

Compendium (Jan) S31-S39.

Endotoxin and disease in food animals.

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Abstract not available.

Journal of the American Veterinary Medical Assoc. 1996 Jul 1;209(1):46-52.

Alternatives for validation of diagnostic assays used to detect antibiotic residues in milk.

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Abstract not available.

Journal of the American Veterinary Medical Assoc. 1996 Aug 1;209(3):638-42.

Alterations in blood lymphocyte subpopulations and hematologic values in neonatal calves after administration of a combination of multiple-antigen vaccines.

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OBJECTIVE--To evaluate alterations in lymphocyte subpopulations, CBC results, and clinical signs in neonatal calves inoculated with 3 commercially available proprietary multiple-antigen vaccines containing known quantities of endotoxin. **DESIGN**--Prospective, randomized controlled field trial. **ANIMALS**--36 healthy Holstein heifer calves between 3 and 31 days old. **PROCEDURE**--Vaccines were administered to 18 calves according to label instructions, except for the recommended age of administration. The 18 other calves served as unvaccinated controls. Two weeks after entry into the study, calves were given secondary doses of the same vaccines. Calves in both groups were examined and blood samples were collected for determination of lymphocyte subpopulations and hematological parameters once daily for 5 days beginning on the day that both the primary and the secondary vaccinations were given. Lymphocyte subpopulations, including BoCD2+, BoCD4+, BoCD8+, B cells, and gamma/delta T cells, were

determined by use of flow cytometry, using monoclonal antibodies as markers. RESULTS-- Vaccinated calves did not develop clinical signs of illness. There were no significant differences in absolute numbers of lymphocyte subpopulations between vaccinated and unvaccinated calves. Vaccinated calves had significantly higher rectal temperatures, total WBC counts, and absolute neutrophil counts than did control calves. These differences persisted for 3 to 4 days after vaccination. CLINICAL IMPLICATIONS--Findings confirm empirical observations that vaccination with multiple products at the same time may induce evidence of an inflammatory response in most calves. Additional research is indicated to further evaluate the safety of using multiple vaccines simultaneously.

Veterinary and Human Toxicology. 1996 Jun;38(3):169-72.

Monensin concentrations measured in feeder cattle using enzyme immunoassay.

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Thirty heifers were fed a ration containing 30 g monensin/ton. Fecal, urinary and seral samples were collected at varying intervals prior to and after initiating administration of the monensin-containing feed, and monensin concentrations were determined using a modified indirect enzyme immunoassay. Fecal samples contained measurable (micrograms/g; ppm) concentrations of monensin in most samples. The majority of sera and urine samples contained monensin at ng/ml (ppb) concentrations, which were above background levels prior to monensin feeding. Twelve head were fed monensin at 60 g/ton and 90 g/ton for 5 d with collection of similar samples. Higher concentrations of monensin were detected with increasing ration amounts in all 3 sample types. Enzyme immunoassay for monensin in these biological samples identified presence of the feed additive.

Journal of Biochemical Chemistry. 1996 Jul 5;271(27):16430.

Purification, primary structures, and antibacterial activities of beta-defensins, a new family of antimicrobial peptides from bovine neutrophils.

Selsted M.E., Tang Y.Q., Morris W.L., McGuire P.A., Novotny M.J., Smith W., Henschen A.H., Cullor J.S.

Publication Types:

- Published Erratum
-

Journal of the American Veterinary Medical Assoc. 1996 Dec 15;209(12):2049-50.

An HACCP learning module for graduate veterinarians.

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Abstract not available.

Veterinary Medicine. 92: 286-290.

Exploring the Internet: a guide for food-animal practitioners

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Abstract not available.

American Chemical Society, p. 44-57.

Dilemmas associated with antibiotic residue testing in milk: choices, problems, and issues.

Cullor, J.S.

Veterinary drug residues food safety. Washington, DC:

Since mid-1994 there have been antibiotic residue assays that are Center of Veterinary Medicine/Food and Drug Administration (CVM/FDA) "accepted", Association of Official Analytical Chemists (AOAC) International "performance tested", and National Conference On Interstate Milk Shipments (NCIMS) "recommended" that: a) are used for tanker milk and have never been scientifically field tested on tanker loads of milk, b) are used for trace back on bulk tank milk and have never been field tested on bulk tank milk and c) are routinely used on individual animal milk samples and have not gone through a validation protocol following scientific, epidemiological principles that take into account individual animal variation in milk constituents. The philosophies employed to permit the use of antibiotic residue assays in uncontrolled settings and the consequences of current assay performance will be discussed in the following pages.
