

# Source of light emission in a luminous mycelium of the fungus *Panellus stipticus*

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**ABSTRACT:**

Mechanism of bioluminescence and light-emitting sources in higher fungi remain as an open question for a long time. We investigated the mycelium of cultivated luminous *Panellus stipticus* using confocal microscopy. No excitation light was imposed on the sample. Two types of sources of bioluminescence and their location were determined in the substrate mycelium. One were small 0.1-3  $\mu\text{m}$  local formations disposed on the surface of hyphae, the other - relatively vast areas in bulk of the nutrient medium. No luminescence signal was recorded inside the hyphae. This may mean that the components of luminescent reaction are spatially separated within the cells, or the intracellular conditions block the reaction. The origin and formation of the light-emitting structures are discussed.

**Keywords:**

Bioluminescence, *Panellus stipticus*, luminous mycelium, confocal microscopy.