Approaches to empower the implementation of new tools to detect and prevent foodborne pathogens in food processing

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© 2017 Elsevier Ltd Foodborne pathogens cause an important public health burden, which is estimated in 600 million cases and more than 400,000 deaths, globally every year. The most susceptible populations, such as children under the age of five, the elderly and immunocompromised, account for the majority of the deaths. Food safety incidents, outbreaks, sporadic cases, and recalls have recognized economic impact, estimated at 7 billion every year in the US. Food safety has become a priority, and the implementation of preventive controls and monitoring systems has raised the development of new tools to detect and prevent pathogens in the food chain. Detection tools have evolved quickly, from rapid testing methods to application of genomics and metagenomics. Importantly, to reduce food safety hazards at food processing, the food chain needs to be seen from farm to fork. This review summarized the main findings discussed during the 2016 OECD-sponsored symposium on food safety. These includ