Special Issue

Advances in Targeting Mitochondrial Sirtuins for Treatment of Metabolic Diseases Such as Type 2 Diabetes and Obesity

Message from the Guest Editors

Mitochondrial defects and mitochondrial decline have been implicated in a wide spectrum of metabolic disorders, age-related metabolic and degenerative diseases, aging, and cancer. Sirtuins are NAD+-dependent protein deacetylases that are involved in the regulation of metabolic diseases, stress responses, and aging. Three sirtuins are located in mitochondria, including SIRT3, 4, and 5. SIRT3 deacetylates and regulates the enzymatic activity of many metabolic enzymes in mitochondria, whereas SIRT5 removes lysine malonylation and succinylation. Among the three mitochondrial sirtuins, Sirt3 is of particular interest with regard to mitochondrial function and drug targeting because it is primarily localized in the mitochondria and is a major mitochondrial deacetylase. Sirt3 also regulates mitochondrial biogenesis via the deacetylation of PGC-1 and several mitochondrial substrates to control metabolic homeostasis. It is therefore crucial to enhance our understanding of how mitochondrial sirtuins affect systemic metabolism in order to identify targets that may facilitate the prevention and treatment of type 2 diabetes and metabolic disorders.

Guest Editors

Dr. Linh Ho

College of Pharmacy, California Northstate University, Elk Grove, CA 95757, USA

Prof. Dr. Tibebe Woldemariam

College of Pharmacy, California Northstate University, Elk Grove, CA 95757, USA

Deadline for manuscript submissions

closed (31 January 2026)

Pharmaceuticals

an Open Access Journal by MDPI

Impact Factor 4.8
CiteScore 7.7
Indexed in PubMed

mdpi.com/si/247088

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

mdpi.com/journal/pharmaceuticals

Pharmaceuticals

an Open Access Journal by MDPI

Impact Factor 4.8
CiteScore 7.7
Indexed in PubMed

mdpi.com/journal/pharmaceuticals

About the Journal

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 peer-reviewed 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.

Editor-in-Chief

Prof. Dr. Amélia Pilar Rauter
Departamento de Química e Bioquímica (DQB) e Centro de Química Estrutural (CQE), Institute of Molecular Sciences, Faculdade de Ciências, Universidade de Lisboa, Lisboa, Portugal

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 - Q1 (Pharmacology and Pharmacy) / CiteScore - Q1 (Pharmaceutical Science)

MDPI