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ANTIMICROBIAL ACTIVITY SCREENING OF TRACHYCARPUS FORTUNEI (HOOK.) H. WENDL

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Abstract:

Rapidly increasing resistance seen in bacteria compared to the amount of antimicrobial agents discovered is one of the biggest predicaments surrounding human health nowadays. This crisis is mainly fueled by the misuse of antibiotics which in turn promotes antibiotic resistant organisms. In addition, our inability to match the speed of these organisms is an important factor. Our inability lies in the fact that it takes approximately 10-15 years and \$1 billion to develop a new drug. In the search of finding new antimicrobial agents, this study investigates a plant known as *Trachycarpus fortunei* (Hook.) H. Wendl. There are various factors to study plants but two of them stand out the most. The first factor is that plants can be found abundantly in nature thus making them the perfect specimens for research. Secondly, unlike other matter which inflicts damage on both human and pathogen cells, plants rarely cause severe damage to humans. In addition, plants exhibit crucial therapeutic features as can be seen from their involvement in both the old and the new medicinal practices. This study focuses on *T. fortunei* because it shows immense potential with its abundance and rich nutrient results from its buds. To determine *T. fortunei*'s antimicrobial properties disk diffusion method was used and *T. fortunei*'s ethanol extract was tested against 48 strains which include 3 *Candida* species. Disks that were impregnated with *T. fortunei*'s ethanol extract inhibited the growth of 14 bacteria strains including *Staphylococcus aureus* MRSA+MDR and 2 *Candida* species. The widest zones were seen in a clinically isolated *Candida glabrata*. Antimicrobial activity against this wide range of strains and its abundant nature shows that *T. fortunei* has great potential as an antimicrobial agent source.

Keywords: Antimicrobial activity, Disc Diffusion, *Trachycarpus fortunei* (Hook.) H. Wendl., Ethanol extract