

Factors influencing ADME properties of drugs: advances and applications

Executive Guest Editor: Dr. Shuang-Qing Zhang

• **Scope of the Thematic Issue:**

In previous consecutive thematic issues for Current Drug Metabolism “Absorption, disposition and pharmacokinetic properties of novel therapeutic modalities” in late 2020 and early 2021, the latest and outstanding developments in absorption, distribution, metabolism, and excretion (ADME) of various drugs were fully reported and attracted extensive attentions in the scientific research fields. The present issue continues to further probe into factors influencing ADME properties of drugs. Nowadays, some traditional molecules, novel therapeutic modalities, and potential drug candidates are limited or hindered in clinical applications and drug development due to side effects, poor patient compliance and drug resistance, etc., and effective strategies are proposed to address the above-mentioned problems via understanding and utilizing factors governing drug ADME properties. The scope of the thematic issue of Current Drug Metabolism is to solely include reviews on state-of-the-art advances in factors influencing ADME properties of drugs, as well as their applications in drug discovery, development, and clinical therapy.

Keywords:

Absorption, Distribution, Metabolism, Excretion, Influencing factor, Specific population, Intrinsic property, Disease state, Gender, Genetics, Ontogeny, Drug delivery systems, Diet.

Sub-topics:

The sub-topics to be covered within the issue should be provided:

1. Physicochemical and physiologic properties
2. Drug delivery systems
3. Specific populations: geriatric, obese, pregnant and pediatric patients
4. Disease and comorbidity, such as renal disease and hepatic disease
5. Sex differences
6. Ethnicity, race and species
7. Genetics and epigenetics
8. Ontogeny
9. Drug-drug interactions and herb-drug interactions
10. Diet

11. Clock circadian rhythms and chronotherapy

12. Dosing regimen

13. Factors influencing ADME properties of drugs include but are not limited to the contents mentioned in the subtopics.

Tentative titles of the articles:

- Hepatoprotection and hepatotoxicity of 2,3,5,4'-tetrahydroxystilbene-2-O- β -D-glucoside, the unique component of traditional Chinese medicine Heshouwu: advances and prospects
- Ontogeny of Hepatic Transporters and Drug-Metabolizing Enzymes in Humans
- Optimizing the use of thiopurines in pediatric patients with acute lymphoblastic leukemia
- Developmental pharmacokinetics of opioids in neonates.
- Pharmacokinetics and dosing regimens of anticoagulants in obese patients
- Advance in PK-PD study of arteriosclerosis therapeutic drugs based on gut microbiota-drug interactions
- PLGA-based drug delivery systems: an overview of their pharmacokinetic characteristics in cancer therapy
- Exosome-based carrier for RNA delivery: progress and prospect
- Advances in pharmacokinetic mechanisms of transporter-mediated herb-drug interactions
- Effects of high-altitudes hypoxia on metabolism of cardiovascular drugs
- Role of lysosomes in pharmacokinetics of antibody-drug conjugates
- Methodological advances in intracellular and in vivo ADME of nanomedicines
- Pharmacokinetics of tacrolimus with modified drug delivery approaches in lung transplant recipients
- Research progress on PK-PD of antineoplastic drugs based on cytochrome P450 Enzyme 2C family

Schedule:

Thematic issue submission deadline: 08th November 2022.

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