



Drug Metabolism and Toxicological Mechanisms

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Deadline for manuscript
submissions:

31 December 2024

Message from the Guest Editors

Absorption, distribution, metabolism, and excretion (ADME) processes are of importance in understanding how the body disposes and responds to drugs. These processes play a pivotal role in assessing the efficacy and safety of drugs, while also enabling the prediction of potential adverse reactions or toxicities. A parent drug can undergo biotransformation by drug-metabolizing enzymes, leading to the formation of either toxic metabolites (metabolic activation) or non-toxic metabolites (detoxification). Thus, drug metabolism can be a key determinant of drug toxicity. Recently, new approach methodologies such as in silico methods, based on non-animal data, have been developed and applied in regulatory practices.

This Special Issue mainly focuses on drug metabolism and toxicological mechanisms. It extensively covers a range of topics, including drug metabolism, physiologically based pharmacokinetic (PBK) modeling, toxicokinetics–toxicodynamics (TK–TD), ADME characterization, the identification and toxicity of metabolites, high-throughput pharmacokinetics (HT-PK), organ-specific toxicity, and toxicological mechanisms.





toxics



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Message from the Editor-in-Chief

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