Special Issue

The Double Face of Smooth Muscle Cells in Vascular Biology—Friends or Foes, Damage or Regeneration?

Message from the Guest Editor

Smooth muscle cells (SMCs) ensure the basic physiological functions of blood vessels, namely contraction, relaxation, and thus regulation of blood flow and pressure. Expert articles describing mechanistic, functional, biochemical, cellular, molecular, or genetic aspects of the role of SMCs in blood vessel wall damage or regeneration are highly welcome. Relevant topics include but are not limited to: Role of SMCs in vascular diseases; Phenotypic switching; Contractile phenotype and its achieving/maintaining; Synthetic phenotype and its potential reversal; Role of extracellular matrix and scaffolds; Role of cytokines, chemokines, growth factors, and hormones; Role of oxidative damage and inflammation; Vascular replacements and vascular tissue engineering; Differentiation of SMCs from stem cells; Genetic and RNA modifications of stem cells and SMCs; In vitro SMC-based models of the vascular wall or vascular diseases; Differences in SMC behavior related to gender, age, species, and localization in the vascular bed, etc.

Guest Editor

Dr. Lucie Bacakova

Department of Biomaterials and Tissue Engineering, Institute of Physiology of the Czech Academy of Sciences, Videnska 1083, 142 20 Prague, Czech Republic

Deadline for manuscript submissions

closed (31 December 2024)

Cells

an Open Access Journal by MDPI

Impact Factor 5.2
CiteScore 10.5
Indexed in PubMed

mdpi.com/si/178972

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

mdpi.com/journal/cells

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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.

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

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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).