

Study on Chemotactic Behavior of *Pseudomonas aeruginosa* in Present of Some Drug Plant Extracts

Mahsa Sharifian*¹; Majid Baserisalehi²; Nima Bahador¹

1- Department Microbiology, Science and Reserch Branch, Islamic Azad University, Fars, Iran

2- Department of Microbiology, Kazeroun Branch, Islamic Azad University, Kazeroun, Iran

mbaseri@kau.ac.ir

Background & Objectives: Chemotaxis is a phenomenon caused that the bacteria moves toward organic or non-organic chemical materials or be far away from them. It could be considered an important virulence factor for some motile bacteria. chemotactic behavior *Pseudomonas aeruginosa* probably is an important virulence factor for this bacterium. Hence the present study was undertaken to investigate on chemotactic behavior of *Pseudomonas aeruginosa* in present of water and hydro-alcoholic (70%) extracts of Shallot, Garlic and Querecus.

Methods: To perform this study effect of plant medical extracts on *Pseudomonas aeruginosa* were evaluated by well diffusion agar. Then minimal inhibitory concentrations (MICs) and Sub minimal concentrations (SICs) were determine for each extract. Eventually chemotactic behavior of *Pseudomonas aeruginosa* towards of attractant was evaluated in present of SIC of drug plant extracts using KB device.

Results: The results obtained from this study indicated that chemotactic behavior of *Pseudomonas aeruginosa* was ceased in present of alcohol extracts of Shallot, Garlic and Querecus.

Conclusion: Chemotactic behavior of bacteria could be considered as a special target for eliminating infection and drug plant extracts might be use as remedy for this purpose. In addition our finding illustrated that drug plant extracts such as Shallot, Garlic and Querecus could eliminated chemotactic behavior of *Pseudomonas aeruginosa* and therefore we can used these plants as prophylaxis of *Pseudomonas aeruginosa* infections.

Keywords: Chemotatic Behavior; *Pseudomonas aeruginosa*; Treatment