



The Roles of Photodynamic Therapy in Tumors and Cancers

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Message from the Guest Editor

Dear Colleagues,

Photodynamic therapy (PDT) has evolved as a promising therapeutic option for cancerous and non-cancerous diseases. It involves the combination of a photosensitizer (PS), light with an appropriate wavelength, and molecular oxygen ($^3\text{O}_2$). Upon irradiation, the excited PS transfers energy to the surrounding $^3\text{O}_2$ to generate cytotoxic reactive oxygen species (ROS), especially singlet oxygen ($^1\text{O}_2$), which attacks key structural entities within the targeted cells, ultimately resulting in cell necrosis or apoptosis. Compared with conventional cancer treatments, PDT has displayed some potential advantages such as minimal invasiveness, low drug resistance, broad-spectrum antitumor activity, and high spatiotemporal selectivity, which have stimulated extensive studies of this promising treatment modality.

This Special Issue aims to present recent novel developments in PDT against cancers. The original research manuscripts and comprehensive reviews focus on the mechanism of PDT, the discovery of new photosensitive molecules, immuno-PDT, and the strategies to enhance PDT outcomes are especially welcome.





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Message from the Editor-in-Chief

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