# บทคัดย่อภาษาอังกฤษ

The opportunistic pathogen infections are a serious public health problem especially in the area where large numbers of people are in close localization. Many strains of opportunistic pathogens are found to be resist to antimicrobial drugs. Thus, there is the need for the search of new potent antibiotic agents, particularly against drug resistant strains.

Some bacterial species isolated from soil has been found to produce antibiotics especially in the group of Actinobacteria. Almost 80% of commercially and medically useful antibiotics are produced from soil bacteria belonging to the genera *Streptomyces* and *Micromonospora*. The present study attempts to isolate the antibiotics producing bacterial strains from soil in Suranaree University of Technology.

Twelve antibiotic producing strains isolated from soil in Suranaree University of Technology were belonged to Actimonycetes family. They produced antimicrobial agents which were active against tested opportunistic pathogens. Based on 16s rRNA genes analysis, these strains were close affiliated with the genus *Streptomyces* (11 isolates) and *Nonomuraea* (1 isolate). Most of soil isolate strains showed narrow antimicrobial spectrum activities; however, two isolates named PJ36 and PJ95 exhibited the broad antimicrobial spectrum against Gram–positive bacteria, Gram–negative bacteria and yeasts. Phylogenetic tree analysis of 16S rDNA reveals that soil isolate PJ33, PJ75, PJ90, PJ95 and PJ107 strains are not cluster with others strain of *Streptpmyces* from GenBank database. They are represent a distinct phyletic line which could be suggested a novel strains. The study of these soil isolates could lead to the development of new potent antimicrobial drugs.

**Keywords:** Soil bacteria, Antibiotics, Actinobacteria, Actinomycetes