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Chemical and bioactive investigation of *Kosteletzkya virginica* (Malvaceae)

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Kosteletzkya virginica (L) Presl is a perennial plant native to the saline tidal marshes and belonged to the genus of *Kosteletzkya* in the family Malvaceae. As an excellent economic halophyte, *K. virginica* has been served as a candidate species of the current development and utilization of saline flats in the east of China. Meanwhile, *K. virginica* is used as a folk medicine to treat upper respiratory tract inflammation. In our study, 39 compounds were isolated and identified from the ethanol extract of *K. virginica* tuberous roots by a variety of modern chromatography and spectroscopic methods. Their structures were elucidated by spectroscopic methods, including 1D, 2D nuclear magnetic resonance (NMR) and high-resolution time of flight electrospray ionization mass spectrometry (HR-TOF-ESI-MS). All of these compounds were obtained from the genus *Kosteletzkya* for the first time and evaluated for their potential in scavenging diphenyl-picryl hydrazyl radical (DPPH•), inhibition of nitric oxide (NO) induced by lipopolysaccharide (LPS) and cytotoxic activity. The virginicin showed activities against DPPH•, NO, human acute promyelocytic leukemia (HL-60) and human colorectal adenocarcinoma (LOVO) with IC50 of 34.6, 12.5, 40.5, 31.7 μmol/L respectively. It may be promising leads for the development of potential antioxidant and anticancer agents.

Biography

Ming Wang is an Associate Professor of the Research Center for Natural Products Chemistry, Institute of Botany, Jiangsu Province and Chinese Academy of Sciences. He has obtained his Bachelor's degree from China Pharmaceutical University in 1983. His research interests mainly focus on the isolation, structure and analysis of the chemical constituents in medicinal plants. He has published over 30 academic papers.

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