

2nd International Conference and Exhibition on Pharmacognosy, Phytochemistry & Natural Products

August 25-27, 2014 DoubleTree by Hilton Beijing, China

Isolation and simultaneous determination of five bioactive compounds in mushroom *Inonotus obliquus*

Haixia Chen

Tianjin University, China

Five main phenolic compounds were isolated from the mushroom *Inonotus obliquus* by a repeated column chromatography. The structures of the five phenolic compounds were identified as 3,4-dihydroxybenzaldehyde (1), vanillic acid (2), caffeic acid (3), syringic acid (4) and 3,4-dihydroxybenzalacetone (5) using ¹H and ¹³C NMR in combination with mass spectrometry. A simple reversed-phase high performance liquid chromatography (RP-HPLC) procedure was developed for simultaneous determination of the five bioactive phenolic compounds. Three extraction methods on *Inonotus obliquus* extract were compared and reflux extraction was the efficient method with the strong antioxidant properties. There are stronger linear relationships between DPPH radical scavenging activity and total phenolic content, caffeic acid and 3,4-dihydroxybenzalacetone content ($R^2 > 0.95$). Caffeic acid and 3,4-dihydroxybenzalacetone are the major contributors to the observed antioxidant activities. This could be important information for quality control and the structure-activity relationships of phytochemicals of mushroom *Inonotus obliquus*.

Biography

Haixia Chen is associate Professor in Tianjin University. She completed her Postdoctoral research from Ocean University of China during the years 2002-2004. She completed her PhD in Food Chemistry and Natural Products Chemistry from Huazhong Agricultural University in 2002. Her area of interest includes natural product chemistry, bioactivities of the constituents from natural products, analysis method of chemical constituents and functional food.

chenhx@tju.edu.cn