Request for Proposal

AMP CMD RFP 4: Development of analytic tools and approaches for data analysis and visualization in the CMD Knowledge Portal

Background
The Accelerating Medicines Partnership®1 program in Common Metabolic Diseases (AMP® CMD) is a public-private partnership between the National Institute of Diabetes and Digestive and Kidney Diseases at the National Institutes of Health and the Foundations for the National Institutes of Health, and industry partners that aims to elucidate human disease drivers to understand the underlying pathophysiology of common metabolic diseases: including obesity, atherosclerotic cardiovascular disease and heart failure, pre-diabetes, type 2 diabetes, type 1 diabetes and diabetic complications, nonalcoholic fatty liver disease (NAFLD) and steatohepatitis (NASH), and chronic kidney disease (CKD). In doing so, the AMP CMD program strives to accelerate the identification of novel, high-value, actionable therapeutic targets across common and prevalent metabolic diseases with substantial unmet medical need. Data and analytic tools attained from study cohorts or generated through AMP CMD program are made publicly available in the AMP CMD Knowledge Portal and/or the CMD Genome Atlas to the broad research community.

Request: The Foundation for the National Institutes of Health2 (FNIH) is requesting proposals for development and expansion of analytic tools for the AMP CMD Knowledge Portal in 2022-23.

Issued by: FNIH Division of Research Partnerships on November 18, 2021

Objectives:
Development of analytic tools and/or analysis methods and/or visualization tools for data related to understanding molecular drivers of Common Metabolic Diseases including:

1. Development of analysis tools and/or visualization tools for existing and novel data types (e.g. proteomics, metabolomics) to support therapeutic target identification or prioritization across CMDs within the CMD Knowledge Portal (KP) and/or CMD Genome Atlas (CMDGA), and/or
2. Advance heuristic approaches, algorithms, data input, and visualizations for target validation
3. Expansion of analytic tools and visualizations to support functional annotation of noncoding variants across the range of CMDs, and/or
4. Development of tools or algorithms for integrated analysis of multitrait and multi-omic data within and across CMDs, and/or
5. Analytic approaches and visualization tools for defining sub-types, clusters, or endotypes of patients with CMDs and analyzing their associations with genetic, genomic, phenotypic, and/or biomarker data, and/or
6. Embed analytic capabilities supporting pathway and network related queries and visualizations of knowledge portal data Embed analytic capabilities supporting pathway and network related queries and visualizations of knowledge portal data.

1 ACCELERATING MEDICINES PARTNERSHIP and AMP are registered service marks of the U.S. Department of Health and Human Services.
2 FNIH support the mission of NIH by organizing and administering research programs pursuant to 42 U.S.C. §290b.
**Deliverables**
1. Description of analytic tools, methods, and/or visualizations and how they contribute to understanding of CMD pathogenesis and/or target identification.
2. Demonstration of tool utility using CMD-related datasets
3. Implementation plan and integration of new methods, tools, and/or visualizations into the AMP CMD KP and/or CMDGA.
4. Plan for future publications or follow up research activities.
5. Description of where key components of novel tools or data have been deposited for public availability.
6. Proposal on how results from utilization of new tools or methods will be made publicly accessible in the AMP CMD KP or CMDGA.

**Expectations:**
1. A plan on data submission to the KP Team to coordinate the completion of the milestones to the portal scheduled quarterly release.
   a. If a proposal is selected to move forward for consideration of funding, Investigators will meet with the portal team to determine how data will be incorporated into the portal. An additional plan for portal integration will be submitted as part of the Investigators’ application.
   b. This plan will include written permission(s) from cohorts’ investigators for data sharing. See CMDKP Policies on data submission, use and access.
2. Investigators are expected to deliver the project milestones by their due dates.
3. Investigators are expected to submit written reports on the deliverables by the due dates.
4. All milestone-driven data must be made publicly available by the due dates, unless approved in advanced by the Steering Committee.
5. Investigators are expected to present their work twice yearly, subject to their availability, to the AMP CMD Steering Committee/consortium at face-to-face meetings or via teleconferences.
6. Investigators are expected to participate in a yearly face-to-face meeting.

**Project timeframe:** 1 year

**Proposal guidelines:**
1. Please address the objectives and deliverables with following format:
   a. Title of your project
   b. Principal investigators and co-investigators
   c. Specific Aims
   d. Timeline for deliverables
   e. Budget and justification
   f. Letters of support
   g. Bio sketches of Principal Investigators and co-investigators and published works (NIH bio sketches welcomed)
2. The proposal (excluding budget, bio sketches, and letters of support) is not to exceed five pages using 10-11 pt Arial or Calibri font.
3. A short video demonstrating the value of proposed analytic tools and methods is acceptable and is optional. It does not replace a detailed research proposal.
4. Send your proposal to Lynette Nguyen (lnguyen@fnih.org) and Tania Kamphaus (tkamphaus@fnih.org) by January 21, 2022.
5. FNIH will notified applicants in writing of the AMP CMD Steering Committee decision no later than April 30, 2022.
6. If your proposal is selected, you will participate in a teleconference with the AMP CMD Steering Committee prior to finalizing the award contract.
Eligibility:
Any organization from the private and public sector, inside/outside the United States is eligible to apply. AMP CMD has federated nodes in Europe and the U.S.. It is acceptable for more than one organization to collaborate and submit a joint proposal.

For more information about the AMP CMD program, please visit:
https://fnih.org/our-programs/amp/accelerating-medicines-common-metabolic-diseases and

https://www.niddk.nih.gov/research-funding/research-programs/accelerating-medicines-partnership-common-metabolic-diseases