

# International Dairy Meet

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## Bovine leukemia virus in Chinese dairy and beef cattle

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In this study, we investigated the prevalence of bovine leukemia virus (BLV) infection in dairy and beef cattle at individual-level in 19 provinces of China, and the influence of BLV infections on complete blood counts, biochemical parameters and milk composition in cows. A fluorescence resonance energy transfer (FRET) quantitative PCR was established in this study to detect BLV proviral DNA and compared with a commercial CELISA against gp51. Our data showed that 49.1% of dairy cattle (964/1,963) from 6 provinces and 1.6% of beef cattle (22/1,390) from 15 provinces were BLV positive. In a detailed study of 105 cows (26 BLV-uninfected cows and 79 BLV-infected cows) in a dairy farm in Jiangsu province, 18 complete blood count parameters, 13 biochemical parameters and 5 parameters of milk composition were tested. Comparing BLV-infected and BLV-uninfected cows, all the biochemical parameters we studied in 105 cows did not differ significantly, while 9 of the 18 complete blood count parameters were significantly different. The BLV-infected cows had significantly higher levels in 6 parameters (white blood cell count, lymphocyte number, lymphocyte percentage, hemoglobin, hematocrit, and red blood cell distribution width) and significantly lower levels in 3 parameters (monocyte percent, granulocyte percent, and platelet count). The lactose level in milk in BLV-infected cows was significantly lower than that in BLV-uninfected cows. Taken together, our results indicate that BLV infections are widespread in the dairy farms of China, and BLV-infection may affect blood count and lactose metabolism of cows.

## Biography

Y Yang is a PhD student from College of Veterinary Medicine, Yangzhou University, and currently is a visiting scholar in College of Veterinary Medicine, Kansas State University. He has published 5 papers studying on cattle in reputed journals, such as *Journal of Dairy Science*.

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