

Analysis of Total Proteins, Polysaccharides and Glycosaponins Contents of Orthosiphon stamineus Benth. In Spray and Freeze Dried Methanol: Water(1:1) extract and its Contribution to Cytotoxic and Antiangiogenic Activities.

M.J. Siddiqui, S. N. Hafizoh, Z. Ismail, H.B. Sahib, M.H.S. Helal, Majid A.M.S. Abdul

Department of Pharmaceutical Chemistry

ABSTRACT

Orthosiphon stamineus (OS), Benth, (Lamiaceae), popularly known as Java tea, is a useful traditional medicinal herb cultivated largely in Malaysia and in Indonesia. This study was conducted to investigate the primary metabolic contents, cytotoxicity and antiangiogenic activity of freeze dried and spray dried extracts of the OS methanol: water (1:1). Primary metabolic contents were evaluated for total proteins, total polysaccharides and glycosaponins ($P < 0.05$). Freeze dried extract showed high content of proteins and glycosaponins while contents of polysaccharides were high in spray dried extracts. Cytotoxicity was detected by MTT assay using MDA-MB-231 breast cancer cell line and anti angiogenesis assay was performed on rat aorta. Both extract showed moderate cytotoxic activity using extract in high and medium concentration. Freeze dried extract showed strong antiangiogenic activity while spray dried extract showed no activity. A significant change in total proteins of freeze dried extract may be the reason for strong antiangiogenic activity.

KEYWORDS

Antiangiogenesis . Proteins . Polysaccharides . Glycosaponins . Cytotoxicity . Orthosiphon stamineus

REFERENCES

2026 Phcog.Net - All rights reserved. Published on the JrnIXPress platform.