# **Special Issue**

# Calcium Signalling in Alzheimer's Disease: From Pathophysiological Regulation to Therapeutic Approaches

### Message from the Guest Editor

In recent decades, several studies have reported calcium dysregulation in AD, affecting different cellular compartments, such as mitochondria, endoplasmic reticulum, lysosomes, and several microdomains within the plasma membrane, and occurring through a broad intervention of several calcium signaling "tool-kits" (receptors, channels, binding proteins, etc.). The obtained results depict calcium signaling dysregulation as a common proximal cause of dysfunctional neurons and also glial supporting cells. The objective of this Special Issue is to gather the newest results and advances on: i) calcium signaling deregulation mechanisms in AD, ii) how they are linked to other players involved in AD pathogenesis, and iii) potential therapeutic approaches to correct calcium alterations to treat AD. Keywords: Alzheimer's disease; aging; amyloid amyloid precursor protein; calcium; Ca2+ signaling; Ca2+ channels; Ca2+ receptors; Ca2+ binding proteins; endoplasmic reticulum; mitochondria; lysosomes; synaptic plasticity; IP3R; RyR; SOCE; presennilin; glutamate receptors; AMPA receptors; neurons; astrocytes; microglia; neurodegeneration

#### **Guest Editor**

Dr. Mounia Chami

Laboratory of excellence DistALZ, Université Côte d'Azur, INSERM, CNRS, IPMC, 660 route des Lucioles, 06560 Sophia-Antipolis, Valbonne, France

### Deadline for manuscript submissions

closed (31 August 2020)



## Cells

an Open Access Journal by MDPI

Impact Factor 5.2 CiteScore 10.5 Indexed in PubMed



mdpi.com/si/45824

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

mdpi.com/journal/ cells





## Cells

an Open Access Journal by MDPI

Impact Factor 5.2 CiteScore 10.5 Indexed in PubMed



### **About the Journal**

### 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.

### **Editors-in-Chief**

Dr. Alexander E. Kalyuzhny

Dental Basic Sciences, University of Minnesota, 308 Harvard St. SE, Minneapolis, MN 55455, USA

Prof. Dr. Cord Brakebusch

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

### **Author Benefits**

### **High Visibility:**

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, CAPlus / SciFinder, and other databases.

### Journal Rank:

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

### **Rapid Publication:**

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).

