



Safety and Toxicity Evaluations of *Xanthium strumarium* Linn

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ABSTRACT: *Xanthium strumarium* Linn. root and seeds were found to contain alkaloids, anthraquinones, flavonoids, atractyloside, phenolics, steroids, terpenoids, and resin etc. In the present investigation attempt was made to separate the atractyloside by using instant preparative thin layer chromatography (IPTLC) technique. Purified atractyloside was chemically characterized by IR, Mass and NMR spectral analysis. Atractyloside concentrations were found to be 2.9 and 4.3 mg/ml in plant root and seeds respectively using HPLC techniques. During hepatotoxic assessment, atractyloside produced severe hepatotoxicity in albino wistar rats. Observations of the sub-acute and acute toxicity studies had indicated that methanolic extract of *X. strumarium* had shown a narrow safety margin in animals. On the basis of sub-acute and acute toxicity evaluation studies, it was established that both atractyloside and methanolic extract of *X. strumarium* L. possess a narrow safety margin in rats used in *in-vivo* experimental and preclinical pharmacological studies.



Biography : Prof. Bhanu P. S. Sagar had completed his Ph.D at the age of 29 years from Jamia Hamdard, Postdoc from National Institute of Immunology and D.Sc. in Alternative Medicine. Presently, Director of Pharmacy College at IEC-GI & Former Vice-Chancellor of IEC University. Published 47 papers and presented 30 papers. Presented two papers in "AAPS 2006 National Biotechnology Conference" in Boston, USA.

- Publications:**
1. In Vitro.–Enhanced Production of Podophyllotoxin in Phytohormonal-Induced and Regenerated Roots of *Podophyllum hexandrum*.
 2. Pharmacokinetic Interactions of Antihepatotoxic Wedelolactone with Paracetamol in Wistar Albino Rats.
 3. Hepatoprotective And Cardiac Inhibitory Activities Of Ethanolic Extracts From Plant Leaves And Leaf Callus Of *Eclipta Alba*.
 4. Anti-tumor activity of podophyllotoxin and ethanolic extracts of in-vitro developed root callus and intact plant root/rhizome of *Podophyllum hexandrum* Royle.
 5. Pharmacokinetic interactions of in vitro produced Wedelolactone (an anti-hepatotoxic compound) with paracetamol in wistar albino rats.

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