**THE PROTECTIVE EFFECT OF THE COMBINATION OF ZINC AND TOMATOES (*Solanum lycopersicum L*) AGAINST LIVER HISTOLOGY OF *Rattus norvegicus* *Sprague dawley* EXPOSED BY ELECTROMAGNETIC HANDPHONE WAVES**

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**Abstract**

**Background**: Exposure of mobile phone elektromagnetic waves can cause oxidative stress that will lead to damage of cells hepar. Zinc and tomato have efficacy as antioxidant. This experiment is aimed to acknowledge the protective effect of the combination of zinc and tomato against liver histology of white rats *Sprague dawley* strain because of stress that is caused by electromagnetic handphone wave’s exposure.

**Methods:** This research is experimental that is using 25 rats which divided into 5 group. Control group 1 (K1) is only given eat and drink, control group 2 (K2) is induced by exposure to mobile phone, control group (P1), (P2), (P3) is given combination zinc and tomatoes with dose (P1): tomatoes 1,85g and zinc 0,54mg; (P2): tomatoes 3,7g and zinc 0,27mg; (P3): tomatoes 7,4g and zinc 0,135mg; and induced by exposure to mobile phone 2 hour/day during 35 days.

**Result:** The average of hepatocyte damage that who degenerate cloudy swelling in K1=0,4; K2=3,36; P1=1,2; P2=1,52; P3=1,8. Data is tasted by test *one way ANOVA* and the result are p=0,006 (p<0,05). Then, with *Post Hoc* test obtained p K1 vs K2= 0,003; K2 vs P1= 0,049; K2 vs P2= 0,140; K2 VS P3= 0,336.

**Conclusion:** The combination zinc and tomato can repair liver histology of white rats on P1.

**Keywords:** electromagnetic waves*,* hepar, tomatoes, zinc