Rapid Diagnosis of Tuberculosis

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Rapid Diagnosis of Tuberculosis

**BACKGROUND & MOTIVATION**

Current diagnosis of active tuberculosis is inadequate, especially with HIV co-infection in endemic populations.

**DESCRIPTION**

A novel pathogen biomarker-based assay for the diagnosis of active tuberculosis and validated it in a blinded clinical study.

The approach uses three different assays to detect pathogen biomarkers directly from host urine and blood.

- **sandwich immunoassays**
- **membrane insertion**
- **high-density lipoprotein capture technology**

### Detection in TB patients but not in controls in a double-blinded study

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**ANTICIPATED IMPACT**

Rapid, early diagnosis of active tuberculosis, extendable to all pathogens.

- **Start to finish diagnostics:**
  - Sampling
  - Ligands
  - Novel assays
  - Clinical validation
  - Sensitive fieldable platform
  - Clinical validation

Ability to detect small molecules and amphiphilic pathogen biomarkers, previously undetectable.

**PATH FORWARD**

**Clinical Demonstrations**
- Advance assay technology
- Extend technology to other pathogens

**Technology Transition**
- Develop for commercial use
- Develop a single platform for human and veterinary diagnostics

**Potential End Users:**
- Medical diagnostics and biosensor/bio-detection companies

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