International Journal of
Molecular Sciences

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Role of Phosphodiesterase in Biology and Pathology

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Deadline for manuscript submissions:
closed (31 January 2021)

Message from the Guest Editors

The Special Issue will publish the most exciting articles on the role of phosphodiesterases in health and disease. Phosphodiesterases are ubiquitous enzymes which hydrolyze cAMP and cGMP second messengers in a temporal, spatial, and integrated manner according to their expression and localization inside the cell. cAMP and cGMP signaling regulate a huge variety of cell functions; therefore, phosphodiesterases are involved in any aspect of cell biology. In recent years, further research has focused on the role of these proteins in compartmentalization of the cyclic nucleotide signal in a wide number of cell models. The understanding of cell signaling pathways in which phosphodiesterases are involved is of great importance in cell physiology and human pathology. A great number of pharmaceutical inhibitors are available, and over the past few decades, they have been successfully used in the treatment of impotence and chronic pulmonary diseases. New evidence underlines a possible use of phoshodiesterase inhibitors in the treatment of cardiovascular diseases, type 2 diabetes, cancer, inflammation, and many more other pathologies which have recently been identified.

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Message from the Editor-in-Chief

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