

Natural Antimicrobial Agent Derived from Biomass



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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a new class of fungicides compliant with organic agriculture.

OVERVIEW

Fungal pathogens pose one of the greatest economic threats to agriculture. Every year fungal infections – such as root rot, smut and powdery mildew – destroy about 125 million tons of the top five food crops globally. One pest, *Sclerotinia sclerotiorum*, is responsible for a disease called white mold and causes \$250 million in annual damages in the U.S. alone.

Today, the majority of fungicides are synthetic or metal-containing, and therefore not compliant with USDA organic agriculture laws. The rise in pesticide-resistant strains and the risk to human health is driving the search for safe and effective alternatives.

THE INVENTION

UW–Madison researchers have identified an antimicrobial agent produced as a byproduct of biomass processing. The agent is a diferulate compound called poacic acid (and sometimes also called '8-5-DC'). It has been shown to target and destroy the cell walls of several species of fungus and yeast.

APPLICATIONS

- Potential new antifungal, antimicrobial compound for agriculture and pharmaceuticals

KEY BENEFITS

- Demonstrates strong antifungal activity
- Naturally derived
- Consistent with organic farming
- Adds value to the waste stream of biomass processing plants

THE WARF ADVANTAGE

Since its founding in 1925 as the patenting and licensing organization for the University of Wisconsin-Madison, WARF has been working with business and industry to transform university research into products that benefit society. WARF intellectual property managers and licensing staff members are leaders in the field of university-based technology transfer. They are familiar with the intricacies of patenting, have worked with researchers in relevant disciplines, understand industries and markets, and have negotiated innovative licensing strategies to meet the individual needs of business clients.



STAGE OF DEVELOPMENT

The compound has shown biological activity against the pathogens *Sclerotinia sclerotiorum*, *Alternaria solani* (early blight), *Phytophthora sojae* (stem and root rot), and the yeast *Saccharomyces cerevisiae*.

ADDITIONAL INFORMATION

Related Portfolios

[UW-Madison Technologies Developed Through the Great Lakes Bioenergy Research Center](#)

Publications

[Efficacy of poacic acid on turf diseases](#)

Tech Fields

Agriculture - Pesticides & inoculants

CONTACT INFORMATION

For current licensing status, please contact Mark Staudt at mstaudt@warf.org or 608-960-9845.

