

Advanced Molecular Detection

National investment to advance genomic sequencing capacity

Mountain Region



Arizona

Total Investment¹: \$7,769,248

State and Local Investment: \$5,195,020

Research Awards: \$2,574,228

CDC's Advanced Molecular Detection (AMD) program builds and integrates laboratory, bioinformatics, and epidemiology technologies across CDC and nationwide. Since 2014, AMD has received support from Congress through a \$30 million per year appropriation to implement these technologies in public health programs. Through investments in AMD technologies, CDC is improving both public health outcomes and preparedness in dozens of areas including foodborne disease, influenza, antibiotic resistance, hepatitis, pneumonia, and meningitis.

With funding from the American Rescue Plan Act of 2021, the AMD program has developed a multi-year plan to expand its support to state, local, and territorial public health laboratories with more staff and resources to collect specimens for COVID-19 testing, sequence them to identify and track SARS-CoV-2 variants, and share data, now and future years.

Workforce Development

Arizona is part of the Mountain region. In 2018, the AMD program established seven workforce development regions across the country. Each region has an AMD training lead and a bioinformatics lead. This provides a network of customized AMD support which helps develop skills and provides training assistance to public health labs across the country.

Through the Mountain region's training resources, Arizona receives lab support on data analysis and how to interface with IT departments. They also receive both pathogen-specific training and cross-cutting instruction to help staff develop the critical skills necessary to extract, analyze, and interpret sequencing data.

¹ Funding to public health departments includes support from the American Rescue Plan of 2021 and AMD annual appropriations. Awards to university and research partners in 2020 and early 2021 were funded through appropriations supporting the COVID-19 response.



www.cdc.gov/amd



November 10, 2022

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University and Research Partners in Arizona

These awards are intended to fill knowledge gaps and promote innovation in the U.S. response to the COVID-19 pandemic. Funding awards are determined through a competitive selection process based on scientific needs and available funds.

Arizona State University

SARS-CoV-2 genomic surveillance in Arizona (2022—\$749,526)

This project will conduct viral next-generation sequencing and develop tools to track SARS-CoV-2 in Arizona. It will sequence 2,000 positive samples over 12 months.

Northern Arizona University

Viral genomic dynamics in differentially vaccinated populations (2021—\$749,993)

This study will monitor two populations on opposite vaccination schedules and compare their impact for SARS-CoV-2 transmission. One site will monitor 500 vaccinated residents in two long-term care facilities, and the other site will monitor 2,000 unvaccinated school-aged children in a school setting.

Translational Genomics Research Institute – Arizona

COVID-19 Genomics in the American Southwest (2021—\$1,074,709)

This project will expand analysis of SARS-CoV-2 genomic diversity in the Southwest United States and provide public health with actionable information on how the SARS-CoV-2 virus spreads and evolves. It aims to conduct multi-level genomic analysis on COVID-19 clinical sample sets.

