



Gap Junctions and Connexins in Health and Disease

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Message from the Guest Editors

Connexins are pore-forming proteins incorporated in the cellular membrane where they coalesce into hexamer connexons (hemichannels). Disruption or exacerbation of hemichannel and gap junction functioning is related to a number of pathological conditions, further demonstrating their essential roles in the life of living cells. Finally, gap junctions have also been proposed to distribute apoptotic factors (death signals) between connected cells. This so-called bystander effect underlies a secondary loss of cells that maintain gap junction contact with their injured neighbors even if they escape a primary harmful insult. Due to this latter feature, gap junctions have recently been identified as potential therapeutic targets in trials using pharmacological blockade, gene therapy, or electrical stimulation. This Special Issue intends to bring work from many different fields of biology together to reveal recent advances in both discovery and clinical research, with a focus on connexins and gap junctions.





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