The Missing Gene

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The Sample

- Local Hospital
- Positive MGIT
- On an 89-Year-old Female from Vietnam
- Sample with pre-identified as MTBC.
Our Testing

- Run a Melt Curve PCR and perform Kinyoun stain.
  - PCR negative, AFB positive

- Decontaminate the original MGIT and sub it into a MGIT and a Mitchison plate.

- MGIT turns positive on the seventh day.
Our Testing

- Re-Run a Melt Curve PCR and perform Kinyoun stain.
- Once again, PCR negative, AFB Positive
- We pull the Mitchison Plate
- After two weeks we get typical MTBC Growth
- Let the troubleshooting begin.
Our Testing

- Put solid growth onto MALDI-TOF
- Finally get result of MTBC
- Send out for genotyping
The Results

• Spoligotype: 7777770000000011
• Lineage: IndoOceancic (L1)
• Known to lack IS6110 Gene
• Only 2 cases of this spoligotype reported and genotyped in the US in the last ten years
• Originates in Vietnam
Lessons

• Understand your assays

• Highlights the value of having multiple methods of identification

• Knowledge is power
Thank you