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Protective mechanism of ginsenoside Rb1 in homosysteine induced apoptosis in endothelial progenitor cells

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Present study aimed to discover the protective role of ginsenoside Rb1 against homosysteine (Hcy) induced apoptosis in rats' bone marrow derived Endothelial Progenitor Cells (EPCs). A *Panax ginseng* contains huge numbers of ginsenosides crucial constituents for its pharmacological potential. In the market, presently existing cardio-protective drugs exhibits considerable noxious effect after the treatments. People everywhere in the globe are looking for natural products mediated remedies against cardiac diseases. To fulfill this investigation, EPCs were incubated for the time duration of 24 h, in the presence or absence of ginsenoside Rb1 along with Hcy at a concentration of 200 μ M. Immuno-blotting assays were conducted in order to identify the anti-apoptotic activities of ginsenoside Rb1 against Hcy treated EPCs. Bax and caspase-3 as a pro-apoptotic markers and Bcl-2 as an anti-apoptotic marker were analyzed by immune-blotting. FACS examination also articulates that the substantial rises of apoptosis initiation over induction of Hcy. On the other hand, pretreatment of ginsenoside Rb1 displays extensive increases of Bcl-2 along with reductions of Bax and caspase-3 markers. Ginsenoside Rb1 pretreatment also rises of survival rate of EPCs at significant manner. All the above observations indicated that the Hcy induced apoptosis in EPCs were potentially declined by the treatment of ginsenoside Rb1.

Biography

Aravinthan Adithan has completed his MS from Bharathidasan University, India. He is a Student for PhD course in Chonbuk National University, Republic of Korea. He has published more than 5 papers in reputed journals.

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