# Advanced Molecular Detection
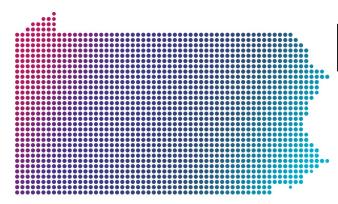
National investment to advance genomic sequencing capacity

# Pennsylvania

## Total Investment[1]: $8,254,592

State and Local Investment: $7,509,291

Research Awards: $745,301

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

Pennsylvania is part of the Mid-Atlantic 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 Mid-Atlantic region's training resources, Pennsylvania 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.

\* Investments listed above do not include Philadelphia, PA which receives direct financial support through the ELC Cooperative Agreement.

[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**

## University and Research Partners in Pennsylvania

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.

### University of Pennsylvania ($745,301)
**Whole-genome sequencing to define SARS-CoV-2 variant populations during vaccine rollout in the Philadelphia metropolitan region**
This project will define how SARS-CoV-2 variant populations cluster geographically across Philadelphia's metropolitan region, and how the variants in this area change over time as people are vaccinated. Using these data sets, researchers will develop a model to predict the impact of vaccination campaigns on evolving variants, which could better inform public health interventions related to vaccines.