Special Issue

Cyclic Nucleotide Phosphodiesterases (PDEs)—from Basic Insights to Structure, Physiologic Roles and Drug Development

Message from the Guest Editor

The second messengers cAMP and cGMP transduce the action of a plethora of extracellular signals, ranging from hormones and neurotransmitters to proton gradients and light, into the most diverse cellular and physiologic responses, including vision, memory, cognition, or growth. It is now appreciated that PDEs do not simply serve to terminate cyclic nucleotide signals. PDEs finetune cyclic nucleotide gradients across the cell and are vital for the generation of subcellular compartments or microdomains of cyclic nucleotide signalling. Given the broad range of physiologic and pathophysiologic paradigms affected by cyclic nucleotide signalling, PDEs have also been recognized as promising drug targets, thus further heightening interest in these enzymes.This Special Issue welcomes original research, short communications, and review manuscripts broadly related to the structure or compartmentalization of PDEs, their cellular, physiologic, and pathophysiologic roles, and the development of PDE inhibitors as therapeutics.

Guest Editor

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Deadline for manuscript submissions

closed (15 September 2021)

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