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Virulence Factors of *Proteus mirabilis* Isolated from Urinary Tract Infection Patients

Harith Ahmed MUSTAFA[1], Marwa Tariq AHMED[2], Marwa Ahmed MERI[3,*]
& Mohammed Ahmed MUSTAFA[1]

[1] *Department of Pathological Analysis, College of Applied Sciences, University of Samarra, Samarra, Iraq*
[2] *Department of Microbiology, College of Medicine, University of Tikrit, Tikrit, Iraq*
[3] *Department of Medical Laboratory Techniques, Faculty of Medical and Health Techniques, University of lkafeel, Najaf, Iraq*

***SUMMARY. Proteus mirabilis* (PM) is a Gram-negative rod-shaped bacterium that is found in large numbers in the natural environment. It is most well-known for the swarming motility and urease activity that it possesses. Infections of the urinary tract that are complicated by PM are the primary cause of such infections. 130 isolated of pathological bacteria from urinary tract infections were collected to investigate the presence of P. mirabilis bacteria from Samarra General Hospital in the city of Samarra for different age groups and for both sexes for the period from October 26th 2021 to February 3rd 2022. The isolates were diagnosed based on phenotypic, cultural traits and some biochemical properties. Isolates were tested on 24 isolates of P. mirabilis bacteria for ten antibiotics. Where the results showed the sensitivity of *P. mirabilis* to the antibiotics amikacin, ciprofloxacin, imipenem, and nitrofurantoin 100%. *P. mirabilis* genes ureC and rsbA were detected using PCR assay. The results showed the presence of the gene by 100% in isolated bacteria.**

RESUMEN. Proteus mirabilis (PM) es una bacteria Gram-negativa en forma de bastón que se encuentra en grandes cantidades en el ambiente natural. Es más conocido por la motilidad enjambre y la actividad de ureasa que posee. Las infecciones del tracto urinario que se complican con PM son la causa principal de tales infecciones. Se recolectaron 130 aislados de bacterias patológicas de infecciones del tracto urinario para investigar la presencia de la bacteria P. mirabilis del Hospital General de Samarra en la ciudad de Samarra para diferentes grupos de edad y para ambos sexos para el período del 26 de octubre de 2021 al 3 de febrero de 2022. los aislamientos se diagnosticaron con base en rasgos fenotípicos, culturales y algunas propiedades bioquímicas. Los aislamientos se probaron en 24 aislamientos de la bacteria *P. mirabilis* para diez antibióticos. Donde los resultados mostraron la sensibilidad de *P. mirabilis* a los antibióticos amikacina, ciprofloxacina, imipenem y nitrofurantoína al 100%. Los genes ureC y rsbA de P. mirabilis se detectaron mediante un ensayo de PCR. Los resultados mostraron la presencia del gen en un 100% en bacterias aisladas.

KEY WORDS: Proteus mirabilis, rsbA, ureC, UTI.

* Author to whom correspondence should be addressed. *E-mail:* marwa.meri@alkafeel.edu.iq

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