

## ABSTRACT

### THE EFFECT OF ULTRAVIOLET-C LIGHT INTENSITY EXPOSURE IN CORNEAL MICE THICKNESS (*Mus musculus L.*)

by

ANISA SEPTA RINI

In humans, prolonged exposure of ultraviolet light causes acute and chronic health of the eyes, skin, brain, immune system and other organs. The aims of this study to determine the time intensity effect of ultraviolet-c light exposure on the corneal mice thickness (*Mus musculus L.*).

Exposure is derived from ultraviolet-C (UV-C) light. This study is an experimental research using 25 male mice that are exposed by ultraviolet - C light in distance of 1,5 meters. Control group (K) is not exposed, (P1) 30 minute exposed, (P2) 1 hour exposed, (P3) 2 hours exposed and (P4) 4 hours exposed for 14 days. After 15 days, the mice were terminated to take eyes organ. Then, made Hematoxylin Eosin preparations and observation the thickness of the corneal epithelial layer.

The result shows that thickness average of the corneal epithelial layer in group control:  $52.22 \pm 11.38$ , P1:  $33.06 \pm 8.94$  , P2:  $32.04 \pm 9.33$  , P3:  $30.67 \pm 3.42$  and P4:  $25.69 \pm 7.12$ . *One way ANOVA* test results,  $p < 0.05$  , meaning that there are significant differences between two groups. The conclusion that increasing of exposure by UV-C light directly proportional to corneal damage. So, exposure by UV-C light has an influence on corneal thickness of male mice (*Mus musculus L.*).

Keyword : Thickness of the cornea, epithelial layer, ultraviolet-C light, male mice