IFSH | INSTITUTE FOR FOOD SAFETY AND HEALTH
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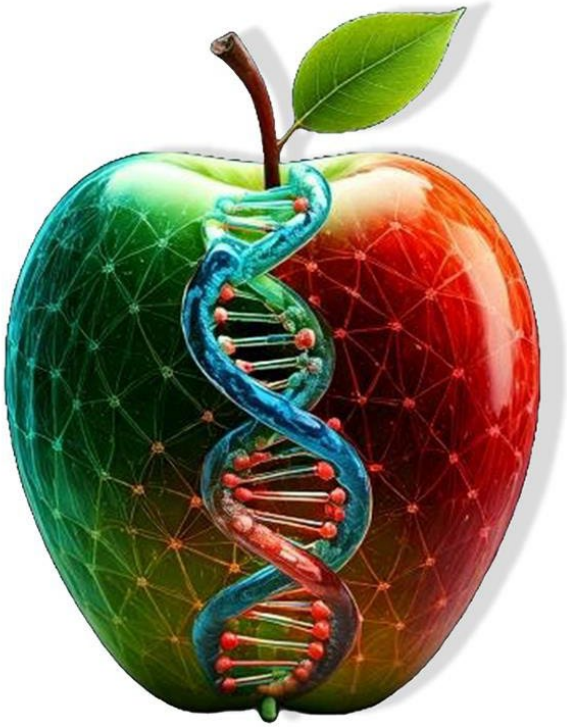
WHOLE-GENOME SEQUENCING (WGS) ANALYSES WORKSHOP



# Unlocking the Secrets of Bacterial Genomics

**Monday, May 18, 2026**
**9:00 AM – 4:00 PM**
**Moffett Campus**
**6502 S Archer Rd, Bedford Park, IL**

IFSH | INSTITUTE FOR FOOD SAFETY AND HEALTH ILLINOIS TECH

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# Unlocking the Secrets of Bacterial Genomics
# Whole Genome Sequence Analyses Workshop

Join us for an exciting and informative workshop that will equip you with the knowledge and practical skills to leverage the power of whole genome sequencing for enhanced understanding and decision-making in the field of food safety and bacterial research.

In today's data-driven world, the wealth of sequence data available for foodborne pathogens and environmental microbiomes is growing exponentially. By harnessing this data, we can unlock crucial insights into pathogenicity, risk assessment, traceability, and more. This one-day workshop will guide you through the complex process of analyzing genome data, from quality control and assembly to phylogenetic analysis.

Through a combination of lectures and hands-on sessions, you will dive deep into various aspects of next-generation sequencing (NGS) technologies, including long-read and short-read sequencing.

You will learn how to navigate the analysis workflows and utilize open-source tools such as GalaxyTrakr and the Pathogen Detection Website to perform quality control, assembly, build phylogenetic trees, and identify genes of interest, including those associated with antimicrobial resistance, virulence, and stress response.

By the end of the workshop, you will have gained invaluable knowledge and practical skills that can be directly implemented in your own laboratory for the analysis of whole genome sequencing data. Don't miss this opportunity to stay at the forefront of bacterial genomics research and enhance your capabilities in pathogen detection, characterization, and risk assessment.

**Participants are required to bring their own fully charged laptops.** Please register for a Galaxytrakr account at https://account.galaxytrakr.org/Account/Register. This account registration system is separate from the main GalaxyTrakr site. After registration, please test if you can log in at the GalaxyTrakr site, https://galaxytrakr.org. There is no other prerequisite for this training and workshop. It will be a full day event, from 9:00 am to 4:00 pm. A continental breakfast, lunch, snacks and coffee will be provided.

Space will be **limited to 20 attendees**, and a certificate of completion will be awarded to the participants at the end of the training session.

Participants are also encouraged to attend the IFSH HTS 2-day symposium on May 20 – 21, 2024, held at Chicago Marriott Southwest, Burr Ridge, Illinois.

## Register Now!

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## Organizers and Instructors:


**Padmini Ramachandran, Ph.D.**
Research Microbiologist
Office of Applied Microbiology and Technology
Office of Laboratory Operations and Applied Science
Human Foods Program
Food and Drug Administration

**Maria Hoffman, Ph.D.**
Research Microbiologist
Office of Applied Microbiology and Technology
Office of Laboratory Operations and Applied Science
Human Foods Program
Food and Drug Administration

**Renmao Tian, Ph.D.**
Research Scientist
IFSH HTS Initiative
Institute for Food Safety and Health
Illinois Tech

**Behzad Imanian, Ph.D.**
Research Assistant Professor
Leader, HTS Initiative
Institute for Food Safety and Health
Illinois Tech


# Register Now!

| May 18, 2026 | | |
|---|---|---|
| **START** | **END** | **SESSION** |
| 9:00 AM | 9:20 AM | ***Introduction to WGS Data Analysis*** Maria Hoffmann |
| 9:20 AM | 10:30 AM | ***Pathogen Detection Demo and Hands on activity*** Maria Hoffmann |
| 10:30 AM | 10:45 AM | **BREAK** |
| 10:45 AM | 11:00 AM | ***Introduction to GalaxyTrakr*** Padmini Ramachandran |
| 11:00 AM | 12:00 PM | ***Hands On: Data import, Workflow Import, MicroRun QC, QA/QC workflow*** Padmini Ramachandran |
| 12:00 PM | 1:00 PM | **LUNCH** |
| 1:00 PM | 2:30 PM | ***Hands On: SeqSero, AMRFinderPlus, ConFindr, Genome Assembly, CFSAN SNP Pipeline*** |
| 2:30 PM | 2:45 PM | **BREAK** |
| 2:45 PM | 3:15 PM | ***Hands On: CFSAN SNP Pipeline and Tree Building*** |
| 3:15 PM | 3:45 PM | ***Introduction to Long-Read Sequencing and Nanopore Data QA/QC and Assembly workflow demo*** Maria Hoffmann & Padmini Ramachandran |
| 3:45 PM | 4:00 PM | ***Questions and Closing*** |