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Applications for Biotechnology: Present and Future Improvements in Bacteria

Guest Editor:

Dr. Michał Złoch

Centre for Modern Interdisciplinary Technologies, Nicolaus Copernicus University in Toruń, Torun, Poland

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Message from the Guest Editor

The application of biotechnology in industry and medicine is rapidly expanding around the globe. This is especially true of bacteria due to their various advantages, including large-scale production, short time of cultivation, and ease of handling. Within these areas, tremendous progress was made over the last decades in providing novel solutions in, among others, the generation of new enzyme-based products; enhancement of crop productivity; the food processing sector, especially in the areas of food fermentation, enzymes, food ingredients, food testing, and postharvest management of horticultural crops; and in biofuel production through so-called next-generation industrial biotechnology (NGIB). Such advancements arise from both the recent discoveries in genetic mobilization methodologies for the improvement industrial strains properties (e.g., CRISPR-Cas technology) as well as from achievements in the field related to rapid and reliable microorganism identification - spectroscopic techniques such as MALDI-TOF MS, Raman, infrared, and intrinsic fluorescence - or for molecular analyses - next-generation sequencing (NGS).



