



TB urine biomarkers

The invention relates to the identification of Mycobacterium tuberculosis-specific biomarkers in urine and the method employed, using a urine sample to diagnose active tuberculosis (TB) or a latent tuberculosis infection.

In recent years, TB has emerged as the leading cause of death after influenza and pneumonia in South Africa. Globally, South Africa is rated second after India and China in terms of TB incidence. The major challenge faced by scientists in combating TB has been accurate diagnosis of the disease at an early stage. This failure is attributed to the fact that there are many TB subtypes and different forms of TB which exist in various body compartments or organs, preventing a 'one size fits all' approach.

The biomarkers identified by the UCT team can be used to distinguish between active and latent-TB. This could in turn lead to improved and early diagnosis of TB disease.

Benefits

- Non-invasive method for detecting TB
- Quick access to result
- Distinction between active and latent TB

Market

Private and public hospitals, diagnostic laboratories, governments, NGOs, research institutes, and diagnostic device manufacturers.

Technical Description

The Mycobacterium tuberculosis proteins identified as being TB biomarkers in urine include Rv1664, Rv1977, Rv2490c, Rv2694c, Rv2748c, Rv1161, Rv2280, Rv1759c, Rv2126c, Rv3202c, Rv1450c, Rv3775, Rv3885c, Rv0765c, Rv1235, Rv2981c, Rv1475c, Rv0014c, Rv0578c, Rv1522c, Rv2737c, Rv1464, Rv0668, Rv3345c, Rv3736 and Rv2455c. More preferred TB biomarkers are Rv1664, Rv1977, Rv2490c, Rv2694c, Rv2748c and Rv1161, which are specific for active TB disease, and Rv1759c, Rv2126c, and Rv3202c, which are specific for latent TB infection.

Keywords:

MRI, patient tracking, MRI orientation, image correction

Intellectual Property Rights:

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Technology Readiness Level:

4 - Lab Demonstration

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