

Antidiarrheal potential of *Tabernaemontana divaricata*

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Abstract

The antidiarrheal activity of hydroalcoholic and aqueous extracts of *Tabernaemontana divaricata* leaves were evaluated in rats. Studies were carried out on castor oil induced diarrhea and gastrointestinal motility. The hydroalcoholic and aqueous extracts of *Tabernaemontana divaricata* leaves (100, 200 and 300 mg/kg, p.o.) causes a dose dependent protection against castor oil induced diarrhea and decreased markedly gastrointestinal motility. A preliminary phytochemical screening of extracts of *Tabernaemontana divaricata* leaves revealed the presence of alkaloids, tannis, resins, proteins, amino acids, flavonoids, saponins, phenols, glycosides, steroids, triterpenoids, fixed oils and fats. The results obtained showed that the hydroalcoholic and aqueous extracts of *Tabernaemontana divaricata* leaves showed a significant activity against diarrhea and so it can be used traditionally for gastrointestinal disorders.

Keywords: *Tabernaemontana divaricata*; diarrhea, castor oil; tannins

Introduction

Diarrhea is one of the main water-borne diseases endemic in many regions of the world and considered to be the major health threats to the world populations, both in tropical and subtropical poor countries (Damiki & Siva, 2011). The disease is majorly responsible for morbidity and mortality in developing countries leading to the death of millions of people each year (Carlos and Saniel, 1990). It may be defined as a situation in which an adult daily stool exceeds 200 g and contains 60-95% water (Weber, 1976).

The major causative agents of diarrhea in human beings include various enteropathogens like *Shigella flexneri*, *Escherichia coli*, *Staphylococcus aureus*, *Salmonella typhi*, and *Candida albicans* (Robert et al., 2001; Anne et al., 2002). For the treatment and management of diarrhea in developing countries, the world health organization (WHO) has constituted a diarrhea disease control programme (DDC) which includes studies of traditional medicine practices together with the evaluation of health education and prevention approaches (Syder