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Intellectual Property

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Patent Pending

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Detection of Valley Fever Fungus in Plasma

AzTE Case # M12-013

Invention Description

Coccidioidomycosis (commonly known as "Valley Fever") is a respiratory illness that is acquired by the inhalation of airborne spores and may result in severe and even life-threatening pulmonary illness. Its incidence has risen six-fold since 1993, and it accounts for 150,000 human infections annually.

Current tests detect antibodies produced in response to the fungus. However, it may take weeks to months to develop such an antibody response, and many immunocompromised patients may not mount an antibody response at all. Therefore, there is a need for a blood test to directly detect coccidioidal proteins allowing for a more definitive diagnosis.

Researchers at Arizona State University have developed a method for diagnosing Valley Fever by detecting a polypeptide biomarker associated with Valley Fever. The test works with blood, urine, saliva, or bronchoalveolar lavage fluid samples.

This direct examination is a noninvasive, fast, and accurate way to test for Valley Fever.

Potential Applications

- Diagnosis of coccidioidal infection in humans and domestic animals and pets
- Monitoring of treatment for Valley Fever

Benefits and Advantages

- Detects Valley Fever at an earlier stage than current tests - directly detects coccidioidal proteins, rather than antibodies produced in response to the fungus
- Works with several types of fluid samples
- Noninvasive
- Fast results
- Can be used on humans, pets, and livestock