

Bacteriology and Infectious Diseases

May 16-18, 2016 San Antonio, USA

Molecular characterization of *Staphylococci* isolated from retail mushrooms

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Neonatal calf diarrhea and subsequent mortality is one of the main economic losses associated to dairy industry particularly in developing countries like Pakistan. Among infectious agents, rotavirus is the major one. Fecal samples (n=200) from cattle and buffalocalves suffering from diarrhea (n=100 each) and of age <3 months were taken aseptically from dairy populated districts of Punjab province and processed for detection of rotavirus thorough commercially available ELISA kit. Out of 200 diarrheic fecal samples, a total of 12 samples; 5 cattle calves and 7 buffalo calves were found positive after processing. Among these, 3 cattle calves and 5 buffalo calves were from Lahore district while 2 cattle calves and 2 buffalo calves were from Faisalabad district. When the virus was switched to MDBK cell line a remarkable difference in the CPEs was observed and after 9 successive passages the titer of the virus was $1 \times 10^{8.5}$ TCID₅₀/ml. The onset of diarrhea was delayed and decrease in severity was observed in the calves that had been fed with colostrum that contained high concentrations of antibody to the bovine rotavirus. The average antibody titers in 25 cattle dams at 0, 14, 28 and 42 days post vaccination were 0%, 57%, 68% and 78% respectively. The average antibody titers in 25 buffalo dams at 0, 14, 28 and 42 days-post-vaccination were 0%, 55%, 70% and 82% respectively. These results indicate the protective maternal antibody level against rotavirus were developed which will be transferred passively to calves. The challenge study using same live rotavirus strain reveals protection among calves from vaccinated dams while calves from unvaccinated dams showed mild to severe diarrhea. The vaccine efficacy findings led to a strategy of vaccinating dams shortly before delivery, to boost levels of RV-specific antibody in colostrum. It is to be noted that the dose and timing are integral to the success of this mode of vaccination.

Biography

Ms. Nadia Mukhtar is a PhD candidate in Department of Microbiology at University of Veterinary and Animal Sciences of Lahore. Currently working as Instructor Microbiology at Virtual University of Pakistan. She has published more than 10 papers in reputed journals. She has won a Scientific Exchange Award as the part of AAAS BMENA Scientific Exchange Program, supported by a grant from the U.S. Department of State, 2013. She got a training on Metagenomic investigations of respiratory infections of Sheep at Harvil's Lab, PennState University, USA, 2014. She got a certificate from Universite de Lauzanne in a Pasteur International Workshop on Surveillance and Control of Rabies Phnom Penh, at Institute Pasteur Du Cambodia, 2015.

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