

Advanced Molecular Detection

National investment to advance genomic sequencing capacity

Bioinformatic Regional Resource Lead for the Western Region



Nevada

Total Investment¹: \$8,656,256

State and Local Investment: \$7,910,944

Research Awards: \$745,312

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—now a \$40 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 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

Nevada is part of the Western 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.

Nevada's **Bioinformatic Regional Resource Lead** acts as a regional consultant. They provide support to labs within the region on data analysis and how to interface with IT departments. From the Western region's training resources, Nevada receives support for pathogen-specific training and cross-cutting AMD training 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 in FY2021-2023. Awards to university and research partners were funded through appropriations supporting the COVID-19 response.



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AMD Platform Community of Practice (CoP)

The Office of AMD has established five communities of practice to build processes and tools for relevant interests, concerns, and priorities regarding the AMD Platform. The AMD Platform will serve CDC programs and STLT partners by providing a common infrastructure to perform genomic epidemiology and contribute high-quality data to publicly available data repositories. **Nevada's Domain Leader** facilitates collaboration between OAMD and the public health community for the Applied Genomic Epidemiology CoP.

University and Research Partners in Nevada

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.

Nevada State Public Health Laboratory

Real-time tracking of COVID-19 cases through rapid sequencing and single nucleotide polymorphism (SNP) analysis (2021—\$745,312)

The Nevada State Public Health Laboratory will develop a monitoring system of SARS-CoV-2 genomics in Nevada which will include daily sequencing of SARS-CoV-2 positive specimens with results available within 24 hours. In addition, the project will produce a software pipeline that will convert files into actionable genomic data.

