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Genetic variation of bovine leukemia virus (BLV) after replication in cell culture and experimental animals

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ABSTRACT. This article reports the selection of bovine leukemia virus (BLV) variants after continuous passage in cell lines or experimental animals. Two wild BLV strains isolated from 2 naturally infected Holstein dairy cows in Brazil (cow codes: 485 and 141) were used for the experimental infection of 1 sheep and FLK cells, and 1 rabbit and CC81 cells. Viral DNA was isolated several months after infection, and *env* gene nucleotide and amino acid sequences of the "passaged" variants were compared against the 2 original infecting wild strains. The sequences of the original infecting wild strains were not recovered after their replication in the cell lines or experimental animals. These results indicate that genetic variation occurred after BLV replication *in vivo* and *in vitro*, with new variants being selected.

Key words: Bovine leukemia virus; Genetic variation; Cell culture; Experimental infection

