Special Issue

Human ABC Transporters in Drug Disposition and Resistance: 50 Years of Progress and Future Perspectives

Message from the Guest Editor

In 1976, the first human ABC transporter, ABCB1 (P-glycoprotein/MDR1), was identified. Since then, a total of 49 human ABC transporter genes have been discovered, representing one of the largest and most diverse transporter families. ABC transporters are crucial for moving diverse substrates, including endogenous metabolites like bile acids and lipids, as well as exogenous drugs and toxins. This broad specificity supports physiological functions but also drives multidrug resistance in diseases like cancer. Following the Human Genome Project, the impact of genetic variations, particularly single-nucleotide polymorphisms (SNPs), on ABC transporter function has gained significant attention. These polymorphisms can alter transporter activity, influencing drug disposition, therapeutic efficacy, and disease susceptibility. This Special Issue, "Human ABC Transporters in Drug Disposition and Resistance: 50 Years of Progress and Future Perspectives," invites original research and reviews on past achievements and future directions. Topics include structural/functional analyses, drug-transporter interactions, regulatory mechanisms, and pharmacogenetics of SNPs.

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Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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