Special Issue

Microbial Safety and Molecular Detection in Food Production and Processing

Message from the Guest Editor

Foodborne diseases (FBDs) constitute a public health problem due to their incidence and severity. The high costs associated with FBDs have required world health authorities (WHO-FAO) to design preventive measures that ensure international trade and protect the health of consumers through food safety. Monitoring pathogenic microorganisms through traditional culture methods or viable counts provides direct evidence of microbial hazard. In some cases, these pathogens are not easily detectable due to low concentration, heterogeneous distribution, and physiological stress conditions that characterize their presence in foods, among other reasons. Current research in epidemiology and foodassociated diseases has used a variety of techniques derived from immunology to genetics. Whole-genome sequencing (WGS) is currently the gold standard for epidemiological and molecular identification and typing. This technique not only enables the identification of the causative microorganism, but also creates a link with the source of contamination. It provides a wealth of information regarding its virulence and antibiotic resistance, and enables the establishment of more precise epidemiological links.

Guest Editor

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"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

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