Corynebacterium bovis

- Corynebacterium bovis is an opportunistic bacterial pathogen that infects the skin of immunodeficient mice.
- Immunocompetent mice are rarely impacted by C. bovis.
- C. bovis has a negative impact of cancer mouse models.
- 55% (38/69) of NCI’s Cancer Centers have infected mice.
- Immunocompetent mice are rarely impacted by C. bovis.

Hypothesis

- C. bovis will not grow in tissue culture media, or under tissue culture conditions.
- This knowledge will diminish the risk of C. bovis infection transmission for tumor cell lines cultured in vitro.

Control (HIBTW)

- OD600
- Time (minutes)

DME

- OD600
- Time (minutes)

DMEM

- OD600
- Time (minutes)

RPMI

- OD600
- Time (minutes)

Materials and Methods

- Isolates: CUAMC1, HAC, ATCC-7715
- Bacterial Plate w/ Streaked Bacteria
- Overnight Culture in HIBTW
- Microplate w/ cells + media
- Growth Curves

Results and Discussion

- Under tissue culture conditions, C. bovis successfully grew in HIBTW (control).
- Unexpectedly, under the same conditions, all 3 isolates also grew in DME but failed to grow in DMEM and RPMI.
- Our data shows that C. bovis growth under tissue culture conditions is possible.
- These results highlight the importance of pathogen surveillance for tumor cell lines propagated in vitro and demonstrate the need for further investigation into C. bovis growth requirements.

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