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## Drinking milk in Tanzania: An important reservoir and vector of enterotoxigenic, antibiotic resistant strains of *Staphylococcus aureus*

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In Tanzania pastoralists such as the Maasai and small urban farmers are responsible for the country's milk production, whereby 80% of the national milk is sold without regulation. This study set out the identification and typing of *Staphylococcus aureus* (SA) isolated throughout the milk chain in Tanzania. Samples were taken from production-level (pastoralists, urban farmers), collection-level (middlemen and depots), processors (dairies) and retailers (kiosks). Samples were analyzed for coagulase positive *staphylococci* and subsequently typed by enzymatic activities, enterotoxin production, lyses by phages, Pulse-field-gel electrophoreses and the resistance pattern to antibiotics. All in all 200 milk samples were collected in regions of Dar-es-Salaam and Lake Victoria, respectively. 37 of the 200 samples (18.5%) were identified as SA positive. 11 different biotypes were found and the predominant type accounted for 21.6% of all SA isolates (8/37). 32%, 43% and 92% of the isolates were  $\beta$ -hemolytic (12/37), egg yolk (16/37) and clumping factor positive (34/37). 54.1% (20/37) were positive for enterotoxin genes and 81.1% (30/37) of all strains were Penicillin resistant, further 37.8% of the strains were resistant to  $\geq 2$  antibiotics. 43% (16/37) of all strains were non-typeable by a set of 32 phages containing human, bovine and small ruminant phages. 43.2% (16/37) of the isolates were lysed by bovine phages. The most common phage types were type 81 (human, 15 isolates), 108 (bovine, 11 isolates) and type 117 and 111 (bovine, 7 isolates each). We can conclude that milk in Tanzania is an important reservoir and vector of enterotoxigenic, antibiotic resistant strains of *Staphylococcus aureus*.

## Biography

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