Therapeutics & Vaccines

Vaccine for Fungal Infections

View U.S. Patent No. 9,993,534 in PDF format.

WARF: P130116US02

Inventors: Bruce Klein, Theodore Brandhorst, Thomas Sullivan, Marcel Wuethrich

The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a vaccine containing calnexin protein that protects against many pathogenic fungi.

Overview

There are no commercial vaccines against fungi. Infections like aspergillosis and Valley Fever can be life-threatening, particularly in immune-compromised patients. These patients also are more vulnerable to fungal strains that flourish in hospitals and cause grave illness. Treating infections can cost many thousands of dollars and is much harder on patients than similar antibacterial regimens.

The fungi kingdom includes molds, yeasts and more than 100,000 known species. A new anti-fungus vaccine, especially one that protects against many strains, would be tremendously beneficial both to human and animal health.

The Invention

UW–Madison researchers have developed a vaccine that could prevent infection by many strains of pathogenic fungi.

The vaccine contains calnexin, a common folding protein found in fungi and other eukaryotes. Administered in an effective amount, the vaccine helps a patient's immune system recognize and destroy fungus it may encounter.

Applications

- Vaccine against dimorphic and non-dimorphic fungi (including *Histoplasma*, *Coccidioides*, *Paracoccidioides*, *Penicillium*, *Blastomyces*, *Sporothrix*, *Aspergillus*, *Pneumocystis*, *Magnaporthe*, *Exophiala*, *Neurospora*, *Cryptococcus*, *Schizophyllum* and *Candida*)

Key Benefits

- Protects against wide variety of pathogenic fungi
- Effective for animals and humans

Stage of Development

The vaccine has been shown to protect mice from blastomycosis and a number of different pathogenic fungal strains.

Additional Information

For More Information About the Inventors

- Marcel Wuethrich

Related Technologies

- WARF reference number P06029US describes strains of dimorphic fungi useful in vaccine development because they do not become virulent.
- WARF reference number P110280US02 describes a diagnostic kit for blastomycosis.

Related Intellectual Property

- View Continuation Patent in PDF format.

Tech Fields

- Therapeutics & Vaccines : Vaccines

For current licensing status, please contact Rafael Diaz at rdiaz@warf.org or 608-960-9847