

Trans-Omics for Precision Medicine (TOPMed) Fellowship

Informational Webinar

September 5, 2024

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Agenda

- TOPMed Program Overview
- TOPMed Fellowship Overview
 - Eligibility
 - Timeline
 - Proposal Sections
 - Scientific Review Criteria
- Creating an Applicant Account
- Questions

TOPMed Program Overview

What is TOPMed?

- The Trans-Omics for Precision Medicine (TOPMed) program is sponsored by the National Institutes of Health (NIH) National Heart, Lung and Blood Institute (NHLBI)
- Supports NHLBI's Precision Medicine Initiative, which aims to provide disease treatments tailored to an individual's unique genes and environment.
- The TOPMed program integrates of whole-genome sequencing (WGS) and other omics data with molecular, behavioral, imaging, environmental, and clinical data.

TOPMed Study Characteristics

- Goal: Improve understanding of the biological processes that underlie heart, lung, and blood disorders
- Data:
 - TOPMed consists of ~200k participants from >85 different studies with varying designs. Of the sequenced participants, 60% are of non-European ancestry.
 - Study types: Prospective cohorts, case-control studies, extended family structures and population isolates
 - Types of omics: WGS, RNA-seq, metabolomics, methylation, proteomics
 - Most WGS and some of the Omics data can be accessed through BioData Catalyst (<https://biodatacatalyst.nhlbi.nih.gov/>) or dbGaP (<https://www.ncbi.nlm.nih.gov/gap/>)

Challenges and Opportunities

- Integrating TOPMed multi-omic data with clinical and other phenotypic data
- AI/ML for HLBS research

TOPMed Fellowship Overview

TOPMed Fellowship Goals

- Promote broad participation and engagement of early-career researchers in applying novel and innovative AI/ML approaches on data-focused research problems.
- Facilitate the career advancement and/or transition of participants to the next steps in their scientific careers
- Develop a cadre of diverse scientists capable of applying AI/ML approaches to address challenging research questions in areas of heart, lung, blood and sleep, including Women's Health Research and bias in AI/ML algorithms or data.

Award Information

- **Number of Awards:** Up to 20 awards, contingent upon availability of funds and the number of meritorious applications.
- **Project Period:** One year.
- **Deliverables:**
 - Confirmation of obtaining access to all data necessary for the project;
 - Quarterly progress reports;
 - Final datasets along with documentation/metadata; and
 - Final report (or publication ready manuscript).

Funding Details

- **Funding Mechanism:** A firm fixed price subcontract between the selected awardee's institution and Westat, which serves as the TOPMed Administrative Coordinating Center (ACC).
- **Award Budget:**
 - Award budgets are composed of salary supporting trainee's effort between 25% to 75%
 - The direct cost should not exceed \$70,000 and the indirect cost will be at 10% of direct cost.
 - Travel budget for a trip to the TOPMed annual meeting held in Washington, D.C.'s metro area, and an additional trip to a relevant national/international conference if trainee presents poster or oral presentation.
 - If awardees choose to use BioData Catalyst for computing, the cost of computing will be covered by NHLBI

Eligibility

Eligible Individuals

- Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research is invited to apply.
- Individuals from diverse backgrounds, including underrepresented racial and ethnic groups, individuals with disabilities, and women are always encouraged to apply for NIH support (see, e.g., [NOT-OD-20-031](#)).
- Applicants should be doctoral students, post-doctoral fellows, or early-career faculty investigators (i.e., those performing hands-on analysis work).

Eligible Individuals Continued

- Applicants at any stage who intend to use the fellowship to support someone else to perform the majority of analysis work, are ineligible to apply.
- Early-career investigators are defined as:
 - **New Investigator.** An investigator who has not previously competed successfully for substantial, independent funding from NIH.
 - **Early-stage Investigator.** A program director/principal investigator who has completed their terminal research degree or end of post-graduate clinic training, whichever date is later, within the past 10 years and who has not previously competed successfully as PD/PI for substantial NIH independent research award.

Eligible Organizations

- Higher Education Institutions
- Nonprofits Other Than Institutions of Higher Education
- For-Profit Organizations
- Eligible Agencies of the United States Federal Government
- Foreign Institutions:
 - Non-domestic (non-U.S.) Entities (Foreign Institutions) are not eligible to apply, with the exception of those foreign institutions that have received funds from major NIH Common Fund initiatives on genomics/data science (e.g., H3Africa and DS-I Africa).

Timeline

Proposal Timeline

- Solicitation Open Date: August 9, 2024
- Informational Webinar Session: September 5, 2024, 3:00pm ET
- Frequently Asked Questions Posted: September 10, 2024
- Proposal Due Date: October 29, 2024 5:00PM EDT
- Scientific Review Meeting: Week of December 2, 2024
- Award Notification: February 15, 2025

Proposal Sections

Proposal Instructions

- To apply:
 - Create a Fellowship Applicant account
 - Submit via the TOPMed website:
<https://topmed.nhlbi.nih.gov/2024-topmed-fellowship>
 - Contact the TOPMed ACC with questions: TOPMed-Admin@westat.com
- Total page limit: 12 pages (11-point font), excluding support letters, biosketches and budget template

Proposal Components

- Abstract (0.5 pages)
- Applicant's Background and Goals for Fellowship Training (3 pages)
- Describe the dataset if there is lack of details of it in public (optional, 2 pages)
- Respective Contributions to your project(s) (1 page)
- Working environment and institution's commitment to the applicants career development (1 page)

Proposal Components Continued

- Research Training Plan (4 pages)
 - Specific Aims (up to 1 page)
 - Significance
 - Research Strategy (bench work should not be proposed)
 - Design
 - Analysis
 - Dissemination

Proposal Components Continued

- Mentor responsibility/support letter (3 pages)
 - A mentor can be the person under whom the applicant is working; or an expert in or outside applicants' institution who provides guidance in any specific area of the project.
 - Mentoring plan
 - Training history
 - An applicant may have more than one mentor.

Proposal Components Continued

- Budget:
 - Provide a budget using the downloadable template. The award is to be used for salary support and conference travel only. Indirect costs must not be more than 10%.
- Attachments:
 - Biosketch of applicant and mentor(s)

Review and Selection Criteria

Review and Selection Criteria

- **Overall Impact**

- Reviewers will provide an overall impact score to reflect their assessment of the likelihood that the fellowship will enhance the candidate's potential for, and commitment to, a productive independent scientific research career in a health-related field, in consideration of the scored and additional review criteria.

- **Scored Review Criteria**

- Reviewers will consider each of the review criteria in the determination of scientific merit and give a separate score for each.

Review and Selection Criteria Continued

- Scored Review Criteria categories:
 - Fellowship Applicant
 - Sponsors, Collaborators, and Consultants
 - Research Training Plan
 - Training Potential
 - Institutional Environment & Commitment to Training

Creating an Applicant Account

Creating an Account

Home About Centers Projects & Studies Data Resources Publications Collaborators Directory FAQs Dashboards

Create a New User Account

To begin your application request for a TOPMed account, please complete the form below. Once approved, you will receive an automated email with additional steps to set up your account.

To gain full membership and access to the TOPMed website, you must be affiliated with one of the TOPMed consortium entities. Learn more [about TOPMed membership](#). TOPMed affiliated investigators can only access private pages of this website by completing the form below, and having a TOPMed PI from a [TOPMed Project](#), TOPMed Center ([ACC](#), [IRC](#), [sequencing or omics center](#)), [U01](#) or [R01](#) Award (in response to TOPMed RFAs), [NIH-sponsored investigator-initiated award centered on TOPMed data](#) review and approve the new user account request.

Once we have received PI approval, you will receive an automated email with additional steps to set up your account. You will be asked to sign a [TOPMed NDA](#).

All the fields with a * are required.

Investigator Information

Given / First Name(s) *

Examples: Anya / André G. / María-Jose / F. Scott / Jon Ethan

Preferred Name for Communications

(if different than Given/First Name above, otherwise leave this field blank)

Family / Last Name(s) *

Examples: Nguyễn / Smith, Jr. / Abdul-Rahman / Carreño Quiñones

Email *

A valid e-mail address. All e-mails from the system will be sent to this address. The e-mail address is not made public and will only be used if you wish to receive a new password or wish to receive certain news or notifications by e-mail.

Application URL:

<https://topmed.nhlbi.nih.gov/2024-topmed-fellowship>

Required Fields: First name, Last name, Email, Institution

Creating an Account Continued

Account Type - TOPMed PI Information and Fellowship Account Request

Full Membership in the TOPMed program requires nomination and sponsorship from an existing TOPMed Project Study or Center PI or Award PI. An email will be sent to the TOPMed Project Study or Center PI or Award PI to approve your request.

If you are interested in submitting an application for the TOPMed Fellowship, then select that the Fellowship Applicant option to be provided with an account to access the TOPMed Fellowship application form.

Please Select which Account Type (The Project Study or Center or Award your PI is associated with or Fellowship Applicant) *

- Project Study or Center
- Award
- Fellowship Applicant

Questions

TOPMED ACC: TOPMED-ADMIN@WESTAT.COM



National Heart, Lung,
and Blood Institute