Special Issue

Advances in Perinatal Pharmacology

Message from the Guest Editors

Understanding perinatal pharmacokinetics is crucial due to profound physiological changes during gestation and the neonatal period that affect drug behavior. Key changes include increased plasma volume and total body water altering drug distribution, reduced plasma albumin affecting protein binding, and changes in hepatic enzyme activity impacting drug metabolism. Increased cardiac output and renal blood flow may accelerate drug clearance. At birth, organ growth and function maturation influence neonatal drug exposure. Intrinsic and extrinsic factors like genetics and comedications cause exposure variability. Advances in molecular biology, in vitro and in silico systems, and in vivo data modeling have enhanced our understanding, improving drug safety and efficacy. Recent use of PBPK and population pharmacokinetics models allows for better prediction of drug disposition and description of sparse PK/PD data, enabling dose optimization and improved patient care.

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We hope to handle your contribution to *Pharmaceuticals* soon.

Editor-in-Chief

Prof. Dr. Amélia Pilar Rauter

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