

Molecular Detection and Characterization of *Brucella* Species in Raw Informally Marketed Milk from Uganda

Tove Hoffman; Kim Rock; Denis Rwabiita Mugizi; Shaman Muradrasoli; Elisabeth Lindahl-Rajala; Joseph Erume; Ulf Magnusson (Professor); Åke Lundkvist (Professor) & Sofia Boqvist (Associate Professor)

DOI: 10.3402/iee.v6.32442

© 2016 Tove Hoffman et al.

Abstract

This study identified and characterized *Brucella* species in the informal milk chain in Uganda. A total of 324 cattle bulk milk samples were screened for the genus *Brucella* by real-time PCR with primers targeting the *bcsp31* gene and further characterized by the *omp25* gene. Of the samples tested, 6.5% were positive for *Brucella* species. In the *omp25* phylogeny, the study sequences were found to form a separate clade within the branch containing *B. abortus* sequences. The study shows that informally marketed cattle milk in Uganda is a likely risk factor for human brucellosis and confirms that *B. abortus* is present in the cattle population. This information is important for potential future control measures, such as vaccination of cattle.

Keywords: Africa; Brucellosis; Bulk Milk; Milk Delivery Chain; PCR; BCSP31; OMP25