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Biomimetic Catalytic Systems for Pharmacokinetic and/or Pharmacodynamic Processes

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Macromolecular systems in the living organism (such as proteins, lipids, lipid-protein, nucleic acid) provide unique points of interaction for both endogenous and exogenous compounds, including drug molecules. Due to the complex interactions, the physicochemical, structural and chemical properties of the interacting molecules can also change significantly.

The so-called biomimetic systems are able to substitute the real biotransformation in they can be effectively applied for homogeneous or heterogeneous systems as well. The well-designed biomimetic model systems can be a unique alternative tool to describe and explore physiological biotransformations such as metabolism, specific tissue- or cell-targeted drug delivery or action of APIs on sensor molecules.

In accordance with the above, this special issue is expected to present biomimetic/biocatalyst systems for biotransformation processes and therapeutic and diagnostic solutions related to drug-biomacromolecule interactions, typically related to pharmacokinetics and pharmacodynamics.