









## CHARACTERIZATION OF PROPOLIS FROM MOLDOVA'S CENTRAL REGION: CHEMICAL COMPOSITION, ANTIOXIDANT AND ANTIMICROBIAL PROPERTIES

Serghei Pogrebnoi <sup>a</sup>, Nicolae Eremia <sup>b</sup>, Dmitri Bilan <sup>a</sup>, Lucian Lupascu <sup>a</sup>,  
Natalia Bolocan <sup>a</sup>, Gheorghe Duca <sup>a</sup>, Svetlana Armasu <sup>a,c</sup>, Dumitru Tertea <sup>a,c</sup>,  
Vitalie Cebanu <sup>c</sup>, Serghei Tincu <sup>d</sup>, Alexandru Znagovan <sup>d</sup>, Iulia Neicovcena <sup>e</sup>, Olga Coseleva <sup>e</sup>,  
Valerina Slanina <sup>f</sup>, Fliur Macaev <sup>a\*</sup>

<sup>a</sup>Institute of Chemistry, Moldova State University, 3, Academiei str., Chisinau MD-2028, Republic of Moldova

<sup>b</sup>State Agrarian University of Moldova, 42, Mircesti str., Chisinau MD-2049, Republic of Moldova

<sup>c</sup>Scientific and Practical Institute of Horticulture, Viticulture and Food Technologies, 59, Hincesti hwy.,  
Chisinau MD-2021, Republic of Moldova

<sup>d</sup>State University of Medicine and Pharmacy "Nicolae Testemitanu", 165, Stefan cel Mare blvd.,  
Chisinau MD-2004, Republic of Moldova

<sup>e</sup>State University of Comrat, 17, Galatzana str., Comrat MD-3805, Republic of Moldova

<sup>f</sup>Institute of Microbiology and Biotechnology, 3, Academiei str., Chisinau MD-2028, Republic of Moldova

\*e-mail: [fliur.macaev@ichem.md](mailto:fliur.macaev@ichem.md); fax: 373 22 739775

**Abstract.** The chemical composition, antioxidant and antimicrobial activity of propolis ethanolic and water-ethanolic extracts from the central zone of Moldova have been investigated by GC-MS and liquid chromatography. There were found 21 amino acids, of which the most abundant are glutamic acid, alanine, leucine and isoleucine. The main constituents of the alcoholic extract are pinocembrin, *n*-heptacosan and naringenin. The aqueous-alcoholic extract was characterized by the content of sakuranin, 4-methoxy sakuranetin, caryophylline oxide, isocaryophylline oxide, *trans*-longipinocarveol. The propolis extracts exhibited strong antioxidant (53.7 mg ascorbic acid eq./g extract or 113.4 mg Trolox eq./g extract and 87.5 mg ascorbic acid eq./g extract or 162 mg Trolox eq./g extract for ethanol, and water-ethanol extract, respectively) and antimicrobial activity (from 0.0055 up to 0.07%), suggesting their potential as natural agents for therapeutic use.

**Keywords:** amino acid, gas chromatography–mass spectrometry, liquid chromatography, antifungal activity, antibacterial activity.

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