Special Issue

Versatility of Protein Synthesis in a Test Tube

Message from the Guest Editor

The genetic code is manifested in thousands of proteins in all living organisms. Determining the function of these proteins is a challenging task in life sciences. The analysis of individual proteins typically begins with producing the protein of interest, which can often be a bottleneck for further analysis. Although cell cultures are currently the most widely used platforms for recombinant protein production, cell-free translation systems are a more rational approach for small-scale and high-throughput protein synthesis, as well as synthetic biology studies. In recent decades, cell-free translation systems have been optimized for synthesizing difficult-to-produce proteins, such as those with disulfide bridges and membrane proteins, and even for composing functional protein complexes. Recent developments have made cell-free translation an even more versatile method for producing proteins, and it is expected to be the method of choice in an increasing number of laboratories. This Special Issue aims to provide insight into the current status of cell-free protein production and showcase the capabilities of optimised, next-generation in vitro translation systems.

Guest Editor

Dr. Tamás Mészáros

Department of Molecular Biology, Institute of of Biochemistry and Molecular Biology, Semmelweis University, H-1094 Budapest, Hungary

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

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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

Editor-in-Chief

Prof. Dr. Maurizio Battino
Department of Odontostomatologic and Specialized Clinical Sciences, Sez-Biochimica, Faculty of Medicine, Università Politecnica delle Marche, Via Ranieri 65, 60100 Ancona, Italy

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