

Comparative Study on Different Parts of *Murraya Konigii* for the Identification of Antimicrobial Profile of Defensins

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Abstract—Defensins are highly cationic proteins of 3-5 kDa in size which is formed by 20 to 40 amino acids. They contain 6 atoms of cysteine, which form a three disulfide-bonded secondary structure. The presence of sulfide bridges determines the antimicrobial properties of these peptides. Plants, and insects and animals produce a large variety of cationic peptides as a first line of defense. Defensins are found in plant species such as *Spinacea oleracea*, *Elaeis guineensis*, *Dhalia merckii*, *Arabidopsis halleri* etc and showed innate immune activity. Our study based on the *Murraya konigii* plant to find the efficacy of the antimicrobial action of defensins on gram positive and gram negative marker bacteria causing diseases in human. The past studies in our lab prove that *Murraya konigii* leaves contain defensins in the form of protein. The present study based on the comparative study on leaves, stem and roots of *Murraya konigii* to identify the part of the plant having maximum amount of defensin. These defensins could be used as a potential drug for the treatment of various pathogenic diseases without any side effects.