

Pengaruh Sun-Chlorella terhadap Mikronukleasi Sel Darah Merah pada Fetus Tikus

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Abstrak

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Sun-chlorella yang belakangan ini gencar dipasarkan, merupakan tablet chlorella yang dibuat dari ganggang hijau air tawar dan dianjurkan untuk diberikan baik pada orang sehat (mulai dari anak-anak sampai manula) untuk menjaga kesehatan, maupun pada orang yang sedang mangidap penyakit kronis sebagai makanan kesehatan alamiah untuk mempercepat penyembuhan.

Produsen chlorella mengunggulkan produknya dengan menyatakan bahwa chlorella boleh dikatakan tidak mempunyai efek samping, namun belakangan ini ada satu laporan penelitian yang menyatakan bahwa chlorella bersifat toksik pada biakan cell line BHK (Baby Hamster Kidney).

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ABSTRACT

The Effect of Sun-Chlorella on the Micronucleation of Erythrocyte In Fetal Rat Sun-chlorella (tablets made of fresh water green algae) is vigorously launched on the market recently and recommended for healthy (from the children to the aged) individuals to promote health, as well as for individuals suffering from chronic diseases as natural healthy food supplement to promote recovery. Chlorella's producers advertised its product and claimed that chlorella has almost no side effect. However, recently a research on chlorella reported that it was toxic when added to the BHK. (baby hamster kidney) cell culture.

The aim of this eksperimental research is to know wether chlorella is toxic, by testing its mutagenicity on rats. We administered chlorella to pregnent rats and screened the erythrocyte of the fetuses to search for the increase of micronucleated erythrocyte. This is a rapid procedure to test the mutagenicity of a substance.

In this research we used 36 female rats, divided randomly to 4 groups, mated, and on day-14 of pregnancy was given: sunchlorella 0.8 mg/g body weight (group I), sun chlorella 5 mg/g body weight (group II), aquadest (group III), no treatment (group IV). From each group 3 rats were sacrificed after 30 hours, 3 others after 48 hours, and the rest after 54 hours. From each rat 2 fetuses were removed (1 from the left and 1 from the right horn of the uterus), the fetuses were dissected and 3 blood smears were made from each fetus. Blood smears were stained using Wright's stain, and per fetus 1000 erythrocyte were screened for micronucleus. Statistical analysis using I?tiruskal Wallis test reveals that the amount of micronucleated erythrocytes were significantly different between the 4 groups (P .0015). It can be concluded that the administration of Sun"chlorella to pregnant rats lowered the amount of micronucleated erythrocytes, and the decrease is greater in the groups given 10 times than in the groups given 100 times the dosis; So Sun chlorella might be beneficial to promote health, and non toxic if used appropriately.</i>