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Protective effect of the standardized extract of *Holmskioldia sanguinea* on tumor bearing mice

Mahesh Pal, Tripti Mishra, Ch V Rao and D K Upreti
CSIR - National Botanical Research Institute, India

Cancer has been considered to be very dreadful disease. *Holmskioldia sanguinea* is a large climbing shrub found in the Himalayas at an altitude of 5,000 feet and preliminary investigation showed the excellent yield of andrographolide and subjected for the anticancer activity. Protective effect of *Holmskioldia sanguinea* leaf ethanolic extract has been investigated against Ehrlich ascites carcinoma (EAC) and Dalton's ascites lymphoma (DAL) in Swiss albino mice and to evaluate the possible mechanism of action. The enzymatic antioxidant status was studied on tumor bearing mice, which shows the potential of the compound to possess significant free radical scavenging property and revealed significant tumor regression and prolonged survival time. The isolated bioactive molecule andrographolide from *Holmskioldia sanguinea* yields 2.5% in subject to HPTLC/HPLC analysis. The cellular defense system constituting the superoxide dismutase, catalysis was enhanced whereby the lipid peroxidation content was restricted to a larger extent. The *Holmskioldia sanguinea* is a new source of andrographolide and demonstrated the potency in treatment of cancer.

drmpal.nbri@rediffmail.com

Novel 5-susituated analogues of 4H-3-(2-phenoxy)phenyl–1,2,4-triazole derivatives as agonists of benzodiazepine receptors with anxiolytic effect

Mehrdad Faizi, Aliasghar Peyvandi and **Sayyed Abbas Tabatabai**
Shahid Beheshti University of Medical Sciences, Iran

Benzodiazepines are important medicine for treatment and control of a series of disorders including anxiety, insomnia, muscular spasm, and epilepsy. However, they have some unwanted effects such as negative effects on memory and drug dependence. In a search for new active compounds a series of novel non-rigid benzodiazepine ligands, 5-substituted analogues of 4H-3-(2-phenoxy) phenyl-1,2,4-triazole and its chlorinated derivatives were synthesized. The goal is having new ligands with a potential clinical use and less unwanted effects. The novel compounds had several substituents including NH2, SH, S-Methyl groups on position 5 of the 1,2,4-triazole ring. The anxiolytic effects of the novel compounds and diazepam were assessed by elevated plus maze in male NMRI mice. The ED50 was defined as the dose of drug leading to a 100% prolongation in mean duration of staying on open arm of the maze when compared to the control group. Compound with amino substituent at position 5 of the 1,2,4-triazole ring and chloro substituents on position 2 of phenoxy group and position 4 of phenyl ring were the most potent compound in the novel compounds (ED_{50} of 7.6 mg/kg with 95% confidence interval of 5.5-10.3 mg/kg). These findings are in agreement with structure-activity relationship studies of ligands of benzodiazepine receptors. Flumazenil, a selective antagonist of benzodiazepine receptors, was able to reduce the anxiolytic effect of the compounds, which confirms that the anxiolytic effects were seen are results of the interaction of the novel compounds and benzodiazepine receptors.

m.faizi@sbmu.ac.ir