

## Genetic Diversity of Mycobacterium bovis and Its Zoonotic Potential in Ethiopia: A Systematic Review

**Authors :** Begna Tulu, Gobena Ameni

**Abstract :** Understanding the types of Mycobacterium bovis (*M. bovis*) strains circulating in a country and exploring its zoonotic potential has significant contribution in the effort to design control strategies. The main aim of this study was to review and compile the results of studies conducted on *M. bovis* genotyping and its zoonotic potential of *M. bovis* in Ethiopia. A systematic search and review of articles published on *M. bovis* strains in Ethiopia were made. PubMed and Google Scholar databases were considered for the search while the keywords used were 'Mycobacteria,' 'Mycobacterium bovis,' 'Bovine Tuberculosis' and 'Ethiopia.' Fourteen studies were considered in this review and a total of 31 distinct strains of *M. bovis* (N=211) were obtained; the most dominant strains were SB0133 (N=62, 29.4%), SB1176 (N=61, 28.9%), and followed by SB0134 and SB1476 each (N=18, 8.5%). The clustering rate of *M. bovis* strains was found to be 42.0%. On the other hand, 6 strains of *M. bovis* were reported from human namely; SB0665 (N=4), SB0303 (N=2), SB0982 (N=2), SB0133 (N=1), SB1176 (N=1), and 1 new strain. Similarly, a total of 8 strains (N=13) of *M. tuberculosis* bacteria were also identified from animal subjects; namely SIT149 (N=3), SIT1 (N=2), SIT1688 (n=2), SIT262 (N=2), SIT53 (N=1), SIT59 (N=1), and one new-Ethiopian strain. The result showed that the genetic diversity of *M. bovis* strains reported from Ethiopia are less diversified and highly clustered. And also the result underlines that there is an ongoing active transmission of *M. bovis* and *M. tuberculosis* between human and animals in Ethiopia because a significant number strains of both type of bacteria were reported from human and animals.

**Keywords :** mycobacterium bovis, Mycobacterium tuberculosis, zoonotic potential, genetic diversity, Ethiopia

**Conference Title :** ICVE 2019 : International Conference on Veterinary Epidemiology

**Conference Location :** Toronto, Canada

**Conference Dates :** July 18-19, 2019