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MEDICINAL CHEMISTRY RESEARCH

ORIGINAL RESEARCH

Protein–polysaccharides of *Trametes versicolor*: production and biological activities

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Abstract Extracellular- (E-PPS) and intracellular-protein–polysaccharides (I-PPS) complexes were produced by *Trametes versicolor* in submerged cultures with different carbon sources. The highest extracellular-(EPS) and intracellular-polysaccharide (IPS) concentration in the complexes was obtained with tomato pomace culture. DPPH radical scavenging for E-PPS and I-PPS produced by liter of culture was equivallent to 2.115 ± 0.227 and 1.374 ± 0.364 g of ascorbic acid, respectively. These complexes showed a protector effect in the oxidation of erythrocyte membranes and had ability to inhibit the hemolysis and methemoglobin synthesis in stressed erythrocytes. These results suggest that extracellular- and intracellular- polysaccharides produced are important bioactive compounds with medicinal potential.

Keywords Protein–polysaccharides · *Trametes versicolor* · Submerged fermentation · Edible mushrooms · Antioxidant properties

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