ANTITUBERCULOUS ACTIVITIES AND CHEMICAL INVESTIGATION OF MYANMAR TRADITIONAL MEDICINE USED FOR THE TREATMENT OF TUBERCULOSIS

Ph.D. DISSERTATION

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Myanmar traditional medicine containing Badegawgyi (*Alpinia galanga* Walld), Kun (*Piper betle* Linn) and Myetmounyin (*Cyperus rotundus* Linn) used for the treatment of tuberculosis was analysed. The traditional medicine and its individual constituents were successively extracted with solvents of different polarity. These different crude extracts were screened for the antibacterial activities employing 29 species of bacteria by utilizing agar disk diffusion method. The medicine and its individual constituents indicated antibacterial activities. The antituberculous activities of these different crude extracts were also determined by Ogawa Method (or) Absolute Concentration Method. The pet ether extract and essential oil of the medicine and that of *A. galanga* showed antituberculous activities. Their Minimum Inhibitory Concentrations (MIC) were determined. Eugenol (0.02%) and α Terpineol (0.01%) were isolated from the essential oil of *A. galanga* by column and thin layer chromatographic methods and identified by UV, FTIR, $^1$HNMR, $^{13}$CNMR, $^1$H-$^1$H COSY, $^{13}$C-$^1$H COSY, GCMS and EIMS spectroscopic methods. These compounds were then tested for antituberculous activities with sensitive strains and resistant strains of *Mycobacterium tuberculosis*. They indicated the antituberculous or antimycobacterial activities.