Technical Assistance Webinar:
NLM Institutional Training Grants for Research Training in Biomedical Informatics and Data Science

RFA-LM-21-001

NLM Extramural Programs
National Institutes of Health
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Note: Session will be recorded, please stay muted.

Aims of Session

1. Provide overview of RFA-LM-21-001.
2. Answer general questions about funding announcement that are sent via chat.

***Note*:** Specific questions unique to your institution should be emailed directly to PO or GM staff listed in the RFA.

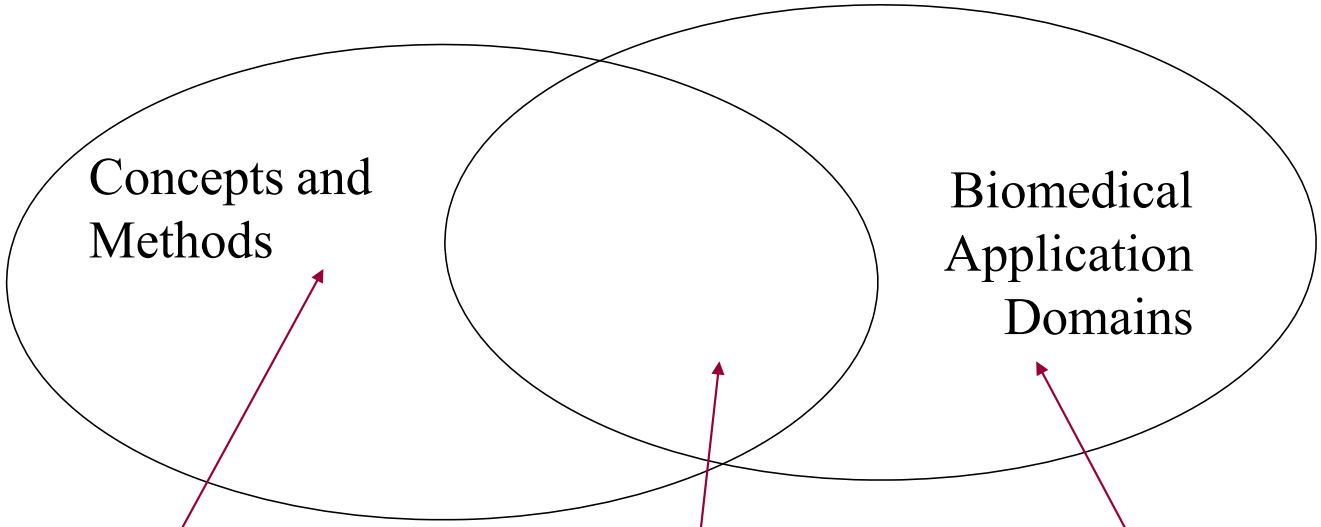
Purpose of RFA

- To support predoctoral and/or postdoctoral training for research careers in biomedical informatics and data science.
- Meet a growing need for well-trained investigators capable of conducting basic and applied research.

Purpose of RFA

- Prepare graduates for research-oriented roles in academic institutions, not-for-profit research institutes, governmental and public health agencies, pharmaceutical and software companies, and health care organizations.
- This initiative is not intended to prepare trainees for careers emphasizing planning, deployment, maintenance, or administration of computer systems or IT infrastructure.

Education for Biomedical Informatics Careers



Computer Science
Information Science Data Science Statistics
Social/Behavioral Sciences
Other areas

Trainee Knowledge & Expertise

Health Care
Biology Transl. Science Public Health
Clinical Research
HIV Research, Other areas

Training Program

T15 focuses on three main trainee groups:

1. Predoctoral: Must pursue doctoral degree in informatics or a related field.
2. Postdoctoral with doctorate not in informatics: must pursue masters or doctorate in informatics or related field.
3. Postdoctoral with doctorate in informatics: traditional postdoc (enhanced preparation for research career) or certificate.

Training Program

- Applicants may propose training programs in one or more of the following five areas:
    1. Health Care/Clinical Informatics
    2. Translational Bioinformatics
    3. Clinical Research Informatics
    4. Public Health Informatics
    5. Consumer health informatics
- Special tracks that emphasize informatics and data science training may also be proposed within these areas.

Health Care/Clinical Informatics

- Applications of informatics principles and methods to direct patient care, such as advanced clinical decision support systems, multimedia electronic health records, provision of health-care related informational support to consumers
- Special tracks might be offered for nursing informatics, dental informatics, imaging informatics, precision medicine, clinical data science or other similar areas

Translational Bioinformatics

- Applications of informatics principles and methods to support 'bench to bedside to practice' translational research, such as genome-phenome relationships, pharmacogenomics, or personalized medicine
- Special tracks might be offered in health effects of environmental factors, mining of large genome-phenome data sets, intelligent tools for curation, visualization and analysis of big data, precision medicine, or other similar areas

Clinical Research Informatics

- Applications of informatics principles and methods to support clinical trials, comparative effectiveness research or other clinical research
- Special tracks might be offered in areas such as biomedical big data analytics, biostatistics, in-silico trials, merging and mining large disparate data sets that mix images, text and data, or other similar areas

Public Health Informatics

- Applications of informatics principles and methods to build integrated resources for health services research, for decision support in public health agencies, to support regional or global health research or syndromic surveillance.
- Special tracks might be offered in areas such as health literacy, information design for consumers, health effects of climate change or other environmental factors.

Consumer Health Informatics

- Applications of informatics and data science principles and methods to address and support the needs of individuals to gather, manage, understand and use data and published information about their personal health.
- Special tracks might be offered in areas such as health literacy, tailored information design for patients, design of personal health libraries.

Training Program Curriculum

- NLM has not endorsed a single approach or curriculum for research training in biomedical informatics and data science.
- Applicant organizations should propose a curriculum that includes informatics and data science principles and concepts, quantitative methods, and elements of computer science, engineering, and/or other information fields.
- The core curriculum should include instruction in the design of rigorous, reproducible research studies in biomedical informatics and data science.

Training Program Curriculum

- Curriculum should provide courses and research experience in one or more biomedical application domains, so a trainee has the depth of knowledge to undertake interdisciplinary research.
- Elective options should offer opportunity for advanced training in fields related to informatics.
- Each trainee must complete a mentored research experience and an independent research project.
- Trainees are expected to author research and disseminate findings.

Number of Full-time Slots

- Maximum of 15 full time slots per application for mix of predoctoral and postdoctoral.
  - Generally, no more than 60% can be predocs.
- Maximum of 10 full time slots per application for programs requesting 100% predoctoral or 100% postdoctoral slots.
- Do not request more slots than your training capacity and/or recruitment history can justify.

Short Term Training

- NLM will support 4 short-term trainee positions (STTPs) aimed at enhancing interest in research careers in biomedical informatics and data science.
- Provides full-time supervised training experience of 8 to 12 weeks.
- Should target pre-doctoral health professions or veterinary students, graduate students, or postdoctoral fellows.
- If STTP slots are requested, those should be addressed in the overall recruitment plan.
- Short-term training is not intended, and may not be used, to support activities that would ordinarily be part of a research degree program, nor for any undergraduate-level training.

Informatics/Data Science Training Addressing HIV

- NIAID has committed funds to add an additional training track that focuses on one or more areas of HIV research including epidemiology, basic science, clinical research, viral phylogenetics, genomics, immunology, and public health.
- Aim is to develop skills that integrate basic, clinical, and observational data and the capacity to build tools to understand the complex multifactorial causal pathways of HIV susceptibility and transmission.
- May exceed number of full-time training slots and request up to 2 additional slots.

Recruitment

- NLM-supported trainees must be US citizens or permanent residents at time of appointment.
- Programs must advertise and recruit nationally.
- Cannot be restricted to a single health professional group (e.g., physicians, nurses, dentists).
- NLM **encourages** a recruitment plan that aims to increase under-represented racial and ethnic groups; individuals with disabilities, individuals from disadvantaged backgrounds, and women in biomedical informatics and data science (NOT-OD-20-031).

Application Format

- SF424 (R&R) Application instructions must be followed **PLUS** any additional instructions provided in the funding announcement.
- Only limited items are allowed in Appendix (consult SF424 instructions).
  - Applications submitting appendix materials not allowed will be withdrawn.
- All applicants must complete appropriate data tables:

  https://grants.nih.gov/grants/forms-f/data-tables.htm
  - Required tables do not count against page limits.
  - Note that there are different tables for new and renewal applications.

Core Review Criteria

- Training Program & Environment
- Training Program Director(s)/Principal Investigator(s)
- Preceptors/Mentors
- Trainees
- Training Record
- “Renewals” in Section V.1 for existing programs

Additional Review Considerations

- Recruitment & Retention to Enhance Diversity
- Training in the Responsible Conduct of Research
- Multiple PD/PI Management Plan
  - If you propose a Multiple PD/PI program, you must have a Multiple PD/PI management plan and explain how multi PD/PI leadership benefits the program and the trainees.

Budget Requests

- Program budgets are tied to number and type of training slots requested.
- In addition, programs may request $2500 direct costs each year to support curriculum development that incorporates new material and activities that enhance the scope of course content that were developed in partnership with an HBCU or Tribal College/University.
    - Request under Training-Related Expenses and provide narrative budget justification.

Budget - Predoctoral

- For each full-time predoctoral slot:
  - Stipend support:
    - NRSA predoctoral level, currently $25,836.
  - Predoctoral Tuition:
    - Request the full, actual cost of institutional tuition & fees.
    - If awarded, NLM will apply NIH formula (60% of costs up to $16,000 for single degree / $21,000 for dual-degree).
  - Travel: may request up to $2,000 per trainee per year.
  - Training-related expenses: $8,500 per trainee per year.

Budget - Postdoctoral

- For each full-time postdoctoral slot:
  - Stipend support:
    - NRSA stipend table (NOT-OD-21-049) for postdoctoral trainees, based on years of relevant experience.
    - For TBN postdoc, use year 3 experience level.
  - Postdoctoral Tuition:
    - Request the full, actual cost of institutional tuition & fees.
    - If awarded, NLM will apply NIH formula (60% of costs up to $16,000 for degree-seeking postdocs / $4,500 for non-degree-seeking).
  - Travel: may request up to $2,000 per trainee per year.
  - Training-related expenses: $11,850 per trainee per year.

Budget – Short Term

- For each short-term trainees:
  - Predoctoral: NRSA predoctoral stipend prorated to length of appointment (up to ¼ of annual level).
  - Postdoctoral: NRSA postdoctoral stipend, prorated to length of appointment (up to ¼ of annual level). Use level 3 for TBN trainees.
  - Tuition:
    - Request the full, actual cost of institutional tuition & fees.
    - If awarded, NLM will apply NIH formula (60% of costs up to $4,000).
  - Travel is not provided for short-term trainee positions.
  - Training-related expenses: ¼ cost of predoc or postdoc level, prorated to length of appointment.

- Current NRSA levels are posted at: https://grants.nih.gov/grants/guide/notice-files/NOT-OD-21-049.html

Trainee Support Limits

- A total of 5 years of NLM trainee support is permitted per trainee.
  - Predocs may be supported for up to 5 years. If a predoc is supported for 5 years, no additional years of NLM training support can be provided.
  - Support can be divided between predoc and postdoc (e.g., 3 pre + 2 post, are acceptable).
  - Postdocs may be supported for up to 3 years.
- For NLM trainees who have received previous training support from another NIH (non-NLM) training grant, the NIH ceiling on training support applies – maximum of 5 years predoc plus maximum of 3 years postdoc.

Key Dates

- Applicant Receipt: May 14, 2021
  - Applications must be submitted electronically.
  - No late applications will be accepted.
- Peer Review: July 2021
- Council Review: October 2021
- Funding Notification: December 2021
- New Awards: July 1, 2022

Questions

Please submit questions using the chat feature.

T15 Program Contact Information

For any additional questions, please email:

nlmepinfo@mail.nih.gov

Subject line: T-15 question