



an Open Access Journal by MDPI

Cytochrome P450 Enzymes in Drug Metabolism

Guest Editors:

Prof. Dr. Anderson R. M. De Oliveira

Departamento de Química, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto 14040-901, SP, Brazil

Prof. Dr. Natalia V. De Moraes

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

Deadline for manuscript submissions: closed (31 March 2023)



mdpi.com/si/122959

Message from the Guest Editors

Dear Colleagues,

Pharmacokinetics comprises the dynamic processes of absorption, distribution, metabolism, and excretion. The metabolism of xenobiotics can occur in successive steps with the participation of several enzymes classically divided into phase I and phase II metabolism. Phase I metabolism comprises oxidation, reduction, and hydrolysis reactions mediated primarily by cytochrome P450 (CYP450) enzymes. These enzymes are predominantly found in the smooth endoplasmic reticulum of hepatocytes, although they may also be present in other tissues, such as the lung, kidney, gastrointestinal tract, nasal mucosa, skin and brain. Variability in drug metabolism can be explained by genetic variation, diseases, age-related functions and extrinsic factors resulting in drug-induced toxicity or even the failure in pharmacological treatment.

This special issue aims to bring together several aspects related to the metabolism of xenobiotics by CYP450 enzymes from in vitro, in vivo and modeling and simulation studies. Determination of enzymatic parameters, inhibition and phenotyping studies, pharmacokinetics and pharmacometrics approaches, such as PBPK modeling, are welcome.







an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Amélia Pilar Rauter

Departamento de Química e Bioquímica (DQB) e Centro de Química e Bioquímica (CQB), Faculdade de Ciências, Universidade de Lisboa (FCUL), Rua Ernesto de Vasconcelos, Campo Grande,Edifício C8, 5° Piso, 1749-016 Lisboa, Portugal

Message from the Editor-in-Chief

Because of your expertise in the field of drug sciences, I kindly invite you to consider publishing your current work, in the form of a research article or a review, in the open access electronic journal *Pharmaceuticals*.

Pharmaceuticals is characterized by an active editorial board and a dynamic editorial staff. Manuscripts are peerreviewed and a final decision is provided to authors within 4–6 weeks after submission. Papers are published on the web immediately after acceptance. For details on the submission process or any other matter, please do not hesitate to contact us.

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

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Embase, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q2 (*Pharmacology & Pharmacy*) / CiteScore - Q2 (*Pharmaceutical Science*)

Contact Us

Pharmaceuticals Editorial Office MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/pharmaceuticals pharmaceuticals@mdpi.com