



CDC-RFA-OE20 -2001: Enhancing Public Health Laboratory Capabilities and Increasing Capacity
New Focus Area Project Plan Template

SECTION 1: GENERAL INFORMATION

1.	Name of Applicant: Association of Public Health Laboratories (APHL)	2.	Focus Area: Foodborne, Waterborne, and Environmentally Transmitted Disease
3.	Funding Amount: <i>(Whole Numbers Only)</i> \$45,000	4.	Funding Source (e.g., BA, COVID, PPHF, OPIOID): AMD
5.	Name of Project: CryptoNet Pilot of Cryptosporidium Whole Genome Sequencing and wgMLST methods		
6.	Name of Technical Monitor(s): Dawn Roellig, Colleen Lysen	7.	Technical Monitor(s) Email Address: iyd4@cdc.gov, vqy1@cdc.gov
		8.	Technical Monitor(s) Phone Number: 404-718-4134, 404-639-4654
9.	Name of Focus Area Coordinator (FAC): Don Sharp	10.	Email Address of FAC: das8@cdc.gov
		11.	Phone Number of FAC: 404-639-3845

SECTION 2: PROJECT SUMMARY

2.1 – Project Description

Project Status: Select whether your project/activity is an entirely new project or an extension of an existing project:

- ☐ New CIO Project/Activity
☒ CIO Existing Project/Activity (Expansion/Change of Scope)

Project Description: Provide a description of the project including a justification for the project's bona fide need in the space below:

Background: The CryptoNet laboratory has developed and validated whole genome (WG)-based characterization tools with improved cluster detection capabilities for cryptosporidiosis cases caused by *Cryptosporidium parvum* and *Cryptosporidium hominis*. When implemented nationally and linked to epidemiological data, WG-based characterization will be a valuable tool for detecting foodborne, waterborne, and zoonotic cryptosporidiosis outbreaks. The WG pipeline has been developed and validated with retrospective isolates. The next stage of implementation is piloting CryptoNet's tools for real-world testing with cryptosporidiosis cases.

Purpose: To build capacity for and pilot CryptoNet's WG wet lab and dry lab methods at three key state public health laboratories.

Significance: Implementing CryptoNet's highly discriminatory WG-based method and piloting in state laboratories will inform CryptoNet's QA/QC programs, onboarding procedures, and workflow modifications needed for deploying WGS methods to state partners. Pilot states will be able to leverage genomic epidemiology capacity to improve cryptosporidiosis cluster detection and investigations.

Expected results: This expanded scope for CryptoNet activities will build off existing projects to expand Cryptosporidium typing capacity in the public health laboratory community. Provision of laboratory equipment and supplies for Cryptosporidium whole genome sequencing.

Activities: Describe activities to be carried out in this project as well as their associated deliverables:

- Collaborate with CDC to determine requirements and resources needed for roll out of Cryptosporidium whole genome sequencing methods and transmission of data to CryptoNet
- Provide needed supplies and resources to three state public health laboratories participating in the pilot to complete whole genome sequencing and wgMLST analysis for 50 *C. parvum* or *C. hominis* isolates

2.2 – Project Strategy and Outcomes

Project Strategies: Select one or more strategies that the project will contribute towards:	☐ S1. Science, Management and Operations ☐ S2. Policy, Partnership and Communication ☒ S3. Training and Capacity Building ☒ S4. Laboratory Quality, Safety and Informatics for Public Health Testing Services, Surveillance and Response
For this Project: Select the outcomes that the project will contribute towards	
Please check and select responses for all applicable boxes below.	
PO-1. Improved collaboration and communication across public health laboratories and other stakeholders.	☐
PO-2. Improved awareness and understanding of public health laboratory capabilities and needs among public health laboratories and other stakeholders.	☐
PO-4. Improved awareness of new tools and resources for public health laboratories and other stakeholders.	☒
PO-5. Increase in needs met due to improved awareness and understanding of public health laboratory training and professional development needs and opportunities among training and workforce development stakeholders.	☐
PO-6. Improved access to and participation in training and workforce development resources and opportunities among current and potential laboratory professionals.	☒
PO-7. Enhanced knowledge, skills, and abilities among current and potential public health laboratory professionals in diverse settings.	☐
PO-8. Improved awareness of public health laboratory informatics capabilities.	☐
PO-9. Improved implementation of quality and safety systems and model practices in public health laboratories.	☐
PO-10. Improved knowledge of technical assistance needs and priorities in state and local public health laboratories.	☐
PO-11. Improved and ongoing awareness and understanding among stakeholders of emerging methods and processes in public health laboratories.	☐
PO-12. Improved dissemination of evidence-based practices to public health laboratories and other stakeholders.	☐
PO-13. Improved laboratory testing capability and surge capacity for emergency response through equipment procurement, competent staff and partnerships.	☐
NEW S1.PO-14 Implement approaches to ensure efficiency for committee/subcommittee functions	☐
NEW S1.PO-15 Maintain monitoring and evaluation processes across all focus areas	☐
NEW S1.PO-16 Maintain and ensure process and system of effective knowledge management and commitment to rigorous scientific integrity, quality, and professional standards of practice in development	☐

of APHL products	
NEW S4.PO-1 Better informatics solutions available for public health laboratory system-wide adoption	☐
NEW S4.PO-2 Improved, timely public health laboratory access to and awareness of needed resources	☐
NEW FLS.C.PO-1 Improved dissemination of clear, compelling, targeted, and timely messages using appropriate communication channels for relevant audiences	☐
NEW FLS.C.PO-2 Increased production of communications materials, websites or other digital platforms, or any other resources with APHL-CDC logo use (i.e., co-branding and logo licensing)	☐
NEW FLS.C.PO-3 Improved dissemination of APHL-CDC co-branded materials or resources for public health laboratories and other stakeholders	☐
NEW Ph2.ID.PO-1 Improve testing capability/capacity to conduct and report low-volume or highly-specialized testing efficiently.	☒
NEW Ph2.PHPR.PO-1 Ensure compliance and access to essential, centralized resources for laboratory testing capability and surge capacity for coordinated emergency response.	☐
NEW QSS-S4.2-PO1. Increased public health laboratory and system partner participation/commitment to L-SIP assessment/reassessment process.	☐
NEW QSS-S4.2-PO3. Improved implementation of quality and safety system model practices across participating public health laboratory system (state/local level).	☐
NEW QSS-S4.2-PO2. Increased participating public health laboratory, system partner knowledge of quality needs and model practices.	☐
IO-1. Expanded Communities of Practice and other collaborative relationships among public health laboratories and other stakeholders.	☐
IO-2. Strengthened information sharing across public health laboratory networks and other stakeholders.	☒
IO-3. Improved engagement and participation of current and potential public health laboratory workforce through application of best practices.	☐
IO-4. Enhanced practices, methods, and infrastructure within the public health laboratory system.	☒
IO-5. Improved data exchange and interoperability among public health laboratories and their partners.	☒
IO-6. Improved public health laboratory detection, surveillance, and response.	☒
IO-7. Improved quality and safety in public health laboratories.	☐
NEW S1.IO-8 Ensured effective leadership and management system for committees/subcommittees	☐
NEW S1.IO-9 An effective monitoring and evaluation system across the organization	☐
NEW S2.IO-3 (Old PO-3) Improved support for public health laboratories among policy makers	☐
NEW S3.IO-1 Leadership development participants granted increased leadership roles and/or responsibilities	☐
NEW S4.IO-1 System-wide adoption of informatics and data management solutions among public health laboratories and their partners	☒
NEW S4.IO-2 Increased use of resources/outputs created and shared via technical assistance responses	☐
NEW S4.IO-3 Improved technical capability among recipients as a result of fulfilled requests	☐
NEW FLS.C.IO-1 Improved reach of clear, compelling, targeted, and timely messages among relevant audiences	☐
NEW FLS.C.IO-2 Enhanced adoption or use of APHL-CDC co-branded materials or resources among public health laboratories and other stakeholders	☐

SECTION 3: PROPOSED BUDGET

Instructions for Use of funds: *Provide any restrictions or instructions for applicant use of funds, as applicable:*

10 month funding request

SECTION 4: ADDITIONAL CONSIDERATIONS

Reviewers’ feedback on additional considerations (if any):

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6/15/2021

X Dawn M. Roellig

Technical Monitor/Submitter
Signed by: PIV