Special Issue

Cyclic Nucleotide Signaling and the Cardiovascular System

Message from the Guest Editors

Cyclic nucleotides 3',5'-adenosine monophosphate and 3',5'-cyclic guanosine monophosphate play important roles in the control of cardiovascular function under physiological and pathological conditions. They are produced by adenylate and guanylate cyclases, respectively, bound by different effector proteins, and are subsequently degraded by phosphodiesterases. These proteins form nanodomains in specific locations in cardiac myocytes, such as the plasma membrane, t-tubules, and the nuclear envelope. Thereby, a highly-compartmentalized regulation of essential functions of cardiac myocytes, such as calcium cycling, excitation-contraction coupling, and cell–cell cohesion, is achieved. In cardiac myocytes, several effector proteins are expressed. Through the use of effector protein-specific agonists and antagonists and alternatively, with the help of genetic experiments, insight into their individual roles and cross-talk have been obtained. The importance of the cyclic nucleotide pathway in both health and disease cannot be underestimated and up-to-date reviews of this important scientific field will be provided.

Guest Editors

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Message from the Editor-in-Chief

The primary goal of the *Journal of Cardiovascular Development and Disease* (*JCDD*, ISSN 2308-3425) is to provide cardiovascular scientists a platform to publish their work in a quick and efficient way. Topics can range from studies designed to decipher the events underlying early heart development to studies focusing on the origins of congenital and acquired heart disease. Papers submitted to *JCDD* undergo a fast, yet thorough, peer-review process. In this process, we will apply strict ethical policies and standards. *JCDD* guarantees fast dissemination of results to a large scientific audience

Editor-in-Chief

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