations;
 - Novel recruitment efforts in underrepresented populations;
 - Partnership with national and global programs and consortia



**NATIONAL
CANCER
INSTITUTE**

➤ Leverage or enhance relevant NCI resources and investments for:

- Identifying and recruiting cancer cases, e.g., the [Cancer Epidemiology Descriptive Cohort Database \(CEDCD\)](#), the [Surveillance, Epidemiology, and End Results Program](#) and State Cancer Registries;
- Incorporating data through linkages to existing databases with relevant exposure, administrative, and health-related data, e.g., the [Virtual Pooled Registry Cancer Linkage System \(VPR-CLS\)](#);
- Community engagement, e.g., the [NCI Center to Reduce Health Disparities \(CRCHD\)](#) supported [National Outreach Network \(NON\)](#) and [Partnerships to Advance Cancer Health Equity \(PACHE\)](#);
- Cost-effective exposure assessment and genomic profiling. e.g., the [NCI Center for Inherited Disease Research \(CIDR\) Program](#), or the [Human Health Exposure Analysis Resource \(HHEAR\)](#).



- Applications that focus on aging research as well as Alzheimer's Disease and related dementia (AD/ADRD)
- Studies drawing data from across the lifespan are encouraged
- Applicants expected to factor sex as a biological variable into research
- See [NIA Strategic Directions for Research, 2020 – 2025](#) and the [AD/ADRD Research milestones](#)

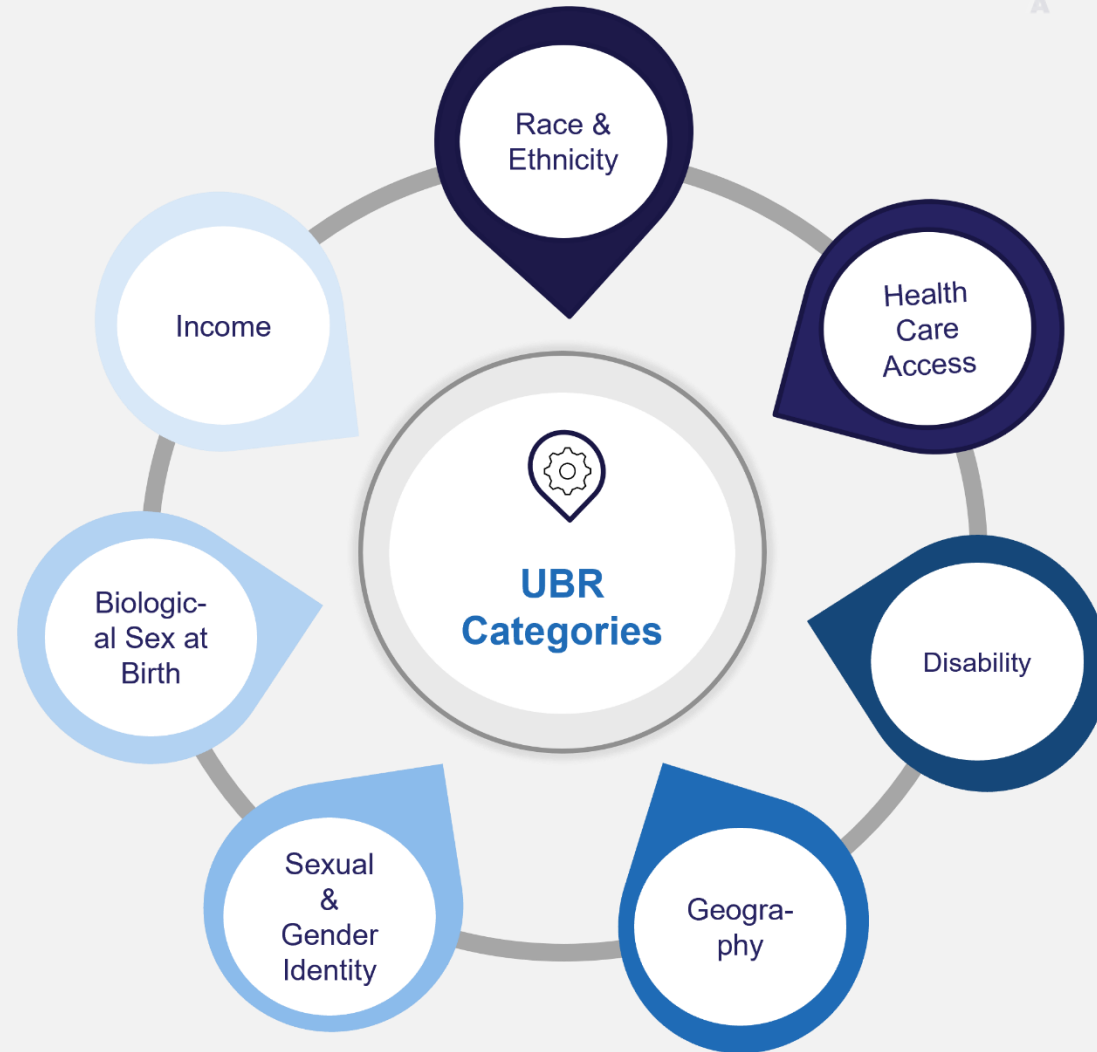
The *All of Us* Research Program will support R21 applications focused on understanding how social determinants of health:



- Influence genomic variations between and within human genetic ancestry groups
- Contribute to unequal burden of disease risk, development, risk, disability, severity, and progression across populations historically underrepresented in biomedical research
- Unresponsive applications: Applications that only assess differences in genomic variations, biological processes, etc. across populations without assessing SDOH in the study design

Populations underrepresented in biomedical Research

A C G
A C G
A C G






- Applications that use community-engaged research approaches to inform the research study and promote data justice will be prioritized
 - Data justice: Ensuring that study results are interpreted in a manner that represent study populations fairly and without bias
- Investigators must register for the *All of Us* Researcher Workbench & complete data access processes
<https://www.researchallofus.org/register>
- Additional training is required to access the *All of Us* Controlled Tier
<https://www.researchallofus.org/>

ORWH

A C G
C G T
A C G

ORWH does not accept primary assignments and will work with the other ICs to identify potential co-funding for meritorious applications



—

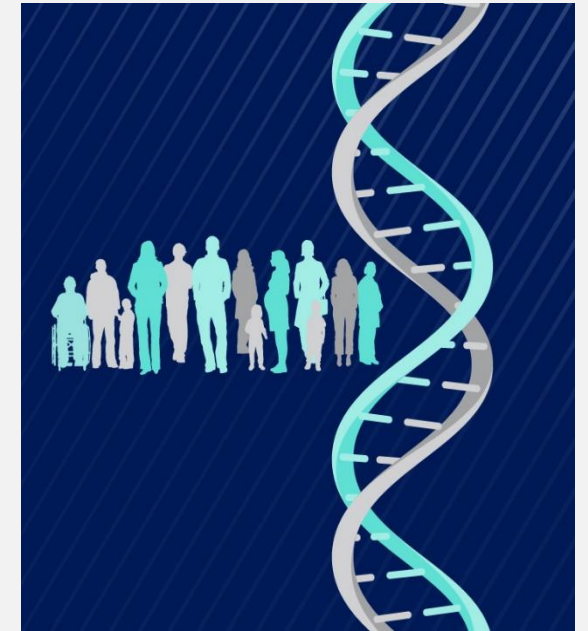
Additional application information

Budget and project period

- R01 ([RFA-HG-23-017](#))
 - Up to \$500,000 direct costs per year
 - Maximum of 4 years for NHGRI, NIA, ORWH; 5 years for NCI applications
- R21 ([RFA-HG-23-018](#))
 - Up to \$200,000 direct costs per year
 - Maximum of 2 years

Plan for Enhancing Diverse Perspectives

- One page to advance the scientific and technical merit of the proposed project through inclusivity
- Examples of possible strategies
 - Transdisciplinary research projects and collaborations among researchers from different disciplines.
 - Engagement from different types of institutions and organizations (e.g., research-intensive, undergraduate-focused, minority-serving, community-based).
 - Individual applications and partnerships that enhance geographic and regional heterogeneity.
 - Investigators and teams composed of researchers at different career stages.
 - Participation of individuals from diverse backgrounds, including groups traditionally underrepresented in the biomedical, behavioral, and clinical research workforce (see NOT-OD-20-031)
 - Opportunities to enhance the research environment to benefit early- and mid-career investigators.
- [PEDP guidance material](#)



Data Management and Sharing Plan

- [NIH guidance](#)
- NHGRI guidance: [NOT-HG-21-022](#)
- NHGRI supports the broadest appropriate data sharing with timely data release through widely accessible data repositories

Important dates

Letter of intent	October 9, 2023 June 8, 2024 June 8, 2025
Application due dates	November 8, 2023 July 8, 2024 July 8, 2025



—

Questions and answers

Additional questions?

- NHGRI: Lucia Hindorff, hindorffl@mail.nih.gov
- NIA: Damali Martin, martinda@mail.nih.gov
- NCI: Melissa Rotunno, rotunnom@mail.nih.gov
- ORWH: Rajeev Agarwal, agarwalraj@mail.nih.gov
or Elena Gorodetsky, egorod@mail.nih.gov
- *All of Us*: Janeth Sanchez, janeth.sanchez@nih.gov





The **Forefront**
of **Genomics**[®]