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The Role of Mitochondrial Ion Channels and Transporters in Cancer Development and Progression

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Deadline for manuscript
submissions:

closed (31 January 2022)

Message from the Guest Editors

Dear Colleagues,

Ion channels and transporters play an important role in modulating cellular functions and in determining cell fate. Recent evidence has demonstrated that plasma membrane as well as intracellular ion transporting proteins are involved in cancer progression and in the acquisition of the main malignant features by cancer cells. An important role is mediated by mitochondrial ion channels and transporters. These channels are involved in fine-tuning the mitochondrial membrane potential and reactive oxygen species (ROS) production and thus regulate mitochondrial physiology, which in turn impacts several hallmarks of cancer. Ion transport can be modulated by several synthetic compounds or natural products, which allows a great variety of pharmacological options to regulate the function of proteins mediating ion transport and reduce tumor progression, as illustrated in preclinical mouse tumor models.

In this Special Issue, we welcome reviews, descriptions of new analytical methods, and original articles covering various aspects of the pathophysiology and pharmacological targeting of mitochondrial ion channels in cancer.



mdpi.com/si/69809

Special Issue



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Message from the Editor-in-Chief

Cancers is an international online journal addressing both clinical and basic science issues related to cancer research. The journal is publishing in Open Access format, which will certainly evolve to ensure that the journal takes full advantage of the rapidly changing world of information and knowledge dissemination. It publishes high-quality clinical, translational, and basic science research on cancer prevention, initiation, progression, and treatment, as well as other related topics, particularly to capture the most seminal studies in the rapidly growing area of immunology, immunotherapy, and tumor microenvironment.

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