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Gloriosa superba LINN. (LILIACEAE) -A PHARMACOLOGICAL REVIEW

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Key words : *Gloriosa superba* Linn., Phytochemicals, Chemotherapeutic, Anticoagulant, Anticancer.

Gloriosa superba Linn. is an ornamental climber which belongs to the family Liliaceae. The roots, seeds and leaves of this plant possess medicinal value due to the presence of varied phytochemicals which are combined with analgesic, anti-inflammatory, anticoagulant, enzyme inhibitory, antivenom and chemotherapeutic potential.

INTRODUCTION

The art of the use of plant medicine is called as herbalism. Alternative medicine is attracting the attention of professionals due to the fact that it is a profitable use of old herbal traditions for achieving highest potential against diseases. From many centuries, herbs are used for their medicinal, flavoring and aromatic properties. Synthetic products of modern age have decreased their importance. But blind dependence on synthetic drugs is over and now a days people are adopting herbalism with hopeful security and safety to health (Acharya *et al.,* 2008). Traditional system of medicine is found to have utilities on many accounts. Due to population rise, inadequate supply of drugs and high cost of treatment are commonly found. Moreover, adverse side effects along with drug resistance have been encountered in synthetic drugs, which has led to an added emphasis on the use of plants to treat human diseases.

The forest of India is endowed with rich collection of medicinal and aromatic herbs. Ayurveda, the Bible of medicinal science, has codified about 8000 herbal remedies used for various therapeutic purposes. Secondary metabolites of plants showed a number of roles in modern medicine. It is the potential ancient herbal medicinal system which provide base to synthesis of lead structures for the development of modified derivatives with increased efficiency and reduced toxicity.

Some miraculous useful chemicals from plants include atropine, curcumin, morphine, taxol, digitoxigenin, capsicin, artemesinin and ephedrine. The crude extract from medicinal plants could be used as medicament. On the other side, the isolation and identification of active principle along with elucidation of the mechanism of action of drug is of prime importance (Joy *et al.*, 2001; Balandrin, *et al.*, 1988).

Morphological features of *Gloriosa superba*

Common Name	:	Glory Lily
Sanskrit Name	:	Langli
Hindi Name	:	Karihari
Native	:	Indigenous

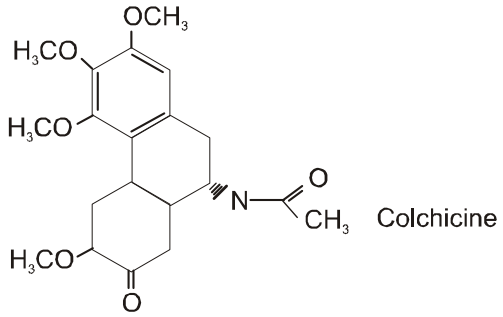
The plant is an ornamental climber, with apex of leaves modified into tendril, Rootstock fleshy and cylindrical with solid central core.

Chemical Constituents :

In the world market, *Gloriosa superba* is considered as rich source of Colchicine and gloriosine, sistosterol, its glucoside and β, γ - Lumicolchicines, β- sistosterol, its flucoside and 2-OH-6-MeO benzoic acid. The above mentioned phytochemicals present in different parts of this plant are as below :

Plant Parts	Chemical Constituents
Root Tuber	Colchicine, β-sistosterol, its glucoside, a long chain fatty acid, β and γ-Lumicolchicines, 2-OH-6-MeO benzoic acid.
Seed	Colchicines
Young Leaf	Cholidonic acid
Flower	Luterlin and its glucosides, N-formyl-de-Ac-colchicine, Lumicolchicine.

The dried tuberous root stock and seeds are two most important parts of *Gloriosa superba* Linn. used for a variety of purposes. The root contains colchicine which finds prime use in the treatment of arthritis (Srivastava, *et al.*, 1977).



Colchicine

Pharmacological Activities

1. Analgesic and anti-inflammatory Potential : Gloriosine and colchicines are two commonly used phytochemicals for the treatment of gout and rheumatism. The hydroalcoholic extract also showed analgesic activity when evaluated by Eddy's hot plate (Jomy *et al.*, 2009).

2. Antithrombotic/Anticoagulant Potential : Methanolic and aqueous extract of this plant has displayed anticoagulant property which is mainly due to inhibition of thrombin induced clotting. (Nalise *et al.*, 2009).

3. Antitumor Potential : Various extracts of glory lily have got antitumor potential when studied under P-388 cell lines (Chulabhorn *et al.*, 2009).

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4. Enzyme Inhibition :

The aqueous extracts of this plant has got inhibitory effects against lipoxygenase, acetylcholinesterase and urease.

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