

# XXI World Veterinary Congress

Moscow, U.S.S.R., July 1-7, 1979

Over 6000 veterinarians and scientists from allied professions attended the XXI World Veterinary Congress in Moscow, U.S.S.R. on July 17, 1979.

The opening ceremony took place in the main conference hall of the magnificent Kremlin Palace of Congresses on Sunday morning, July 1 under the Presidency of Professor R. Vuillaume, WVA President. The opening address was given by the USSR Minister of Agriculture.

Dr. Vernon Tharp, AVMA President and a past president

of the AABP was an honorary Vice-President of the Congress.

The scientific program was presented in eighteen sections with simultaneous translations in English, Russian, German, French and Spanish. The First Annual medicine sessions covered mastitis, leukosis, infertility, nutrition. Dr. Eric Williams, AABP editor, presided over the session on short communicational relative to cattle diseases. Summaries of selected papers are included herewith.



Opening ceremony in the Kremlin Palace of Congresses.



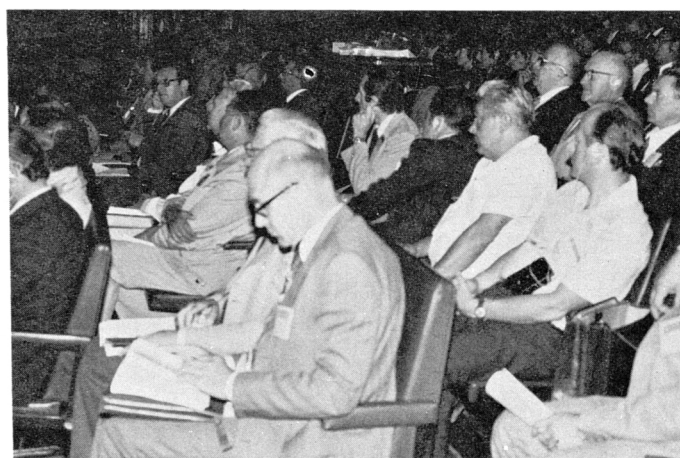
Dr. Vernon Tharp  
President AVMA



*Food Animal Session: Dr. Gregorovic, Yugoslavia, Vice Chairman; Dr. Eric Williams, Chairman; Dr. Alla Slapencko, U.S.S.R., Secretary.*



Dr. Grunder, W. Germany left, and Dr. Ed Sterner, Michigan, USA



Ruminant medicine session—Dr. M. Stober, W. Germany, WAB Secretary in Center foreground.



Dr. Cakala, Poland, left and Dr. Shishkov, Moscow, WAB Board Members.

## Selected Summaries

**Bovine Leukosis. New Concepts Related with the Causative Agent, Diagnosis and Transmission.** A.A. Ressang, Central Veterinary Institute, Rotterdam (The Netherlands)

Bovine leukosis occurs in two forms: 1. the juvenile (or non-infectious or solitary) and 2. the adult (or infectious or enzootic) form. The former is mainly found in animals under two years of age and clinically manifests itself by a remarkable swelling of all lymph nodes (malignant lymphoma) with or without organ metastases. The latter mostly occurs in animals over two years old. It generally runs a clinically symptomless course with lymphocytosis (leukemia, leukosis) in the advanced stage. Malignant enlargement of lymph nodes are rarely seen. The cause of juvenile leukosis is still unknown. The causative agent of the enzootic form (EBL) is the bovine leukosis virus (BLV) a RNA virus which induces serum antibody formation in the infected animal. These antibodies do not appear in juvenile leukosis. New findings in relation to properties of BLV, present available serological methods. Transmission and control will be discussed.

**Enzymatic Diagnostic of the Liver Diseased in Domestic Animals. P. Georgiev, dept of Pathological physiology at the Veterinary Faculty, Stara Zogora (Bulgaria)**

The enzymatic diagnostic of the liver injuries in domestic animals is one of the most perspective spheres of the clinical diagnostics. It concerns the diagnostics of the most early disruptions of the liver function when they are not manifested by definite clinical symptoms. The establishment of the earliest functional disorders of the liver makes possible the applications of the respective therapeutic and prophylactic measures for correcting the disproportions appearing in the animal's organism. In the report an account is given of the diagnostic value of the enzymes: SGOT, SGPT, LDH, GLDH, OCT, guanase, urokinase and isozymes of LDH, GOT, MDH, AP etc. The next section deals with some fundamental principles of the enzymatic diagnostics that should be taken into account by the laboratory veterinarian in view of attaining accurate and reproductive results from enzymological investigations.

**Five Years Experience of the Introduction of Algorithmic Diagnostic Programme in Dairy Herds. B. Rutkowiak, K. Wolanczyk-Rutkowiak. Veterinary Higiene Research Station, Gdansk (Poland)**

A diagnostic programme including environmental analyses, feeding stuff examination, rumen fluid and blood analyses was employed in 117 dairy herds. In 1973-77, 163,500 analyses using 54 parameters were carried out. The main deviations were: hypoglycemia in 50.4% of investigated animals, hyperproteinemia — 48.2%, hypo- or hyperphosphatemia — 31.9%, electrolytic disorders — 17.6%, hypomagnesemia — 22.6%, decrease of the rumen ciliates count — 29.0% and other disturbances. The programme enables the verification of clinical diagnosis, diagnosis of digestive and metabolic disorders, detection of the environmental causes of low yield and the control of prophylactic therapy.

**Trace elements Deficiency Diseases in Ruminants. M. Lamand, Nutritional Diseases Laboratory, National Agronomical Research Institute, Theix, 63110 Beaumont (France)**

Primary deficiencies in copper, zinc, cobalt, selenium and iodine are most common in ruminants in France.

Secondary deficiencies (by availability modification) are also met. Copper, zinc, manganese digestibility is lowered in forages supplemented with sulphur, contaminated with soil or transiting rapidly through the digestive tract (ground forage or young grass). The forage quality influences the copper and zinc digestibility, in contrast the manganese content only is important for its availability.

Deficiencies treatment may be accomplished by intramuscular injections of metal or oxide of copper or zinc suspended in oil. Hypercupremia or hyperzincemia appears on the 3rd or 6th day with a maximum on 10th—13th day.

Then regulation occurs. One injection of 60 mg of copper (CuO) keeps out of deficiency ewes grazing on a copper deficient pasture for more than two months (compared to controls).

**L-Ascorbic Acid Detection in the Serum of Calves and Cows During the Early Postnatal Period. O Dobsinsky, L. Itze, J. Pospisil, M. Pospisil, Dept. Vet. Sci., Univ. of Agricult., Dept. Biophys., Sch. of Med., Charles Univ., Prague (Czechoslovakia)**

The authors report on the results obtained during examination of the dynamics of L-ascorbic acid in 68 mother-cows and 91 calves aged 1—10 days, from November through April. King's procedure has been used for L-ascorbic acid detection. The lowest and the highest levels of Ascorbic acid were observed in February and April, respectively. The dynamics during ontogenesis of the calves revealed values of 6.72 mg% at birth displaying a decreasing tendency afterwards. On the basis of the results obtained in those studies a working hypothesis has been suggested as to the effects of an improper composition of the food ratio and the importance of colostrum as

an exogenous source of ascorbic acid for calves.

**On The Effect on Milk Fever Incidence of "Acidifying" Substances in the Prepartal Diet of Dairy Cows. G. Jonsson, B. Pahrson, Veterinary Institute, Experimental Station, Skara (Sweden)**

In a two-year study "acidifying" substances were given in the prepartal diet to dairy cows, highly predisposed to parturient paresis. The experimental design was a modification of a Norwegian method which has given almost complete prevention of the disease. In this study no significant difference in the incidence of parturient paresis was observed between experimental and control groups.

**Investigations Concerning Coccygenic Spondylosis in Cattle. O. Vladutiu, I. Murgu, Faculty of Veterinary Medicine, Bucharest (Roumania)**

Anatomo-clinical, radiographical and morphopathological investigations were performed in 240 cows with coccygenic spondylosis, with the aim of pointing out the clinical manifestation, the pathogenic mechanism and the etiopathogeny of the disease. This illness is found only in the Holstein Friesian breed, appearing for the first time after the first or second calving; it clinically manifests itself by an undulated direction of the tail, with thickenings of the intervertebral articulations of the third middle and inferior part of the tail (polyarthrosis). The illness manifests itself as a general metabolic disorder, in which the tail is the localization place of the arthrosis.

**Correlation Between Zinc Deficiency and Pedal Diseases in Cattle. I. Cristea, Elisabeta Cristea, I. Ivascu, Al. Ceciu, E. Steopan. Faculty of Zootechny and Veterinary Medicine, St. Manastur 3, Cluj-Napoca City (Romania)**

Investigations pointed out parakeratosis with a 5—10% incidence in milking cows, and up to 20—30% in young bulls submitted to fattening. In the same farms augmentation of the incidence of pedal diseases was recorded. Laboratory determinations have indicated in the animals with parakeratosis and pedal diseases a significant diminution of zinc in their blood and hair, concomitantly with a significant augmentation of calcemia. Curative or prophylactic treatment with zinc sulfate had favourable effects.

**Effect of Different Diarrhea Agents and Aspirin on the *in vitro* Jejunal Secretory Function. Olga Torres and a Talave, a. Centro Nacional de Salud Animal, Aptdo. #10, San Jose de las Lajas, La Habana (Cuba).**

The effect of the *Escherichia coli* TL enterotoxin, saccharose, teophylline, PGE<sup>2</sup> and aspirin on the jejunal secretory function of healthy calves was studied in connection with the mode of development of diarrhea and the use of aspirin as an antidiarrhea agent.

The *in vitro* everted-bag technique was used; the Na<sup>+</sup> and K<sup>+</sup> analysis was done by flame photometry, and that of Cl after the technique of Schales and Schales (1946) in Krebs-Henseleit solution.

The results were expressed by the difference between the action time of the diarrhea agent and that of aspirin for each agent used.

There was a marked Na<sup>+</sup> and Cl reabsorption after the administration of aspirin, which was significant (p<0,05), which supports its use as an antidiarrhea agent in calves.

**Dynamics of Serum Proteins in Calves With Acute Pneumonias Treated by Means of Blocking of the Stellate Ganglion. Elisa Aznar and Mariselys Gonzalez. Centro Nacional de Salud Animal, Aptdo. #10, San Jose de las Lajas, La Habana (Cuba)**

In order to determine the variations of serum proteins in calves treated by blocking of the stellate ganglion with 0.5% novocaine, 32 calves were studied by comparing the treatment with blocking using streptopenicillin. Serum proteins were ascertained by the biuret method and fractionation by

cellulose acetate electro-phoresis before and after treatment.

Average values of total proteins before treatment were  $6,4 \pm 0,4$  g/100 ml. No significant differences between groups were found. Following treatment, a rise in total proteins was observed in blocked animals ( $7,53 \pm 0,4$ ), as well as an increase in gammaglobulins, such not being the case of the streptopenicillin-treated animals ( $6,07 \pm 0,9$  g/100 ml), significant differences being evident in total proteins ( $P < 0,01$ ) and gammaglobulins ( $P < 0,05$ ) between both. Clinical recovery was 100% higher in blocked animals, with a shorter recovery time (8—10 days) than that of the group treated with antibiotic alone.

**Big Size Still Fluorography in Diagnosing a Disorder in Phosphorus-Calcium Metabolism in Cattle. R. Mustakimov, G. Safarov. Tadjik Agricultural Institute, Dushanbe (USSR)**

Big size still fluorography has been found to be the most promising, rapid and easy method to early diagnose a disorder in phosphorus — calcium metabolism in cattle in mass examination.

**Pharmacological Uterine Relaxation in Cattle: Clinical Therapeutic Indications and Zootechnical Administration. G. Ballarini, Istituto di Clinica Medica Veterinaria, Università di Parma (Italia)**

There is a report on this uterine relaxation using beta-2-mimetics. Special mention is made of 4-amino-alfa- (tertiary butylamino) methyl -3,5-dichlorbenzyl alcohol-hydrochloride (N-AB 365; PLANIPART Boehringer Ingelheim). On the basis of personal observations the most important indication of pharmacological uterine relaxation with N-AB 365 in treatment of cattle are discussed: prolapse of the uterus; uterine

haemorrhage; dystocia with torsio uteri, incorrect posture of the foetus, too large foetus, spasms of the cervix; retained foetal membrane; postponement of parturition to prepare for a caesarian section; to postpone parturition at night in cattle and with facilitation of parturition especially in primiparous animals. In the conclusion, the possibilities for use in the technology of intensive cattle breeding are mentioned.

**Leptospira Hardjo Associated with Peri-Natal Mortality in Beef Cattle of a Tropical Region. E. Aycardi, J.M. Cortes and B. Torres. Centro Internacional de Agricultura Tropical, Cali (Colombia)**

A herd of 100 breeding cows with naturally occurring *L. hardjo* infection was examined for pathogenesis studies and effect of the disease on productivity. Artificial infection of 10 cows was also carried out to study the pathogenicity of locally isolated *L. hardjo* strains. Serologic observations of the herd with natural infections revealed a high infection rate with *L. hardjo*. 70.5% of breeding cows had reactions to this serotype. Three isolations of *Leptospira* were obtained in this herd, one from kidney tissue and two from urine. They were all confirmed as *L. hardjo*. These isolates were obtained from animals with low but rising titers. Pregnancy check-ups showed 35 abortions during a year, 21 of which occurred in animals with detectable antibodies to leptospira, and 16 of those were in late pregnancy. Cows artificially inoculated, developed microscopic agglutination titers that reached a peak at 14 to 18 days. They decreased to very low levels at 75 days and rose to a level 125 days after reinfection. Five of the ten cows have retained placenta and metritis. Seven of the ten calves were born weak and five had antibodies to *L. hardjo*. From this observations it is becoming evident that *L. hardjo* is associated with perinatal mortality in beef cattle of tropical regions of South America.

## In Memoriam Prof. Dr. h.c. Sven Hoflund, Stockholm Sweden

On June 12th of this year Prof. Dr. Sven Hoflund, the emeritus Ordinarius of "Internal medicine of ruminants" and former head of the like named clinic of the Royal Veterinary College in Stockholm, died in his seventy-third year. During the twenty years that Prof. Dr. Hoflund held his appointment as teacher and researcher, he always labored with the utmost intensity, thereby obtaining those results which brought him the highest recognition both in his homeland and abroad.

As early as the years 1935-1940, as assistant and chief assistant in Nil Lagerlof's obstetrics and ambulatory clinic, he concentrated on the problems of the physiology and pathology of omasal digestion in ruminants, an area which up to that time had not been under continuing investigation. His first great attainment was the clarification of the cause of chronic motility disturbances of the rumen, through the overloading of this organ with liquid substances, and the accompanying pronounced bradycardia. Time after time, with a certain number of these animals, a persistent extensive localized peritonitis with an abscess formation was found. Hoflund suspected that through these changes, which as a rule resulted from perforation of the reticulum by foreign bodies, branches of the abdominal vagus were damaged and thus produced the paralytic condition of the omasum as well as the retardation of the heart rate. Using sheep and cattle experimentally to prove his theory, he severed different branches of the vagus nerve and thus produced the same clinical picture found in the field. These investigations are found in detail in his doctoral dissertation, consisting of 449 pages with 50 illustrations and presented in 1940. These discoveries were received in the experts' world with great attention and since that time the clinical picture has been called "Hoflund's syndrome" or, in English speaking countries, "Hoflund's disease." Later Hoflund turned to the biochemistry of the ruminant digestive system

and worked on the role of bacteria of the rumen in relation to albumen-, fat- and cellulose digestion and the connection with the appearance of indigestion and metabolic disturbances, especially of acetoneemia. Propionic acid therapy and prophylaxis of ketosis, for example, are products of Hoflund's research. Further he developed a series of simple tests in the examination of rumen contents, which shortly were introduced in the diagnosis of "indigestion": the microscopic evaluation of flora and fauna, the ph-value measurement, the fermentation test, cellulose digestion test and others. Thus it was possible to view the digestive disturbances of the omasum from an etiological aspect and to classify and treat these cases more successfully than before. Concepts of diseases such as rumen acidosis, alkalosis, which today every veterinarian is familiar with, were established by Hoflund.

Further valuable contributions of his dealt with colic in cattle, muscular dystrophy in calves and lambs, the origin and pathogenesis of fatty necrosis, paratuberculosis, urinary calculi in bulls and rams, and numerous others. For economic reasons (the high amounts paid for slaughter), the number of milk cows in Sweden were reduced in the last fifty years, and the question arose as to how this freed pasture land could be utilized significantly and the landscape retained. Hoflund carried out studies on the possibility of maintaining sheep on these areas, always with the protection of the environment in mind. In the not too distant future this will probably become profitable in some of the common market countries, as it already has in the highlands and alpine foothills.

**The journey to Hannover in June 1978 was his last trip abroad. His retirement was complicated by severe illness; he bore it admirably; moreover he was lovingly cared for by his wife. With his death the veterinarians of the world, especially in buiatrics, have lost one of the best. Many indeed have also lost a good friend. His memory will always be esteemed.**

Gustav Rosenberger, Hannover

English translation by Mrs. LaVerne K. Jones, Oklahoma State University Library.