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BACTERIOPHAGE BIOCONTROL RESCUES MICE BACTEREMIC OF CLINICALLY ISOLATED MASTITIS FROM DAIRY COWS ASSOCIATED WITH METHICILLIN-RESISTANT *STAPHYLOCCOCUS AUREUS*

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Methicillin-Resistant *Staphylococcus Aureus* (MRSA) is among the most alarming pathogens affecting both humans and the global bovine industry. The current control measures in hospitals and on farms for MRSA have proven to be inadequate leaving a need for new rapid control methods to curb MRSA infections *in situ*. New control measures for bacterial infection are widely sought, with particular interest in the applications for bacteriophages (phages) as a biocontrol or therapeutic agent. The current study uses a wild highly lytic phage isolated from cow's milk taken from three farms in Baghdad, Iraq. The resulting phage was able to rescue 100% of the mice from a median lethal dose (LD50) or (1×10^8 CFU mL⁻¹ per mouse) for MRSA wild isolates achieved when the phage: bacteria ratio was 100:1. Even when treatment was delayed for 6 h post lethal infection, to the point where all mice were moribund, 80% of them were rescued by a single injection of this phage preparation. Based on the current results, a comprehensive study is needed to guide further research on the MRSA phage as a biocontrol for MRSA mastitis in dairy cows to replace or reduce the use of antibiotics in animal husbandry.

Biography

Artheer is microbiologist working in university of Baghdad, veterinary medical college and department of microbiology since seven years. He got a BSc in science College, University of Baghdad department of biology in 1984 and work in Al Mansur factory as a microbiologist for water treatment. Then he got an MSc in bacteriology In veterinary college and works as head of the department of bacteriology in Al Razee center for research and production diagnostic kits in ministry of industry and Materials. After that he got a PhD in virology from University of Almustanseria department of biology he started publishing his work in many journals.

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