



P2X Receptors and Their Pharmacology

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

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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.





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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

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Pharmaceuticals Editorial Office
MDPI, Grosspeteranlage 5
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