

## Special Issue

# Mitochondrial Dynamics in Neurons

### Message from the Guest Editors

The chemical energy provided by the mitochondria is essential for proper neuronal function. The continuous distribution of mitochondrial energy required by neurons involves several biochemical processes that are closely coordinated by mito-nuclear communication, which adjusts neuronal bioenergetics in an activity-dependent manner. These processes include mitochondrial fusion, fission, and transport; mitochondrial quality control; replication, transcription, and translation of mitochondrial DNA. The alteration of any of these processes is at the root of various neurodegenerative diseases (NDs).

This Special Issue aims to cover research on cellular and molecular mechanisms involved in the regulation of mitochondrial dynamics and the mitochondrial DNA copy number in neurons. We will also incorporate research that aims to ascertain the role of mito-nuclear communication, mitochondrial quality control, and mitochondrial dynamics in NDs. The main objective is to bring together research on the different fields of mitochondrial biology to advance our knowledge of the physio-pathological effects of mitochondria in neuronal function.

### Guest Editors

Dr. Ramon Trullas

1. Neurobiology Unit, Institut d'Investigacions Biomèdiques de Barcelona (CSIC), 08036 Barcelona, Spain  
2. Centro de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas (CIBERNED), 08036 Barcelona, Spain

Dr. Anna Colell

Neurobiology Unit, Institut d'Investigacions Biomèdiques de Barcelona, Consejo Superior de Investigaciones Científicas (CSIC), and Centro de Investigación en Red de Enfermedades Neurodegenerativas (CIBERNED), Spain

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Editorial Office  
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4052 Basel, Switzerland  
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### Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences,  
Sez-Biochimica, Faculty of Medicine, Università Politecnica delle  
Marche, Via Ranieri 65, 60100 Ancona, Italy

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