Grant

Characterization of NCDC Strain Repository by Next Gen Sequencing (NGS)

Funder: Defense Threat Reduction Agency (DTRA)
Grant number: HDTRA11510062

Investigators

Gvantsa Chanturia - National Center for Disease Control and Public Health
PI

Research organization

National Center for Disease Control and Public Health, Georgia

Abstract

Los Alamos National Laboratory (LANL) has been assisting country of Georgia National Center for Disease Control and Public Health (NCDC) Genome Center Facility at the R. G. Lugar Center for Public Heath Research in developing Next Generation Sequencing (NGS) and analytic capabilities. As the infrastructure is being established and personnel trained, LANL and NCDC-Lugar Center propose to develop scientific collaborations that utilize the capabilities at both institutes to address the global threat of weapons for mass destruction (WMD), focusing on biothreat agent detection and characterization. NCDC (formerly known as the Anti-Plague Center) holds extensive collections of pathogen strains from past several decades. We will determine the whole genome sequences of a subset of these collections, correlating genomic information with previous phenotypic and provenance data for functional characterization. Samples collected from both recent and historical local outbreaks as well as disparate geographic regions within Georgia will be compared to determine geographic and temporal profiles. Established correlation will help surveillance efforts and tracking of the most likely source of infection of future outbreaks, and contribute to a more global picture of novel pathogen movement across borders. We plan to leverage other US Government funded projects in Georgia in this joint NCDC-LANL effort, wherein tasks will be performed by NCDC and LANL staff at each site respectively with close coordination, and data analysis and interpretation will be carried out jointly. This project will rigorously exercise the genomic capabilities at NCDC, and will enhance and improve these capabilities. New laboratory sequencing techniques will be continuously introduced by LANL to NCDC to produce high quality genomic sequencing information. New assembly and analysis techniques will be provided by LANL. NCDC staff, as well as students involved in the project, will be trained to use these techniques with the data generated by the project.

Less

Details

Funding amount

USD 488 K

Funding period

2015 - 2018

1 Nov 31 Oct

Research Categories

Fields of Research

06 Biological Sciences
0604 Genetics

Similar grants

Sorted by: Start Date Funding amount (USD), Funding period

To support the Risk Communications Pillar of the NCDC Action Plan and Presidential Task Force (PTF) emergency response to the novel coronavirus outbreak in Nigeria

263,875
2020 - 2020

Bill & Melinda Gates Foundation

To support the Risk Communications Pillar of the Nigeria Center for Disease Control (NCDC) Action Plan and Presidential Task Force (PTF) emergency response to the novel corona-virus outbreak in Nigeria

381,379
2020 - 2020

Bill & Melinda Gates Foundation

Advanced Detectors for XFELs and Proton Accelerators
3,745,225
2020 - 2023
UC Lab Fees Research Program
to Eric Prebys, Stuart Kleinfelder, Bruce Schumm, Jen Bohon, Carl Grace, D...

RII Track-4: Operating High Purity Germanium Detectors in Liquid Scintillator
207,462
2019 - 2021
Office of the Director
to Wenqin Xu

Emory-Georgia Clean Air Research & Education (CARE) Program
249,145
2019 - 2024
National Institute of Environmental Health Sciences
to CARMEN JOSEPH MARSIT, LELA STURUA, CARLA J BERG

More