

Thesis Title Differentiation of *Mycobacterium* species by
restriction enzyme analysis of amplified
16S-23S ribosomal DNA spacer sequences

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ABSTRACT

Mycobacterium species are a group of medically important bacteria, which are major causes of morbidity and mortality around the world, especially since the spread of the human immunodeficiency virus (HIV) world wide. In Thailand, tuberculosis is still the leading cause of death among infectious diseases. Some species of *Mycobacterium* are always resistant to most antituberculous drugs and the effective treatment depends on each species. Therefore identification of mycobacteria to the species level is important. In general, the differentiation of *Mycobacterium* species is done by time-consuming biochemical tests. Recently molecular techniques such as the polymerase chain reaction (PCR) has been developed in several microbiological laboratories for the rapid differentiation of mycobacterial species.

This study aimed to develop the PCR technique to differentiate *Mycobacterium* species by amplifying the spacer sequences between 16S rDNA and 23S rDNA gene which has been shown to be species-specific in