INCIDENCE, *Tumour Multiplicity*, AND EXPRESSION OF *p53* PROTEIN IN *Sprague dawley* STRAIN RAT MAMMAE AFTER INITIATION OF Dimethylbenz(a)antracene WITH *Gynura procumbens* TREATMENT

Jamilatul 'Athia Farikha

ABSTRACT

The aim of this experiment is to evaluate the inhibitory effect of ethanolic extract leaves of *Gynura procumbens* (Lour) Merr administrated at pre initiation period on 7,12- dimethylbenz(*a*)anthracene (DMBA) induced rat mammary carcinoma as Chemoprevention agent from natural substance. Fourty five female Sprague Dawley rats with the age of 40-60 day, were randomly divided into 5 treatment of 9. Treatment I, rats aged 54 day were given DMBA 20mg/kg BB (intragastric) twice a week for 5 weeks. Treatment II, rats were given DMBA and ethanolic extract leaves of *Gynura procumbens* with dose 300 mg/kg BB were given everyday during 7 weeks. Treatment III, same like 2nd treatment, these extracts with dose 750 mg/kg BB. Treatment IV, rats aged 40 day were given ethanolic extract leaves of *Gynura procumbens* with dose 300 mg/kg BB, everyday during 7 weeks. Treatment V, same as 4th group, these extracts with dose 750 mg/kg BB. Initiation with DMBA in all groups were started at 3 weeks of age. Palpation of mammary cancer was started at one week after the last DMBA treatment during 12 weeks to know about the tumour incidence and tumour multiplicity. Necropsy was performed at 12 weeks after last DMBA treatment has been terminated to be taken up their mammary gland for Immunohistochemistry staining microscopic examination to analyze the expression of *p53* protein. Result of this study demonstrated that etanolic extract leaves of *Gynura procumbens* could inhibit the development of DMBA-induced rat mammary cancer by reducing the tumour incidence, tumour multiplicity, and the level expression of *p53* protein as a blocking and suppressing agent. It can be concluded that etanolic extract leaves of *Gynura procumbens* are capable to delay the progression of mammary cancer, therefore it should be taken into account for chemopreventing agent in mammary cancer model.

Key words : mammary cancer, incidence, *tumour multiplicity*, *p53*, *Gynura procumbens*.