P21

The Effects of Gorgonian *Isis hippuris* Extract on Proliferative Activity and Histological Grading of Adenocarcinoma Mammae Cells in C3H Mice

Neni Susilaningsih[1], Retno Murwani[2], Agus Trianto[3], Widagdo[4], Adityas Purnianto[4], Anisatusholihah[4]

1Department of Histology, Faculty of Medicine; 2Laboratory of Nutritional Biochemistry, Faculty of Animal Science; 3Laboratory of Marine Biotechnology, Faculty of Fisheries and Marine Science; 4Faculty of Medicine; Diponegoro University, Semarang Indonesia

Breast cancer is the most frequent cancer among women worldwide. Gorgonian *Isis hippuris* is a marine organism which its secondary metabolites demonstrate anticancer activity *in vitro*. AgNOR count method, which represents proliferative activity and histological grading score was chosen to measure its anticancer activity. The aim of this study was to investigate the effects of *Isis hippuris* extract on adenocarcinoma mammae cells in C3H mice.

This experimental study used posttest only control group design. Twenty C3H mice were randomized into three treatment groups (T1, T2 and T3) which received 500 mg pellets containing 0.15, 1.5, and 15 mg *Isis hippuris* extract respectively. The control group (C) received no treatment. Mice were inoculated with adenocarcinoma mammae on the third week, and followed by the treatments for the next three weeks. Afterwards mice were terminated and operated to remove their tumors. AgNOR count method was performed on tumor sections using two parameters, mean of AgNOR (mAgNOR) and percentage of AgNOR (pAgNOR). Histological grading was determined based on *Elston and Ellis modification of the Scarff-Bloom-Richardson.*

Significant differences among four groups were found in mAgNOR ($p=.000$), pAgNOR ($p=.003$), and histological grading ($p=.008$). mAgNOR, pAgNOR, and histological grading of T1, T2 and T3 groups were significantly lower than C group ($p\leq.05$). mAgNOR and pAgNOR of T3 were also significantly lower than T1 and T2. No significant differences were found in mAgNOR and pAgNOR between T1 and T2 as well as in histological grading of all treatment groups ($p>.05$). This study provide evidence that Gorgonia *Isis hippuris* extracts can reduce proliferative activity and histological grading of adenocarcinoma mammae cells in C3H mice.

***Keywords**: Gorgonian Isis hippuris, proliferative activity, AgNOR count method, histological grading adenocarcinoma mammae, C3H mice.*