



NLM R25 Leaders Launch Meeting

November 18, 2022

Director's Update

Patricia Flatley Brennan, RN, PhD



National Library of Medicine

NLM Leadership Team 2022



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Library Operations



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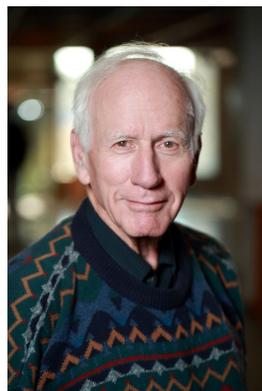
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NLM Institutional Grants for Short-Term Research Education Experiences to Attract Talented Students to Biomedical Informatics/Data Science Careers and Enhance Diversity

- Support creative educational activities with a primary focus on research
- Address a growing need for a well-trained research workforce
 - For undergraduate students: to provide hands-on exposure to research, to reinforce their intent to graduate with a college degree, and to prepare them for graduate school admissions.
 - For master's students: to provide hands-on exposure to research, to extend their skills, experiences, and knowledge base, to prepare them for doctoral program admissions, and future careers in research.
- Scope of research interest is broad, with an emphasis on novel methods and approaches to foster data driven discovery in the biomedical and clinical health sciences as well as domain-independent, reusable approaches to discovery, curation, analysis, organization and management of health-related digital technologies

What's new and emerging?

- Fully automated indexing for the full set of MEDLINE journals
 - Reduced time to index (from many months to a few days) and eliminated backlog
 - Human domain expertise still a component of MEDLINE
- SRA available via Amazon Web Services Open Data Platform
 - Over 60M user interactions to ~20M sequence records
 - SARS-CoV-2 mutation and variant analysis results
- Data Management and Sharing Policy
 - Required section in all proposals submitted after Jan 23, 2023
- OSTP Memo
 - Update their public access policies as soon as possible, and no later than December 31st, 2025, to make publications and their supporting data resulting from federally funded research publicly accessible without an embargo on their free and public release;
 - Establish transparent procedures that ensure scientific and research integrity is maintained in public access policies; and,
 - Coordinate with OSTP to ensure equitable delivery of federally funded research results and data.

Advanced Research Projects Agency for Health (ARPA-H)

ARPA-H will be complementary to, not duplicative of, NIH programs and efforts

Mission

To benefit the health of all Americans by catalyzing health breakthroughs that cannot readily be accomplished through traditional research or commercial activity

Goals

Support transformative high-risk, high-reward research to:

- **Speed application and implementation** of health breakthroughs to serve all patients
- Foster breakthroughs across various levels – from **the molecular to the societal**
- Build **capabilities and platforms** to revolutionize prevention, treatment, and cures in a **range of diseases**
- Convert **use-driven ideas** into tangible solutions for patients far more rapidly than previously thought possible
- Overcome market failures through **critical solutions or incentives**

Approach



I A R P A
BE THE FUTURE



NIH UNITE Initiative to Eliminate Structural Racism

U – Understand

N – New Research

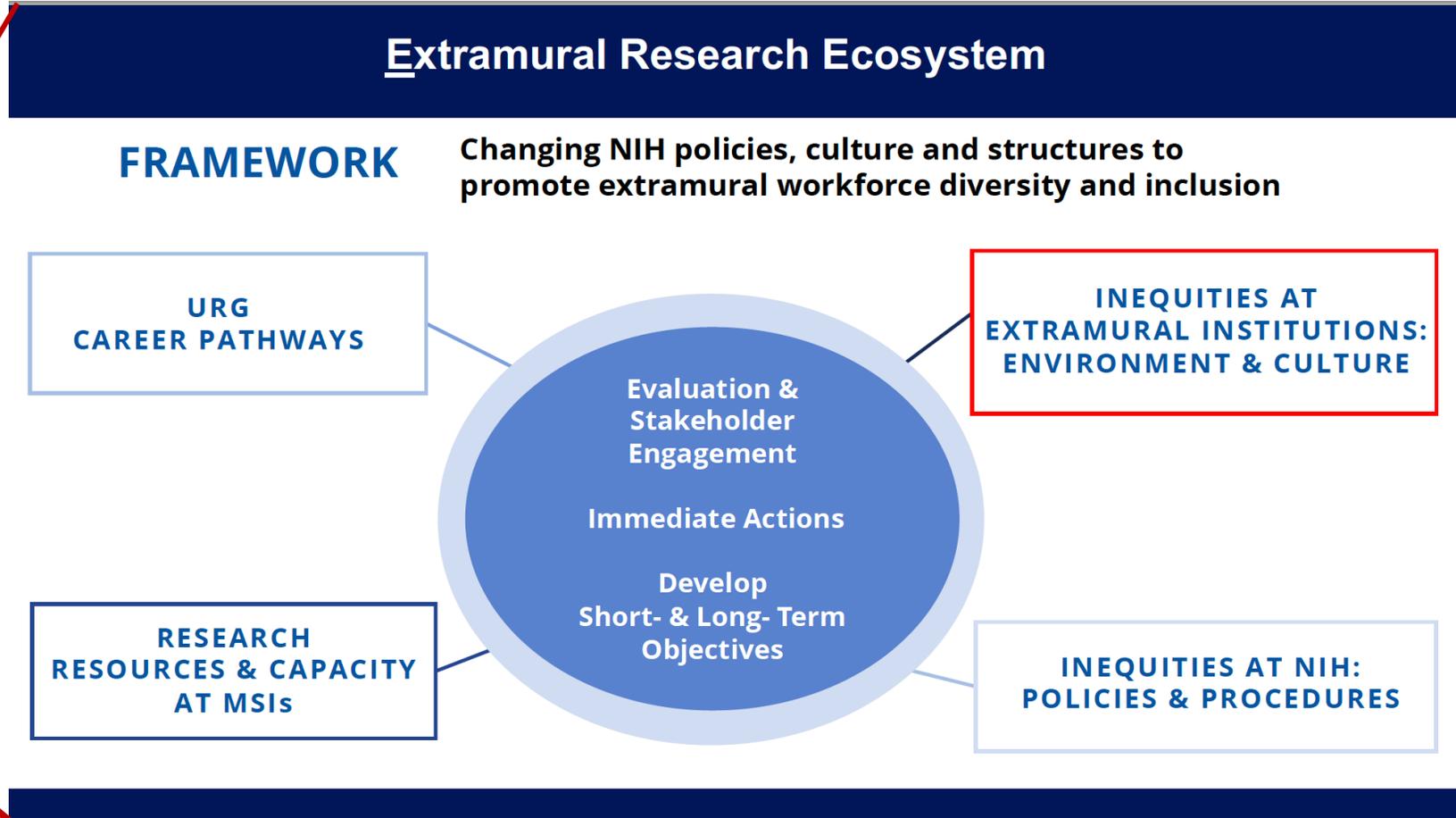
I – Improve Culture

T – Transparency

E - Extramural

NIH UNITE Initiative to Eliminate Structural Racism

- U – Understand
- N – New Research
- I – Improve Culture
- T – Transparency
- E - Extramural**



NLM Appropriations Update

	NLM	NIH
FY 2022 President's Budget	\$ 474,864,000	\$ 51.9 Billion
FY 2022	\$ 479,439,000	\$ 46.1 Billion
FY 2023 President's Budget	\$ 471,998,000	\$ 62.5 Billion
FY 2023 House Proposed	\$ 494,572,000	
FY 2023 Senate Proposed	\$ 494,302,000	

Reaching NLM



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Short-Term Research Education Experiences to Attract Talented Students to Biomedical Informatics/Data Science Careers and Enhance Diversity (R25)

Kickoff Meeting

**NLM Extramural Programs
National Institutes of Health**

**Meryl Sufian, PhD
November 18, 2022**



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Background

NLM Strategic Plan Goal 3: Build a workforce for data-driven research and health

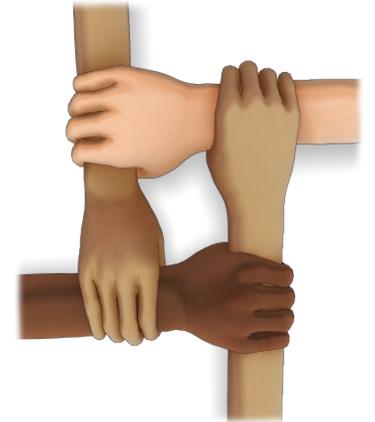
- R25 program addresses a training need to develop a pipeline of diverse future scientists interested in biomedical informatics and data science research
- NLM supports innovative research and development in biomedical informatics and data science
- Biomedical informatics and data science draw upon many fields, including mathematics, statistics, information science, computer science and engineering, and social and behavioral sciences



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Diversity

- **Diversity in research**
 - Diverse teams outperform homogenous teams
 - Scientists and trainees from diverse backgrounds bring different perspectives, creativity, and individual enterprise to address scientific problems
- **Benefits of a diverse scientific workforce**
 - Fosters scientific innovation
 - Enhances global competitiveness
 - Contributes to robust learning environments
 - Improves the quality of the researchers
 - Advances the benefit potential for underserved populations
 - Enhances public trust



NLM R25 Program Objectives

- **To support** educational activities that encourage undergraduates/post-bacs/masters students, including those from groups underrepresented in biomedical and behavioral sciences, to pursue training and careers in biomedical informatics and data science
- **To promote diversity** by supporting the increased participation and retention of trainees from underrepresented backgrounds
- **To increase the pool** of future research investigators from diverse backgrounds and facilitate career advancement and/or transition of participants to the next step in their scientific careers



Program Outcomes

- **Increased admissions** into graduate programs among trainees in research mission areas relevant to NLM
- **Enhanced participation** of persons from diverse backgrounds in the biomedical informatics research workforce who can bring their unique experiences, perspectives and innovation to addressing disease and the public's health and/or the ethical or social implications of biomedical informatics research
- **Other outcomes:** completion of undergraduate and graduate degree programs, and achievement of research funding, e.g., NLM fellowship or career development awards



Mentorship .

- Quality mentorship is critical to the recruitment and retention of scientists
- Mentoring and other educational activities should be conducted at each collaborating institution to maximize the program's impact
- Programs and research experiences should provide mentoring and education in other critical skills in addition to research
 - Leadership
 - Scientific writing and presentation skills
 - Training in rigor and reproducibility
 - Time management



Program Participants/Trainees

- Each site should establish student selection criteria that will ensure a highly qualified pool and a diverse group of trainees
- Students from fields as engineering, mathematics, computer science, physics, chemistry, biology, psychology, sociology, public health and other relevant academic disciplines with an interest in biomedical informatics and/or data science should be encouraged to participate



Evaluation Plan

- Each site should establish an evaluation plan for activities supported by the award
- Evaluation plans should include a logic model and include both process and outcome measures
 - Specify baseline metrics (e.g., numbers, educational levels, and demographic characteristics of participants), and measures for short or long-term research education success
- Institutions are encouraged to obtain participant feedback to help identify weaknesses and to provide suggestions for improvement



Goals and Milestones

- Every site should establish a training program website by at least February 2023
 - We can feature and link from the NLM website
- Every site should establish an application process and recruitment strategy to ensure diversity
- All sites should start accepting applications by February/March 2023
- Sites are encouraged to work together and not compete for candidates to ensure recruitment goals are met



Next Steps

- Opportunity for collaboration:
 - NLM T15 University-based Biomedical Informatics and Data Science Research Training Programs
 - Supports predoctoral and postdoctoral training for research careers in biomedical informatics and data science
- R25 Follow Up Meeting: six months



NLM R25 Kickoff Meeting Grants Management highlights

Samantha Tempchin, MLS
Chief Grants Management Officer
NLM Division of Extramural Programs
November 18, 2022

Agenda

- Cost policies
- Prior approval requirements
- Reporting requirements

Cost policies

Cost categories: participants

- Personnel costs for participants
 - Participants may be compensated for participation in the program, with sufficient justification.
 - **Salary and fringe benefits (not stipend)** for participants must be consistent with institutional salary policies for employees in similar positions.
- Travel for participants
 - Up to \$3,000 for each **non-local** participant for round trip travel to the research experience site, and housing. Must be **itemized and justified**.
 - Unallowable expenses include: daily commuting costs; foreign travel.

Cost policies: other personnel

- Personnel costs: may request salary and fringe benefits for PD/PI(s), Program Coordinator, & faculty effort directly associated with the grant - **may not exceed 30%** of the total direct costs in each year.
 - If mentoring interactions are considered a regular part of faculty's academic duties, then costs associated with mentoring are **not** allowable costs from grant funds.
 - Limited program-related admin/clerical staff effort may be supported with appropriate justification.
- Other costs, such as consultant costs and evaluation costs, **may not exceed 10%** of the total direct costs in each year.

Cost policies: Rebudgeting

- NLM prior approval is not required to rebudget funds for any direct cost item, unless the incurrence of costs is associated with a **change in scope**, or if the cost is otherwise restricted by the terms of award.
 - Significant rebudgeting (deviation from the established level for the cost category by 25% or more) *may indicate* a change in scope.
- Costs must conform to RFA requirements (see Terms of Award in NOA Section IV).
- Must conform to Federal cost principles.

Prior approval requests

Common Prior Approval Items

- Change in scope
- Change in status of PD/PI
- Appointment of additional participants exceeding the number proposed in the application
- Deviation from award terms and conditions

**this is not an all-inclusive list – please refer to the NIH Grants Policy Statement*

How to Request Prior Approval

- Requests must be made in writing, no later than 30 days before the proposed change
- Must include evidence of authorized Signing Official's concurrence
- eRA submission via the [Prior Approval feature](#) for certain types of requests: No-Cost Extension, Carryover, Change of PD/PI
- For all other requests: Email requests should be sent by the authorized Signing Official to the Grants Management Specialist, with cc to the Program Official
- Official approval comes from Grants Management
 - Informal discussions with Program Official are ok, but only responses provided by the GMO are officially valid

Reporting requirements

Reporting requirements: xTrain forms

- Appointments
 - Must be submitted **prior** to the participant start date.
 - Appointment start dates may occur at any time during the budget period, but all Statement of Appointment forms should be submitted no later than 2 months prior to the budget period end date (June 30)
 - Select “Participant” type and enter salary amount
- Termination Notices – not required for R25 awards
- xTrain help and tutorials: <https://www.era.nih.gov/help-tutorials/xtrain>

Reporting Requirements: Progress Reports

- Research Performance Progress Report (RPPR) is due annually on **June 30th**.
 - Submitted via eRA Commons
 - RPPR instruction guide: <https://grants.nih.gov/grants/rppr/index.htm>
 - Include detailed budget for the upcoming year. Must conform to requirements from RFA/NOA.
- All appointment forms for the budget period must be entered in xTrain **before June 30th** in order to be included in the RPPR tables.
 - Even participants who will begin in July/August should be entered in advance so that your reporting will be accurate.
- Ensure that any publications are compliant with the NIH [Public Access Policy](#).

Reporting Requirements: Financial Reporting

- Federal Financial Report (FFR)
 - Submitted annually in the HHS Payment Management System (PMS)
 - Due December 31 for budget period ending August 31
 - FFR Instructions:
https://grants.nih.gov/grants/forms/report_on_grant/federal_financial_report_ffr.htm
- Carryover of an unobligated balance to the next budget period is generally allowable without NLM prior approval. Refer to NOA Section III to confirm.

Contact Information

- Grants Management assignments:
 - [Amy Keener](#): Texas A&M, Ohio State, U Texas Arlington, Indiana U
 - [Ebony Hughes](#): Buffalo, Meharry, Wake Forest, Pitt
 - [Samantha Tempchin](#): Arizona, Wash U, Fred Hutchinson, Oregon
- eRA Service Desk
<https://www.era.nih.gov/need-help>