

I. Justification for the meeting

The food industry is one of America's largest enterprises. It employs about one-quarter of the nation's workforce and produces 20% of America's Gross Domestic Product (GDP). Billions of dollars worth of food are sold each year. Within this industry, control of food safety is always a very critical consideration. Recent reports issued by the Centers for Disease Control and Prevention (CDC) estimates that foodborne diseases cause approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths in the United States each year (Mead et. al.).

The food industry is made up of businesses that produce, manufacture, transport, and distribute food. Food production involves the many activities that occur on farms, on ranches, in orchards, and in fishing operations. Food manufacturing takes the raw materials harvested by producers and converts them into forms suitable for distribution and sale. The retail distribution system consists of the many food operations that store, prepare, package, serve, vend, or otherwise provide food for human consumption. The retail portion of the food industry flow represents the largest point of distribution of products to consumers and is an important point of vulnerability and for controlling food safety risks.

Recent surveys by the National Restaurant Association show that more than 54 billion meals are eaten in restaurants and school and work cafeterias each year (The National Restaurant Association Pocket Fact Book). According to the Food Marketing Institute, there are 126,000 supermarket/grocery stores in the U.S. Large supermarkets carry an average of 49,225 items in their inventory. The size and diversity of the retail food industry has made it virtually impossible for regulatory officials to continuously monitor all aspects of food safety. Therefore, food safety educational programs must involve governmental agencies, the food industry, educators and researchers working closely together to ensure the safety of our food supply. ***The primary purpose of this proposed conference is to bring together important stakeholders involved with retail food safety and promote better access to emerging research and education.***

The Conference for Food Protection (CFP) has supported the adoption of the Food and Drug Administration's *Food Code* by jurisdictions throughout the United States. The *Food Code* serves as a model for food programs sponsored by federal, state, local and tribal agencies. To date, 44 states and territories have adopted the *Food Code*. Those jurisdictions that have adopted the 1999 and 2001 versions of the *Food Code* require retail food establishment managers or persons in charge to demonstrate competency in food safety. As regulatory agencies adopt the *Food Code* they must find ways to implement the competency provisions. Some jurisdictions will rely on the sanitation history of the establishment or will have retail food inspectors pose questions about sanitation to the managers or persons in charge. Many jurisdictions will rely on mandatory examination-based programs as the means for demonstrating competency.

Certification in these jurisdictions will be based on the manager's ability to pass a food safety certification examination that is provided by an American National Standards Institute (ANSI) and Conference for Food Protection (CFP) accredited certification organization. There are currently three ANSI/CFP accredited certification organizations that are providing paper-and-pencil and computer administered examinations. A variety of food safety training programs have been developed to prepare retail managers to take a food protection manager certification examination. These training programs are delivered in classroom, CD-ROM, and web-based formats.

In recent years, the Conference for Food Protection (CFP), regulatory officials, and academicians have identified important research and education needs related to food safety for retail food establishments.

Examples of the important research needs have included defining storing, cooking and cooling parameters for potentially hazardous foods, understanding the impact of bare hand contact for ready-to-eat foods, and time as a public health impact. The retail food industry today is most concerned about control of *Listeria* in ready-to-eat foods and development of effective biosecurity prevention and crisis management programs. From an educational standpoint, there are a number of good educational programs, produced by government agencies, the food industry and from academia, that help to teach basic principles of safe food handling at retail. Retail Food Manager's Certification programs are also being mandated in a number of States and being taught through university-based programs.

While some research needs have been established and educational programs are available, there is no strong collaborative forum that brings all of the stakeholders together. The focus of this proposal is to offer a a) research-based workshop and an b) educational-based workshop that benefit research and educational needs for all of the stakeholders of retail food safety.

II. Meeting Objectives

- A. Develop a research-based workshop focusing on control of *Listeria monocytogenes* in ready-to-eat foods stored, prepared, and sold in retail food establishments. This will be accomplished by assembling *Listeria* experts, representing industry, academia, and government that have provided leadership in *Listeria monocytogenes* incidence, risk, and control. The anticipated audience is mainly industry, regulatory, and academia. The primary outcome is to start a forum that helps bring stakeholders together to discuss important retail food safety research needs.
- B. Develop an educational-based workshop focusing on describing education/research needs and education/research opportunities for the retail food industry. This will be accomplished by assembling *Listeria* experts and retail food safety experts, representing academia, and government that have provided leadership in food safety programs for the retail food industry. The anticipated audience is mainly Cooperative Extension Specialists and other educators. The primary outcome is to create better awareness for retail food safety education and research needs and to stimulate more involvement in organizations like CFP.

III. Collaborations and Partnerships

A. The Conference for Food Protection (CFP)

The CFP is a non-profit organization that originated in 1971. The structure of the conference provides a representative and equitable partnership among regulators (state/local/federal), industry, academia, professional organizations and consumers to identify problems, formulate recommendations, and develop and implement practices that ensure food safety for retail food establishments. Though the federal, state, and local governments are primarily responsible for setting food safety standards, many other organizations share a stake in carrying out enforcement of the standards. CFP brings together representatives from the food industry, government, academia, and consumer organizations to identify and address emerging problems of food safety and to formulate recommendations. The Conference seeks to balance the interests of regulatory and industry people while providing an open forum for the consideration of ideas from any source. The Conference meets at least biennially to provide this forum. Though the Conference has no formal regulatory authority, it is a powerful organization that profoundly influences model laws and regulations among all government agencies and minimizes disparate interpretations and implementation.

Developing a partnership with CFP is critical for bringing together the stakeholders and expertise related to retail food safety. CFP has created the needed audience and incorporation of the proposed research program will help foster this already existing collaborative effort.

B. The Organizing Committee

The organizing committee represents significant academic leadership related to retail food safety. Each of the committee members has been heavily involved in CFP representing different councils, and serving/chairing several important science-based and education committees. They have also been involved in the development of many retail food safety programs (used for certification and non-certification programs), and have authored several textbooks related to retail food safety. Each of their credentials is highlighted within their 2-page vita attached to this proposal.

IV. Enhancing collaboration among food safety researchers, educators, and extension professionals

The retail food industry is a very complex industry that relies on collaboration from all facets of the food flow chain – from the farm, through manufacturing and distribution, and ultimately to the consumer. As described earlier, the best example of collaboration for retail food safety research and education is through the CFP. Very strong collaborative ties have been developed for the retail food industry (from small to large and from supermarket-type, to restaurants, to foodservice) and for regulatory agencies (state, local, and federal). In this collaboration, academia and consumer groups are also represented but to a much lesser

degree. Discussions related to FDA Food Code changes are the focus and to a lesser degree education and research. The Institute of Food Technologists and International Association of Food Protection have small groups dedicated to retail food safety, but the activity and efforts to form strong collaborative ties between retail food safety stakeholders is limited. *There is a need to further enhance collaborations like CFP to promote education and research related to retail food safety. Similarly, many educators and Extension Specialist are still unaware of the importance of retail food safety and the role of important groups like the CFP. There is a similar need to develop programs that increase awareness of retail food safety to educators.*

V. Updating information and advancing the field of food safety

The primary goals of these proposed workshops is to advance the field of retail food safety by: a) promoting further research for the industry and regulatory agencies and understand needed researchable areas, and b) promoting education and certification programs from University-based settings and other educational outlets.

VI. Identifying future research, outreach, and educational needs

The overarching goal of both of the proposed workshops is to serve as a “seed program.” It is our hope, that success from these workshops will stimulate more activity and interest related to research and education in retail food safety and that similar workshop series will continue after the termination of this project.

VII. Recent meetings on the same subject with dates and locations

Related to our proposed program, no program has been developed that incorporated all of the elements that we have proposed. Programs that have had a retail food safety content, their dates, main topic, and audience are listed in the table below:

Meeting/Sponsor	Date	Retail Food Safety Topic	Audience
Conference for Food Protection	April 2004	Biosecurity	Industry, Regulatory
Institute of Food Technologists	July 2004	Outreach to the hospitality and foodservice industry	Academia, Industry, Extension
International Association of Food Projection	August 2004	General retail safety	Academia, Industry, Extension
Food Marketing Institute (facilitated by Dr. Linton)	November 2004	<i>Listeria</i> control for regenerated ready-to-eat foods	Industry (closed)
University of Arkansas (facilitated by Dr. Marcy)	November 2004	<i>Listeria</i> summit for deli foods	Industry (closed)

VIII. Proposed programs (or agenda for the conference), including a listing of scheduled participants and their institutional affiliations

Workshop 1

Meeting Title: Control of *Listeria monocytogenes* at retail food establishments

Location: CFP, Columbus OH, April 2006

Targeted Audience: Retail Food Industry, Regulatory, Consumer Groups, Academia

Proposed Agenda

Presentation Topic	Speaker	Time
Meeting Registration		8:30 am
<i>Listeria</i> and listeriosis from food systems	Mike Lynch – CDC	9:00 am
The Challenge of <i>Listeria</i> in food manufacturing	Bob Reinhard - SaraLee	10:00 am
Break		10:30 am
<i>L. monocytogenes</i> in Ready-to-Eat (RTE) Deli Foods	Dr. Ann Draughn, University of Tennessee	11:00 am
Retail Industry Perspective and Needs	Cas Tryba, Big Y Foods	11:45 am
Lunch		12:15 pm
Equipment Design and Operation	John Mayer, Berkel	1:15 pm
Cleaning and Sanitizing Operations	Tom Ford, EcoLab	1:45 pm
Break		2:15 pm
Role of People and <i>Listeria</i> Control	Dr. David McSwane Indiana University	2:30 pm
Role of Time & Temperature and <i>Listeria</i> Control	Dr. Richard Linton Purdue University	2:50 pm
RTE Food Formulation and <i>Anti-Listeria</i> Ingredients	Dr. John Marcy University of Arkansas	3:10 pm
Future Research Needs for <i>Listeria</i> control at Retail	All Speakers	3:30 pm
Questions, Discussion, Meeting Adjourn	All speakers	4:00 pm

The primary focus of this program is to provide information related to new research and to understand needed research for better control of *Listeria monocytogenes* in a retail food environment. The list of speakers includes a good overview of *Listeria* and retail niches for *Listeria* (Lynch, Draughn), emerging knowledge and research done by industry leadership (Tryba, Mayer, Reinhard) as well as intervention strategies that are manageable at retail (Linton, McSwane, Marcy).

Workshop 2

Meeting Title: Retail Food Safety: Emerging Issues and Education Forum

Location: National Extension Association of Consumer and Family Sciences – Sept. 2006

Targeted Audience: Extension Educators, Teachers, Academia, and Other Educators

Proposed Agenda

Presentation Topic	Speaker	Time
Meeting Registration		8:30 am
The Role of the Conference for Food Protection (CFP) and Retail Food Safety	Janice Buchanan Chair of CFP	9:00 am
Meeting the Needs of Retail Food Protection Through CFP: An Industry perspective	Larry Kohl Giant Food Stores	9:30 am
Emerging Research Needs for Protecting Foods at Retail	FDA Speaker USDA Speaker	10:00 am
Break		10:45 am
A National Perspective on Retail Food Certification and Adoption of the FDA Food Code	Dr. David McSwane Indiana University	11:00 am
Educational Programs for Retail Food Safety	Dr. John Marcy	11:30 am
Lunch		12:00
Assessing Impact of Retail Food Safety Programs Through Cooperative Extension Programs	Dr. Richard Linton Purdue University Dr. Julie Albrecht University of Nebraska	1:00 pm
Control of <i>Listeria monocytogenes</i> at Retail <ul style="list-style-type: none"> • People, Time and Temperature • Equipment Design and Operation • Cleaning and Sanitizing Operations • RTE Food Formulation and Anti-Listeria Ingredients 	Dr. Richard Linton Purdue University Dr. John Marcy University of Arkansas	1:45 pm
Break		2:30 pm
Biosecurity Considerations at Retail <ul style="list-style-type: none"> • Threats Issues and Concerns • Industry Example 	CDC Speaker (Tauxe) Speaker to be determined	3:00 pm 3:30 pm
Questions, Discussion, Adjourn		4:00 pm

The primary focus of this program is to provide information related to research and education needs related to retail food safety intended mainly for educators. An overview of research and education needs will be addressed by academia (Marcy, McSwane, Albrecht) and regulatory officials (USDA, FDA), as well as the the role of CFP (Buchanan, Kohl). Important and emerging retail food safety research areas will also be highlighted including control of *Listeria* at Retail (information will be summarized for this group from Workshop 1 – Linton, Marcy) and biosecurity (CDC).

IX. Names and organizational affiliations of the chairperson and other members of the organizing committee

Dr. Richard Linton (Lead Investigator)
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Dr. David McSwane
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X. Method of announcement or invitation to be used

For Workshop 1, the method of announcement and invitation will be done through the CFP website, through CFP annual meeting mailings, and will also be included on websites associated with the 3 collaborating universities. The CFP meeting generally has a mailing list of nearly 1000 people, an average attendance of 400-500, and an anticipated attendance for the workshop of 100-150 people.

For Workshop 2, the method of announcement and invitation will be done through the CFP website, through CFP annual meeting mailings, and will also be included on websites associated with the 3 collaborating universities. The CFP meeting generally has a mailing list of nearly 1000 people, an average attendance of 400-500, and an anticipated attendance for the workshop of 100-150 people.