



Role of ABC Transporters in Drug Development

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Message from the Guest Editor

Dear Colleagues,

This Special Issue aims to cover the interactions between ABC (ATP-binding cassette) transporters and chemotherapeutic drugs or drug candidates developed for the treatment of various diseases. The majority of human ABC proteins are plasma membrane efflux transporters that can restrict the penetration of amphiphilic or lipophilic small molecules through cellular and tissue barriers and thereby affect the pharmacological and toxicological profile of numerous chemotherapeutic drugs and drug candidates. When expressed in tumor cells or tumor stem cells, ABC transporters can confer multidrug resistance and contribute to the failure of cancer chemotherapy. Since several ABC transporters are expressed in the blood–brain barrier and in different cells of the central nervous system, they can affect the chemotherapy of neurological diseases such as Alzheimer’s and Parkinson’s, depression, schizophrenia and epilepsy, among others. Drug–drug interactions occurring on the level ABC transporters often modify the absorption or elimination of chemotherapeutic drugs and may lead to toxicity and serious side-effects.

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Guest Editor





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Message from the Editor-in-Chief

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