ABSTRACT

The present doctoral thesis deals with the phytochemical and bioactivity studies of *Agrostistachys borneensis* Becc. and *Naravelia zeylanica*. The medicinal importance of these two plants prompted us to take up the present research study.

The phytochemical screening of the extracts of the chosen plants indicated the presence of alkaloids, lactones, terpenoids, phenolics, tannins, flavonoids and anthraquinones. The GC-MS analysis of the plant extracts has revealed the presence of different types of phytoconstituents. The phytochemical compounds were isolated and characterized by chemical and spectral studies. They are listed here: 1-methoxyanthracene-9, 10-dione; (2Z)-5-(1-hydroxy-3,6,6-trimethyl-4-oxocyclohex-2-en-1-yl)-3-methylpent-2-enoic acid; 5-hydroxy-6-methoxy-2-(3,4, 5-trihydroxyphenyl)-4H-chromen-4-one; 3-ethenyl-4-hydroxy-5-\{3, 4, 5-trihydroxy-6-(hydroxymethyl)tetrahydro-2H-pyran-2-yl\}oxy\}benzoic acid; 5-\{3,4,5-trihydroxy-6-(hydroxymethyl) tetrahydro-2H-pyran-2-yl\}oxy\}methyl dihydrofuran-2(3H)-one; 4-(prop-1-en-2-yl) benzene-1, 2-diol; 8-hydroxy-2(4-hydroxy-5methoxyphenyl)-7-(tetrahydro-3,4,5-trihydroxy-6-(hydroxymethyl)-2H-pyran-2yloxy)-4H-chromen-4-one; (7-methoxy -3-methylquinolin-5-yl) methanol and 1-(1H-indol-3-yl)ethanone. The anatomical studies of both the plants were performed for botanical identification. It was evident that the plants did belong to Euphorbiaceae and Ranunculaceae family. The antimicrobial activity was carried out by disc diffusion method for both the plant extracts. The plant extract showed a significant analgesic and anti-inflammatory activity at all tested dosage levels.