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# Genomics and Data Science with a Health Equity Lens

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*AI-CARES webinar, 4/24/24*



National Human Genome  
Research Institute

# Health equity

- The state in which everyone has a fair and just opportunity to attain their highest level of health. <https://www.cdc.gov/chronicdisease/healthequity/index.htm>
- Health disparities/health equity through a genomics lens:
  - Access to high-quality and comprehensive genomic information
  - Development of accessible technology and methods
  - Access to genomic testing
  - Quality of treatment and management of genomic findings
  - Acceptability of genomic approaches and interventions
  - Workforce diversity in backgrounds and scientific disciplines



# RFA-HG-23-017 (R01) and RFA-HG-23-018 (R21)

- Support investigator-initiated research in genomics and health equity
- Research spanning missions of 5 ICOs:
  - NHGRI (R01, R21)
  - All of Us (R21)
  - NCI (R01)
  - NIA (R01, R21)
  - ORWH (R01, R21)
- **Next receipt date: July 8, 2024**



# Examples of genomics and health equity research relevant to data science (RFA-HG-23-017)

- Improving prediction of molecular variation from genetic variation in admixed populations, in conjunction with biological and social determinants of health
- 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
- Distinguishing the utility of race and other socially defined descriptors from genomic information in determining laboratory reference values and clinical algorithms

# CGDS Educational Partner Sites, RFA-HG-23-002

Funding Opportunity Title	Broadening Opportunities for Computational Genomics and Data Science Education (UE5 Clinical Trial Not Allowed)
Activity Code	UE5 Education Projects - Cooperative Agreements
Announcement Type	New
Related Notices	<ul style="list-style-type: none"><li>• <b>February 29, 2024</b> - Notice of NIDA's Participation in RFA-HG-23-002, "Broadening Opportunities for Computational Genomics and Data Science Education (UE5 Clinical Trial Not Allowed)". See Notice <a href="#">NOT-DA-24-014</a></li><li>• <b>November 3, 2023</b> - Notice of NCI's Participation in RFA-HG-23-002. See Notice <a href="#">NOT-CA-24-006</a>.</li><li>• <b>September 08, 2023</b> - Notice of Change to First Application Receipt Date, Addition of a Pre-Application Webinar, and Change in Eligibility Information and Personnel Costs in RFA-HG-23-002. See Notice <a href="#">NOT-HG-23-050</a>.</li><li>• <b>August 31, 2022</b>- Implementation Changes for Genomic Data Sharing Plans Included with Applications Due on or after January 25, 2023. See Notice <a href="#">NOT-OD-22-198</a>.</li><li>• <b>August 5, 2022</b>- Implementation Details for the NIH Data Management and Sharing Policy. See Notice <a href="#">NOT-OD-22-</a></li></ul>



**Upcoming  
application due date:  
June 10, 2024**

**Pre-application  
webinar: May 3, 2024**



# Advancing Genomic Medicine Research (AGMR)

**Goal:** applications on implementation of genomic information and technologies in clinical care

- Broadly applicable to the field
- Significant beyond a single disease

R01: [RFA-HG-23-032](#)

R21: [RFA-HG-23-033](#)

R03: [RFA-HG-23-048](#)

**Next receipt date: July 8, 2024**



## Topics funded to date:

- Undiagnosed diseases
- EHR integrated tools
- Pharmacogenomics
- Evidence for clinical and economic value
- Promoting access for underserved populations

# Diversity is key in unlocking scientific discovery and productivity



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