

**THE EFFECT OF POMEGRANATE FRUIT EXTRACT (*Punica granatum L.*) STANDARDIZED 40% *Ellagic acid* AGAINST HISTOPATHOLOGY PICTURE OF DIAMETER AND THICK EPITHELIAL TUBULES SEMINIFEROUS WHITE RAT (*Rattus norvegicus*) WHICH ARE EXPOSED TO HEAT**

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**ABSTRACT**

This study aimed to determine the effect of pomegranate extract (*Punica granatum L.*) Standardized to 40% *ellagic acid* against histopathological picture diameter and thickness of the seminiferous tubule epithelium white rat (*Rattus norvegicus*) *wistar* strain were exposed to heat. This study used 25 rats 7-8 months old as experimental animals were randomly divided into 5 treatment groups. Rat in the negative control group not treated, solvent control group were given CMC Na 0,5% and it exposed to heat, the treatment groups 1, 2, and 3 induced pomegranate extract standardized to 40% *ellagic acid* at a dose of 75mg/kgBB, 150mg/kgBB and 300mg/kgBB and exposed to heat. At the end of the study take the right testes, then the testes made preparations with *Hematoxylin eosin* staining. Based on statistical data analysis, it shows significant difference between the lowest and highest a dose of  $p < 0,05$ , with the most significant different treatment group induced pomegranate extract standardized to 40% *ellagic acid* at a dose of 75mg/kgBB and exposed to heat and treatment group induced pomegranate extract standardized to 40% *ellagic acid* at a dose of 300mg/kgBB and exposed to heat. In conclusion, the optimal dose of pomegranate extract standardized to 40% *ellagic acid* in supporting increase of fertility is a dose of 300mg/kgBB.

*Keywords:* Pomegranate extract, diameter, epithelial thickness, seminiferous tubule