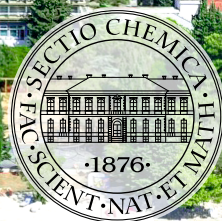


**ADRIATIC NMR**  
18-20 September 2025, Vodice, Croatia

**BOOK OF  
ABSTRACTS**



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# POSTERS

## BIOACTIVE METABOLITES ISOLATED FROM *HERICIUM ERINACEUS* (BULL.) PERS.

Mladen Rajaković,<sup>a,b</sup> Jovana Ljujić,<sup>a</sup> Dejan Stojković,<sup>b</sup> Katarina Simić,<sup>c</sup> Stefan Ivanović,<sup>c</sup>  
Antoaneta Trendafilova,<sup>d</sup> Andrej Gregori,<sup>e</sup> Boban Anđelković,<sup>a</sup> Ivana Sofrenić<sup>a</sup>

<sup>a</sup> University of Belgrade – Faculty of Chemistry, Belgrade, Serbia

<sup>b</sup> University of Belgrade – Institute for Biological Research “Siniša Stanković”, Belgrade, Serbia

<sup>c</sup> University of Belgrade – Institute of Chemistry, Technology and Metallurgy, Belgrade, Serbia

<sup>d</sup> Institute of Organic Chemistry with Centre of Phytochemistry, Bulgarian Academy of Sciences, Sofia, Bulgaria

<sup>e</sup> Mycomedica Ltd., Kranjska Gora, Slovenia

✉ [ivanasofrenic@chem.bg.ac.rs](mailto:ivanasofrenic@chem.bg.ac.rs)

*Hericium erinaceus* is considered one of the most promising medicinal fungi for the treatment of neurodegenerative diseases, containing a wide variety of bioactive compounds, including hericenones, erinacines, and many other related molecules, which exhibit significant neurotrophic and neuroprotective properties. Previous studies demonstrated that erinacine-enriched mycelium of *H. erinaceus* can delay neuronal cell death in animal models of neurodegenerative conditions such as Alzheimer’s disease and ischemic stroke. [1] Our research focus on the isolation of a diverse range of bioactive compounds from employing conventional chromatographic techniques, followed by their structural characterization predominantly through nuclear magnetic resonance (NMR) spectroscopy. Hericene A was isolated from the ethyl acetate extract of the *H. erinaceus* fruiting bodies by performing gravitational chromatography, followed by additional purification on semi-dry flash chromatography. Furthermore, erinacines A and C were isolated from the ethyl acetate extract of the mycelium. The extract was initially processed through semi-dry flash chromatography, followed by subsequent purification utilizing preparative high-performance liquid chromatography (HPLC). The structures of isolated compounds were determined using 1D (<sup>1</sup>H NMR and <sup>13</sup>C) and 2D (COSY, *J*<sub>RES</sub>, HMBC, HSQC and NOESY) NMR experiments. These purification methodologies demonstrated high efficiency and cost-effectiveness, resulting in the isolation of pure natural compounds appropriate for subsequent pharmacological investigations. Future investigations will prioritize the optimization of isolation protocols for various metabolites derived from both the mycelium and fruiting bodies of *H. erinaceus*, alongside comprehensive characterization and systematic evaluation of their biological activities, with the aim of elucidating potential therapeutic applications in the treatment of neurodegenerative disorders, particularly Alzheimer’s disease.

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