Special Issue

Optimizing Drug Safety and Efficacy: Pharmacokinetic Modeling

Message from the Guest Editors

Pharmacokinetics is the study of what the body does to a drug after administration, and is critical for understanding how much of the drug a patient will be exposed to and for how long. This information is important for maintaining doses that are both safe and efficacious based on a particular drug's profile. Furthermore, special considerations need to be made for drug pharmacokinetic evaluations for patients with varying intrinsic and extrinsic properties, such as enzyme expression differences, renal or hepatic deficiencies, drug-drug interactions, and age-based changes, among others. To address this important aspect of drug development and utility, many modeling methods are available for evaluating the processes involved in drug pharmacokinetics and how to optimize drug safety and efficacy based on physiologic and pharmacokinetic principles.

This Special Issue will cover various pharmacokinetic modeling methods and applications utilized for the evaluation of drug safety and efficacy, specifically focusing on how pharmacokinetic modeling can be used to ensure optimal drug safety and efficacy among various clinical scenarios.

Guest Editors

Dr. Brian Cicali

Center for Pharmacometrics and Systems Pharmacology, Department of Pharmaceutics, College of Pharmacy, University of Florida, Orlando, FL 32827, USA

Dr. Francine Johansson Azeredo

Center for Pharmacometrics and Systems Pharmacology, Department of Pharmaceutics, College of Pharmacy, University of Florida, Orlando, FL 32827, USA

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Pharmaceutics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
pharmaceutics@mdpi.com

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Editor-in-Chief

Prof. Dr. Patrick J. Sinko

Department of Pharmaceutics, Ernest Mario School of Pharmacy, Rutgers University, Piscataway, NJ 08854, USA

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