



Symposium
Rapid Methods in Food Safety
Microbiology

Thursday, September 18, 2014

Chicago Marriott Southwest at Burr Ridge
1200 Burr Ridge Parkway | Burr Ridge IL 60527



Innovation Through Collaboration
 **IFSH** | INSTITUTE FOR
FOOD SAFETY
AND HEALTH
ILLINOIS INSTITUTE OF TECHNOLOGY



FOOD RESEARCH INSTITUTE
University of Wisconsin-Madison

Rapid Methods in Food Safety Microbiology Symposium

Current Challenges and Leading Technologies for the Path Forward

Chicago Marriott Southwest at Burr Ridge, Burr Ridge, IL

Co-organized by IIT's Institute for Food Safety and Health (IFSH) and the University of Wisconsin-Madison Food Research Institute (FRI).

Synopsis: Advances in molecular and analytical technologies have led to the development of new rapid detection methods that provide improved accuracy, sensitivity, reproducibility and faster time-to-result than traditional methods. Whether used for foodborne disease tracking, surveillance, or regulatory action, methods to detect and identify foodborne pathogens are essential to ensuring the public health. Equally critical to the discussion is an understanding of the relationships among microorganisms and the food processing environment. These interactions influence foodborne pathogen colonization, survival, biofilm formation and detection. This symposium will address the critical role and state of rapid detection methods in key food industry segments. Given that methods and approaches vary widely across and within industry segments - what are the challenges to ensuring a timely and reliable food safety assessment? How can current and emerging methods best be applied? Critical questions like these will be explored in this thought-provoking symposium.

What to expect: Symposium sessions will feature speakers from government, academia and the food industry covering these four important areas:

- **Public Health Considerations:** Advancements in molecular microbiology, bioinformatics, and instrumentation technologies with examples of how they are being implemented in public health applications.
- **Sample Preparation and Sampling Plans:** The latest developments in methodologies and technologies for the isolation, concentration and enrichment of target organisms from food and environmental samples.
- **New Technologies:** New and near market technologies for rapid detection and identification of foodborne pathogens in food and food processing environments.
- **Microbial Ecology:** The microbiome of foods, food manufacturing environments and humans in hopes of better understanding the impact of these relationships on product quality, pathogen detection, and health.

Who should attend: This symposium is for food professionals in academia, industry and government in food processing, food safety, quality assurance, regulatory functions, public health administration, and those involved in developing or using pathogen detection equipment and methods.

Location: The symposium will be held at the Chicago Marriott Southwest at Burr Ridge, Burr Ridge, IL. Early registration will be available on-line at: www.iit.edu/ifsh after July 21, 2014.

Hotel:

Chicago Marriott Southwest at Burr Ridge
1200 Burr Ridge Parkway
Burr Ridge, IL 60527
630-986-4100
\$186.00 USD per night + Tax

Please contact Armand Paradis at 708-563-8175 for details.

Joint IIT IFSH/UW FRI Symposium
Rapid Methods in Food Safety Microbiology
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Burr Ridge, IL

PROGRAM

- 7:30 – 8:30 Registration
- 8:30 - 8:40 **Welcome and introductory remarks**
Chuck Czuprynski, Ph.D., Food Research Institute, University of Wisconsin-Madison

Session 1: Public Health Considerations

Session Chair: Mary Lou Tortorello, Ph.D., Food and Drug Administration (FDA) Center for Food Safety and Applied Nutrition (CFSAN)

- 8:40 - 9:10 **Regulatory use of whole genome sequencing**
Eric Brown, Ph.D., FDA, CFSAN
- 9:10 -9:40 **Methods for detection and identification of non-O157 STEC**
Pina Fratamico, Ph. D., USDA Agricultural Research Service Eastern Regional Research Center
- 9:40 -10:10 **Culture-independent molecular methods in microbial epidemiology**
John Besser, Ph.D., Centers for Disease Control and Prevention

10:10 -10:25 Coffee Break

Session 2: Sampling Plans and Sample Preparation

Session Chair: Jason Wan, Ph.D. Institute for Food Safety and Health (IFSH), Illinois Institute of Technology (IIT)

- 10:25 - 10:50 **Statistical principles for sampling plans and how they also impact conventional and rapid microbiological methods**
Robert Buchanan, Ph.D., Center for Food Safety and Security Systems, University of Maryland

- 10:50 – 11:15 **Sample preparation: the forgotten beginning**
Keith Lampel, Ph.D., FDA CFSAN
- 11:15 - 11:40 **Environmental and In-process testing considerations**
Katie Swanson, Ph.D., KMJ Swanson Food Safety Inc.
- 11:40 - 12:05 **Detection of foodborne viruses – Advances and gaps in methods and sample preparation**
Alvin Lee, Ph.D., IIT IFSH
- 12:05 - 1:20 Lunch and Technology Showcase

Session 3: New Technologies

Session Chair: Robin Kalinowski, IIT IFSH

- 1:20 - 1:45 **The new fast: a review of new and near market technologies**
Mark Carter, MC2E, Inc.
- 1:45 – 2:10 **Leveraging bacteriophages for high-speed, enrichment-free bacterial pathogen detection**
Michael Koeris, Ph.D., Sample6
- 2:10 – 2:35 **Development process for a handheld resistance based biosensor for pathogen detection**
Andre Senecal, Ph.D., US Army Natick
- 2:35 – 3:00 **Rapid serotyping of *Salmonella* in food by microfluidic capillary electrophoresis**
Bart Weimer, Ph.D., University of California, Davis
- 3:00 – 3:20 Coffee Break

Session 4: Microbial Ecology

Session Chairs: Chuck Czuprynski, Ph.D., and Adam Borger, Ph.D., University of Wisconsin-Madison

- 3:20 – 3:50 **Dissecting diet-gut microbiota interactions and their impact on human health**
Federico Rey, Ph.D., University of Wisconsin-Madison
- 3:50 – 4:20 **Accurate detection of *Listeria* and *Salmonella* in processed meat products and associated processing environments**
Peter Taormina, Ph.D., John Morrell Food Group / Smithfield Foods, Inc.
- 4:20 – 4:50 **Beyond the standard plate count: genomic views into food microbial ecology**
Greg Siragusa, Ph.D., DuPont
- 4:50 – 5:00 **Closing remarks**
Robert Brackett, Ph.D., IIT IFSH



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Attendee Registration Form

Name

Title

First Name

Surname

Position

Company

Address

City

State/Postcode

Phone

Fax

Email

I wish to register as the following:

Early Bird Registration through September 12, 2014 USD \$ 250

Registration after September 12, 2014 USD \$ 325

Academic Rate USD \$175

Student Rate USD \$100

Payment Method: (Required in full prior to program opening session)

For On-line Registration and Credit Card Payment visit:

<https://www.eventbrite.com/e/rapid-methods-for-food-safety-microbiology-symposium-tickets-12199814975>

For Checks make payable to
IIT Institute for Food Safety and Health
6502 S. Archer Road
Bedford Park, IL 60501-1957

For Special Hotel Rate Booking visit:

Link above or **CLICK HERE: [Book your special rate: Joint Symposium Sep2014](#)**

Please direct application forms and inquiries to

Armand Paradis, Director Business Development
Institute for Food Safety and Health
6502 S. Archer Road
Bedford Park, IL 60501-1957
708.563.8175 Phone
708.563.1875 FAX
aparadi2@iit.edu

Signature
