



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

Guest Editor:

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### 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.





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## Message from the Editor-in-Chief

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