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PENGARUH PEMBERIAN PENTAGAMAVUNON-0 PADA AKTIVITAS GLUTATION-S-TRANSFERASE PADA HATI TIKUS SECARA *IN VIVO*

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ABSTRACT

Glutathione S-transferase is amount of enzymes catalyze conjugation reac-tion of glutathione (GSH) with electrofilic endogen compound or electrofilic xenobiotic. At the particular cancer there is increasing GST, especially on *mu* and *phi* class that it cause therapy on cancer cell by citostatic drug (commonly as electrofilic compound) not effectively. Pentagamavunon-0 (PGV-0) is anti-inflammation compound. Base on *in vivo* research denoted this compound has five times strengthened than curcumin to inhibit GST enzyme activity. But using PGV-0 by *in vivo* to GST activity never report or publish yet.

This research was done by measuring isolated GST enzyme activity from rat liver was given *in vivo* PGV-0, with nine groups treatment. Each group consist of control group without treatment, control group CMC-Na 0.5 % per oral and intraperitoneal DMSO, group with doses treatment of PGV-0 20, 40, 80 and 160 mg/Kg BB per oral, rat group was given benzo(*a*)pirene (BP) 1 mg/Kg BB i.p. and group was given BP 1 mg/Kg BB i. p. and PGV-0 80 mg/Kg BB per oral. GST enzyme activity is measured from reaction of conjugate GSH and DCNB that it's absorption/minute. Base on rate (absorption/minute) GST enzyme activity can be accounted. Then inhibition percentage can be accounted from each rat treatment compared with control without treatment and solvent control. Analyze use statistic test (*Kruskal-Wallis* then continued by *Mann-Whitney* test), to know specific different of GST class *mu* enzyme activity in rat liver at each treatments group.

Result research denoted that PGV-0 give inhibition effect to GST class *mu* activity of rat liver by *in vivo*. Doses level did not give proportional result to GST class *mu* activity of rat liver. Doses level of PGV-0 give optimum result to GST class *mu* activity of rat liver inhibition at 80 mg/Kg BB with inhibition value 19,99 % compared with CMC-Na as solvent.

Key word: pentagamavunon-0, in vivo, glutathione S-transferase, inhibition