Abstract

In this study, 65 soil samples from underneath identified plants were collected upsfeam along the Melalap river. One hundred and thirty-six actinomycetes and ten microflrngi were isolated using selective isolation methods. These pure isolates were cultured aerobically for secondary metabolite production. They were screened for inhibitors against three yeast-based molecular targeted screenings: protein phosphatase 1 (PPI), glycogen syrthase kinas&euro; 3p (GSK-39), Ras/ Raf-I protein-protein interaction, aad two Mycob acterium-based screening systems: isocitrate lyase (ICL) of the glyoxylate pathway and PhoP-PhoR two component signal transduction system. Three extracts (H11329, H1337 andH1402) were toxic to yeast in Ras/Raf-I screening, nine extracts were toxic to yeast in PPI screening (H11293, H11298, H11300, H11301, Ht 1302, H11304, H11307, H11339 and H11402). One actinomycete strain H11299 showed weak inhibition to PP I . Two extacts (H 1 1 329 and H1 1 3 64) showed weak inhibitory activify and ttree extracts (H11339, H11337, H11402) showed toxicity in the GSK-39 yeast screening. Five extracts (H11310, H11317, H11337, H11346 and H11383) showed toxic effect in the ICL screening system, and one extract (H11392) possibly showed weak inhibition to the PhoP-PhoR two component system. It is interesting that H1 1383 has th&euro; same inhibition characteristic as H7763, a presumptive ICL inhibitor with a wide partial inhibition zone on acetate plate (Dain, 2003).