Viruses are the most frequent cause of foodborne illness worldwide and a major contributor to the global foodborne disease burden [1]. To assess risks associated with viruses and other hazards in the food chain and set appropriate control measures, the use of risk assessment techniques has been suggested by international bodies [2, 3] and increasingly accepted by governments around the world as a basis for national legislation in relation to food safety [4, 5].

There are two main approaches in performing a microbiological risk assessment (MRA), an epidemiological approach (top-down approach) starting from data on illness and moving towards the hazard in the product and a food chain approach (bottom-up approach) starting from the hazard in the product and moving towards an estimate of the probability of illness [6]. This presentation aims to give a general introduction into the use of MRA by both industry and governments as a tool for quantifying the risk of foodborne illness due to viruses and to discuss bottlenecks and differences in available methodologies (top-down and bottom-up), providing examples from recent literature. A special focus will be given into translating the results of MRA into practical interventions for the protection of public health.

References


Biography

Dr Elissavet Gkogka is an experienced food microbiologist with more than 10 years of academic and industrial experience in the areas of food safety, natural antimicrobials, predictive modeling, risk assessment and challenge testing. In her position as a research microbiologist in Arla R&D, she has been involved in numerous new product development projects, giving recommendations on product formulations and processing/packaging conditions to ensure food safety and quality throughout shelf-life. She is also a member of ILSI’s Microbiological Food Safety Task Force and has experience in foodborne disease epidemiology, having presented her research as a technical adviser for the World Health Organization (WHO).