ABSTRACT

THE EFFECT OF ETHANOL EXTRACT MANGOSTEEN PEEL (GARCINIA MANGOSTANA L.) AGAINST LIVER HISTOPATHOLOGY OF WHITE MALE RATS (RATTUS NORVEGICUS) SPRAGUE DAWLEY STRAIN GIVEN EXPOSED TO MOBILE PHONE ELECTROMAGNETIC WAVES

By

Mohammad Syahrezki

The increasing of the use of handphone can cause increase of radiation. It is can increase the levels of free radicals or Reactive Oxygen Species (ROS) that can affect the structure of liver. Xanthone in mangosteen peel (Garcinia mangostana L) is antioxidant substance. This experiment aimed to acknowledge effect of ethanolic extract mangosteen peel toward histopatologic liver image restoration of white rats (Rattus norvegicus) Sprague dawley strain exposured to mobile phone electromagnetic waves.

This research is analitic experimental with post test only control group design.

This study used 33 white male rats Sprague dawley strain with the body weight in range of 200-300 gram which divided into 5 groups, there are control group 1 (K1) without any treatment, control group 2 (K2) given NaCl 0.9% and exposure to mobile phone electromagnetic waves, the treatment groups (P1), (P2), and (P3) given ethanolic extract mangosteen peel with multilevel dosage 50, 100, 200 mg/kgBW and given mobile phone electromagnetic waves for 3 hours in 28 day.

The result of this study shows mean level of hepatocyte damage with cloudy swelling degeneration K1=0; K2=1.6; P1=7.5; P2=8.5; P3=2. In Kruskall Wallis test with p= 0.001 (p<0.005). Statistic test continued using Mann Whitney test. The result are p between K1 vs K2= 0,174; K2 vs P1= 0,011; K2 vs P2= 0,009; K2 VS P3= 0,735. Conclusion of this study is that the administration of ethanolic extract mangosteen peel (Garcinia mangostana L.) have not been able to repair the image of histopathologic of white male rats (Rattus norvegicus) Sprague dawley strain’s liver exposure to mobile phone electromagnetic waves.

keyword: electromagnetic wave, liver, xanthone