

Special Issue

Cellular Biology of Brain Angiogenesis

Message from the Guest Editors

At the embryo stage, the development of brain vasculature includes three different phases: vasculogenesis, angiogenesis and arterial specialization. Specific molecular events selectively drive each phase. Several growth factors and neurotropic molecules secreted by endothelial, glial and nervous cells act in a paracrine manner, leading to the correct neurovascular development. The perturbation of pathways controlling brain vascular homeostasis results in aberrant vessel morphogenesis and congenital vascular malformation development. This Special Issue aims to collect research articles, reviews and communications focusing on mechanisms related to brain angiogenesis in both physiological and pathological conditions, as well as those related to oxidative damage. Moreover, submission of manuscripts describing the regulation of blood–brain barrier permeability and the cross-talk at the neurovascular unit is also encouraged. In this context, reports of single-cell transcriptomics, ATAC and methylome analysis can be considered for publication. Studies performed on human samples, cell lines and animal models can be considered.

Guest Editors

Dr. Concetta Scimone

Department of Biomedical and Dental Sciences and Morphological and Functional Imaging, University of Messina, Via Consolare Valeria 1, 98125 Messina, Italy

Dr. Rosalia D'Angelo

Department of Biomedical and Dental Sciences and Morphological and Functional Imaging, University of Messina, Via Consolare Valeria 1, 98125 Messina, Italy

Deadline for manuscript submissions

closed (2 February 2024)



Biology

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Impact Factor 3.5
CiteScore 7.3
Indexed in PubMed



mdpi.com/si/176085

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

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Message from the Editorial Board

A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

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Prof. Dr. Jukka Finne

Research Programme in Molecular and Integrative Biosciences, Faculty of Biological and Environmental Sciences, University of Helsinki, P.O. Box 56, FI-00014 Helsinki, Finland

Prof. Dr. Andrés Moya

Integrative Systems Biology Institute, University of Valencia and CSIC, 46980 Valencia, Spain

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