

## ABSTRACT

### THE STUDY OF SIGER RICE FROM WAXY CASSAVA CLONE ADMINISTRATION TO HISTOPATHOLOGY OF MAMMARY GLAND AND BLOOD CHEMICAL PROFILE OF MICE INDUCED BY 7,12- DIMETHYLBENZ(A)ANTHRACENE

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Breast cancer is one of the most common types of deadly disease suffered by women worldwide. Chemotherapy treatment has side effects by damaging the patient's healthy cells. Siger rice from *waxy* cassava clone is expected to be an alternative treatment for breast cancer patients. This study aimed to determine the effect of giving siger rice from *waxy* cassava clones on the histopathology of mammary gland and blood chemical profiles in DMBA-induced mice. The treatments were arranged in a Completely Randomized Design (CRD) with 6 replications and 4 treatments, there are K- (control + standard feed), K+ (DMBA + standard feed), BS (DMBA + siger rice feed), and BP (DMBA + IR-64 rice feed). Observation were made on histopathological description of mammary gland and blood chemical profile including the number of erythrocytes, leukocytes, hemoglobin, and hematocrit. The data were analyzed for homogeneity and additivity using the Barlett and the Tuckey test, then continued with the ANOVA and a 5% level of LSD test. The results showed that the administration of siger rice from *waxy* cassava clones to DMBA-induced mice caused a decrease in the degree of differentiation (*grade*) to well differentiated (*grade* 1) with the histopathological appearance of cancer cells similar to normal breast tissue, as well as a decrease in the number of erythrocytes (5,38 million/mm<sup>3</sup>), leukocytes (4,00 thousand/mm<sup>3</sup>), hemoglobin (9,25 g/dL) and hematocrit (30%).

Keyword: breast cancer, siger rice, mice, DMBA, histopathology, blood chemical profile.

## ABSTRAK

### **KAJIAN PEMBERIAN BERAS SIGER DARI KLON UBI KAYU WAXY TERHADAP GAMBARAN HISTOPATOLOGI KELENJAR MAMMAE DAN PROFIL KIMIA DARAH MENCIT YANG DIINDUKSI 7,12-DIMETHYLBENZ(A)ANTHRACENE**

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Kanker payudara merupakan salah satu jenis penyakit mematikan yang umumnya diderita oleh wanita di seluruh dunia. Pengobatan kemoterapi memberikan efek samping dengan merusak sel sehat penderita. Beras siger dari klon ubi kayu *waxy* diharapkan dapat menjadi alternatif pengobatan bagi penderita kanker payudara. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian beras siger dari klon ubi kayu *waxy* terhadap gambaran histopatologi kelenjar mammae dan profil kimia darah mencit yang diinduksi 7,12-dimethylbenz( $\alpha$ )anthracene (DMBA). Perlakuan disusun dalam Rancangan Acak Lengkap (RAL) dengan 6 ulangan dan 4 perlakuan, yaitu K- (kontrol + ransum standar), K+ (DMBA + ransum standar), BS (DMBA + ransum beras siger), dan BP (DMBA + ransum beras IR-64). Pengamatan dilakukan pada gambaran histopatologi kelenjar mammae dan profil kimia darah meliputi jumlah eritrosit, leukosit, hemoglobin, dan hematokrit. Data yang dihasilkan dianalisis untuk uji homogenitas dan aditivitas dengan uji Barlett dan Tuckey, kemudian dilanjutkan dengan ANOVA dan uji lanjut BNT taraf 5%. Hasil penelitian menunjukkan bahwa pemberian beras siger dari klon ubi kayu *waxy* pada mencit yang diinduksi DMBA menyebabkan penurunan derajat diferensiasi (*grade*) menjadi diferensiasi baik (*grade* 1) dengan gambaran histopatologi sel kanker mirip dengan jaringan payudara normal, jumlah eritrosit (5,38 juta/mm<sup>3</sup>), leukosit (4,00 ribu/mm<sup>3</sup>), hemoglobin (9,25 g/dL) dan hematokrit (30 %).

Kata kunci: kanker payudara, beras siger, mencit, DMBA, histopatologi, profil kimia darah.