

Antioxidant and antitumor activity of chloroform extract of *Alangium salvifolium* flowers

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Abstract

The present study was designed to investigate the antioxidant and antitumor activities of *Alangium salviifolium* (AS) wang flowers. Antioxidant potential of the AS extract was evaluated *in vitro* by DPPH (1,1-diphenyl-2-picrylhydrazyl) scavenging assay and reducing power assay method. AS extract showed scavenging activity in all the methods with IC₅₀ value of 182.31 ± 0.31 µg/ml for DPPH assay method. In reducing power assay, AS extract also showed significant (p<0.001) activity. In addition, total phenolic and total antioxidant capacity were also determined. The antitumor effect of the flowers of AS against Ehrlich ascites carcinoma (EAC) in mice at the doses of 10 mg/kg body weight intraperitoneally. Significant (p<0.001) increases of survival times 32.4 ± 0.77 days for chloroform extract of the (10 mg/kg) treated tumor bearing mice were confirmed with respect to the control group (22 ± 0.12 days). From the result it was showed that the extract has significant antioxidant as well as antitumor activity.

Keywords: Antitumor, Ehrlich ascites carcinoma, *Alangium salviifolium*, Cancer

Introduction

Cancer is the abnormal growth of cells in our bodies that can lead to death. Cancer cells usually invade and destroy normal cells. These cells are born due to imbalance in the body and by correcting this imbalance, the cancer may be treated. Billions of dollars have been spent on cancer research and yet we do not understand exactly what cancer is. Free radical, one of the major cause for the conversion of normal cell to cancerous cells, are generated as a consequences of a number of endogenous metabolic processes involving redox