

# ANTIDIURETIC ACTIVITY OF AQUEOUS BARK EXTRACT OF SRI LANKAN *FICUS RACEMOSA* IN RATS

W. D. RATNASOORIYA,\* J. R. A. C. JAYAKODY and T. NADARAJAH

Department of Zoology, University of Colombo, Colombo-03, Sri Lanka

(Received: June 24, 2002; accepted: November 5, 2002)

The decoction (D) of the bark of *Ficus racemosa* Linn (Family: Moraceae) is claimed as an antidiuretic by some Sri Lankan traditional practitioners. However, the validity of this claim has not been scientifically proven or refuted. The aim of this study was to evaluate the antidiuretic potential of D of the bark of *F. racemosa* (made as specified in traditional use) in rats using three doses (250, 500 or 1000 mg/kg) following oral administration. The reference drug used was ADH. The results demonstrated both the low- and high-doses of D and ADH significantly impaired the total urine output. The D-induced antidiuresis had a rapid onset (within 1 h), peaked at 3 h and lasted throughout the study period (5 h). However, antidiuretic potential of D was about 50% lower than that of ADH. The D was well tolerated even with sub-chronic administration. The D caused a reduction in urinary Na<sup>+</sup> level and Na<sup>+</sup>/K<sup>+</sup> ratio, and an increase in urinary osmolarity indicating multiple mechanisms of action. The results provide scientific support for its claimed antidiuretic action and deserve intensive scrutiny.

*Keywords:* *Ficus racemosa* – antidiuresis – antidiuretic – traditional medicine – Sri Lanka

## INTRODUCTION

In the allopathic system of medicine a need exists for novel, orally active, potent and selective antidiuretics to be used in the treatment of pituitary diabetes insipidus, nephrogenic diabetes insipidus, polyuria, nocturia or bed-wetting. Currently, only five drugs are available as antidiuretics: vasopressin or ADH and its analogue lypressin or desmopressin, thiazide related diuretic chlortalidone, sulphonylureal hypoglycaemic agent chlorpropamide and antiepileptic carbamazepine of which only the first two are specific [1]. The situation is not better with traditional medicine where several plants are claimed to possess antidiuretic properties [8] but rarely affirmed by scientific experimentation. In this regard, we recently demonstrated potent antidiuretic effect of *Scoparia dulcis* Linn (Family: Scrophulariales) in rats [5], an herb that is recommended by some traditional physicians of Sri Lanka to reduce urine output.

\* Corresponding author; e-mail: wdratna@webmail.cmb.ac.lk