



Bacterial-Origin Polymers: The Relationship between Biomedical Properties and Natural Functions

Guest Editor:

Dr. Anton P. Bonartsev
Faculty of Biology, M. V.
Lomonosov Moscow State
University, 119234 Moscow,
Russia

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Message from the Guest Editor

Polymers synthesized by bacteria have great potential for biomedical application due to their unique properties. A series of biomedical properties of bacterial-origin polymers are completely determined by their natural properties, e.g., biocompatibility, biodegradability, superior biomechanical properties, specific biological activity (osteogenic, chondrogenic, fibrogenic, neurogenic, prebiotic), antimicrobial activity, ability of chemical functionalization, loading by drugs for their sustained or/and controlled delivery.

Bacteria synthesize a number of structural and storage polymers, which are components of the bacterial wall, their capsule mucosa and biofilm, as well as polymers stored in special cell granules.

The aim of this Special Issue is to highlight the urgent problem of the relationship between biomedical properties and natural functions of bacterial-origin polymers and their functional analogues to search for their new applications in medicine, pharmacology, and bioengineering.





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Editor-in-Chief

Prof. Dr. Alexander Böker

Fraunhofer-Institut für
Angewandte Polymerforschung,
Lehrstuhl für Polymermaterialien
und Polymertechnologie,
Universität Potsdam,
Geiselbergstraße 69, 14476
Potsdam-Golm, Germany

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Polymers Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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