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Bovine Tuberculosis Screening (20140058, Dr. Srinand Sreevatsan)

IP Status: Issued US Patent; **Application #:** 15/037,838

M. Bovine Biomarker

A bovine and human screening method has been developed that is capable of specifically diagnosing subclinical tuberculosis infection. The test uses pathogen serum proteins as reliable biomarkers to detect subclinical evidence of M. bovis infection quicker than current methods. Unlike procedures that lack biological specificity, this method solely identifies bovine tuberculosis and does not require blood processing to happen within 24 hours of the sample collection. The circulation of the pathogen peptides and host response proteins can track disease progression of human tuberculosis as well, making this diagnostic test effective at quickly determining the risk of illness in various organisms.

Bovine Tuberculosis

Bovine tuberculosis is one of the most damaging zoonotic diseases today. There exists a need for rapid, inexpensive diagnostics capable of detecting and differentiating M. bovis from other pathogenic and environmental mycobacteria at multiple surveillance levels. Unambiguous subclinical detection in the early stages of infection is a critical point of prevention and control of bovine tuberculosis. However, current methods for diagnosis rely on immune responses that may indicate a widespread infection already underway. Pathogen-specific biomarkers to predict the disease using diagnostics with improved accuracy are necessary to prevent dangerous outbreaks of bovine tuberculosis.

BENEFITS AND FEATURES OF SCREENING METHOD FOR BOVINE TUBERCULOSIS:

- Unlike current procedures, blood tests are not necessary within 24 hours of sample collection
- Specifically detects M. Bovis
- Uses pathogens and host peptides to recognize and detect illness in humans as well

Phase of Development First stage validation complete

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Life Sciences/Biomarkers
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