The advent of high-throughput sequencing has revolutionized genomic epidemiology and is creating vast new opportunities for understanding the dynamics and control of infectious diseases. In response, the Association for Public Health Laboratories (APHL) and U.S. Centers for Disease Control and Prevention (CDC), Office of Advanced Molecular Detection (OAMD) are seeking CDC laboratories to host bioinformatics fellows.

Fellowship Description
Administered by APHL, the APHL-CDC Bioinformatics Fellowship Program provides host labs with masters- and doctoral-level bioinformatics graduates who can apply their skills to a range of important and emerging public health problems. Host labs will be matched with qualified bioinformatics applicants, who will contribute to real-world infectious disease projects during their 12-month term. Host labs may have the opportunity to extend post-doctoral for an additional 12 months, provided funding is available.

Opportunities to Expand AMD Research
A selection panel will pair host laboratories with qualified bioinformatics fellows to assist in synthesizing and correlating data into actionable public health information as part of ongoing AMD projects. Host laboratories are encouraged to integrate fellows into research activities, outline projects, provide clear goals and desired outcomes for activities, and assign a mentor (see details below).

Example Bioinformatics Fellowship projects include
- Comparative genomics of pathogenic microorganisms, leading to the development and validation of candidate targets and strategies for high-throughput assays for subtyping, virulence, or antimicrobial resistance screening
- Modeling of predicted structural changes in antigenic surface proteins, and correlation of these differences with known differences in vaccine coverage and efficacy
- Transcriptomic studies of specific infection models to understand the role of host responses in determining the course and outcome of infection
- Proteomic identification and characterization of pathogenic microorganisms from mass spectrometry data
• Metagenomic identification of unknown pathogenic organisms from complex environmental or clinical samples
• Development of comprehensive reference databases, combining genomic data with microbiologic, clinical, and epidemiologic data

Stipends and Benefits
Funding for APHL-CDC Bioinformatics Fellows comes through the CDC’s Cooperative Agreement with APHL. Laboratories are not required to include funding for fellows in their AMD budgets. APHL-CDC Bioinformatics Fellows will receive:
• A stipend, disbursed on a biweekly basis, for the duration of the fellowship. Stipends follow U.S. Health and Human Services’ Government Schedule (GS) rating scale. Current rates are
  o Post-Doctoral Fellows, GS-11 ($61,193 per year; $5,099/month).
  o Post-Masters Fellows, GS-9 ($50,578 per year; $4,215/month).
• Individual (single) major medical insurance.
• A professional development allowance to include attendance at appropriate professional meetings, training courses, and/or purchase of relevant books or software.
• The customary leave and holidays of the host laboratory.

Selection Criteria
APHL and CDC will review applications and select a subset for matching prospective fellows with infectious disease host laboratories. A Selection Panel will evaluate each fellowship application and make recommendations based on applicants’
• Education, skills, and experience;
• Reasons for participation in the program/career goal;
• References/letters of recommendation; and
• Degree to which candidates can meet the needs of the host laboratories.

Host Laboratory Eligibility and Application Information

Host Laboratory Requirements:
Any Infectious Disease laboratory located at CDC or in a US Public Health Laboratory (PHL) may apply to serve as a host laboratory. Applicant laboratories from CDC are encouraged to incorporate state public health laboratories and/or programs into the fellowship experience. Joint applications from CDC and a PHL will also be considered.

Interested laboratories must fulfill the following requirements:
• Demonstrate need for the project:
  o Specify how the proposed project for the fellow fits laboratory strategic objectives and will benefit laboratory practices.
  o Describe state public health laboratory and/or program involvement.
  o All project proposals should include clear timelines and defined objectives and describe how hosting the fellow will integrate with and advance programmatic activities.
• Supply the fellow with appropriate office and laboratory space, facilities, technical and clerical support (including an email account), travel to state public health facility (if applicable) and access to necessary equipment and personnel as needed for the fellow to implement program requirements.
• Designate a mentor to provide administrative and programmatic oversight. See below for Mentor Responsibilities and Requirements.
• Provide a written report to APHL of the fellowship experience on a quarterly basis to ensure sufficient progress has occurred.
• Propose timeframe for training(s) and subsequent technology transfer of methods learned during training(s), if applicable.
• Identify training provider(s) and their commitment to provide the requested training within the proposed timeframe.

**Mentor Responsibilities and Requirements**
Host laboratories will assign the fellow a mentor who will outline the objectives of each fellow’s assigned project(s) and provide guidance for the duration of the program. The assigned mentor at the host laboratory and be responsible for the development of the fellow. The mentor must meet the following requirements:
• Be a full-time employee.
• Hold a supervisory level position as an infectious disease laboratorian or other public health role.
• Have research or training experience/goals complimentary to the fellow’s project.
• Be available and accessible for the duration of the program.
• Meet weekly with the fellow to review progress.
• Provide a realistic appraisal of the fellow’s goals and performance based on objectives agreed upon at the beginning of the assignment.
• Provide constructive criticism and enthusiastic support to the fellow.
• Provide quarterly reports to APHL and CDC fellowship leads on the fellow’s performance in the laboratory and on his or her progress with the designated project.

**Host Laboratory Applications and Selection Process**
Interested laboratories must submit an application form to APHL for consideration. The application deadline is February 28, 2017. The projected start date for fellowships is July – August 2017.

**Selection Process:**
A Selection Panel composed of representatives from APHL and CDC will evaluate each host laboratory application. Selection will be based on:
• Strength of proposed project including applicability of project goals and outcomes to broader public health applications and integration of state public health programs into the proposed project(s).
• Demonstration of mentor’s ability to meet requirements as outlined above.
• Degree to which candidates in the fellowship pool will meet the needs of the host lab.

**How to Apply**

Application information and submission can be found at https://www.aphl.org/fellowships/Pages/Bioinformatics.aspx

Applications are due by **February 28, 2017**
Questions and applications should be directed to:

Bioinformatics in Public Health Fellowship Program
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