

**EFFECT OF GREEN TEA (*Camellia sinensis*) ETHANOL EXTRACT  
ADMINISTRATION ON THE NUMBER OF SPERMATOGENIC  
CELLS OF MALE MICE (*Mus musculus*) EXPOSED TO 2,3,7,8-  
TETRACHLORODIBENZO-P-DIOXIN**

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Abstract

One of the cause of infertility in male reproduction is contamination of hazard chemical. 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) is known as most toxic chemical which can impair the reproductive system and cause low count of spermatogenic cells. The purpose of this study is to know the effect of green tea (*Camellia sinensis*) ethanol extract on the number of spermatogenic cells of male mice (*Mus musculus*) exposed to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin. This research used 25 male mice which divided into 5 groups of treatment i.e C(-) which received aquadest only, C(+). T(1), T(2), and T(3) which injected with TCDD 0,14 µg per mice and continued with the treatment. C(+) treated with Epigallocatechin gallate (EGCG) 1,2 mg/kg BW, T1 treated with green tea ethanol extract 1 mg/kg BW, T2 treated with green tea ethanol extract 2 mg/kg BW and T(3) treated with green tea ethanol extract 4 mg/kg BW for 53 days. After that the mice sacrificed and the testis were taken for making histopathology slides using HE staining. The results showed that there are significant difference ( $P < 0.05$ ) of spermatogenic cells among the treatment group where T(1) with a mean of  $100.68 \pm 1.91$ , T(2) with a mean of  $136.32 \pm 2.33$  and T(3) group with an average of  $166.84 \pm 3.40$ . Between T(3) and C(-) showed there are no significant difference between where the average of group C(-) is  $169.72 \pm 2.67$ . There were significant differences between groups C(+) with a mean of  $93.88 \pm 3.12$ ; compared to all treatment groups.. The conclusion is green tea ethanol extract could maintain the number of spermatogenic cells.

**Keyword:** Green tea ethanol extract, Spermatogenic cells, TCDD