Research Title: The role of phospholipids in Actinomycetes bacteria from mangrove forest in Chonburi province

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ABSTRACT

Gram-positive, soil dwelling actinobacteria has been receiving more attention since actinomycetes displays a complex secondary metabolites and clinically useful antibiotics. Seventy four strains were isolated from mangrove forest soil samples of Mangrove Forest Natural Education Centre, Khlongtamrhu, Muang district Chonburi province, Thailand and classified using the morphological and cultural characteristics. This study were examined a culturing optimization, the rate of growth and their phospholipids. The cultivation were grown in ISP2 media (control), 3MA media supplemented with D-Mannitol as a carbon source and RASS media supplemented with arginine as a nitrogen source. The cultural conditions were 230 rpm at 30 °C. 15 of 19 isolates in 3MA more likely grew better than ISP2. There are only three isolates in ISP2 grew higher and one isolates were able to grow in both media similarly. And 12 isolates in ISP2 more likely grew better than RASS. However, the growth of actinomycetes in all of media are hardly no different. Further study was carried out on the involvement of phospholipids in the development of actinomycetes by thin layer chromatography (TLC). A phosphorus-containing lipids identified with an ammonium molybdate spray profile of mid-log phase cultures to aid identification of PG, PE and CL.

Keywords: Actinomycetes, Phospholipids, Mangrove forest soil, ISP2, 3MA, RASS