

2nd International Conference on **Animal & Dairy Sciences**

September 15-17, 2014 Hyderabad International Convention Centre, India

Isolation and molecular identification of *Moraxella ovis* and *Moraxella* spp. from Infectious Keratoconjunctivitis in sheep in India

Rajesh Kumar Vaid, Taruna Anand, Bidhan Chandra Bera, Brihaspati Narayan Shukla, Dinesh Kumar Nagar, Gagandeep Singh, Nitin Virmani, Sanjay Barua, Birendra Kumar Singh and Raj Kumar Singh
National Research Centre on Equines, India

Infectious keratoconjunctivitis (IKC) is a disease of worldwide economic importance causing blepharospasm, corneal opacity and conjunctivitis in ruminants. Recovered animal may develop corneal opacity and blindness. Although, *Moraxella bovis* is the major cause of IKC in bovines, *Moraxella ovis* has been implicated in epizootics of IKC in sheep and goats worldwide. Isolation of *M. ovis* has been reported from both healthy sheep and those with IKC; however we confirm for the first time, isolation and molecular confirmation of *M. ovis* and *Moraxella* spp. isolates from IKC cases in sheep in India. Out of a free-ranging nomadic herd, six cases of IKC in sheep were randomly sampled. Conjunctival swabs for bacterial culture were plated on 5% Columbia blood agar and MacConkey agar. Out of twenty isolates 10 oxidase-positive isolates which showed microscopic morphology of Gram-negative cocci in pairs were biochemically processed. Three non-motile, nitrate positive, indole negative and non-saccharolytic isolates were identified as *Moraxella ovis*. Two isolates subjected to 16S rRNA PCR sequencing. Clones of 16S rRNA gene were sequenced to complete >1.5 kb, which was subjected to phylogenetic analysis. By RDB database analysis sequence showed a sequence similarity of 99.24% with *Moraxella ovis* ATCC33078, and formed a cluster with *M. ovis* strains, however the other isolate *Moraxella* spp. clustered close to *Moraxella boevei* DSM14165. The *M. ovis* isolate was resistant to penicillin and cloxacillin. Phenotypic, biochemical, molecular and phylogenetic evidence identified isolates as *M. ovis* and *Moraxella* spp. This isolate with first molecular confirmation of *M. ovis* isolation from sheep in India, and has been accessioned in VTCC repository.

Biography

Rajesh Kumar Vaid has completed his PhD at the age of 37 years from Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, Uttarakhand, in the area of Veterinary Public Health. He is appointed as Principal Scientist at Veterinary Type Culture Collection, Hisar, Haryana. He is working in the area of Veterinary Bacteriology with interest in Bacterial identification, culture collection and genomics related to bacteria and animal microbial biodiversity. He has published research articles in reputed journals.

rk_vaid@yahoo.com