

EXPLORATION OF LEAVES, STEM AND ROOTS OF *BRYOPHYLLUMPINNATUM* FOR ITS PHARMACOLOGICAL AND PHYTOCHEMICAL PROFILE.

Harender Sharma¹, Avijit Mazumder², Bharti Yadav, Amit bind³

^{1,2,3}Department of pharmacology, Noida Institute of Engineering and Technology (Pharmacy Institute),
avijitmazum@yahoo.com

ABSTRACT

Bryophyllumpinnatum (Lam.) Kurz (belongs to family Crassulaceae) was a perpetual growing plant that occur broadly in the stifling equatorial Africa, USA, Bharat, Australia and was used in folkloric medicine. *Bryophyllumpinnatum* (Lam) Pers. was endemic to Madagascar and Brazil both. As the numbers of diseases were increasing daily, there was a shift in focus to use herbal remedies as compared to the synthetic counterparts. This attracts the researcher towards the natural remedies. We have selected *Bryophyllumpinnatum* as our plant of study. Detailed informations pertaining to the phytochemical and pharmacological studies of the plant were gathered in this review were collected by using electronic search as PubMed, Research gate, Elsevier, Google scholar and Web science. Triterpenoids, glycosidal, flavonoidal, steroidal moieties along with alkaloids and bufadienolides were among some of the active compounds contained in this holy plant. The plant had a considerable high level of alkaloids with highest value in the leaf (2.08 ± 0.02 mg/100g). The stem extract had the highest value of saponins (0.81 ± 0.014 mg/100g) and the root extract had the highest level of sterols (0.49 ± 0.014 mg/100g). The plant had been found to possess antimicrobial activity, anti-inflammatory, antidiabetic, anticonvulsant, antihypertensive and anticancer activity, antitumour, anthelmintic, hepatoprotective, antiinflammatory, nephroprotective, antioxidant activity, anticonvulsant, neuropharmacological, antipyretic, haemostatic and wound healing properties. By observing the pharmacological and active constituents of the roots, stem and leaves various herbal formulations can be prepared to fight various disorders with fewer side effects.

Keywords: *BryophyllumPinnatum*, pharmacological activity, roots, stem, leaf.

I. INTRODUCTION

BryophyllumPinnatum, brief (Crassulaceae) Synonym- Kalanchoepinnata, patharchitta, maternity plant, Cathedral bell, parnabija. The leaves have a rooting vegetative bud on them (1). In the Bengal areas, the plant was popular as Pattharkuchi and was a drug that was widely used to cure urinary stones (2). The plant can be found growing in hot, humid areas all over India, majorly in Bengal region. This was a fleshy annual herb and develops to a height of 1-1.5 meters and has a hollow four-angled stem that was commonly branched. The leaves were 10-20 cm long, opposite, decussate, and succulent. Lower leaves were simple, while upper leaves were 3-7 long-petioles and foliated. These were moist dark green with scallop edges and a red trim present. Bijugate compound leaf blade, 10-30 cm long, with 3-5 leaflets. The blades of the leaflet were oblong to elliptic in shape, 6-8 x 3-5 cm, and petiolules were 2-4 cm. Each notch on the margin bears a dormant bud capable of developing into a healthy plantlet (3). It has 5cm tall, purple-reddish, flowers that dangle in wide outspreading panicles; its fruits were membranous follicles covered in a papery corolla and calyx, with small ellipsoid seeds. The taxonomical classification was mentioned in Table.1 (4). The picture of *Bryophyllumpinnatum* plant was shown in Fig.1.