Using the NCBI Pathogen Detection Portal to Aid in Surveillance of Enteric Pathogens

New York Integrated Food Safety Center of Excellence

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Agenda

• Demonstration of NCBI Pathogen Browser
• Examples of utilization of NCBI
  – Determining if cases are related
  – Reaching out to other states
  – Environmental/food samples
NCBI Demonstration
Introduction to NCBI

National Center for Biotechnology Information
Established in 1988
Many projects (including PubMed, GenBank, Pathogen Detection)

• NCBI Pathogen Portal
• Many contributors
• Real-time surveillance of pathogens and foodborne disease
  • Publicly available
  • Anyone can use
  • Search for WGS matches across agencies, states, even countries
Demonstration of NCBI Pathogen Detection

• Ways to browse the portal
  • ‘Find isolates now’
    • Organism name, food item, Biosample number
    • WGS ID
      – Obtained from SEDRICH or lab communication
Demonstration of NCBI Pathogen Detection

• How to search for one or more isolates using WGS IDs
  • Type by hand
  • Copy/paste (Word, Excel)
• Live demo: NYS workflow demo (*Listeria, Salmonella, E. coli*)
  1. Customizing and filtering
  2. Quick look for Min-same and Min-diff samples
  3. Investigating SNP distances and selecting samples
  4. Creating a Subtree
  5. Exporting a tree or subtree
  6. Downloading metadata as .csv file
Webinar

https://nyfoodssafety.cals.cornell.edu/molecular-epidemiology/additional-resources/

New York Integrated Food Safety Center of Excellence page
- Molecular Epidemiology, Additional Resources
Live Demo

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Questions?

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