

Special Issue

P2X Receptors and Their Pharmacology

Message from the Guest Editor

The P2X family constitutes an important class of receptors within the purinergic system. The P2X2, P2X4 and especially P2X7 subtypes have exceptional abilities to increase plasma membrane permeability. The therapeutic potential of P2X family receptors has been investigated in a number of pathologies. In this context, studying the functioning of the P2X receptors becomes limited by the lack of selective antagonists with potent in vitro and in vivo activity in animal models and appropriate pharmacokinetic and pharmacodynamic properties in humans, which demonstrate a superior effect to the reference drug in clinical trials.

Thus, several research groups and pharmaceutical industries have invested in discovering new antagonists for P2X receptors, mainly for the P2X7 and P2X3 receptor. Additionally, several patents, case studies and clinical trials that focus on P2X receptors have increased in recent years, mainly focusing on the P2X7 receptor.

The proposed topics cover the action of new and already known antagonists in different study models, repositioned drugs, and ongoing studies of P2X receptor activity modulators.

Guest Editor

Prof. Dr. Robson Xavier Faria

1. Programa de Pós-graduação em Ciências e Biotecnologia, Instituto de Biologia, Universidade Federal Fluminense, Rua Professor Marcos Waldemar de Freitas Reis s/n, Niterói 24210-201, Brazil
2. Laboratório de Avaliação e Promoção da Saúde Ambiental, Instituto Oswaldo Cruz, Av. Brasil 4365, Rio de Janeiro 21040-360, Brazil

Deadline for manuscript submissions

31 August 2025



Pharmaceuticals

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 7.7
Indexed in PubMed



mdpi.com/si/203208

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

[mdpi.com/journal/
pharmaceuticals](https://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](https://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)