**ABSTRACT**

Medicinal plants are sources of important therapeutic aids for alleviating human ailments. The traditional use of medicinal plants leaf extract for diseases is quite common in developing countries like India. In a view to understand the scientific reason behind its medicinal value, an attempt is made in this study, to analyze major bioactive compounds present in the leaf extract from Wedelia chinensis (Osbeck) Merrill (Family Asteraceae) by GC-MS. The major chemical constituents are 2-Tridecanone (CAS) (4.51%), n-(methoxyphenylmethylene) carbamic acid ethyl ester (1.65%), and 9, 12, 15-Octadecatrienoic acid, methyl ester, (Z, Z, Z) (13.68%). The presence of some of these constituents in the plant extract provides the scientific evidences for the antimicrobial, anti-tumor, and antioxidant properties of the plant. Further study is required to find out the specific phytochemical which is responsible for its medicinal value.