Special Issue

Use of GEMs (Genetically Engineered Microorganisms) for Sustainable Food Production

Message from the Guest Editors

Over the past years, the use of GEMs has become widespread in food production. They are used as processing aids and in the fermentative production of food additives. GEMs have many advantages in food production, increasing product yield and specificity, improving process efficiency, and reducing waste and resources for sustainable manufacturing. Several food additives, such as flavors and colorants produced by GEMs, have already been approved as GRAS food ingredients and commercialized in the market. Additionally, functional food materials such as human milk oligosaccharides (HMOs) made by GEMs have been approved for addition to baby formula. Some GEMs have been utilized as starter cultures, alternative protein sources, and therapeutic probiotics. More food ingredients will be produced by GEMs for sustainable food production, and require safety assessment. In this Special Issue, we are focusing on the beneficial roles of GEMs and are collecting articles that demonstrate the applications of GEMs for the food industry. Manuscripts covering all aspects of research relating to GEMs for food production are welcome, including work from fundamental research to industrial application.

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Message from the Editor-in-Chief

"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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