Antimicrobial Activity of the Crude Extracts of *Withania somnifera*, *Ocimum sanctum* and *Phyllanthus emblica* In-Vitro

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ABSTRACT:

The aim of present study is to investigate the antimicrobial activity of *Withania somnifera*, *Ocimum sanctum* and *Phyllanthes emblica* extracts in order to use it as possible source for new antimicrobial substances against important human pathogens. Prior to the selection of all the above said 3 plants for the study of antimicrobial activity, the preliminary screening using different parts of 35 plant extracts was carried out in order to select the most effective plants showing maximum zone of inhibition against three bacteria (*Escherichia coli, Bacillus subtilis* and *Bacillus fusiformis*) and three fungi (*Candida albicans, Embellisia alli* and *Fusarium*). Among the 35 plants 3 plants were selected for further screening. The crude extracts of different parts (root, leaf and fruit) of *Withania somnifera*, *Ocimum sanctum* and *Phyllanthes emblica* were successively screened for their antimicrobial activity in-vitro against *E. coli, B. subtilis, B. fusiformis C. albicans Embellisia alli* and *Fusarium* by agar well diffusion assay. Serial dilution method was used to determine minimum inhibitory concentration (MIC). Ethyl acetate extracts of root of *W. somnifera* and leaf of *O. sanctum* and fruits of *P. emblica* showed highest activity against all the organisms tested. The demonstration of broad spectrum of *W. somnifera* and *P. emblica* may help to discover new chemical classes of antibiotic substances that could serve as selective agents for infectious disease chemotherapy and control.

Key words: Antimicrobial activity, *W. somnifera*, *O. sanctum*, *P. emblica*, and *B.subtilis.*