



Effect of Purified Bioactive Compounds for *Streptomyces griseus* on Proliferation Lymphocyte *in Vitro*

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Abstract: This study employed local *Streptomyces griseus* isolates capable of producing novel bioactive compounds (Fredericamycin), as well as investigating their biological activity on normal human blood lymphocytes cultured. The characteristics *Streptomyces griseus* strain has been recorded based on culture morphology of aerial mycelium colors which was pale yellow on ISP2 media at 28°C for 7-14 days and the biochemical tests. The extraction method to obtain the bioactive compounds from the isolated *S. griseus* was employed by running about 500 ml ISP2 medium broth of *Streptomyces griseus* to get the extra and intra cellular production. The pH of the broth was adjusted to 2.0 with dilute sulfuric acid and left at 4°C for 96 hours. The lysate was filtered and the filtrate was transferred to reparatory fennel for extract the secondary metabolites yields with ethyl acetate. The acetate layers were collected and evaporated to dryness then to be subjected for purification of bioactive compounds by preparative TLC. The solvent system was ethyl acetate: methanol: water (10:1.5:1) on silica gel plates. Two major compounds were obtained named as (E1 and E2) which represented the purified components from the isolated local strain. The proliferative cultured lymphocytes by MTT assay after treated with purified active substance (E1 and E2) provided same results for both compounds. However; the E2 give low proliferation when cultured lymphocytes with higher concentration of 500 µg/ml.

Keywords: *Streptomyces griseus*, Fredericamycin, Lymphocyte
