

RESEARCH ARTICLE

# ANTIOXIDANT AND THROMBOLYTIC ACTIVITY OF CHLOROFORM EXTRACT OF *BACOPA MONNIERA* (L.)

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**The present study was designed to investigate antioxidant and thrombolytic properties of chloroform extract of *Bacopa monniera* (L.), along with phytochemical study for the presence of chemical constituents. Antioxidant potential was evaluated using DPPH (2, 2-diphenyl-1-picrylhydrazyl) radical scavenging assays. In DPPH scavenging method, scavenging of DPPH was observed in different concentrations (20, 40, 60, 80, 100, 200, 400, 800 µg/ml). Plant extract found to demonstrate significant scavenging activity. Chloroform extract of *Bacopa monniera* (L.) showed significant clot lytic properties in different blood samples. The mean percent clot lytic activity of chloroform plant extract of *Bacopa monniera* (L.) was found to be 48.39%.**

**Key words:** *Bacopa monniera* (L.), DPPH scavenging method, antioxidant potential, clot lytic activity.

## INTRODUCTION

Different approaches to drug discovery from plants can be enumerated like random selection followed by chemical screening, random selection followed by one or more biological assays, follow-up of biological activity reports, follow-up of ethnomedical (traditional medicine) use of plants, use of appropriate plant parts as such in powdered form or preparation of enriched/standardized extracts (herbal product development), use of a plant product, biologically potent, as a lead for further chemistry, and single new compounds as drugs (Samuelsson, 1999).

The future of plants as sources of medicinal agents for use in investigation, prevention, and treatment of diseases is very promising (Sofowora, 1982). The objective of the later approach is the targeted isolation of new bioactive plant products *i.e.* lead substances with novel structures and novel mechanisms of action.

Plants are well known for their medicinal value since years (Jain *et al* 2011; Dey *et al* 2012; Deb *et al* 2013; Arjariya and Nema, 2014). *Bacopa*

*monniera* (L.) (Family: Scrophulariaceae), also referred to as *Bacopa monnieri*, *Herpestis monniera*, water hyssop, and "Brahmi," has been used in the Ayurvedic system of medicine for centuries (Figure 1).



Fig. 1. *Bacopa monniera* (L.) leaves

Traditionally, it was used as a brain tonic to enhance memory development, learning, and concentration, and to provide relief to patients with anxiety or epileptic disorders. The plant has also been used in India and Pakistan as a cardiac