

DRUG DISCOVERY, DESIGNING CHEMISTRY AND PHARMACEUTICAL ANALYSIS &

BIOBETTERS AND REGULATORY AFFAIRS

June 27-28, 2018 | Vancouver, Canada

New source of andrographolide having potential biological activities

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

Holmskioldia sanguinea is a large climbing shrub found in the Himalayas from satlej eastwards ascending upto an altitude of 5000 ft. It is also found in Bihar, some parts of Assam and Meghalaya. The plant is commonly cultivated in the garden throughout India for its showy scarlet flowers. The plant can be grown with little care and does best in full sunshine. It is propagated by layers, cutting and seeds. The plant is eaten by sheep and goats. In view of excellent yield of andrographolide *H. sanguinea* can be used as an economical source for the isolation of this important bioactive constituent. Andrographolide is known to possess hepatoprotective properties. Recently we have discovered *H. sanguinea* as a new source for the isolation of andrographolide in excellent yield. The plant showed significant anticancer, diuretic, CNS depressants and pain relieving activities. Recently a novel diterpene has been isolated from the aerial part of *Andrographis paniculata* which contain an oxetane moiety in it. This prompted us to study the structure activity relationship. It has been established that the presence of oxetane moiety in the most potent anticancer drug taxol is essential for its biological activity. It was, therefore of interest to us to synthesize the novel diterpene and various other derivatives of andrographolide by manipulation of various groups present in the molecule which showed potential activity.

drmpal.nbri@rediffmail.com