TITLE: IDENTIFICATION AND ANTIBIOTIC RESISTANCE PROFILE OF *Staphylococcus aureus* ISOLATED FROM MILK SAMPLES FROM EXPANSION TANKS IN CENTRAL-WEST PAULISTA

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ABSTRACT:

It is still believed for most of population that raw milk is more tasteful, healthy, nutritious and even has a lower price when compared to the industrialized one which has conservatives and chemicals that might affect the health of whom consume. These arguments are used by people who consume raw milk in several states of Brazil. However, raw milk and its derivates are a great source for the development of pathogenic and deteriorating microorganisms, due to this, the process of milking, improvement and storing must follow rigorous cares to avoid contamination. Among the various groups of bacteria that might be found in raw milk, *Staphylococcus aureus* is highlighted globally for being responsible for an elevated number of subclinical mastitis cases in herd of cattle, causing problems in pasteurized products due to the presence of toxins and to the antibiotic resistance. This study identified *S. aureus* in 56,9% (n=58) from the 102 samples of bovine milk from expansion tanks in properties localized in Central-West Paulista, by isolation in specific medium Baird-Parker followed by morphological and biochemical (Catalase, Manitol and Coagulase) tests for confirmation. It was positive identified as *S. aureus*, 76 isolated strains. The sensibility test in plate revealed a high profile of resistance before the 12 antibiotics tested. The results of oxacillin resistance were 38,2% (n=29). PCR was performed to investigate the presence of the *mecA* gene responsible for oxacillin resistance in *S. aureus* strains isolated from raw milk as part of the risk factor analysis. Verified the occurrence of *mecA* gene in 4% (n=3) of the 76 strains isolated from *S. aureus*. The results of this study demonstrate the importance of good practices of milking and manufacturing, besides the control of subclinical mastitis in herd of cattle and specialized orientation for the infection treatment, because, according to Food Safety, the presence of *S. aureus* in milk from expansion tanks might become a potential risk to the consumer health.

Keywords: antibiotic resistance, food safety, PCR

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