Ginsenoside Rg1 is a triterpene saponin originally found in species of Panax that exhibits antioxidative, anti-inflammatory, neuroprotective, anti-aging, anti-fibrotic, anticancer, antithrombotic, anti-allergic, immunomodulatory, cardioprotective, and pro-angiogenic activities. In an animal model of aging, ginsenoside Rg1 prevents decreases in cognitive capacity and neurogenesis, and suppresses astrocyte activation and production of TNF-α, IL-6, and IL-1β; it also increases activity of telomerase, glutathione peroxidase, and superoxide dismutase. In other animal models, ginsenoside Rg1 decreases levels of ALT, AST, LDH, and ALP, inhibiting inflammation and hepatic stellate cell activation, decreasing fibrosis. Additionally, ginsenoside Rg1 suppresses JAK2/STAT5 signaling in leukemia cells, upregulates expression of Bax and caspase 3, downregulates expression of Bcl-2, induces apoptosis, and inhibits cell proliferation. This compound also inhibits platelet aggregation, fibrinogen binding, P-selection expression, platelet adhesion, and ERK activation, increasing time to occlusion in vivo. Ginsenoside Rg1 inhibits left ventricular hypertrophy and increases expression of HIF-1α and VEGF in other animal models. This compound also decreases serum histamine, IgE, and IgG and suppresses infiltration of eosinophils and mast cells in animal models of allergic rhinitis.

References


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