Pathogen Detection Resources

From next generation sequencing reads to clusters of related bacterial pathogens based on SNPs.

ncbi.nlm.nih.gov/pathogens/

NCBI Pathogen Detection integrates bacterial pathogen genomic sequences originating in food, environmental sources, and patients. It quickly clusters and identifies related sequences to uncover potential food contamination sources, helping public health scientists investigate foodborne disease outbreaks.

Isolate Browser

- Determine if an isolate is part of a cluster of isolates
- Examine the phylogenetic relationship of clustered strains
- Download the metadata for isolates of interest
- Determine if a clinical isolate is closely related to a food-borne isolate (and vice versa)

Antimicrobial Resistance Resources

Bacterial Antimicrobial Resistance Reference Gene Database
Curated dataset of antimicrobial resistance genes and point mutations with standardized gene descriptions

- Download 4,942 sequences
  ncbi.nlm.nih.gov/bioproject/PRJNA313047
- List of accessions, gene names, and resistance phenotypes
- Data for the Hidden Markov Models (HMMs) used to identify resistance genes

AMRFinder
Publicly-available resistance gene detection tool

- Identify resistance genes in your genomic data
- Download genomic metadata for genomes with your antimicrobial resistance genes of interest

AMRFinder is available at bit.ly/ncbi-amrfinder

Phenotypic data

- Search over 11,600 genomic datasets that also have antimicrobial susceptibility testing data using “antibiogram[filter]” in the Isolate Browser.

Over 378,000 isolates from 28 taxa are integrated into the Pathogen Detection System.

Learn More
Isolate Browser
  bit.ly/pathogen-browser-intro
  bit.ly/ncbi-pathogen-factsheet

Pathogen Detection System
ncbi.nlm.nih.gov/pathogens/about/
AMR Finder
  bit.ly/ncbi-amrfinder

Download
Data can be downloaded via ftp
  ftp.ncbi.nlm.nih.gov/pathogen/Results/
or visualized in NCBI’s Isolate Browser
  ncbi.nlm.nih.gov/pathogens/isolates/

Submit Data
Details and instructions at
ncbi.nlm.nih.gov/pathogens/submit-data/

Questions, comments or are interested in an online demonstration?
Contact us at pd-help@ncbi.nlm.nih.gov