HIGH-THROUGHPUT WORKFLOW FOR PROFILING CROP SEED ALLERGENS

Plant seeds provide a significant portion of the protein present in the human diet, but are also the major contributors of allergenic proteins that cause a majority of the reported cases of food-induced anaphylaxis in the U.S. It is estimated that as many as 12 million Americans have food allergies, and there is a need for better methods for analytical screening of foods, or protein phenotyping, particularly for the seed industry.

The current invention developed by researchers at the University of Missouri is a high-throughput, inexpensive workflow for quantifying prominent plant seed proteins. This was done by developing a mass spectrometry-based workflow beginning with intact, whole plant seed. The method does not require gel electrophoresis, antibodies, chemical labeling or *a priori* information about the seed to be analyzed.

POTENTIAL AREAS OF APPLICATIONS:

- Seed Regulatory and Biotechnology Industry

PATENT STATUS: Patent Application filed.

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