



Diagnostic Kit for Blastomycosis

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a method to detect *Blastomyces dermatitidis* infection in mammals using highly pure BAD-1 protein.

Overview

Blastomyces dermatitidis is a soil fungus found throughout the world, and is especially prevalent in the river valleys and Great Lakes region of the United States. If spores are inhaled, blastomycosis can develop in the lungs, leading to pneumonia-like symptoms and other diseases. Dogs are particularly vulnerable to infection and early treatment is essential.

A variety of techniques have been used for diagnosing blastomycosis. However, these clinical tests suffer from potential false positives due to cross-reactivity with common fungal antigens. One approach to reduce false positives is to use BAD-1, a protein unique to *B. dermatitidis*, as a biomarker for detecting infection. But isolating the protein has traditionally relied on recombinant methods, using histidine tags or other capture means.

A better approach would aid cheaper and more sensitive testing.

The Invention

UW–Madison researchers have developed a method for obtaining highly pure native BAD-1 protein that could be used to detect *B. dermatitidis* infection.

A solution containing native BAD-1 protein or fragments is collected from cultured fungus strains. The solution is combined with nickel-chelating resin, washed and eluted to obtain a highly pure form without the need for more expensive recombinant methods. This can be mixed and analyzed with a patient's sample to determine if the fungus is present.

Applications

- Diagnostic kit for detecting *B. dermatitidis* infection

Key Benefits

- More economical
- Better diagnostic sensitivity
- No need for histidine tags or other recombinant capture means

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Related Technologies

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- [WARF reference number P00200US describes a recombinant, attenuated vaccine that is highly effective against *B. dermatitidis* infection.](#)

Publications

- Wüthrich M., Finkel-Jimenez B., Brandhorst T., Filutowicz H., Warner T. & Klein B.S. 2006. Analysis of Non-Adhesive Pathogenic Mechanisms of BAD1 On Blastomyces Dermatitidis. Med Mycol. 44, 41-49.

Tech Fields

- [Animals, Agriculture & Food : Animal health](#)
- [Diagnostics & Biomarkers : Diagnostics](#)

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