

WINNER PROFILE



➔ **Meet: Michael Ladisch**
Distinguished Professor, Purdue
University, West Lafayette, Indiana

➔ **The Challenge: FDA Food Safety**

The Food and Drug Administration (FDA) launched the Food Safety prize competition to inspire breakthrough ideas on how to more quickly find disease-causing organisms in food, especially Salmonella.

➔ **The Prize:**
 \$300,000

💡 **The Solution:**

The Purdue University team developed a technology that concentrates Salmonella to detectable levels using automated microfiltration, making it possible to process samples much more quickly, in hours instead of days.

☎ **For More About the Winner:**

Steve Martin
 Phone: 765-588-3342
 E-mail: sgmartin@prf.org

SUCCESS: IN HIS OWN WORDS

How has participating in this challenge helped you advance your solution?

Advancement has occurred through learning about key areas that need to be addressed for successful translation of pathogen detection technology from a research stage to food safety laboratories that monitor our food supply. The biggest insights have been on the large number of samples that must be processed and the importance of rapid detection of pathogens in fruits and vegetables. These insights and mentoring from the FDA focused our work on adapting the instrument to achieve higher sample throughput while maintaining sensitivity.

What is the impact of your solution for government, your community and society?

The impact is still developing. We are working together with our partners to develop a robust protocol and system that meets the needs of food safety monitoring laboratories. The key impact so far is the realization that a physical method for concentrating Salmonella to detectable levels using automated microfiltration is possible. We address a change in a core assumption, i.e., that a combination of microfiltration and short enrichment (a three- to four-hour process) can replace enrichment culture which may require a day or more to carry out. This approach, coupled with appropriate detection techniques, will help to reduce the time between sampling and testing and thereby contribute to maintaining a safe food supply.

