



*cells*



an Open Access Journal by MDPI

## Understanding the Impact of Dopamine Receptors Diversity in the Central Nervous System

Collection Editors:

**Dr. Alicia Rivera**

Department of Cell Biology,  
University of Malaga, Instituto de  
Investigación Biomédica (IBIMA),  
29076 Malaga, Spain

**Dr. Belén Gago**

Department of Human  
Physiology, University of Malaga,  
Instituto de Investigación  
Biomédica (IBIMA), 29076 Malaga,  
Spain

### Message from the Collection Editors

The neurotransmitter dopamine interacts with five types of dopamine receptors (D<sub>1</sub>R–D<sub>5</sub>R) to regulate a great variety of functions in the brain. These dopamine receptors belong to the superfamily of G protein-coupled receptors and have been classified in two families (D<sub>1</sub>-like and D<sub>2</sub>-like) according to their pharmacological and biochemical properties. Dysfunction of dopamine neurotransmission and its receptors leads to several neurological disorders. Since the cloning of the dopamine receptors in the 1990s, numerous studies have been conducted to elucidate the specific function of each of them. In addition, research on dopamine receptors has also focused on their ability to form homo- and heteroreceptor complexes, which significantly increase the variety and complexity of the integrative mechanisms of dopamine signal.

The aim of this Topical Collection is to compile research and review articles studying molecular biology, pharmacology, and function of dopamine receptors, especially those less studied, i.e., D<sub>3</sub>R, D<sub>4</sub>R, and D<sub>5</sub>R. Articles on other important aspects of dopamine homo- and heteroreceptor complexes relevant to both health and neurological disorders are also welcome.



[mdpi.com/si/84660](https://mdpi.com/si/84660)

**Topical** Collection



*cells*



an Open Access Journal by MDPI

## Editors-in-Chief

**Prof. Dr. Alexander E.  
Kalyuzhny**

Neuroscience, UMN Twin Cities,  
6-145 Jackson Hall, 321 Church St  
SE, Minneapolis, MN 55455, USA

**Prof. Dr. Cord Brakebusch**

Biotech Research & Innovation  
Centre, The University of  
Copenhagen, Copenhagen,  
Denmark

## Message from the Editorial Board

*Cells* has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

## 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](#), [MEDLINE](#), [PMC](#), [CAPus / SciFinder](#), and [other databases](#).

**Journal Rank:** JCR - Q2 (*Cell Biology*) / CiteScore - Q1 (*General Biochemistry, Genetics and Molecular Biology*)

## Contact Us

*Cells* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/cells](http://mdpi.com/journal/cells)  
[cells@mdpi.com](mailto:cells@mdpi.com)  
[X@Cells\\_MDPI](#)