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PHYTOCHEMICAL PROFILING & GC-MS/MS ANALYSIS OF LEAF EXTRACT OF *RICINUS COMMUNIS* L.

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ABSTRACT

Medicinal plants are of great importance to researchers in the field of pharmacology as most pharmaceutical industries depend on medicinal plant for their raw materials. *Ricinus communis* is a plant species belonging to the family Euphorbiaceae. The main aim of this study was to identify the bioactive components present in the acetone extract of leaves of *Ricinus communis* by qualitative & quantitative phytochemical screening and GC-MS/MS techniques. The shade dried plant material was powdered and extracted in acetone using soxhlet extraction method. Then the extracts were further subjected to Gas Chromatography GC-MS/MS analysis revealed the presence of 26 phytochemical components. The prevailing bioactive compounds present were 4H-Pyran-4-one, 2, 3-dihydro-3,5-dihydroxy-6-methyl- (RT-7.88), Tetradecanoic acid (RT- 15.43), Phytone (RT-16.33), n-Hexadecanoic acid (RT- 17.55), Ricinin (RT-18.42) & Octadecanoic acid (RT-19.80). Some of these compounds have anticancer, antioxidant and antimicrobial properties. The results of the present study suggest that the plant can be used as a valuable source in the field of herbal drug discovery. However further studies are needed to undertake its bioactivity and toxicity profile.

Keywords: Acetone extract, GC-MS/MS analysis, Phytochemical.

INTRODUCTION

Medicinal plants are essential to maintaining human health. Organic chemicals found in plant kingdoms are abundant and have been utilized for medical purposes for a long time. Numerous natural crude medications are used in traditional medicine and have the ability to treat a wide range of illnesses and diseases. Bioactive substances commonly referred to as secondary metabolites, phytochemicals are typically derived from plant sources. The indigenous people