

Publication

Transporter Regulation in Critical Protective Barriers: Focus on Brain and Placenta.

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Drug transporters play an important role in the maintenance of chemical balance and homeostasis in different tissues. In addition to their physiological functions, they are crucial for the absorption, distribution, and elimination of many clinically important drugs, thereby impacting therapeutic efficacy and toxicity. Increasing evidence has demonstrated that infectious, metabolic, inflammatory, and neurodegenerative diseases alter the expression and function of drug transporters. However, the current knowledge on transporter regulation in critical protective barriers, such as the brain and placenta, is still limited and requires more research. For instance, while many studies have examined P-glycoprotein, it is evident that research on the regulation of highly expressed transporters in the blood-brain barrier and blood-placental barrier are lacking. The aim of this review is to summarize the currently available literature in order to better understand transporter regulation in these critical barriers.

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