

# Thank You!

## Reflections from the 10<sup>th</sup> National Conference on Laboratory Aspects of Tuberculosis

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Analysis. Answers. Action.

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# Dr. Rodwell

- Proposed a “Different Vision for the Future”
- Starts with the sputum cup
- We will get to MIC prediction and effective drug suggestions for patients
- Forecasted quantitative resistance and gave us a quick tutorial on PK/PD and AUIC
- Dared us to trust him



# Insight to Different Lab Approaches

- Low-tech approaches to Quality Improvement using Lean concepts
- Unique algorithms for use of MALDI, PCR, and line probe



# Susceptibility Testing

- Tricks for improved PZA testing based on manipulation of inoculum
  - Promise for a paper and SOPs to use
- Reinforcement that MIC testing is an important option
- CDC is continually improving it's MDDR platform and new eLIMS reporting to come
- National DST reference centers are a good working model



# CDC – Aggregate PHL TB data

- PHLs are doing the majority of DST
- NAAT testing volumes continues to increase
- PHLs play an important role in consulting with partners
- Reminder – look at reports from CDC compare and measure your lab
- Thank you Frances!



## 4 Highlighted Posters

- Equivocal smears
- HAIN line probe for molecular resistance markers used in combination with TREK MIC AST
- Melt curve analysis for MTBC
- Success with shorter incubation for agar proportion method DST



# Round table session

- I found a reason to get out of bed early
- Staff “huddles” can be productive
- How to deal with multiple specimens on one patient
- How NAAT is used
- Tips for validating – seeded specimens
- Choice for media that is set up
- Thank you to Robin and Denise



# WGS – NGS

- Progress at CDC – future timeline thru 2020
  - “Everything is Changing but Nothing is Changing”
- Kelly provided great questions to work thru for WGS for ID or DST – Not many answers... 😊
  - Important to learn how to understand the WGS/NGS data/information to continue to be the go to TB Lab SMEs





# WGS – NGS

- Great progress
  - Jill - NY State – leading the way
    - Learned “they cant’ live without WGS in NY”
    - Data to be published in JCM - soon
  - Kevin - TB WGS Pilot labs
    - Most excitement since HPLC
    - Challenged us with: “you don’t have to be Italian to cook like one”
  - TB ID using non-sputum specimens Xpert MTB/RIF



# Latest Research

- Description of Fitness and that “Epistasis matters” - *rpoA* and *rpoC* compensate for *rpoB* resistance genes
- Educated us in a new paradigm (and the old) for the pathogenesis of pulmonary TB
  - Reminded us that “rabbits are not people and *M. bovis* is not TB”
- CDC using Functional Genetics to identify new resistance genes for INH and PZA



# Case studies - Contamination

- Great trouble-shooting tips for investigating contamination
  - Opportunity for quality improvement
- Difficulties of drug susceptibility testing
  - Visually check growth in MGIT DST tubes
- The basics of digestion/decontamination are still really important



# Great Collaboration with NTCA

- Joint poster session
- Dr. Kelly Holland
  - Waiting is Hard
- Looking forward to tomorrow's session
  - Sub-culturing: Working with Lab Partners
  - 8:30 – 10:15
  - Atrium B



## 2 Very Deserving Awardees

- Jessica Gentry
- Ken Jost



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# Personally...

- Reconnected with old friends
- Network and meet new colleagues
- Learned valuable lessons to bring home
  - Quality improvement
  - Workflow efficiencies
  - New technology to mull over



# Personally...

- Reinforced that what we do every day, no matter which algorithm or technology that we use, is incredibly important



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# Finally

- Thank you to the planning committee
- Thank you to APHL
- Please fill out evaluations
- Happy travels.....



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