

# **JIFSAN International Activities**

## **Education / Outreach**

JIFSAN is extensively involved in developing food safety education and outreach programs in partnership with other government and academic organizations. These programs involve aspects of food safety, applied nutrition, animal health sciences, and risk analysis that have been identified as areas of need within the purview of JIFSAN's responsibilities.

Identification of these areas is done in collaboration with the JIFSAN Advisory Council.

### **1. International Good Agricultural Practices (GAPs) Training Program**

The International Good Agricultural Practices (GAPs) Training Program was established to develop a training program in applying good agricultural practices (GAPs) and good manufacturing practices (GMPs) related to the production of produce (raw fruits and vegetables) with reduced microbial and chemical loads. This training is based on the "Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables" published by FDA and USDA. A manual "Improving the Quality and Safety of Fresh Fruits and Vegetables: A Training Manual for Trainers" was developed through a subcontract with the University of Arkansas. Teaching teams consisting of agricultural faculty from universities as well as professional staff from FDA were established to conduct several GAPs train-the-trainer courses in South America and the Caribbean. The manual is available through the Internet at: <http://www.jifsan.umd.edu/gaps.html>. The course has been offered in Chile, Trinidad, Brazil, Mexico, Dominican Republic, and Puerto Rico.

### **2. Food Safety Risk Analysis Clearinghouse**

The Food Safety Risk Analysis Clearinghouse provides a centralized World Wide Web-based information source specializing in areas of risk analysis, including risk assessment, management, and communication, related to food safety. The initial emphasis was in risk assessment of microbial pathogens and their toxins. The Clearinghouse website is located at: <http://www.foodriskclearinghouse.umd.edu>.

Recently, JIFSAN was invited to operate the WHO/FAO Acrylamide in Food Network and has accepted that responsibility. This will be done through the Clearinghouse.

### **3. JIFSAN Food Safety Risk Analysis Professional Training Program**

The JIFSAN Food Safety Risk Analysis Professional Training Program provides opportunities for professionals across a broad spectrum of fields to develop proficiency in language, tools, and techniques of risk analysis. It meets the needs of regulators, academics, industry, trade and consumer groups, and economic, legislative and legal professionals. The program has two basic components: (1) classroom training and (2) distance learning. The Professional Training Program website can be accessed at:

[http://www.jifsan.umd.edu/pro\\_training.htm](http://www.jifsan.umd.edu/pro_training.htm).

### **Collaborations**

JIFSAN is actively involved in developing collaborations with international organizations to facilitate active cooperative research and education programs and exchange of scientists.

#### **1. Central Science Laboratory (CSL), Department for Environment, Food and Rural Affairs, York, United Kingdom**

The Central Science Laboratory (CSL), Department for Environmental, Food, and Rural Affairs (UK) and JIFSAN have a cooperative agreement to promote mutual interests and cooperation in selected research activities of the two institutions, and to deepen the understanding of the scientific, economic, and social issues of the respective countries. Each year a joint symposium, that alternates between the two countries, is held on a selected topic in food safety and nutrition. CSL website:

<http://www.csl.gov.uk/main.cfm>

- **First Joint CSL/JIFSAN Symposium on Food Safety and Nutrition: Risk Assessment and Communication in Food Safety**

The First Joint CSL/JIFSAN Symposium on Food Safety and Nutrition: Risk Assessment and Communication in Food Safety, was held at the Central Science Laboratory (CSL), York, UK, on June 20-22, 2000. Speakers and abstract contributors were from the United Kingdom, United States, Belgium and Switzerland. Approximately 87 international delegates attended from the United States, Italy, Spain, Ireland, Sweden, and the United Kingdom. The symposium was organized to provide those involved in different aspects of risk analysis the opportunity to meet and discuss both chemical and microbiological risk assessments and risk communication. Topics included risk analysis and the law, with an emphasis on international aspects; the internationally increasing significance of risk assessment in human safety evaluations; the type of data used in risk assessment, including human data from dietary exposure to phthalates, ochratoxin A, caffeine, dioxins, and predictive testing for allergy in novel foods; *Listeria monocytogenes* and *Campylobacter jejuni* risk assessments; microbial resistance to antibiotics; and the communication of risk assessment from both regulatory and industrial viewpoints.

- **Second Joint CSL/JIFSAN Symposium on Food Safety and Nutrition: Current Issues in Food Biotechnology**

The Second Joint CSL/JIFSAN Symposium on Food Safety and Nutrition: Current Issues in Food Biotechnology, was held at the Inn and Conference Center, University of Maryland University College, on July 11-13, 2001. The purpose of this symposium was to enable those involved in different aspects of the application of the methods of modern biotechnology to the production and processing of foods to meet and discuss current issues in this important area. The meeting examined international perspectives, safety considerations, detection and analysis, and future prospects. Participating speakers were from the Netherlands, Peoples Republic of China, Kenya, Italy, and the United States. Over 100 international delegates attended the meeting from the United Kingdom, United States, Canada, Australia, Germany, Korea and France. A one-page summary of the meeting was furnished to

the United States delegation to the G8 meeting in Genoa, Italy. Proceedings from the symposium can be found at: <http://www.jifsan.umd.edu/cslproceedings.htm>

- **Third Joint CSL/JIFSAN Symposium on Food Safety and Nutrition: Rapid Methods in Food Safety**

The Third Joint CSL/JIFSAN Symposium on Food Safety and Nutrition: Rapid Methods in Food Safety was held at the Central Sciences Laboratory, Sand Hutton, York (UK), on June 26-28, 2002. The meeting examined the current and prospective technologies for rapid diagnostics testing for the presence of bacterial pathogens, viruses, GMO's and chemical residues/contaminants in foods and in biological samples. Participating speakers were from the United States, Italy, United Kingdom and Switzerland. Poster presenters included delegates from Italy, United Kingdom, United States, Ireland, Czech Republic, Spain, Canada, and Finland. The meeting was well attended by approximately 150 individuals.

- **Fourth Joint CSL/JIFSAN Symposium on Food Safety and Nutrition: Risk Analysis/Risk Communication**

The Fourth Joint CSL/JIFSAN Symposium on Food Safety and Nutrition: Risk Analysis/Risk Communication will be held in College Park, MD, June 11-13, 2003.

- **Fifth Joint CSL/JIFSAN Symposium on Food Safety and Nutrition: Advances in Chemical Analysis**

The Fifth Joint CSL/JIFSAN Symposium on Food Safety and Nutrition: Advances in Chemical Analysis will be held in York, UK in June of 2004.

## **2. Department of Natural Resources and Environment (DNRE), State of Victoria, Australia**

Implementation of this agreement is in progress. Both JIFSAN and the DNRE, State of Victoria, Australia are participating in international training programs in fresh produce

(fruits and vegetables). DRNE also has a domestic training program for producers in Victoria. There are mutual research interests in the veterinary science area and in the uptake of pathogens by fresh produce during production, harvest, and packing. Meetings are being held between members of DRNE and JIFSAN to develop cooperation in one or more of these areas. A collaborative research project is being developed in the pathogen area. Since the two institutions offer training programs in the safe production of fruits and vegetables, efforts are in progress to develop collaborative efforts in this outreach area.

### **3. Canadian Institute for Food Inspection and Regulation (CIFIR)**

The Canadian Institute for Food Inspection and Regulation (CIFIR) is a collaborative program similar to JIFSAN, between the University of Guelph and the Canadian Food Inspection Agency (CFIA). In September 2002 and on two previous occasions, JIFSAN personnel met with officials from CIFIR, University of Guelph, and CFIA to provide an update on both programs and discuss the common challenges of developing collaborations between a federal regulatory agency and an academic institution. During this meeting an agreement was made to explore the possibility of formalizing a relationship between CIFIR and JIFSAN through a memorandum of agreement and developing a joint symposium in an area of mutual interest during the next calendar year. CFIA website:

<http://www.inspection.gc.ca/english/corpaffr/newcom/2000/20000117e.shtml>

### **4. World Health Organization / Pan American Health Organization (WHO/PAHO) Food Safety Collaborating Center**

JIFSAN has been designated as a WHO/PAHO Food Safety Collaborating Center, which focuses on risk assessment of contaminants in foods and mycotoxin analysis. The outreach activities of this Center will improve the risk assessment and analytical capabilities of potential trading partners to facilitate the implementation of mutual recognition considerations of international trade agreements.

WHO website: <http://www.who.int/en>

PAHO website: <http://www.paho.org/>

## **5. World Health Organization/Food and Agriculture Organization of the United Nations (WHO/FAO) Acrylamide in Food Network operated by JIFSAN**

Implementation of the agreement is in progress. This international network will function as a global resource/inventory of ongoing research on acrylamide in food, including formal research, surveillance/monitoring and industry investigations. The network will serve as a discussion forum and network for active researchers/others in the field in order to identify gaps and overlaps in research/information, and make suggestions for how these could be addressed. The network will be managed by JIFSAN on behalf of WHO and FAO.

## **6. Joint Research Centre (JRC), European Commission (EC) Ispra, Italy**

JIFSAN and the European Commission are currently negotiating an Implementation Agreement to work cooperatively. Through joint efforts of JIFSAN and the Commission, new approaches will be identified and developed in the areas of analytical quality assurance, food safety and reference tasks, thus working to the mutual benefit of both organizations and the achievement of their objectives.

### **Additional Workshops and Symposia**

A variety of international symposia were organized and/or co-sponsored by JIFSAN. Selected examples include:

- **First International Conference on Microbiological Risk Assessment**

The First International Conference on Microbiological Risk Assessment was held at the University of Maryland, College Park, Inn and Conference Center, College Park, Maryland on July 24-26, 2002. The conference enhanced interactions between risk assessors in developing and developed nations. In addition to highlighting microbial risk assessments in progress or recently completed, the conference covered a range of topics such as risk assessment frameworks, dose-response models, dynamic exposure assessment models, evaluation of intervention strategies, the interface

between risk managers and risk assessors, and communicating the results of risk assessments. Details of the conference are posted on the web at:

<http://www.foodriskclearinghouse.umd.edu/RACconferencehome.html>

- **International Workshop on Mycotoxins**

The International Workshop on Mycotoxins was held at the Harvey Wiley Federal Building, College Park Maryland, on July 22-26, 2002. The workshop provided training in mycotoxin control programs to participants from economically challenged regions of the world where mycotoxin contamination of the food supply has significant economic and health effects on the population. Upon completion, participants are expected to return to their respective organizations/countries and initiate a training program following the same general format and using the same instructional materials provided during the workshop. This is part of FDA's outreach and JIFSAN's train-the-trainer segment of its education and outreach program. JIFSAN also has responsibilities as a PAHO/WHO Food Safety Collaborating Center. This is part of a five-year education and outreach program conducted by FDA/CFSAN in the area of mycotoxin control.

- **Acrylamide in Food: Scientific Issues, Uncertainties, and Research Strategies**

JIFSAN and the National Center for Food Safety and Technology (NCFST), Argo-Summit, Illinois organized a workshop "Acrylamide in Food: Scientific Issues, Uncertainties, and Research Strategies," October 28-30, 2002 in Chicago. JIFSAN and NCFST served as the organizers for a larger ad hoc group of individuals from industry, government, and academia that have been monitoring the acrylamide in food issues and planned the meeting. The workshop was sponsored by the 170 participants. The primary audience was the U.S. food industry, secondly academics, and thirdly regulatory agencies (domestic and international). The goal of this workshop was to develop conclusions on how efforts of industry, government, and academia can be coordinated to effectively use available resources to address the scientific issues raised by the reports of acrylamide in foods. The workshop focused on science and identified research needs. An invited group of experts identified data gaps in the scientific knowledge underlying the occurrence of acrylamide in a wide variety of foods. Conclusions include a select

number of high-priority needs to be included in a coordinated research agenda. A number of international participants who are involved in the acrylamide issues in their country participated. Five working groups addressed: mechanism of formation of acrylamide in food, analytical methodologies, exposure and biomarkers, toxicology and metabolic consequences, and risk communication. The background papers developed by each working group, summaries of the discussions and conclusions will be posted on the JIFSAN website (<http://www.jifsan.umd.edu>).

- **Workshop on Transmissible Spongiform Encephalopathies (TSE)**

The Workshop on Transmissible Spongiform Encephalopathies (TSE) was held at the University of Maryland, College Park, Inn and Conference Center, College Park, Maryland, on June 8-9, 1998. Over 35 speakers from eight different countries spoke to approximately 300 participants. This was thought to be the first meeting on TSE's that brought researchers on human TSE's together with researchers on animal TSE's. Details of the workshop are posted on the web at: <http://www.jifsan.umd.edu/tse/>

### **JIFSAN Visiting Scientists Program**

The JIFSAN Visiting Scientists Program provides opportunities for visiting scientists from academia, industry, consumer and trade groups, and international organizations to participate in research, education and outreach programs of mutual interest. This provides a mechanism for the exchange of technical information and scientific concepts with outside experts.

- Dr. Friedrich K. Kaferstein became a JIFSAN Distinguished Visiting Scientist in November 1998. He is the former Director of the Programme of Food Safety and Food Aid for the World Health Organization in Geneva, Switzerland. Dr. Kaferstein served as a JIFSAN liaison with FDA and USDA FSIS in the areas of microbiological food safety and risk assessment: advised/assisted in the development of the Food Safety Risk Analysis Clearinghouse; and facilitated interactions with international food safety organizations – particularly WHO. The visibility of JIFSAN has been increased through the number of invited presentations

he made at international scientific meetings. Dr. Kaferstein completed his appointment and returned to Europe in August 2001.

Additionally, JIFSAN facilitates the placement of scientists from their International partners either with FDA staff or University faculty in areas of mutual benefit.

- Dr. Renata Leuschner from the Central Science Laboratory, York, UK participated as a Visiting Scientist October 7 – 31, 2002, at the United States Food and Drug Administration, Center for Food Safety and Applied Nutrition, College Park, Maryland. During that time Dr. Leuschner collaborated with Drs. Steven Musser and Wallace Andrews, both FDA research scientists, on a promising technique showing potential to protect consumers and improve public health. Additionally, this appointment offered an opportunity for Dr. Leuschner to interact with Dr. Catherine Fenselau, University of Maryland. Dr. Leuschner evaluated the use of mass spectrometry to differentiate strains of Salmonella, a harmful bacterium that is responsible for significant illness and deaths worldwide.