

# Advanced Molecular Detection Training Symposium

## Overview of the Day

May 23, 2019

# The Midwest Region

- OAMD utilizes the PulseNet regions (IL, IN, KY, MI, OH, WI)
- Training Lead is based in Michigan
- Bioinformatics Regional Resource is based in Wisconsin
- Lab, Epidemiology, PH Program staff, and Academic Partners together



ADVANCED MOLECULAR DETECTION (AMD)  
INTEGRATES THE FIELDS OF EPIDEMIOLOGY,  
GENOME SEQUENCING, AND BIOINFORMATICS  
TO IDENTIFY AND STOP OUTBREAKS.  
NEXT-GENERATION SEQUENCING AND RELATED TECHNOLOGIES  
GIVE US GREATER CAPACITY TO DETECT DISEASE FASTER  
**AND PROTECT PEOPLE**  
FROM EMERGING AND EVOLVING PATHOGENS.



AMD: TRANSFORMING DISEASE DETECTION AND RESPONSE



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

ADVANCED  
MOLECULAR  
DETECTION  
[www.cdc.gov/amd](http://www.cdc.gov/amd)



# Agenda for the day

- Welcome
- CDC OAMD
- Regional State Roundtable
- Chemistry of AMD
- Phylogenetics
- Lunch Break – please allow those with dietary restrictions to grab the items that fit their needs first
- Bioinformatics
- Core Genome Basics/MLST
- Validation Strategies
- Using Information for Public Health Action
- Open discussion/evals



# The Roundtable

- Open forum to discuss:
  - Challenges
  - Goals for the next year
  - Partnership ideas/successes
  - Immediate Needs
    - Epi
    - Lab
    - Program



# Online Educational Materials

- [https://amd-midwest.github.io/bioinfo\\_course/](https://amd-midwest.github.io/bioinfo_course/)
- Bioinformatics terms
- Some general information for basics of bioinformatics
- Presentations from today will be available on the site
- Throughout the summer new materials will be added
- Welcome to add educational materials from your own state or academic institution

# Future training for Midwest

- ▶ Continue to build the online training courses
- ▶ Linux training – remote access training – COMING SOON
- ▶ 2020 in-person symposium
- ▶ Offer for site visits from either the Bioinformatics Regional Resource (WI) or the Training Resource staff (MI)



# Acknowledgements

- ▶ Thank you to all our Speakers
  - ▶ The Center for Molecular and Clinical Epidemiology of Infectious Disease (MAC-EPID) Program
    - ▶ Dr. Betsy Foxman
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  - ▶ Dr. Kelsey Florek
  - ▶ Heather Blankenship
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