Echinacoside is a phenylethanoid glycoside found in Echinacea, among other sources; it exhibits neuroprotective and vasodilatory activities. In vivo, echinacoside inhibits cytochrome c release and caspase-3 activation through modulation of ERK signaling, resulting in neuroprotection in a model of middle cerebral artery occlusion. Echinacoside also displays neuroprotective benefit in a MTPT-induced mouse model of Parkinson’s Disease, decreasing the Bax/Bcl-2 ratio and inhibiting suppression of dopamine and dopamine transporter (DAT) levels. This compound increases cGMP in rat aortic rings, inducing vasodilation. Additionally, echinacoside improves bone mineral density and microarchitecture, decreasing RANKL expression and increasing esteoprotegerin levels in animal models of osteopenia.

References


