Special Issue

System Metabolic Engineering

Message from the Guest Editor

One of the current global challenges is tackling climate change. To address the latter, one strategy is to develop a biobased economy to replace the polluting fossil-based economy. Microbial cell factories play a key role in producing added-value compounds from sustainable feedstocks such as CO2. Since the beginning of the 1990s, microorganisms have gained more and more attention for use as a chassis, as they are able to naturally produce many different metabolites of interest. However, the efficiency of the natural production is rather low. Metabolic engineering pushed by the development of various synthetic biology tools is an essential pillar for generating synthetic, industrially competitive microorganisms.

This Special Issue will focus on recent advances in system metabolic engineering, including i) system biology for an accurate analysis of microbial metabolism, ii) the creation of novel or non-natural metabolic pathways, iii) the fine tuning of gene expression, and iv) genome editing to finally create highly efficient, engineered, tailormade microorganisms. Successful examples of metabolic engineering strategies using synthetic biology tools could be also described.

Guest Editor

Prof. Dr. Isabelle Meynial-Salles

Professor of University, INSA, Pathway Engineering and Evolution in Prokaryotes, Toulouse Biotechnology Institute TBI, Université de Toulouse, CNRS5504, INRA792, INSA, Toulouse, France

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Genes
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
genes@mdpi.com

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Genes is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised. Why not consider *Genes* for your next genetics paper?

Editor-in-Chief

Prof. Dr. Selvarangan Ponnazhagan
Department of Pathology, The University of Alabama at Birmingham, 1825 University Blvd, SHEL 814, Birmingham, AL 35294-2182, USA

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