

The Future of Food Safety

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In 2009, a grant from the W.K. Kellogg foundation — an organization that operates separately from the Kellogg Company, which provides most of the foundation's operating budget — supplied the startup capital needed to launch the Global Food Protection Institute.

The Institute is located in Battle Creek, Mich., also known as "Cereal City" due to the strong presence of cereal makers Post and Kellogg. During early planning for the Institute, urban developers had hoped that an institute devoted to food safety would not only find a natural home in a town known for food production, but would also prove to be an economic boon to the city by providing a hub, attracting regulators and industry professionals from around the country.

With this goal as well as that of securing a safer food supply in mind, the GFPI got to work quickly after receiving its startup grant from W.K. Kellogg.

According to the organization, it identified three areas through which it would "improve public health and help reduce mortalities, morbidity and economic costs associated with foodborne illnesses." The three core initiatives are:

1. International Food Protection Training Institute (IFPTI). The IFPTI is the training branch of the GFPI. The programs offered here provide intensive training in a variety of areas related to food safety and present an opportunity for food manufacturers to learn side-by-side with local regulators.
2. Imagined Food Futures (IFF). Complementing the IFPTI, the IFF will provide in-depth symposia tackling the complex issues affecting food security around the world.
3. Emerging Technologies Accelerator (ETA). The ETA is tasked with developing technology for rapid pathogen detection that can be used in the field.

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Last May, Dr. Julia Bradsher was selected as the new CEO of the GFPI. The former CEO of the Food Allergy & Anaphylaxis Network (FAAN), Bradsher joined the GFPI with deep knowledge of the food industry. Bradsher said of the role of the GFPI, "Our overarching goal is to be a catalyst to improve the food supply."

At the time of her appointment, the IFPTI had hit the ground running and was shaping up to be a robust initiative for effective training of industry professionals and regulators alike. Under her watch, Bradsher has overseen not only the growth of the IFPTI, but also the development of the GFPI's other two initiatives.

"All three initiatives should build off of one another, and that's really what's started to happen," says Bradsher.

In September 2011, the GFPI received a \$1.3 million grant from the Food and Drug Administration (FDA) to aid in the implementation of the new Food Safety Modernization Act (FSMA), a bill passed in early 2011 that overhauled the nation's food safety system.

Charged with the task of implementing the bill but saddled with a limited budget, the FDA is turning to local regulators to pick up the slack. And that's where the GFPI comes in.

International Food Protection Training Institute

In order to properly implement new food safety standards as mandated by the FSMA, local regulators must be briefed on the Act and on how to perform uniform inspections.

"When we first started it was pretty surprising," said Joan Bowman, GFPI's Vice President of External Affairs. "There is no uniform standard for inspection. So industry would prepare for inspections based on their current inspector, and when they'd get a new one, they'd fail, or they'd be hit with all this stuff no one had ever told them about before."

The IFPTI was instituted to help create normalized standards of inspection to ensure that state and local regulators across the country are inspecting facilities according to uniform rules. Never is this more important than now, when local food inspectors will be tasked with implementing the national food standards put into place under the FSMA.

Bowman says that she sees these changes as the GFPI building a food training consortium with IFPTI as its administrative hub. The IFPTI is run by an advisory council that helps select course direction and identify key areas of food safety to address.

One of the GFPI's most expansive projects to date, completed through the IFPTI, is the cataloging of a national food safety curriculum. The institute surveyed universities and professional organizations across the country, pinpointing food safety courses. The board then categorized the courses according to industry focus

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and level of professional development to place them together into a larger curricula framework. The IFPTI was able to identify and classify over 700 courses nationwide.

In addition to its own coursework and the 700-course national framework it has organized, the IFPTI also runs its Fellowship in Food Protection program, a three-week program of intensive training for top-level students. Bowman says that the GFPI considers this course to be the IFPTI's "signature course" and that the program is currently being adapted for international students.

Imagined Food Futures

Hand-in-hand with the IFTPI, the IFF is tasked with educating food industry experts, regulators and academics about crucial issues in the food industry. The IFF plans to host a series of symposia beginning in Battle Creek, but eventually fanning out across the country and the world.

The IFF's first symposium will be held in Battle Creek on May 1-2 and is entitled, "Ensuring Safe Food in Dynamic Food Systems." The event hosts Ellen Gustafson as its keynote speaker. In 2007, Gustafson co-founded a project to benefit the World Food Program, but she really burst onto the scene in 2010 when she unveiled the 30 Project at TEDxEast. She believes that "hunger and obesity are two sides of the same coin," and the 30 Project is a think tank that brings together food experts in an attempt to address some of the most difficult problems surrounding global food insecurity.

The IFPTI's more traditional classroom initiatives are meant to dovetail with the symposia's "big idea" approach to create a structure supporting holistic food safety and security education.

Emerging Technologies Accelerator

The GFPI's third component is just as crucial. The Institute has unveiled each of its three initiatives at different points since its inception in 2009, and the ETA is the latest, and perhaps most promising, project to date.

Bradsher says she sees the ETA as a "seeding fund to invest in startups" that show promise in developing crucial rapid detection technology. The GFPI hopes, through the ETA, to develop pathogen detection that can be readily applied in the field. The technology the Institute hopes to help develop will be:

1. Portable.
2. Reliable.
3. Easy to use.
4. Rapid.

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5. Affordable.

"The goal," Bradsher says, "is to bring technology closer to the source," and allow inspectors, or perhaps food manufacturers themselves, to test ingredients, products or surfaces for biological contaminants and receive an on-the-spot result. The implications of successfully bringing such products to market are, of course, immense.

On Feb. 22, 2012, the GFPI announced its first investments through the ETA. According to the GFPI, Seattle Sensor Systems has developed "real-time detection of pathogens using customized nanoparticle biosensors." nanoRETE, on the other hand, "utilizes a portable surface plasmon resonance technology for the detection of biohazards in food and the environment." Both of these companies will receive investment funds from the GFPI in the hope that the funds will, as Dr. Bradsher says, "help fast track these technologies to market."

While the ETA is currently focused on pathogen and other biological detection technologies, Bradsher says that as the Accelerator matures, it may one day be open to processing technology solutions that "eradicate and detect pathogens in food."

Bradsher says that while the GFPI is currently looking at what she calls modest investments of \$50,000 to \$150,000, the GFPI hopes to grow the ETA into a full equity investment fund.

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During a meeting in Turkey last month, leaders from the World Bank expressed to Bradsher the urgent need for training and technology like that being developed through the GFPI. "These technologies can help developing countries leapfrog food safety in a matter of months," says Bradsher. "It will take them months to achieve what used to take years."

As the GFPI expands its global reach — offering courses through the IFPTI that cater to an international market, exploring global food security issues with its IFF symposia and developing food safety technology that can be implemented in developing countries with its ETA investments — the work that the Institute is doing now will spread far beyond Battle Creek and, perhaps, impact many generations to come.

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