

## Special Issue

# Bioluminescent and Fluorescent Proteins: Molecular Mechanisms and Modern Applications

### 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. 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, such as Green fluorescent protein (GFP), which e.g., modulate the bioluminescence color by means of energy transfer. This Special Issue of the International Journal of Molecular Science is devoted to experimental and theoretical studies on functioning mechanisms of bioluminescent proteins from various organisms, the proteins involved in bioluminescence (the lumazine protein, GFP and GFP-like proteins, and the enzymes participating in the synthesis of substrates), novel assays with the use of these proteins, and applications of these proteins in experimental biology and medicine. We invite authors to present their latest research in related fields.

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### Guest Editor

Dr. Eugene S. Vysotski

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## International Journal of Molecular Sciences

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### Editor-in-Chief

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