

# Fungal bioluminescence: mechanism and ecological function

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Although it was described by Aristotle, the emission of light by bioluminescent mushrooms remained a mystery for thousands of years. Since 2015, however, the mystery began to be unraveled, with the publication of articles on the ecological function of light emission, the identity of luciferin, luciferase and the mechanism of light emission. With the collaboration of groups in Russia, USA and Japan, our group actively participated in the elucidation of this system. Similar to the bioluminescence of fireflies, whose study allowed the development of several analytical tools for the most diverse purposes, from rapid bioassays for monitoring microbial contamination of food to the use of *luc* and *lux* genes as a probe in Molecular Biology, the study of bioluminescent fungi have the potential to generate new academic and applied knowledge.

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