

PRODUCTION OF NATURAL ESTROGEN HORMONE FROM GOAT LIVER CELL IN VITRO CULTURE

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ABSTRACT

The research was about goat liver cell in vitro culture. The aim of this research was to know that estrogen hormone concentration can be produced from the in vitro cell culture of goat liver and maximum production of goat liver cell based on the concentration of estrogen hormone day third, sixth, nine and twelve incubation time period during cultured. Monolayer cell culture were obtained from goat liver that had been homogenized, trypsinated and sentrifugated. Afterward 100 μ l pellet being cultured into 100 μ l Tissue Culture Medium 199 (TCM 199) with the addition of Foetal Calf Serum (FCS), Pregnant Mare Serum Gonadotropin (PMSG) and antibiotic in the temperature 38 °C, pressure CO₂ 5%, and humidity 5-99 %, and covered with mineral oil. Cell product harvested after three, six, nine, and twelve day of incubation. The data was analyzed using Anava and followed with Duncan's multiple range test on signification level 5 % showed the real difference. The highest average estrogen concentration (108.27^a μ g/ml \pm 12.01) from liver cell produced after six day incubation (P2) and the lowest average estrogen concentration (65.02^b μ g/ml \pm 24.16) produced after twelve day incubation (P4).

Keywords : estrogen hormone, goat liver cell, in vitro culture.