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The protective effect of Marrubiin against the TNF- α induced intracellular oxidative stress

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Abstract

Medicinal plants have been of age long remedies for human diseases. Lamiaceae is a wide distributed plant with various species that most of possess effective pharmaceutical and therapeutic properties. Marrubiin is a bioactive diterpenoid that is the main constitute of family Lamiacea. Therefore, the pharmaceutical properties of this plant attributed to marrubiin. It is well documented that, oxidative stress possesses key roles in most of the diseases onset and development, thus it can be an efficient target to manage most of the diseases. Herein we studied Marrubiin protective potential against oxidative stress by its impact on glutathione GSH redox system. The intracellular level of glutathione (GSH) was measured by colorimetric assay kit after treating the cells by marrubiin. Increased levels of GSH in cells treated with marrubiin compared to cells treated with only TNF- α showed that marrubiin is able to reverse the effects of TNF- α on the levels of GSH. Conclusively, based on our findings, marrubiin is proposed as a preventive/therapeutic remedy against disorders elicited by increased levels of intracellular ROS in most of the disorders.

Keywords: “Marrubiin, oxidative stress, Glutathion” .