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Antimicrobial activity of lactic acid bacteria isolated from camel raw and fermented (Garis) milk against pathogenic bacteria isolated from urinary tract infected patients, Sudan

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This was a cross-sectional study carried out to isolate, identify and test the antimicrobial activity of lactobacillus species against pathogenic bacteria. Three strains of Lactobacillus species (*Lactobacillus acidipiscis*, *Lactobacillus rhamanosus* and *Lactobacillus lactis* subsp. *hordinae*) were isolated from camel milk, and 30 bacterial species were isolated from urinary tract infected patients by using various cultured media. Strains isolated were characterized by phenotypic, physiological and biochemical properties. Identification of Lactobacilli species was confirmed by sequencing of 16S rRNA gene. Well diffusion method was used for antimicrobial activity of Lactobacillus species and commonly used antibiotic, against pathogenic bacteria. Results showed that *Escherichia coli* was the most frequently isolated urinary pathogen 9 (30%) followed by *Klebsiella pneumoniae* 8 (26.7%), *Enterococcus faecalis* 6 (20%), *Staphylococcus aureus* 5 (16.7%), *Pseudomonas aeruginosa* 1 (3.3%) and *Proteus mirabilis* 1 (3.3%). Most of the isolated organisms were resistant to co-trimoxazole 24 (80%), norfloxacin 12 (40%), ciprofloxacin, nitrofurantoin 10 (33.3%) and chloramphenicol 10%. Four (13.3%) isolates of pathogenic bacteria were susceptible to *Lactobacillus lactis* subsp. *hordinae* activity, followed by 2 (6.9%) isolates susceptible to *Lactobacillus rhamanosus* and 1 (3.3%) susceptible *Lactobacillus acidipiscis*, *Lactobacillus lactis* subsp. *hordinae* could be used for the treatment and prevention of multidrug resistant urinary tract infected bacteria.

Biography

Nahed Adam Abdalla Jebrel has completed her MA from National University of Sudan and BSc in Histopathology and Cytology from Sudan International University. She has published one paper in a reputed journal and has expertise in DNA sequencing and sequences analysis, NGS sequencing and data analysis, bioinformatics techniques (Modeling, Mutation analysis, immunoinformatics (BLAST and NCBI)), PCR technique and DNA sequencing and sequences analysis.

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