FOOD SAFETY & HIGH-THROUGHPUT SEQUENCING

“WHAT DOES THE FUTURE HOLD?”

Perspectives from the Industry, Governmental Agencies and Academia
An IFSH HTS Initiative's Palantir, May 30-31, 2018
Chicago Marriott Southwest at Burr Ridge
Burr Ridge, Illinois
**Synopsis:** In the past 15 years, High-Throughput Sequencing (HTS) or Next Generation Sequencing (NGS) has leaped forward and regenerated the word ‘Next’ many times over. The science and technologies behind HTS have introduced us to a wide variety of new investigative, diagnostic and analytical methods such as Whole Genome Sequencing (WGS), large-scale metagenomics, transcriptomics and phylogenomics. HTS provides an unprecedented power and resolution to positively identify and distinguish closely related strains of bacteria (WGS), to catalogue all the various species in a complex community in an environmental sample (metagenomics), and to detect fluctuations in gene expression as a response to the environmental or developmental changes in an organism’s life cycle (transcriptomics). Academic researchers were the first to employ HTS extensively to examine many complicated questions that previously could not have been answered. With its many applications, HTS has replaced or, at least, challenged, changed or is changing the more traditional methods in health and other life sciences. In recent years, HTS has become progressively faster and cheaper, providing increasingly higher quality, longer and larger number of reads, resulting in better resolution and reproducibility. Today, the debate over the superiority of HTS over older methods is conclusively settled, and many governmental agencies have already adopted and implemented it in their insensitive and investigative work. A growing number of businesses have also emerged solely to provide HTS sequencing or its related analytical services, and many existing ones have added these services to their menus. Food industry is also showing great interest for this technology and many of its members have already invested in, experimented with or even implemented it in their research and development procedures.

**What to expect:** In this symposium, we will hold a Palantir and look into the future of HTS in the field of food safety with a focus on its many applications to learn and catalogue, to monitor and control, to combat and modify foodborne microorganisms. The professionals from governmental agencies such as Food and Drug Administration (FDA), Centers for Disease Control and Prevention (CDC) and US Department of Agriculture (USDA) Food Safety and Inspection Service (FSIS), as well as those of the food industry, tech companies and academia present the news and their views, the current state of affairs, including existing obstacles and possible solutions, with respect to the widespread use and implementation of the HTS technology in their organizations and their perspectives about its future. A panel of experts from the federal agencies, food industry and academia will answer the questions from the attendees and discuss what to expect in the near future when it comes to HTS technology.

**Who should attend:** This symposium is for 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.

**Location:** Chicago Marriott Southwest Hotel in Burr Ridge, Illinois.


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