A METHOD FOR DIAGNOSING TUBERCULOSIS

A diagnostic test suitable for all patients including children.
A cost effective diagnostic test with high accuracy results

BRIEF DESCRIPTION

A method for speedy and accurate diagnosis of tuberculosis (TB) and a device to perform the diagnosis have been developed. The method entails the identification of biomarkers that confirm the presence of TB in a patient. The diagnostic device used in the method can detect and indicate the presence of biomarkers in a blood sample. The blood sample, which can be either plasma or serum, is collected into the device where the levels of up to 5 host biomarkers are measured directly in the serum or plasma. If the marker levels are above a certain threshold, it will be indicative of the presence of TB.

TECHNICAL DESCRIPTION

Tuberculosis is one of the developing world’s biggest killers, second only to HIV/AIDS. The 9.4 million new cases and 1.7 million deaths each year are partially due to problems with diagnosing the disease timely and accurately. Currently, the diagnosis of TB can take up to 42 days and provides an accuracy rate of only 50%. This new method of diagnosing TB in a patient is fast and accurate. In addition, the new diagnostic method doesn’t depend on a sample of sputum which is often of poor quality or difficult to obtain. Instead a blood sample is used.

VALUE PROPOSITION/BENEFITS

- Diagnosis is rapid. Results will be confirmed within 15 – 20 minutes after providing a blood sample.
- The new method produces accurate results. Human error is excluded as the results will be read by a hand-held device.
- The diagnostic test is suitable for all patients, including children.
- The blood sample is easy to get and the test is simple to do. The test can be performed by nurses in remote settings.
- The diagnostic test is affordable - it doesn’t require a laboratory with laboratory equipment or a stable electricity supply.
- Improved health service. Patients can go to a clinic for consultation, get their results and medication at point of care within one hour.

The ultimate advantage of the new diagnostic method will be the millions of lives saved worldwide thanks to accurate and timely diagnosis of the disease.

INNOVATION STATUS

A South African provisional patent application (no. 2014/01456) has been filed for this innovation.

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Lung - miliary tuberculosis