

3rd Symposium of Young Researchers on Pharmacognosy



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BOOK OF ABSTRACTS



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Isolation and identification of triterpenes from *Pholiota populnea*: new members of the Pholiol series

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Strophariaceae family has 18 genera and 1.316 species, found in northern temperature zones [1,2]. *Pholiota populnea* (syn. *Pholiota destruens*, *Hemipholiota populnea*) is a saprophytic or sometimes parasitic mushroom species, which plays a considerable role in decomposing the deadwood of cottonwoods. The aim of our work was the isolation and structure determination of bioactive compounds of *P. populnea*. The mushroom material (4.2 kg) was extracted with methanol by percolation. After concentration, the methanolic extract was subjected to solvent-solvent partition using *n*-hexane, chloroform, and ethyl acetate, respectively. The chloroform and ethyl acetate phases were separated by flash chromatography on normal (NP) and reversed phase (RP) column, by NP- and RP-HPLC and gel filtration on Sephadex LH-20. The structures were elucidated using extensive spectroscopic analyses, including 1D and 2D NMR and HRMS measurements. The detailed phytochemical analysis of the chloroform and ethyl acetate phases of *P. populnea* led to the isolation of six new lanostane diesters, named pholiols E-J, together with (+)-clavric acid and two known ribonucleosides. All compounds were isolated for the first time from this mushroom. Our results indicate that *P. populnea* is a promising source for finding new triterpenes. We plan to investigate the anti-inflammatory activity of the compounds in the future.

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References

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