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Antibacterial activity of raw honey versus simulated honey solution

Reham F El-Kased The British University in Egypt, Egypt

Raw honey and simulated honey samples were compared for their antibacterial activities against bacteria causing respiratory tract infections, namely *Klebsiella pneumonia, Staphylococcus aureus, Streptococcus pyogenes, Pseudomonas aeruginosa* and *Streptococcus pneumonia*, where over 50 million deaths worldwide are due to respiratory tract infections. The minimum inhibitory and minimum bactericidal concentrations of both samples were compared using different concentrations (25%, 75% and 100%). The maximum bacterial susceptibility was shown with the 75% raw honey sample and with the 100% simulated honey solution. This could be attributed to the high sugar content exerting high osmotic pressure in both samples. The isolated bacteria showed moderate susceptibility to 100% raw honey, while resistance appeared with 25% raw honey samples and 25% and 75% of simulated honey solutions. This indicates that the antibacterial activity of honey is due to the presence of specific antimicrobial components and not the osmotic pressure. This study shows the distinguished antibacterial activity of raw honey against the most common bacteria causing respiratory tract infections which makes it an ideal natural, non-toxic and cheap antibacterial agent which should be globalized.

Biography

Reham F. El-Kased studied Pharmacy at Cairo University, Egypt. In her subsequent work (MSc. & PhD) at Proteome Center Rostock, Rostock University, Germany, she studied Proteomics, protein-protein interactions & epitope mapping using modern mass spectrometry techniques. In September 2013, she joined The British University in Egypt (BUE) as a Lecturer at Faculty of Pharma.

reham.kased@bue.edu.eg

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