

## Special Issue

# Molecular Aspects of Photodynamic Therapy

### Message from the Guest Editors

Photodynamic therapy (PDT) was developed using empirical phototherapy, in addition to sunlight and photoactive plant metabolites, to establish the scientific foundations of photodynamic reactions, the creation of artificial light sources and several generations of photosensitizers, including their practical use. The main advantages of PDT are its non-invasiveness, selectivity of action and efficiency in relation to objects resistant to traditional chemotherapy. This becomes possible due to local lesion irradiation, the selective accumulation of a photosensitizer in or near the ROS-sensitive structures and the extremely short ROS lifetimes. This Special Issue is focused on studies of ROS-sensitive targets in eukaryotic cells, bacteria and viruses, photosensitizer delivery carriers, studies on the interactions of photosensitizers with cytoplasmic membranes and intracellular structures of cancer and cancer stem cells, endotheliocytes of cancer vessels, bacterial cells and matrices of biofilms, structures of virus envelopes and genetic apparatus. Along with experimental research, studies on the use of molecular modeling and information technologies are welcome.

### Guest Editors

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### Deadline for manuscript submissions

closed (20 February 2025)



## International Journal of Molecular Sciences

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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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### Editor-in-Chief

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