The 7th IFSH HIGH-THROUGHPUT SEQUENCING (HTS) SYMPOSIUM



New Developments and Technology in Its Use in Food Safety Systems

Perspectives from Governmental Agencies, Biotech Companies, Academia, Food Industry

Chicago Southwest Marriott Hotel at Burr Ridge
1200 BURR RIDGE PARKWAY,
BURR RIDGE, ILLINOIS, USA, 60527
Tuesday, May 20, 2025: 1:00 PM – 5:30 PM CDT
Wednesday, May 21, 2025: 8:30 AM – 5:15 PM CDT

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DATES/TIMES:

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FORMAT:

In-person

Place:

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SYNOPSIS:

In this symposium, we will discuss the new developments in high-throughput sequencing (HTS) technology, including its extensive and limited use by the governmental agencies and industry, respectively, the new instruments, new applications, the analytical tools and the latest in scientific research. We will also address the challenges including legal considerations, benefits and future of HTS in food safety systems in the U.S. and beyond.

BACKGROUND:

New technologies have a great impact on our lives, and their numbers and impacts are only growing. High-throughput or next-generation Sequencing (HTS/NGS) is one of these technologies, and since its invention, it has been reshaping and enriching various fields, including food safety and human health. New sequencers are becoming faster, cheaper, more portable, and powerful, producing higher throughput, better quality, and longer and larger number of reads. With an increase in computational power, HTS has generated its own 'big data' and analytical tools. However, the use and implementation of HTS have been both challenging and rewarding. HTS has shown great potential to tackle issues like pathogenicity, virulence, toxicity, and antimicrobial resistance (AMR), helping enhance current food safety measures. The U.S. Food and Drug Administration (FDA), Centers for Disease Control and Prevention (CDC) and Department of Agriculture Food Safety and Inspection Service (USDA FSIS) have recognized the power of HTS technology, and they have implemented and used it in their organizations for over a decade. It is also being used by some food companies. This HTS symposium provides a unique venue for experts from the agencies, food industry, biotechnology enterprises, analytical/consulting companies and academia to gather and discuss the news and views on the latest developments in this technology in relation to food safety.

WHAT TO EXPECT:

The attendees will have the opportunity to meet with and hear from prominent scientists affiliated with FDA, CDC, USDA FSIS, academia, food industry, consulting, groups, analytical companies, and biotech enterprises. The topics include the news and views on HTS and food safety, the latest HTS inventions, innovations, instruments, products and research, their benefits, opportunities, obstacles and challenges, and implementation of HTS by the agencies and the industry.

Two panels of experts, one from the federal agencies, and the other from the industry and academia, will discuss HTS technology, its importance, power, impacts and values; the real and perceived obstacles of its use and implementation by the industry; and its possible future directions. The attendees will have the opportunity to network with this outstanding group of scientists and pose their questions to the panels and participate in their discussions.

WHO SHOULD ATTEND:

This symposium is designed to meet the needs of food safety professionals from industry, academia 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. Students in food science and food safety are strongly encouraged to attend this symposium.

Registration

REGISTRATION FEES:

Early Bird: Ends March 20, 2025, $450

General: Ends May 7, 2025, $550

Special Categories Fees

Students $50
Governmental Agencies $400
Invited Speaker $200

Sponsorship Levels

Gold	$3,500
Silver	$2,500
Tech	$1,500

Registration

Hotel's special group rate for HTS symposium
Chicago Marriott Southwest at Burr Ridge for $218 USD per night



Book your group rate for IFSH HTS Symposium

You will find the information for your online reservation link below. If you have questions or need help with the link, please do not hesitate to ask. We appreciate your participation and look forward to a successful event.

Start Date: Monday, December 2, 2024
Last Day to Book: Monday, April 28, 2025

Limited ticket fee scholarships available. Contact Behzad Imanian at bimanian@iit.edu for complete details.

Cancellation Policy: *No refunds will be given after registration payment has been completed. However, if IFSH cancels the event, all attendees will receive a full refund. Transferring registration to another person is allowable. Please contact Tina Gettis at tgettis@iit.edu with any further questions or requests.*

SPONSORSHIPS

Take advantage of the sponsorship opportunities available at the 7th IFSH High-Throughput Sequencing (HTS) Symposium. Contact Behzad Imanian, bimanian@iit.edu for complete details.

DAY 1 SYMPOSIUM AGENDA

All Times in U.S. Central Daylight Time (CDT)

TUESDAY, MAY 20, 2025		
START	**END**	**SESSION**
1:00 PM	1:10 PM	***Welcome!*** Brian Schaneberg, Executive Director Institute for Food Safety and Health, Illinois Tech
1:10 PM	1:30 PM	***Can, Will and Should Artificial Intelligence Play a Role in Our Food Safety System?*** Behzad Imanian, Research Assistant Professor, FDSN Dept. Leader of IFSH HTS Initiative, Illinois Tech
FDA, CDC, USDA FSIS		
1:30 PM	1:50 PM	***An Added Value for WGS: Precision Food Safety and the Role of WGS in Exploring Novel Mitigation Steps for Pathogen Control*** Eric Brown, Division of food safety genomics, Director, Office of applied microbiology and technology, Food and Drug Administration
1:50 PM	2:10 PM	***Coordination of Approaches to Characterize Foodborne Illness Bacteria: The Multiagency Genomics in Food and Feed Safety Work Group (GenFS)*** Heather Carleton, Chief, Enteric Diseases Laboratory Branch DFWED/NCEZID/Centers for Disease Control and Prevention
2:10 PM	2:30 PM	***Economic Impact of WGS*** Marc Allard, Human Foods Program (HFP), Office of Scientific Coordination and Computational Sciences (OSCCS), GenomeTrakr and Computational Science Staff (GTCSS)
2:30 PM	2:45 PM	**BREAK**
2:45 PM	3:05 PM	***Targeted metagenomics approaches for characterizing Salmonella directly from stool*** Amanda Jo Williams-Newkirk, Co-lead, Culture Independent and Metagenomic Subtyping, Enteric Diseases Laboratory Branch, DFWED/NCEZID/CDC
3:05 PM	3:25 PM	***FSIS Laboratory Innovations*** William Shaw, Executive Associate for Laboratory Services
3:25 PM	3:45 PM	***Whole Genome Sequencing: The Compliance Perspective*** Leslie Hintz, Compliance Officer, CFSAN, Food and Drug Administration
3:45 PM	3:50 PM	**BREAK**

DAY 1 SYMPOSIUM AGENDA (CONT.)

All Times in U.S. Central Daylight Time (CDT)

TUESDAY, MAY 20, 2025		
PANEL OF EXPERTS (GOVERNMENT AGENCIES) DISCUSSION & QA SESSION Perspectives from Governmental Agencies		
3:50 PM	5:20 PM	**FDA:** Marc Allard, Eric Brown, Leslie Hintz, David Lipman, Errol Strain **CDC:** Heather Carleton, Amanda Jo Williams **USDA/FSIS:** William Shaw
Reception		
5:20 PM	6:45 PM	**Reception**
ADJOURN		

DAY 2 SYMPOSIUM AGENDA

All Times in U.S. Central Daylight Time (CDT)

WEDNESDAY, MAY 21, 2025		
START	**END**	**SESSION**
8:30 AM	8:40 AM	***Agenda & Logistics*** Behzad Imanian, Research Assistant Professor, FDSN Dept. Leader of IFSH HTS Initiative, Illinois Tech
FDA and IIT		
8:40 AM	9:00 AM	***IOWarp: Intelligent Data Management to Accelerate Food Safety Genomic Research*** Anthony Kougkas, Research Assistant Professor, Computer Science Dept. IIT
9:00 AM	9:20 AM	***Exploring the Salmonella Mobilome for Source Attribution and Clustering*** Errol Strain, Senior Science Advisor for Bioinformatics at FDA's Human Foods Program
9:20 AM	9:40 AM	***From Colony to Clarity: Accelerated Salmonella and Escherichia coli ID Using Oxford Nanopore Sequencing*** Maria Hoffmann, Research Microbiologist, Food and Drug Administration
9:40 AM	10:00 AM	***The Research at High Throughput Sequencing Initiative (HTSI)*** Renmao Tian, Research Scientist, IFSH HTS Initiative, Illinois Tech
10:00 AM	10:15 AM	***BREAK***
IFSH HTS Symposium Rapid Talks		
10:15 AM	10:25 AM	***Cronobacter sakazakii Biofilms: Influence of Powdered Infant Formula Microbiomes and Water Activity*** Megan Fay, Research Microbiologist, FDA

DAY 2 SYMPOSIUM AGENDA (CONT.)

All Times in U.S. Central Daylight Time (CDT)

WEDNESDAY, MAY 21, 2025		
START	**END**	**SESSION**
10:25 AM	10:35 AM	***Influence of Enrichment Method on the Relative Abundance of Salmonella enterica and Native Microbiota on Peaches*** Bashayer Khouja, Research Microbiologist, FDA
10:35 AM	10:45 AM	***What's Really in Fake Meat? A Metagenomic Profile of Plant-based Meat Alternative Products*** Catherine Rolfe, Research Biologist, FDA
10:45 AM	10:55 AM	***Enrichment Dynamics of Cronobacter sakazakii and Native Microbiota in Powdered Infant Formula*** Emily Smith, Research Microbiologist, FDA Jodie Ulaszek, Scientist, Microbiology, IIT
10:55 AM	11:05 AM	***Food-safe antimicrobial coating for reusable packaging to alleviate specialty crop export barriers to the European Union*** Catherine Wong, Senior Research Associate, IIT
11:05 AM	11:15 AM	***Evaluating the Microbiomes of Enoki Mushrooms*** Joelle Salazar, Research Microbiologist, FDA
Biotechnology & Analytical/Consulting Companies		
11:15 AM	11:35 AM	***Illumina Innovations: Introducing the MiSeq i100 Series*** Claire White, Executive Territory Account Manager
11:35 AM	11:55 AM	***Transforming food safety with a clearer picture of microbial DNA*** TBD, Oxford Nanopore
11:55 AM	12:50 PM	***Lunch***
Biotechnology & Analytical/Consulting Companies …		
12:50 PM	1:10 PM	***Changing the Game with PacBio HiFi long-read Sequencing*** Turner Duncan, Genomic Sequencing Specialist, Pac Bio
The Law and Food Safety		
1:10 PM	1:40 PM	***Foodborne Illness Litigation*** Bill Marler, Marler Clark Food Safety Law Firm
Food Industry		
1:40 PM	2:00 PM	***Industry Perspective on HTS Application to Environmental Monitoring*** Matthew Henderson, Director of Food Safety, Land O'Frost
2:00 PM	2:25 PM	***TBD*** Genevieve Sullivan, *Mars*
2:25 AM	2:40 AM	***BREAK***
Food Industry		
2:40 PM	3:05 PM	***Benchmarking Whole Genome Sequencing Pipelines*** Balasubramanian Ganesan, *Principal Scientist, Mars Global Food Safety Center,* Mars
3:05 PM	3:10 PM	**BREAK**

PANEL OF EXPERTS (INDUSTRY) DISCUSSION & QA SESSION HTS/WGS, Its Benefits, Challenges, Future		
3:10 PM	4:20 PM	**Land 'O Frost:** Matt Henderson **Nestlé:** Daniel Smieszek **Mars:** Bala Ganesan **Marler Clark Food Safety Law Firm:** Bill Marler
4:20 PM	4:25 PM	***Closing Remarks*** Behzad Imanian, Research Assistant Professor, FDSN Dept. Leader of IFSH HTS Initiative, Illinois Tech