

efficient, specialized production by well-skilled managers. While this may reduce some of the general practice experienced by bovine practitioners in the past, it opens a new door of opportunity for contractual arrangements to maintain herd health and avoid the disastrous effects of

As in every other phase of U.S. animal agriculture, "service" is the name of the game. To

prevent and control disease and other difficulties will demand close liason between veterinarian and cattle manager. Tomorrow's cow-calf, feedlot and dairy managers will be willing to pay for herd health service far beyond what is considered adequate today. The bright opportunity for the bovine practitioner in the late 1970's and beyond will be to move ahead with a rapidly advancing livestock industry.

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## A New Test for the Detection of the Bovine Leukemia Virus

Jorge F. Ferrer, *M.D.*, and Diane Bhatt  
*New Bolton Center*  
*School of Veterinary Medicine*  
*University of Pennsylvania*  
*Kennett Square, Pa.*

We have recently developed an accurate, rapid and relatively inexpensive test for the identification of animals infected with the Bovine Leukemia Virus (BLV). This test involves the detection of serum antibodies to BLV using the immunofluorescent antibody (IFA) technique on acetone fixed, infected cells. The specificity of the test was demonstrated by the fact that it was positive in 97% of adult cattle in which BLV was detected electron microscopically. On the other hand, the test was negative in all cases in which the virus was not found despite extensive electron microscopic examination. In order for the IFA test to be specific it is of utmost importance that the target cells used are infected *only* with BLV. Such cells (NBC cell lines) are maintained under continuous culture conditions in our laboratory.

The Agar precipitin (Ouchterlony) technique has also been applied to the detection of BLV antibodies. However, a significant proportion of

animals which are positive in the IFA test and are infected with BLV (as determined by electron microscopic examination) fail to show precipitin antibodies to the virus. Likewise, an extensive survey of multiple-case and single-case herds conducted in collaboration with Drs. D. D. Abt and R. R. Marshak has shown that BLV infection can be demonstrated by both the IFA test and electron microscopy in many animals with persistently normal levels of blood lymphocytes. Thus, neither the precipitin test nor the blood lymphocyte counts (Bendixen's key) can be used as reliable indicators of BLV infection.

Our studies with Drs. Abt and Marshak have also shown that not all animals infected with BLV develop leukemia. Thus, while a positive reaction in the IFA test is accurate in determining BLV infection and therefore leukemia risk, it does not necessarily establish a diagnosis of leukemia.