EuPathDB Driving Biological Projects

The NIAID-funded Eukaryotic Pathogen Genome Database (EuPathDB.org) invites proposals for Driving Biological Projects (DBPs) focused on one or more of the eukaryotic pathogens supported by this Bioinformatics Resource Center (BRC). We anticipate making two awards of up to $600K each by July 1, 2010 (a second round of solicitations is expected in 2012). A two page Letter of Intent (LOI) is due Feb 28, following which full applications will be solicited by invitation only, with a deadline of March 31.

DBP applications must include research exploiting high-throughput experimental technologies to functionally characterize the genome, proteome or metabolome of eukaryotic pathogens, in order to help elucidate how genes, proteins and metabolites may be involved in pathogenesis, antimicrobial resistance or other biological processes of interest in the study of infectious diseases. Such approaches may incorporate expression profiling microarrays, proteomics studies, metabolomics, interactome analysis (two-hybrid screening or other methods), RNAi experiments, RNA-Seq and Chip-Seq studies, bioassays, or other technologies.

All experimental results and data generated by the DBPs must be released into the public domain, according to data release guidelines provided by the EuPathDB BRC. NIAID requires that EuPathDB staff assist with bioinformatics analysis and loading of data produced by the DBP, which may involve computational and statistical analysis of experimental data, generating predictive models, developing algorithms for data analysis, data management, etc.

For more information about the BRC program, see http://www3.niaid.nih.gov/LabsAndResources/resources/brc/

DBP Information

• Type of award: Cost reimbursement subcontract
• Number of awards: 2
• Duration of each award: up to 24 months
• Maximum budget: up to $600,000 in total costs
• Letters of Intent (LOI) must be submitted via email to EuPathDB_DBP@pcbi.upenn.edu by February 28, 2010; maximum length: 2 pages.
• Full proposals will be solicited based on a review of LOIs, and will be due by March 31, 2010; maximum length: 15 pages.
• Anticipated Start Date: July 1, 2010

Note that we anticipate a second solicitation for DBPs in 2012.
Letters of Intent
Submission of a Letter of Intent is required. The LOI should be no longer than 2 pages, including the following components:
• PI name, affiliation and contact information
• Project title
• Pathogen(s) involved
• Project description
• Explanation of how the project is expected to utilize and complement BRC resources in expediting research on these pathogens by the larger scientific community.

LOI’s will be reviewed by the Scientific Working Group (SWG) -- an external group of advisors to the BRC. Projects considered competitive by the SWG and the NIAID will be invited to submit full proposals. Note that the SWG may suggest (but may not require) communication between applicants proposing similar projects, in order to facilitate coordination where appropriate.

Full Proposals
The DBP proposal will be structured as a white paper, and must clearly identify how the DBP will exploit high-throughput experimental and bioinformatics techniques to functionally characterize the genome, proteome or metabolome of microbial species, helping to elucidate how genes, proteins and metabolites may be involved in pathogenesis, antimicrobial resistance or other biological processes of interest in the study of infectious diseases. Applicants must also clearly state what relevant datasets are currently available, how these will be exploited, what data will be generated, and how this information will be released to benefit of the broader research community.

Full DBP white paper proposals should be no longer than 15 pages, and must include:
• A description of the project's goals.
• Expected impact on scientific community served by BRC.
• A description of high throughput experimental technologies necessary to carry out the project, along with a description of available facilities, equipment and other resources.
  o A description of bioinformatics support services to be provided by the BRC, and how the project will influence the development of new BRC features.
• A delineation of the project timeline, with milestones.
• Expected results and a data release/data sharing plan for the project consistent with EuPathDB data release guidelines.
• A list of proposed scientific and technical personnel at the experimental laboratory, and a description of their qualifications, relevant experience, and roles in the project. The DBP lead investigator must devote at least 10%
effort to this project.

- Proposed budget, broken down into total costs for labor, materials, and other line items, as appropriate for the project.

Researchers invited to submit full proposals are strongly encouraged to discuss with EuPathDB staff the technical feasibility and relevance of computational support to be provided by the BRC.

Full proposals will be reviewed by the EuPathDB Scientific Working Group, based on the following evaluation criteria:
- Technical feasibility
- Scientific merit
- Impact on the scientific community served by EuPathDB
- Impact on development of new features in EuPathDB

The NIAID will also review and provide the final approval of DBPs proposed for award by the SWG.

Reports
Semi-annual are required, and periodic ad hoc reports may be requested, in order to assist with the review of progress toward stated goals.

Data Release
All data and information generated under the DBP award must be released in the EuPathDB web site within one month from publication or within one year of generation, whichever comes first. See the data release policy on the EuPathDB website for EuPathDB policies and procedures for handling data.