

## Mast cell stabilizing and bronchodilatory activity of *Nyctanthes arbortristis* bark

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### Abstract

*Nyctanthes arbortristis* Linn (Oleaceae) is one of the well known medicinal plant widely used in folk medicine for the treatment of asthma. Present work was undertaken to check potential of the plant bark in the treatment of asthma. Petroleum ether, chloroform, ethyl acetate, ethanol and aqueous extracts of *N. arbortristis* bark (50 and 100 mg/kg, i.p.) were screened for mast cell stabilizing activity in mice and studies on smooth muscle preparation of guinea pig ileum (in vitro) for bronchodilation property. The petroleum ether extract of *N. arbortristis* bark showed maximum protection against mast cell degranulation by clonidine and resisted contraction induced by histamine better than other extracts. All the results are dose dependant. So it can be concluded that petroleum ether extract of *N. arbortristis* bark have bronchodilation and mast cell stabilizing property and can be used in the treatment of asthma..

**Keywords:** *Nyctanthes arbortristis*; mast cell degranulation; guinea pig ileum; bronchodilation

### Introduction

*Nyctanthes arbortristis* Linn (Oleaceae) is one of the well known medicinal plant. It is commonly called as nyctanthes means night flowering and arbortristis means as it loses its brightness during day time. It is common wild hardy large shrub or small tree, native to India, distributed wild in sub-Himalayan regions and southwards to Godavari. It is also planted in Indian gardens for ornamental purpose due to its highly fragrant flowers (Kiew & Baas, 1984; Nadkarni, 1982; Kirtikar & Basu, 2000). It is a shrub or small tree up to 10 m in height with gray to greenish rough bark with stiff whitish hairs. Leaves are opposite, ovate, acute or acuminate, entire or with few large distant teeth, short bulbous hairs rounded or slig-