

Special Issue

Signal Transduction Pathways Regulated by Vascular Endothelial Growth Factor

Message from the Guest Editor

VEGF, also known as VEGF-A, is the most well characterized member of the cysteine-knot growth factors family. Hypoxia is a major regulator of VEGF expression via hypoxia inducible factor (HIF). Then, when activated, VEGF displays several activities such as pro-angiogenic function, vascular permeability, and vasodilation. However, as largely demonstrated, these VEGF properties lead to the formation of new blood vessels, which may be structurally abnormal in the case of tumors. Moreover, alternative exon splicing on the vegf gene leads to multiple VEGF isoforms with different pro-angiogenic activities, as well as different single nucleotide polymorphisms (SNPs) in the same gene, which have been associated with a significant variability in the association with chronic diseases in humans. Therapies targeting VEGF and its signal transduction are currently available and research in this field is ongoing.

Guest Editor

Prof. Dr. David Della-Morte

1. Department of Systems Medicine, University of Rome Tor Vergata, Via Montpellier 1, 00133 Rome, Italy
2. Department of Neurology, Miller School of Medicine, University of Miami, Miami, FL 33136, USA

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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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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