

June 21-22, 2018
Paris, FranceSamah Noor, Arch Clin Microbiol 2018 Volume: 9
DOI: 10.4172/1989-8436-C3-012

SCREENING OF SOME COMMONLY USED PLANT EXTRACTS FOR THEIR EFFECTS ON SOME GUT PATHOGENS AND PROBIOTICS

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Human gut is colonized by large number of bacteria which is mainly influenced by the plant extracts in the diet.

Material & Methods: In this study, 4 different plant materials, the leaves of *Camellia sinensis*, *Mentha piperita*, *Petroselinum crispum* and *Pimpinella anisum* seeds were collected and extracted with either hot water or methanol. The antimicrobial activity were determined using agar well diffusion method.

Results: All the extracts showed antibacterial activity against some common pathogens which were used as a control. The water and methanol extract of *Camellia sinensis* and the water extract of *Pimpinella anisum* and *Petroselinum crispum* showed significant lower antibacterial activity against all the tested probiotic bacteria *Lactobacillus* and *Bifidobacteria*. Minimum inhibitory concentration (MICs) values of the water extracts of the 4 tested plants were recorded for the test bacterial pathogens in addition to the tested probiotic bacteria. Concerning pathogenic bacteria, MIC was ranged from 50-250 µg/ml, 100-150 µg/ml, 150 µg/ml and 75-125 µg/ml for *Camellia sinensis*, *Pimpinella anisum*, *crispum*, respectively. Concerning the probiotics, the MIC of the 4 tested plants was greater than 250 µg/ml except for *L. plantarum*, where the MIC of *Camellia sinensis* was 250µg/ml. The presence of plant extracts slightly decrease the rate of growth *L. acidophilus* and the decrease was clear in case of *Camellia sinensis* > *Mentha piperita* > *Pimpinella anisum* > *Petroselinum crispum*

Biography

Samah Noor has completed MSc from University of Reading, UK and as Medical and Molecular Microbiologist Doctorate (PhD) from University of East Anglia, Norwich, UK. Presently, she is working as Associate Professor at King Abdulaziz University in Jeddah, Saudi Arabia. She has established a Microbial Research group with two main interests, Controlling Medical Microbial Infections, Human Microbiome and Human Health

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