Preface

The studies on phytochemistry, Antimicrobial activity and *in vitro* biological evaluation of *Leonotis nepetiifolia* (L.) R. Br., a potential medicinal plant revealed significant observations on the qualitative diversity among the secondary metabolites along with their antimicrobial and biological studies.

In developing countries, over 80% of population primarily depends on traditional medicine for their primary health needs according to the estimates of World Health Organization. In India, a majority of rural people is known to use medicinal herbs that grow in their surroundings, as they believe that traditional medicine as the best alternative out of the different health care systems that are in practice. In addition, the medicinal/aromatic plants are also important to support the rural folk who depend on these herbs either fully or partially for their livelihood, as they provide the raw material for textiles, fibers, cosmetics, fodder, fuel, non-wood products etc.

The different species of *Leonotis* contain tannins, quinines, resins, alkaloids and terpenoids, which are medicinally important. *L. nepetiifolia* (L.) R. Br., the test species chosen for present investigation, is a member of the family Lamiaceae (former Labiatae) is a weedy annual herb that is well naturalized in the tropical and subtropical climate all over the world including Southern Andhra Pradesh, normally growing along the road sides and in wastelands.

The different parts of *L. nepetiifolia* (roots, leaves, flowers and seeds) are rich in alkaloids, iridoid glycosides, dipterpenoids, flavonoids, tannins, and vitamins etc., which are therapeutically active in traditional medicine. The plant also use in many Ayurvedic herbal formulations normally used against common diseases. The plant
has antifungal, anticancerous, antimalarial, antipyretic, anthelminitic, antiparalytic, antitussive, febrifuge, tonic, hypotensive and abrotifacient properties.

The review of literature suggests that there is much more to be investigated to bring to light the potential use of different chemical constituents to understand the pharmacological properties of this under-exploited medicinal herb. Hence, this research work has been undertaken to explain the complete medicinal potential of *L. nepetiifolia*. 

* nepetiifolia.