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The Effect of Sodium Azide on Swimming and Swarming Phenomena of *Proteus mirabilis*

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Abstract:This study aimed to detect the effect of sodium azide on swimming and swarming motility of *P. mirabilis*. A total of 450 mid-stream urine samples have been collected from patients with urinary tract infection whom admitted to the hospitals in Annajaf Al-Ashraf province for consultancy during the period from October 2015 to February 2016. The results showed that out of 150 bacterial isolates only 36 isolates were belong to *P. mirabilis* according to conventional methods (depending on microscopic and culturing examination as well as biochemical test) whereas molecular technique using *16SrRNA* gene by PCR technique confirmed that 29 isolates were belong to *P. mirabilis*. As a typical *P. mirabilis* all of bacterial isolates were able to swimming and swarming motility when cultured on semi-solid and solid media respectively. The addition of sodium azide with 0.005% and 0.01% concentrations cause inhibition of swimming and swarming phenomena.

Key words: *P. mirabilis*, *fumC*, swarming, mutation, pathogenicity.

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