

ABSTRACT

Tuberculosis is one of the major infectious diseases afflicting an increasingly growing population in the developing world including India. Emergence of Multi Drug Resistant (MDR) and Extensively Drug Resistant (XDR) strains of *Mycobacterium tuberculosis* has led to the requirement of new anti-tuberculosis drugs. Plants provide a vast range of bioactive compounds that are found to possess antibacterial activity. In the present study two traditionally used medicinal plants of North East India were screened for their antimycobacterial activity. Our preliminary study reveals that the two medicinal plants screened possess potent antimycobacterial activity. The plant extracts have exhibited growth inhibitory activity against the *Mycobacterium smegmatis* (ATCC 14468) as evident from Agar Well Diffusion Assay.

Morphological changes like shrinkage and wrinkling of the bacterial cell wall induced by the MIC value of the ethanol and methanol extracts of root has been observed by Scanning Electron Microscopy.

Antioxidant and phytochemical characterization of the extracts of were also performed. Significant antioxidant activity was observed. Hemolysis assay was performed to study the effect of the extracts on the eukaryotic cell membrane. The two plant extracts did not exhibit cytotoxicity when tested against goat PBMCs and RAE264.7 cell line.