

## Sedative and analgesic activities of *Ludwigia repens*

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### Abstract

The methanolic leaf extract of *Ludwigia repens* was evaluated for possible sedative and analgesic activities in mice. Sedative activity was evaluated by using hole cross, open field, thiopental sodium-induced sleeping time and elevated-plus maze (EPM) tests at 400 mg/kg while the peripheral and central analgesic activity was investigated using acetic acid-induced writhing test, formalin test and tail immersion test at 200 mg/kg body weight orally. The extract decreased the locomotor activity of mice in hole cross, open field and EPM test. Moreover, the extract significantly minimized onset of sleep and maximized the duration of sleeping time when administered with thiopental sodium. The extract also produced a significant ( $p < 0.05$ ) reduction of pain in all three models.

**Keywords:** *Ludwigia repens*, Sedative, locomotor activity, analgesic

### Introduction

*Ludwigia repens*, belonging to the family Onagraceae, is an evergreen amphibian herbaceous plant which is largely found in Southern parts of North America. *Ludwigia* sp. is widely distributed in America, Africa, Asia and Australia (Rataj and Horeman, 1977). It is a species of flowering plant in the evening primrose family known by the common name creeping primrose willow and locally known as Kashordum, Tulehan (Rakhaing). It is found in the shallow waters of streams and lakes and freshwater and familiar as an aquatic weed in some regions. Some of the species belonging to *Ludwigia* genus are used as vegetables, ornamental aquarium plants, pollen source for honey bees, fish feed and medicinal purposes (Brunson, 1988; Brundu *et al.*, 2001; Chen *et al.*, 1989; Greenway and Wooley, 1999; Kuo *et al.*, 1999; Mooi *et al.*, 1999). *L. repens* with small yellow flowers (Cirik *et al.*, 2001) and pinkish red to bright green leaves is widely used as an aquarium plant. The leaves are oppositely arranged and up to 4 or 5 centimeters long. The flower has four yellow petals no more than 3 millimeters long nested on a base of four pointed sepals which may be slightly longer. It grows rapidly in slightly acidic waters at 19-28°C.