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Multidrug Resistance in Cancer: Pharmacological Strategies

Guest Editor:

Prof. Dr. Chin-Chuan Hung

Department of Pharmacy, College of Pharmacy, China Medical University, 91 Hsueh-Shih Road, Taichung 40402, Taiwan

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Message from the Guest Editor

Multidrug resistance is one of the major obstacles in current cancer treatment. Various mechanisms have been proposed for the development of drug resistance in cancers. To overcome the multidrug resistance in cancer treatment, small molecules, natural products, peptides, and nanotherapeutics have been developed in recent years. The most explored therapeutic target for combating multidrug resistance cancer is P-glycoprotein (P-gp), which belongs to the ABC transporter family. In addition, multidrug resistant cancer cells show selective sensitivity to some compounds. It has been proposed that P-gpoverexpressing cells are more sensitive to increased reactive oxygen species, to agents interfering the metabolic pathways related to cellular energy, and to alteration of membrane composition, and that they influence the elimination of endogenous toxic catabolites. However, the underlying mechanisms of collateral sensitivity have not been fully evaluated. This Special Issue welcomes studies, including original articles and reviews that investigate pharmacological strategies to overcome multidrug resistance in cancer treatment, ranging from basic research to clinical studies.









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Message from the Editor-in-Chief

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