

ORIGINAL ARTICLE

Molecular Epidemiology genes detection of *Klebsiella Pneumoniae* Clinical Isolates from the Adult Patients with Comorbidities in a in Baghdad hospitals

Nuha B. Kudaer¹, Mohsen Risan¹, Rasha Raheem³, Khalid Zainulabdeen², Israa Salman⁴, Nany Hairunisa⁵, Husnun Amalia⁶, Emad Yousif²✉

¹ College of Biotechnology, Al-Nahrain University, Baghdad, Iraq

² Department of Chemistry, College of Science, Al-Nahrain University, Baghdad, Iraq


³ Alkarkh Health Directorate, Baghdad, Iraq Department of Chemistry, Baghdad, Iraq

⁴ College of Science, Al-Nahrain University, Baghdad, Iraq

⁵ Department of Occupational Medicine, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia

⁶ Department of Ophthalmology, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia

✉ emad_yousif@hotmail.com

 <https://doi.org/10.56186/jbk.xxx>

ABSTRACT

Klebsiella species is one of the most worldwide opportunistic pathogens in the world that cause infections at multiple sites like lung, urinary tract, bloodstream, wound or surgical site, and brain. *Klebsiella pneumoniae* has many type of virulence factors that give the bacteria the ability to invade the host and cause infections. A total of (105) human clinical samples were collected from different patients with different cases. *Klebsiella pneumoniae* were isolated from 30 samples of 105, the bacteria were identified by biochemical tests and certified by using VITEK 2 system and genetically by amplify using PCR for 16 rRNA gene. One of the *Klebsiella pneumoniae* virulence factors is the capsule that is responsible for the macrophage resistance and its also responsible for serotype. so to confirm the strains isolated, PCR Gene detection of, *MagA*, *K2A*, *RmpA*, and *Kfu*, where (*magA*, *k2A*, *rmpA*, *kfu*) gens are responsible for capsule synthesis of *Klebsiella pneumoniae* have been done.

Keywords: *Klebsiella pneumoniae*; 16 rRNA; *MagA*; *K2A*; *RmpA*; *Kfu*; Capsule