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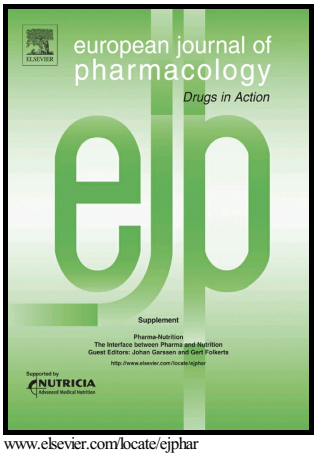

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Abstract

Ovatodiolide was isolated from the traditional Chinese medicinal herb *Anisomeles indica*, possesses anti-bacterial and anti-inflammatory properties; however, the anti-cancer activity and its mechanisms have been limitedly reported. This study aimed to examine the effect and molecular action of ovatodiolide in lung cancer cells. Cell cycle distribution and reactive oxygen species (ROS) generation were measured by flow cytometry. Apoptosis was detected by propidium iodide/annexin V staining and TUNEL assay. DNA damage was investigated by comet assay and γ-H2AX staining. Caspase activity was determined using caspase fluorometric kits. Moreover, protein levels were examined by western blot. Ovatodiolide provoked reactive oxygen species generation and DNA damage, as well as inhibited cell growth and induced apoptosis in human lung cancer A549 and