Special Issue

Mechanisms of the cGAS-STING Pathway and Their Potential as Novel Targets for Immuno-Oncology

Message from the Guest Editor

Immuno-oncology (IO) has revolutionized cancer therapy in the last decade. The IO strategies currently approved by the FDA include the use of immune checkpoint inhibitors and chimeric antigen receptor (CAR) T cells. Recent studies have established a strong connection between DNA damage response/DNA repair and IO, for the following reasons. First, certain DNA damage response/DNA repair-related molecular and genetic features manifested by tumors, including elevated mutational burden, microsatellite instability (MSI), and mismatch repair deficiency (dMMR), have been used as biomarkers for immuno-oncology. Second, when unrepaired DNA fragments are released into cytosol, they induce the innate immune response through the activation of the cGAS-STING pathway. Third, at present, the agonists of the cGAS-STING pathway are being actively exploited as a novel form of immuno-oncology therapy. The major aims of this Special Issue are: (1) to elucidate the molecular mechanisms of how damaged DNA activates the cGAS-STING pathway; (2) to target the cGAS-STING pathway as a novel immuno-oncology strategy. I look forward to receiving your contributions.

Guest Editor

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Message from the Editor-in-Chief

Cancers (ISSN 2072-6694) is an international, online journal addressing both clinical and basic science issues related to cancer research. The journal will continue its 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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