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## Abstracts

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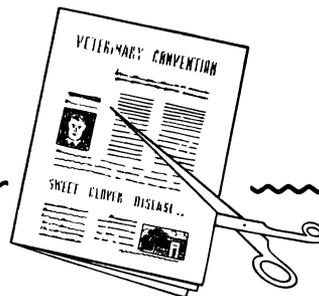
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# ABSTRACTS



**H**EMOLYTIC ANEMIA IN NEWBORN DOGS DUE TO ABSORPTION OF ISOANTIBODY FROM BREAST MILK DURING THE FIRST DAY OF LIFE. Four different antigenic factors have thus far been identified serologically in dog erythrocytes. One of these which may conveniently be called the "Do factor" appears to be somewhat analogous to the Rh factor of human red blood cells. Dogs lacking this factor in their red corpuscles are accordingly labeled "Do-negative" and those whose cells contain this factor are called "Do-positive."

Do-negative bitches that have been immunized by transfusions of Do-positive blood develop Do-antibodies that appear in high concentration in the colostrum after pregnancy and persist for several weeks in the breast milk. Experience with nine litters has shown that Do-positive puppies regularly develop hemolytic anemia if they suckle such an immunized dam during the first day or two of life. The lack of antibody absorption from milk after the second day has not yet been explained. There is evidence that natural immunization of the dam by fetal red cell factors may occur during pregnancy, thus producing hemolytic disease in dogs similar to that recently discovered as a naturally occurring phenomenon in horses.

[ Christian, R. M., Ervin, D. M., Swisher, S. N., O'Brien, W. A., and Young, L. E. Hemolytic Anemia in Newborn Dogs Due to Absorption of Isoantibody from Breast Milk During the First Day of Life. *Science*, 110:443. (Oct. 28) 1949. ]

**I**CTERO-ANEMIA IN SWINE. A new species of a blood parasite, identified as *Eperythrozoon suis*, has been observed in nine field outbreaks of an acute ictero-anemic condition in swine. The disease has been reproduced in susceptible splenectomized swine by the inoculation of infectious blood. The resulting symptoms, disease processes and pathology have been identical to field cases.

A characteristic course of the disease has been noted in both field and experimental cases. This consists of a severe parasitic attack in which symptoms of fever, depression and anorexia are present. Severe and rapid blood destruction quickly follows and the parasites spontaneously become reduced in numbers. The animal exhibits a lowered temperature, pale and icteric mucous membranes, marked weakness, constipation and bile stained feces at the onset of the acute anemia.

The severity of the disease is dependent upon the intensity and duration of the parasitic attack. It has been indicated that the majority of young swine in endemic areas undergo infection and usually are unaffected by the mild attack that results. All infected animals probably remain permanent carriers.

The exact mode of transmission is unknown but is presumed to be by insect vectors.

[ Splitter, E. J. *Eperythrozoon suis*, the Etiologic Agent of Ictero-Anemia or an Anaplasmosis-like Disease in Swine. *Amer. Jour. of Vet. Research*, 40:324-329. (July) 1950. ]

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## **AUREOMYCIN AS A TREATMENT OF ACUTE BRUCELLOSIS OF CATTLE.**

The authors discuss the experimental treatment of four mature cows, acutely affected with brucellosis.

Each cow received intravenously an initial dose of 5 gm. per 1,000 lbs. of body weight. The two cows which had calved within a week before the beginning of treatment continued to receive 5 gm. doses twice a day for a total of six days. Another animal, which had calved prematurely a month earlier, was given 2.5 gm. twice a day for the same number of days, and the fourth cow, a dry, non-pregnant reactor, received 2.5 gm. twice a day for 10 days.

Doses consisting of 5 gm. per 1,000 lbs of body weight every 12 hours produced only mildly toxic symptoms such as partial anorexia and scanty elimination. Concentrations of aureomycin in the whey and blood were found to reach levels at least as high as those required in vitro to inhibit *Brucella abortus* completely for 72 hours. Inoculations of milk into guinea pigs, and agglutination tests of serum and whey made weekly for at least two months after treatment, showed that the cows were still infected with *Brucella abortus*. The aureomycin failed to arrest the disease or to modify its usual course as observed in untreated cases.

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[Larsen, P. H., and Gilman, H. L. Aureomycin as a Treatment of Acute Brucellosis of Cattle. *Cornel Vet.*, 259-271. (July) 1950.]

## **VACCINATION OF SEXUALLY MATURE COWS WITH BRUCELLA ABORTUS STRAIN 19 VACCINE.**

The authors report the results of vaccinating negative cows in fourteen infected dairy herds.

One hundred and eighty eight non-pregnant cows and 181 pregnant cows were vaccinated. One hundred and thirty three (70.74 percent) of the non-pregnant cows and 113 (62.43 percent) of the pregnant cows had returned to negative within two years after vaccination. Fifty-three (39.84 percent) of the former and

37 (32.74 percent) of the latter became infected at a later date.

Fifty-five (29.26 percent) of the non-pregnant cows and 68 (37.57 percent) of the pregnant cows had not returned to negative two years after vaccination. Fifteen (27.27 percent) of the former and 21 (30.88 percent) of the latter showed a gradual but steady decline in serum titre. The remaining animals in each of these groups showed a steady rise in serum titre.

Two cows which were not pregnant at the time of vaccination were shedding *Brucella abortus* from the mammary gland and uterus respectively, following parturition. Agglutination tests of serum and whey from each of these animals were negative.

Thirty cows that were pregnant between six and nine months were vaccinated. Four (13.33 percent) of them aborted. *Brucella abortus* was not demonstrated in the cream or uterine exudate of any of them.

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[Moore, T., and Mitchell, C. A. Vaccination of Sexually Mature Cows with *Brucella abortus* Strain 19 Vaccine. *Canadian Jour. of Comparative Med. and Vet. Science*, 6:209-213. (June) 1950.]

## **LEUKEMIA IN RADIOLOGISTS IN A 20 YEAR PERIOD.**

Some experimental evidence has been presented to show that exposure to ionizing high energy irradiation (by Roentgen irradiation) can produce leukemia. The article reviews the experimental work showing an increased incidence of leukemia in mice exposed to Roentgen irradiation.

The author has conducted a survey, covering a 20 year period, of the incidence of leukemia in radiologists. It is shown that during this time leukemia has occurred more than nine times as frequently in radiologists as in non-radiological physicians. This difference has statistical significance. It is suggested that the increased incidence of leukemia in physicians as a whole (compared with the adult male white population) might be

due to the same factor of exposure to ionizing radiation.

This occupational hazard of radiology indicates that: one, the hazard was not sufficiently appreciated, and insufficient care was exercised to employ standard means of protection against ionizing radiation; or two, these standard means of protection are insufficient protection; or three, they are too difficult to employ correctly in routine work.

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[March, H. C., Leukemia in Radiologists in a 20 Year Period. The Amer. Jour. of the Med. Sciences, 942:282-285. (Sept.) 1950.]

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That exhaustion of natural resources can be seen even in America is shown by the program of reforestation that is under way.

Americans are planting trees at the rate of 38 million per year. The top year on record was 1941 when 98 million seedlings were set out.

An American veterinarian who has just delivered 1300 cattle to Haifa, Israel, found that early morning coffee was a cure for cases of travel nerves among his "passengers" during the 21-day voyage.

Dr. Howard Mean, of Greensboro, N. C., said sickness in animals at sea could be reduced by "treating them as nearly as possible as human beings." He said animals do not die from seasickness, but from lack of exercise and metabolic defects.

"Every morning at sea the animals were served coffee and black molasses rich in vitamins," he said. "Then they were taken for a nice walk on the deck."

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HR Lou 7, a Yorkshire sow, set a world's record by weaning a total of 48 pigs in one year. She is owned by Harold M. Morris of DeWitt County, Ill.; Farm Journal, June 1950.

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