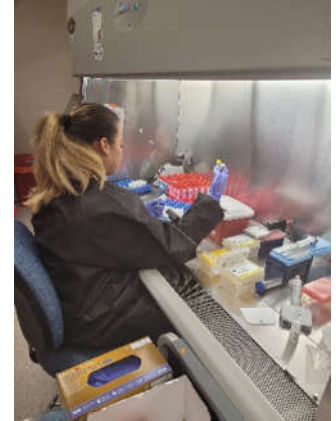


Molecular

The BPHL Molecular Department uses state of the art instrumentation to perform molecular nucleic acid testing and sequencing to support pathogen surveillance activities in Florida. The BPHL- Jacksonville Molecular Department serves as the coordinator and primary laboratory for next-generation sequencing and bioinformatics in the state. The BPHL Bioinformatics team utilizes high-performance computing for genomic data analysis to support genomic epidemiological investigations.



Highlights/specialties

- Participates in the PulseNet program administered by the CDC and performs WGS for organisms that cause food and waterborne illnesses including *Salmonella*, *Listeria monocytogenes* and *Escherichia coli* (Shiga toxin producing *E. coli* or STEC).
- Performs WGS for other organisms including *Legionella pneumophila*, *Neisseria meningitidis*, *Hemophilus influenzae*, *Mycobacterium tuberculosis*, non-tuberculous mycobacteria.
- Performs wastewater testing for disease surveillance.
- Performs sequencing for viral pathogens, including Hepatitis A virus and HIV.
- Performs sequencing for carbapenem-resistant Enterobacterales and other organisms associated with hospital acquired infections.
- BPHL has an in-house bioinformatics team and oversees all data management, data storage, pipeline development and sequencing analysis.
- BPHL Bioinformatics team serves as CDC's Advance Molecular Detection Platform Development Quality and Standards Domain Leader to support national public health bioinformatics infrastructure development.
- BPHL serves as the Bioinformatics Regional Resource Lead and Workforce Development co-Lead for the region.

Workload

- BPHL is a top public health lab contributor to SARS-CoV-2 genomic data in the United States and has sequenced >60,000 isolates to date.
- Performs whole-genome sequencing for >6,000 foodborne illness associated isolates a year



Challenges

- Recruiting and retaining a skilled workforce.
- Building infrastructure to support bioinformatic analysis.

**Contributing to a Healthier Florida
One Test at a Time**