

Special Issue

Bioluminescent and Fluorescent Proteins: Molecular Mechanisms and Modern Applications 4.0

Message from the Guest Editor

Bioluminescence, a natural phenomenon of visible light emission by living organisms, has been found in numerous terrestrial and marine organisms. The study of bioluminescent reactions in organisms has revealed a specific feature—the mechanisms underlying light emission considerably differ in species of different taxa. Both the substrates and cofactors involved in bioluminescence reactions as well as the enzymes catalyzing these reactions have turned out to be peculiar. In addition to luciferases, many bioluminescence systems contain “antenna” proteins. Although investigation of bioluminescence and fluorescence proteins is undoubtedly of fundamental interest, the main driving force that has attracted researchers to this topic is the broad analytical potential of bioluminescent proteins. This Special Issue is devoted to experimental and theoretical studies on functioning mechanisms of bioluminescent proteins from various organisms, the proteins involved in bioluminescence, novel assays with the use of these proteins, and applications of these proteins in experimental biology and medicine.

Guest Editor

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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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