

**THE EFFECT OF GREEN TEA ETHANOL EXTRACT  
ADMINISTRATION ON THE NUMBER OF SERTOLI CELL AND  
EPITHELIUM THICKNESS OF SEMINIFEROUS TUBULES IN  
MICE (*Mus musculus*) EXPOSED TO 2,3,7,8-  
TETRACHLORODIBENZO-P-DIOXIN (TCDD)**

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**ABSTRACT**

The purpose of this research was to determine the effect of green tea ethanol extract on the number of sertoli cells and epithelium thickness of seminiferous tubules. This is an experimental research with simple randomized design. 25 male mice (*Mus musculus*) strain Balb/C with average weight around 25 gram were used in this research. Mice were divided into 5 group of treatment (5 mice each group) treated with combination of TCDD and ethanol extract of green tea which designated like this: (K-) 0 mg/KgBB/day dan 0 µg/KgBw, (K +) EGCG 1,2 mg/KgBw/day and 7 µg/KgBw, (P1) 1 mg/KgBw/day and 7 µg/KgBB, (P2) 2 mg/KgBw/day and 7 µg/KgBw, and (P3) 4 mg/KgBB/day and 7 µg/KgBw. TCDD were injected intraperitoneal with sigle dose and green tea ethanol extract were given orally for 53 days. Histopathology slides of testis were made with HE staining and continue with the calculation of sertoli cell number and seminiferous tubule width. The data were analyzed using *One Way* ANOVA and continue with Duncan test ( $p < 0.05$ ). The result of the research showed P3 which given green tea ethanol extract 4 mg/KgBw/day is the most effective in maintaining the number of sertoli cell ( $28,76 \pm 2,24$ ;  $p < 0,05$ ) and epithelium thickness of seminiferous tubules ( $22,11 \pm 0,49$ ;  $p < 0,05$ ) because the result showed nearly to K(-) group which given aquades 0.1 ml per day where the number of sertoli cell ( $32,16 \pm 2,22$ ;  $p < 0,05$ ) and epithelium thickness of seminiferous tubules ( $24,39 \pm 1,83$ ;  $p < 0,05$ ). Giving ethanol extract of green tea leaves to mice exposed to TCDD can maintain the number of Sertoli cells and epithelium thickness because green tea extract has antioxidant efficacy in repairing damage to male reproductive organs due to oxidative stress.

**Key word** : Green tea, mice (*Mus musculus*), sertoli cells, epithelium thickness of seminiferous tubules, TCDD