

## INTRODUCTION

Monothea buxifolia is an evergreen flowering tree of genus Monothea which belongs to family Sapotaceae in the hilly areas of Northern Pakistan, Afghanistan Oman, and in the south-east Saudi Arabia. The leaves of Monothea buxifolia contain more than 160 compounds. The previous studied of this plant showed antibacterial, antifungal, anti-inflammatory, cytotoxic, antipyretic, antioxidant, anti diabetic Hepatoprotective and anti cancer activity. M. buxifolia is an evergreen flowering tree of genus Monothea which belongs to family Sapotaceae in the hilly areas of Northern Pakistan, Afghanistan Oman, and in the south-east Saudi Arabia. The leaves of M. buxifolia contain more than 160 compounds. The previous studied of this plant showed antibacterial, antifungal, anti-inflammatory, cytotoxic, antipyretic, antioxidant, antidiabetic Hepatoprotective and anti cancer activity.

### Objectives

In vivo acute toxicity of methanolic extract of leaves of Monothea buxifolia.

Sedative potential of methanolic extract of Monothea buxifolia in vivo

### 1.Plant Collection

### 2.Identification of Plant

### 3.Extract Formation ( Methanolic)

### 4.In vivo Acute Toxicity

### 5.Sedative Activity

### 6.Identification of sedative Compounds.

## Methods and Materials

*Monothea buxifolia* leaves methanolic extract was prepared using standard method with some modification. Experimental animals (Rabbits) of uniform weight (1000-1500 g) were used. For sedative activity Rabbits were divided into 6 groups. Group 1 was treated by distilled water and considered as negative control while group 2 was treated by diazepam (0.3 mg/kg) as positive control (figure). R3 rabbits were treated by extract dose of 50 mg/g while doses of 100, 150 and 200 mg/kg were injected intramuscularly to other groups respectively. Rabbits were observed for one hour continuously and after that pedal reflex, palpebral reflex and right reflexes were used as a standard.

## Results

*Monothea buxifolia* leaves methanolic extract exhibited significant sedative effect on dose dependent manner. Dose of 100, 150 and 200 mg/kg (intramuscularly injected) showed significant sedative effect as compared to positive and negative control. The results are showed in Table 1 and Figure 1.

## Conclusions

The findings of this study concluded that *Monothea Buxifolia* is good source for pharmacologically active compounds and might be useful in hypnotic medicine. It also concluded that M. Buxifolia methanolic leaves extract possessed significant sedative activity. It also conclude that this plant maybe use as alternate source of sedative drugs which can be helpful in the treatment of anosmia anxiety and depression.

Table 1. (+) pedal and palpebral reflex, (--) loss of pedal and palpebral reflex.

DOSES	30min	60min	90min	120min
(diazepam) 0.3 ml/kg	+	-	-	-
(Distill H2O) 5 ml/kg	+	+	+	+
50 mg/kg	+	+	-	-
100 mg/kg	+	+	-	-
150 mg/kg	-	-	-	-
200 mg/kg	-	-	-	-

Figure 1. Loss of right reflex in seconds

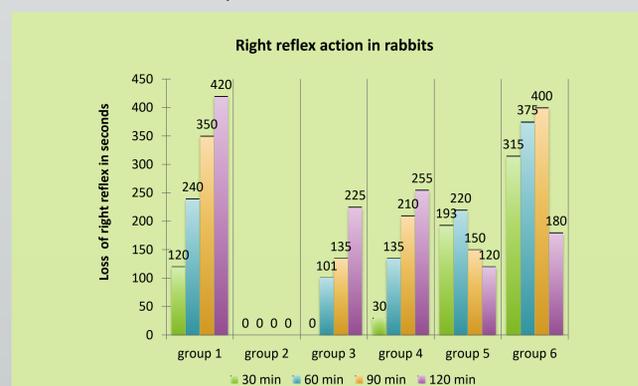


Figure 2. Injection of Extract into Rabbit.



Figure 3. The loss of right reflex compared with negative control.

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