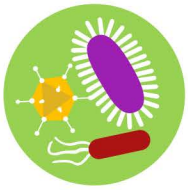
AMD
ADVANCED MOLECULAR DETECTION

AMD harnesses the power of next-generation genomic sequencing, high-performance computing, and epidemiology to study pathogens.



IDENTIFYING EMERGING PATHOGENS

Zika. Ebola. *Elizabethkingia*.

Studying the genetic makeup of microorganisms helps us identify and track rare but deadly pathogens, such as Ebola and Zika viruses. AMD technologies have uncovered previously unknown threats, including Bourbon virus.

IMPROVING VACCINES

Influenza. Pertussis. Pneumococcal disease.

Applying AMD to vaccine-preventable diseases, such as pertussis and influenza, helps us monitor genetic changes and understand why vaccine effectiveness may decrease. Targeting evolving pathogens with AMD, we can develop more effective vaccines.

MAKING FOOD SAFER

Listeria. Salmonella. E. coli.

State-of-the-art AMD methods help solve foodborne outbreaks faster by linking food sources to clusters of illness. By expanding these methods nationwide, we can get contaminated products off store shelves and out of people's homes sooner to save more lives.

DEVELOPING FASTER TESTS

Meningitis. AR Gonorrhea. EV-D68.

AMD leads to more rapid and accurate tests to diagnose respiratory infections and to detect antimicrobial resistance (AR). Reference genomic databases built through AMD are speeding up diagnosis and public health response.

CONNECTING THE DOTS

HIV. Hepatitis. TB.

AMD connects information from public health investigations with genomic data from pathogens to help us better understand how an infection is spreading. By mapping the transmission sooner, we can target resources where they will have the most impact.

The Future of AMD

Next-generation sequencing and related technologies **continue to advance** at an astounding pace, giving us new and expanded tools to **detect disease faster**, **identify outbreaks sooner, and protect people** from emerging and evolving disease threats.

Continued investment in AMD technologies **is crucial** to support the expansion of state and local public health laboratories and **to ensure we stay ahead** of the next potential deadly disease.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

For more information visit **www.cdc.gov/amd**