8<sup>th</sup> Global Summit on

## **MICROBIOLOGY AND INFECTIOUS DISEASES**

February 22-23, 2018 | Paris, France

## Diversity of Mycobacterium tuberculosis complex from cattle lymph nodes, Eastern Cape Province

Nolwazi Londiwe Bhembe<sup>1</sup>, Uchechukwu U Nwodo<sup>1</sup>, Leonard V Mabinya<sup>1</sup>, Anthony I Okoh<sup>1</sup> and Ezekiel Green<sup>2</sup> <sup>1</sup>University of Fort Hare, South Africa <sup>2</sup>University of Johannesburg, South Africa

Tuberculosis (TB) remains the foremost health challenge in South Africa and is well investigated. However, investigations on the routes of transmission as well as circulating *Mycobacterium tuberculosis* complex (MTBC) strains from the Eastern Cape Province of South Africa are insufficient. This study delineated the diversity of MTBC isolates from cows' lymph nodes. A total of 162 MTBC isolates from cattle lymph nodes from two abattoirs were used in this study over a one-year period. Isolates were genotyped with spoligotyping and 12 MIRU-VNTR. The spoligotyping results were matched with isolates in the universal spoligotyping database (SITVIT2) and this current study identified 27 spoligotype patterns, 10 shared types assigned to five lineages with the East-Asian (Beijing) 17.9% predominant and East-Asian (Microti) and Latin-American-Mediterranean were the least detected with 0.6%. Spoligotyping showed a higher clustering rate of 82.1% with the lowest (HGDI)=0.485 and 12 MIRU-VNTR resulted in a clustering rate of 64.8%, showing a higher HGDI of 0.671. The combination of the methods resulted in (HGDI=0.676). The results of this study showed the diversity of MTBC strains in the Eastern Cape Province and a low clustering rate which was lower than expected, indicating continuing transmission in the province.

bhembelwez27@gmail.com