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Effects of some natural compounds on the Glutathione reductase enzyme

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Discovery of Glutathione Reductase (GR) inhibitors has become very popular recently due to antimalarial and anticancer activities. In this study, GR inhibitory capacities of some natural compounds, β -sitosterol, β -stigmasterol, diosgenin and jervine, which have steroidal skeleton, were reported. While β -stigmasterol was isolated from *Artemisia dracunculus*, β -sitosterol, diosgenin and jervine were isolated from rhizomes of *Veratrum album*. The chemical structures of the compounds were confirmed by IR, 1H-NMR, 13C-NMR, 1D and 2D NMR methods. The tested molecules were exhibited much potent inhibitory activities against GR at low micromolar concentrations with IC₅₀ values ranging from 0.1916 to 5.2116 μ M as compared with well-known agents. In this study first time, the inhibition effects of β -sitosterol, β -stigmasterol, diosgenin and jervine were determined on glutathione reductase enzyme.

Biography

Tuba Aydin is currently working as an Assistant Professor in the Faculty of Pharmacy at the Agri Ibrahim Cecen University, Turkey where she has been a faculty member since 2013. She completed her PhD at Ataturk University, Turkey. She has expertise in isolation and characterization of phytochemicals from natural products.

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