

## **PREVALENCE OF BEHAVIOUR PROBLEMS IN DOGS KEPT AS COMPANION ANIMALS**

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### **Summary**

The present study was aimed at estimating the prevalence of various behaviour problems in dogs kept as companion animals in Romanian cities. Owners were asked to fill in behaviour evaluation forms with specific questions related to various types of aggression, inappropriate elimination and phobias. Questions regarding aggression included aggression towards family members, towards visitors, towards strangers on the street and towards other dogs. The prevalence of aggression, phobias and inappropriate elimination were generally higher than the ones reported by various authors. Very few differences were detected between males and females in what concerns the occurrence of problem behaviours. Most of the dogs from the study group displayed aggressive behaviour and a high percent of dogs displayed inappropriate elimination and suffered from various fears and phobias. These results indicate that behavioural advice for dog owners is needed in our country and this domain should be granted particular attention.

**Key words:** behaviour, dog, behaviour problem, behavioural advice

## **A COMPARATIVE RISK CONSEQUENCES ASSESSMENT FOR AVIAN INFLUENZA OUTBREAKS OCCURRED IN ROMANIA**

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### **Summary**

Avian influenza is nowadays, an animal disease which has major implications for the public health and considerable direct and indirect social effects. It generates major losses in the poultry industry, plus significant collateral economic losses, for the time being.

The Service of Policies, Strategies, Programmes and Sanitary Veterinary Procedures within the National Sanitary Veterinary and Food Safety Authority together with the Projection, Development, Coordination and Research Service within the Institute for Diagnosis and Animal Health, performed a risk analysis concerning the wild bird risk for Romania, related to the avian influenza, in order to facilitate a early reaction of the sanitary veterinary and food safety services and of those for public health.

A first stage of avian influenza risk identification was issued related to the wild birds, especially to the migratory ones. The risk origin, the risk itinerary, the risk intermediate zones, the emission risk (concerning the introduction of the avian influenza into Romania), the exposure risk (of the wild and domestic birds to the avian influenza virus), and the transmission risk (in Romania and later for migration) were underlined here.

The identified risk was evaluated then after the place and dimensions of wild birds migrations and assessed upon the import critical unit values for the avian influenza.

This work aims at explaining last part of the risk identification — evaluation of risk consequences for the avian influenza outbreaks occurred in Romania in the three diseases waves identified during October 2005 - July 2006.

**Keywords:** avian influenza, risk analysis, risk identification, consequences of risk

## **RISK ANALYSIS APPROACHES FOR ANIMAL HEALTH**

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### **Summary**

Since 1969, risk analysis has emerged as a formal discipline with its namesake journal *Risk Analysis* has been introduced in practice in 1981. While Starr singled out in Science modern technology as a natural focus for the application of risk analysis, Lowrence expended to six the number of areas in which it could be used. Hathawai and others have already defined the associated terminology both in generic sense and in particular reference to animal health and livestock importations.

After these first steps in defining risk analysis, there were four main approaches regarding risk analysis: the European approach promoted by World Animal Health Organisation based on the model Carvello – Merkhofer in 1993, the American approach promoted by Codex Alimentarius based on the model of National Academy of Sciences – National Research Centre and the approach of international organizations promoted by World Trade Organization.

This paper has as aim to present a comparative assessment of these three approaches in order to identify the particular field of application for each model of risk analysis and to point out the differences among them. This paper consists one of the part of my dissertation these concerning "Risk analysis for some emergent and re-emergent diseases in poultry for Romania"

**Keywords:** risk analysis, animal health, WAHO, WTO, Codex Alimentarius

## DEFINITION OF TRACEABILITY CONCEPT: ELEMENTS OF TRACEABILITY

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### Summary

Traceability, as relative new concept in animal health, feed and food safety, is defined by Regulation of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety (EC) No 178/2002, as 'traceability' means the ability to trace and follow a food, feed, food-producing animal or substance intended to be, or expected to be incorporated into a food or feed, through all stages of production, processing and distribution.

Despite the fact that references to the concept of traceability in animal health, feed and food safety are very limited, this paper has as aim to formulate the system of traceability defining the framework of traceability, the elements of traceability, the instruments of traceability and the means of traceability. This paper is particularly designated to propose the identification and definition of traceability elements in animal health, feed and food safety.

At the same time, our proposal also refers to the establishment of criteria used to define the elements of traceability.

**Keywords:** traceability; channel; line; chain and segment of traceability

## **THE OBSERVANCE OF ANIMAL BREEDING TECHNOLOGIES IS A GUARANTEE FOR HUMAN HEALTH**

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### **Summary**

The premise of this study was that almost all the diseases considered as new were known effectually a long time ago and they had enough frequency for counted those entities. Antibiotics, regular administered in our days to pigs, broiler chickens, dairy cattle and fishes, are inducing and provoking many problems artificially solved not technically and not effectively. The conducted studies proved that antibiotics are used above the normal limit in order to compensate the lacks in the growing period, inobservance of the technologies and more or less justified crowds.

Below is presented the current situation in Europe and the perception mode of each country about the usage of antibiotics in animal's nutrition.

## **EPIDEMIOSURVEILLANCE NETWORK EVALUATION**

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### **Summary**

In this study is presented the evaluation and the organization mode of an epidemiosurveillance network. The purpose was to obtain information which allows correct and concrete evaluation of sanitary situation in the area and in the farm. Below is presented the way of establishing the indicators for assessing the network activity and improvements of the work techniques.

**THE EVALUATION OF THE LAYING HENS PERFORMANCES  
FED WITH COMBINED FODDERS SUPPLEMENTED WITH  
SYNTHETIC AMINO ACIDS  
- MATHEMATICAL MODELING-**

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**Summary**

As a result of an experiment carried out within the poultry department from the Didactic Station of the Banat's University of Agricultural Sciences and Veterinary Medicine Timișoara on laying eggs, the "Shaver 579" hybrid, for which fodder recipes with different protein levels and synthetic amino acids content were used, it was observed the egg-weight evolution. Starting with the experimental data observed on a group to which it was administered a recipe with 17.03% RP, 0.85% Lysine and 0.38% Methionine, it was observed the fodder consumption and egg production. Using mathematical modelling there have been analysed and determined the connections that exist between the dependent variable (egg production weigh) and the amino acids consumption in order to explain and foresee the dependent variables variance. In research the multiple regression analysis was used and it was analysed the statistical significance of the parameters.

**STUDY OF MELIFEROUS PLANTS IN THE POGONICI RIVER  
VALLEY AND IN THE NEIGHBOURING AREA OF BERINI  
(TIMIŞ COUNTY)**

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**Summary**

This paper presents meliferous and poliniferous plants in the period 2000-2006 in the area around Berini (Timis County) on an area of 5 km, including also the forest in the valley of the Pogonici River in the Berini area. The locality is situated in a field area with specific plants, including also water meadow plants, present species being herbaceous bushes and trees. This study presents, besides the list and plants' description, the dynamics of honey productions obtained during the 7 experimental years in different weather conditions and natural changes of floristic (herbal species) composition in the studied territory.

Meliferous and poliniferous plant species, their potential and density play an essential importance in natural bee nutrition, quantity and quality of honey production.

**INFLUENCE OF ALIMENTARY REGIME ON SOME  
PARAMETERS OF SYNOVIAL FLUID IN DOGS WITH  
ARTICULAR CHONDRAL DEFECTS**

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**Summary**

Sick or traumatized cartilage has a limited regeneration capacity.

Tisular engineering catalogues among possible therapeutically methods (1, 5) for the articular condral defects repair using scaffolds implants loaded with condro-progenitor cells (3, 8, 10, 12).

Glucosamine is part of normal cartilage. Studies show that glucosamine can reduce pain in osteoarthritis and improve articular performances (9,11).

In the present study we will follow the influence of glucosamine on the inflammatory process and on articular cartilage regeneration in dogs with articular chondral defects surgically induced/treated by synovial fluid analysis.

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**CLINICAL AND RADIOGRAPHIC CORRELATION OF OSSEOUS DEFECTS  
HEALING PROCESS USING COLLAGEN-HIDROXYAPATITE SCAFFOLD  
LOADED WITH OSTEOLASTS**

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**Summary**

Bone defects repair with bio-composite materials represents a viable alternative for autologous osseous grafts, being a major and current concern for numerous researcher teams (1, 2, 3, 4, 6, 7, 8, 9, 10).

In the present study we proposed to verify the possibility to use collagen scaffolds with hidroxyapatite support loaded with osteoblasts, arises by cultivation from mesenchimal stem cells, for tibia bone defects repair on dogs.

## **OSTEOCHONDRITIS DISSECANS OF THE SHOULDER JOINT IN DOGS**

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### **Summary**

Within the last several years, a developmental disease process named “osteochondritis dissecans” has been diagnosed with increasing frequency in the veterinary medical fields. A generalized metabolic disease process disrupting the normal sequence of cartilage calcification and ossification, osteochondritis has become a major problem in many breeds of dogs. The purpose of this study is to describe pathophysiology of disease, clinical signs, physical examination findings, specific radiographic abnormalities and to indicate specific treatment of osteochondritis dissecans of the shoulder joint in dog.

## **DESIGNING EXPERIMENTAL MODELS OF SCREW TYPE DENTAL IMPLANTS – ESTABLISHING OF MODELS, TYPES AND DIMENSIONS**

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### **Summary**

Following the newest accomplishments and the informational content in oral implantology, which takes proportion in a very alert rhythm, designing new types of implants must rely on the present principles in stomatology in general and prosthetics in special, on the achievement possibilities, the final costs and on the technological transfer to the units that make implants for the use on human subjects.

After consulting the literature in oral implantology ( 2, 5, 6) and after measurements made on canine subjects we choose to design two models of endosseous screw type implants, with various lengths of the thread part.

## **MECHANICAL AND COMPUTER SIMULATION TESTS ON SOME EXPERIMENTAL MODELS OF ORAL IMPLANTS**

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### **Summary**

This paper purpose is to evaluate, through finite elements analysis, the reactions of the structures placed at bone-implant interface and through mechanical tests of the strength of orthodontic implants for temporary anchorage (1, 3, 4). The implants were tested mechanically concerning their axial tension, compression, bending and torsion (1, 4) on Multitest and Vortex-X stands .

**SELENIUM AND IODINE STATUS RELATIONSHIP IN CALVES AND HEIFERS FROM SELENIUM AND IODINE DEFICIENT AREAS IN SERBIA**

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**Summary**

Selenium and iodine status in calves at different age periods (3, 6 and 9 months old) and heifers (12 months) at two farms (A-Kovin, and B-Vrbas) in previously defined iodine and selenium deficient areas of Serbia was determined. Plasma selenium concentrations, determined by AAS, in calves and heifers from both farms were very low, ranging from 1.58 to 9.42 µg/L. Plasma GSH-Px activity was low in 3 month old calves:  $8.4 \pm 5.2$  and  $16.1 \pm 4.3$  µkat/L in farm A and B, respectively, and significantly higher in 12 month old heifers:  $39.0 \pm 6.2$  and  $40.8 \pm 9.8$  µkat/L in farm A and B, respectively. Plasma T<sub>4</sub> levels in all calves and heifers were relatively high, ranging between 57.1 and 102.9 nmol/L. Plasma T<sub>3</sub> levels in calves and heifers from both farms ranged from 2.72 to 3.51 nmol/L, and did not vary significantly, except for the 3 months old calves in farm B, where the level was significantly higher than in the other two groups. A statistically significant correlation was found between plasma GSH-Px activity and T<sub>3</sub>:T<sub>4</sub> ratio in the 6 months old calves from farm A ( $r^2 = 0.80$ ), as well as in combined group of 6 and 9 months old calves from farm B ( $r^2 = 0.68$ ).

**Keywords:** selenium, iodine, deficiency, calves, heifers.

## NEW POSSIBILITIES FOR TREATMENT OF PUERPERAL DISORDERS IN HIGH PRODUCING DAIRY COWS

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### Summary

Delivery in cows especially difficult calving leads to disorders of normal uterine involution, lengthening of service period, increased insemination index and in certain number of cases (from 6 to 12 %) can lead to temporary or permanent infertility. Often findings in these cows are repeated heats without clear clinical symptoms of cause.

Pathologic puerperium in first 9 and especially in following 12 days or in first 3 weeks after calving (because of retained placentas or puerperal infection) leads to extended service period and increased insemination index.

This can be prevented by use of novel approach to therapy with widely used cures for local treatment of uterus and often better with use of hypertonic solutions of NaCl in 3 continuous days in hot – cold pattern in first 3 weeks after calving.

In our work 1177 cows was included, we achieved shorter service period, lower insemination index and improved fertility of cows.

**Key words:** difficult calving, endometritis, local uterus treatment, service period, insemination index

**REPRODUCTIVE PARAMETERS ON A DAIRY FARM  
CONDUCTION OF NUTRITION, HEALTH AND REPRODUCTION  
MANAGEMENT**

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**Summary**

On a dairy farm capacity of 200 milking cows influence of para-genetic factors, especially nutrition based on a TMR feed (Total Mix Ration), improper and irregular control of cows in puerperal period lead to herd sterility, as a result of that in a period of five months after calving only 25 (13,58%) cows from total 184 calved cows were pregnant. By introduction of herd management (management of nutrition, health and reproduction) in following period of five months, fertility of 71,19 % (131 cows) was achieved as well as shortening of service period.

Work on reproduction disorders once a week gave good results and lead also to decrease of number of calves' death. Long service period which was found in 53 (19.56%) cows was dealt with a special care, 36 cows (with a service period over 250 days) from this group were mated by use of two selected bulls with a good pedigree, 13 (9,23%) cows was excluded from further reproduction.

**INFLUENCE OF THE OVARIAN HORMONES ON THE CERVICAL MUCUS (BIOPHYSICAL PROPERTIES) AND SPERM TRANSPORT IN RELATION TO COW'S CONCEPTION RATES**

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**Summary**

The cervical mucus and its secretion in relation to conception varies with domestic mammalian species and human. In these species, therefore, the cervix is by-passed and the cervical mucus can be used only indirectly as an indicator (mirror) of the stage of the cycle or of the hormonal states of the female. The cervical mucus with its cycles properties pay an important role in sperm transport and conception in human and domestic mammals. Any abnormal hormone balance would be reflected in the properties and consequently in its penetrability. So that cervical mucus could play as a factor or a barrier to conception in cows. The results of our research were certainly showed.

## **PREGNANCY DIAGNOSIS IN COW USING PROGESTERONE MEASUREMENTS**

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### **Summary**

Performing an early pregnancy diagnosis by the P4 level measurements some management problems in cow may be anticipated and counteracted; thus, the non-pregnant females are identified and reinseminated. 28 females were included in this study, out of which 21 cows (both primiparous and multiparous) and 7 heifers. The blood samples used to establish the pregnancy diagnosis, were taken 19 days postinsemination. The spectrophotometric method was used in order to determine the progesterone levels in serum. The results were compared with the ones of the clinical transrectal palpation, the last being performed 50 days postinsemination. The criterion for the pregnancy diagnosis was represented by the progesterone levels value of 3 ng/ml in serum. Out of the 28 cows, 8 were considered non-pregnant, having the progesterone level under the value of 3ng/ml. The non-pregnant diagnosis was 100% correct; the pregnancy diagnosis was 75% correct. The test sensitivity was 100%, the specificity was 53%, the positive predictive values-75%, the negative predicted –100% and the accuracy was 82%. The pregnancy diagnosis established by measuring the progesterone levels is a valuable method to improve the reproductive management in the dairy cattle farms.

**INVESTIGATIONS ON THE SYNERGIC EFFECTS OF  
AMINOGLYCOSIDES, POLYMYXINS AND FLUOROQUINOLONES  
COMBINATIONS AGAINST *PSEUDOMONAS AERUGINOSA*  
ISOLATED FROM DOG**

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**Summary**

Many times, the treatment of severe bacterial infections determined by multiresistant microorganisms need a combination of antibiotics.

This paper present the activity of some antibiotics, used alone and in combination, on *Pseudomonas aeruginosa* strains isolated from dogs having chronic otitis. In order to demonstrate the efficacy of these antibiotics on the isolated strains, the dilution method was used and minimum inhibitory concentration was determined for each antibiotic and for the combinations. The results were interpreted by the National Committee for Clinical Laboratory Standards.

Antibiotics from the groups of fluoroquinolones, aminoglycosides and polymyxins, and combination between enrofloxacin-gentamicin, enrofloxacin-amikacin, enrofloxacin-colistin were tested on 7 bacterial strains. The fractional inhibitory concentration index was calculated and showed that the phenomenon of synergism appeared for all strains when enrofloxacin-gentamicin and enrofloxacin-amikacin combinations were used. The enrofloxacin-colistin combination showed synergism only in 57.14 % of cases, in 42,86 % of strains being observed the additive phenomenon.

Based on these results comes the recommendation of using combination of antibiotics when necessary, because of the higher efficacy together, much more than alone, in the therapy.

## **THE ANTIBIOTIC RESISTANCE PHENOMENON IN SALMONELLA STRAINS ISOLATED FROM PIG**

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### **Summary**

Antibiotics from the groups of aminopenicillins, cephalosporins, aminoglycosides, polymyxins, fluoroquinolones, tetracyclines and potentate sulfonamides were tested on 16 bacterial strains from the genus *Salmonella*, isolated from pig that were diagnosed with enteritis.

Antibiotic resistance had been observed for streptomycin, in all bacterial strains. A high percentage of resistance was noticed for tetracycline (87.50 %) and for potentate sulfonamide (68.75 %), the last one having also intermediate values (6.25 %) – only 25 % of the strains being susceptible.

The bacterial strains showed resistance also in some aminoglycosides and aminopenicillins, but in a lower percentage: spectinomycin – 31.25 %, neomycin – 25 %, gentamicin, ampicillin – 18.75 %, amoxicillin – 12.5 %. Intermediate values, in a pretty high percentage (31.25 %), were registered for neomycin and spectinomycin.

From the group of cephalosporins, ceftiofur had had maximum efficiency, meanwhile the use of cephalotin determined 87.5 % susceptibility and 6.25 % intermediate values in the *Salmonella* strains. No resistance was noticed for colistin and enrofloxacin.

**EXPERIMENTAL STUDIES REGARDING THE DIABETES MELLITUS INDUCED  
IN WHITE WISTAR RATS**

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**Summary**

The experiment have been made on the White Wistar rats, diabetes mellitus was induced by intraperitoneal administration of streptozocin – 60 mg/kg.

From the 59 total rats to whom Streptozocin was only 33 (55,93%) have made diabetes mellitus. From those 33 rats, 5 have developed supra acute form, the death appeared on the first days from streptozocin administration.

Clinical symptoms in diabetes mellitus were: deeply deviance, haematuria, hyperglycemia, emaciation. Blood glucose values were  $406,22 \pm 24,85$  mg/dl. There were observed some increases of albumin, triglyceride, creatine kinase and alkaline phosphatase.

**THE USE OF OXYGEN IN CARDIORESPIRATORY DISEASES  
THERAPY IN DOG AND CAT**

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**Summary**

Respiratory insufficiency is the incapacity of respiratory system, especially the lungs, to support blood gases homeostasis. The cause of respiratory insufficiency are as follow: alveolar hypoventilation, damage of diffusion and intrapulmonary sanguine bypass.

In this way, the oxygen therapy is one of this syndrome procedure.

**NORMAL BLOOD GLUCOSE IN WHITE WISTAR RAT AND ITS CHANGES  
FOLLOWING ANESTHESIA**

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**Summary**

The studies have been made in 110 White Wistar Rats, both male and female, the animals being in wakeful state. The sampling have been made from coccygeal vertebra and measurement of the blood glucose were made with Accu-Chek Go (Roche) glucometer. The blood glucose values were  $117.06 \pm 1.96$  mg/dl. It is showed that the anesthesia produced hyperglycemia.

White Wistar Rats is an animal frequently used in different experiments from different fields of medical pathology. One of these is diabetes mellitus that's way it was necessary to study the way regarding the determination of blood glucose, the normal values of blood glucose and the changes produced by anesthesia.

**EXPERIMENTAL STUDIES REGARDING THE INFLUENCE OF SEX ON THE  
APPEARANCE OF DIABETES MELLITUS AT WISTAR WHITE RAT**

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**Summary**

Insular diabetes was induced at 33 rats by administrating streptozocin intraperitoneal. From these 5 developed the severe phase - dying in 7 days, the rest of 26 subjects were slaughtered after 3 months. Regarding the sex incidence rate we noticed that from 33 diabetic subjects, 28 were males (84,84%) and 5 females (15,15%).

**SOME HAEMATOLOGICAL PARAMETERS IN  
POSTWEANING MULTISYSTEMIC WASTING SYNDROME-  
AFFECTED PIGS**

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**Summary**

Postweaning multisystemic wasting syndrome (PMWS) is a recently described disease that affects late nursery and fattening pigs (Harding and Clark 1997, Segales et al., 1997). In Romania PMWS affected pigs have been described for the first time in western region of Transylvania in 2003 (Cadar et al., 2006, 2007). Pigs clinically affected by PMWS show poor body condition, paleness of the skin, dyspnoea and, occasionally, jaundice. Although, gross pathology is not conclusive, the presence of enlarged lymph nodes, non-collapsed and surface-mottled lungs, a yellowish-orange liver and gastric ulcers of the pars oesophagea are of value in the diagnosis of PMWS (Harding and Clark 1997). The aim of this study was to evaluate some haematological parameters, such as total number of leukocytes, lymphocytes, monocytes, eosinophiles and basophiles of PMWS-affected pigs and pigs without clinical signs of PMWS, respectively. An increase in mean white blood cells count was observed for the pigs with naturally occurring PMWS infected pigs compared with healthy pigs. This may be related to the viral infection and/or secondary viral/bacterial infections which are often recorded in pigs suffering from PMWS.

## **EPIDEMIOLOGICAL RESEARCHES IN AN ENDEMIC PRRS FOCAL POINT**

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### **Summary**

In the swine intensive breeding, new nosological entities, more frequently of viral origin, have appeared, composing a dominant component of the infectious pathology. From all these, the PRRS syndrome is clearly the most important one, which after its first official notice in 1997, in the USA, has been rapidly extending, having been also diagnosed in Romania.

The researches have been carried out in a farm with a closed circuit, a whole year, with the purpose of following up the dynamics of the disease. In order to achieve this, the following actions were taken: the epidemiological trial, clinical and anatomopathological examinations, and also serological and virusological tests.

In piglets, mortality was comprised between 10.29% and 21.4% and in young ones this parameter was comprised between 3.78% and 6.2%, characteristic for the mortality in endemic focal points.

Repeat breeders, another characteristic parameter of the disease, was monitored each month in sows, and calculated as a brute and relative value. This specific parameter had values of 10.72% and 30%, with a mean value of 20%, suggesting the genital form of PRRS syndrome. The annual evolution of this parameter associated with reproductive conditions (anoestrus, abortions, weak piglets) is characteristic to the mentioned clinical form.

The serological exams carried out on serum samples, taken from young pigs and sows, confirms the disease in the monitored farm.

## **MATHEMATICAL METHODS APPLICABLE IN PHARMACOLOGICAL RESISTANCE TESTS**

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### **Summary**

In case of in vitro resistance assays (egg hatch assay - EHA and larval development assay - LDA) data analysis can be made using original software (Anthelmintic Resistance Program - ARP) especially conceived for the quantification and interpretation of these determinations. This computer program allows for the calculations regarding hatching percentage of eggs in various concentrations of benzimidazoles, the representation of the reference curve of reduction, determination of the lethal dose 50(DL<sub>50</sub>) establishing hatching percentage at the reference dilution, graphical analysis of the reduction curve, as well as the risk of resistance to the various tested substances

## EGGS HATCHING AND LARVAL DEVELOPMENT ASSAY OF STRONGYLS RESISTANCE AT BENZIMIDAZOLES IN ZOO EQUINES

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### Summary

The research in view of establishing the development and the way in which anthelmintical treatment influences epidemiological indexes, was carried out between October 2005 and May 2006 in equine species from zoos.

In the zoo located Targu Mures it was noticed am strongyls intensity of 2300 EPG - 8700 LPG in horses, and 700 EPG - 1400 LPG in ponies. *In vitro* effectiveness of benzimidazoles (BZ) being low in both horses and ponies. In the zoo located in Turda the intensity of the strongyl parasitism reached the level of 900 EPG - 2300 LPG in horses and 2400EPG - 2800 LPG in ponies, the effectiveness of the benzimidazoles being low. In the zoo located in Baia Mare the intensity of strongyls infestation was of 900 EPG – 1600 LPG in horses, 1900 EPG – 2600 LPG in ponies, 900 EPG -1500 LPG in donkeys benzimidazoles treatment being proven effective.

**EVALUATION OF THE CLINICAL SIGNS AND  
PATHOMORPHOLOGICAL CHANGES IN PIGLETS DERIVING  
FROM VACCINATED SOWS (CHINA STRAIN) AFTER  
EXPERIMENTAL INFECTION WITH CLASSICAL SWINE FEVER  
VIRUS**

**JASNA PRODANOV<sup>1</sup>, R. DOŠEN<sup>1</sup>, M. VALČIĆ<sup>2</sup>, V. POLAČEK<sup>1</sup>, I. PUŠIĆ<sup>1</sup>,  
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**Summary**

An experimental study was conducted to investigate the clinical course of classical swine fever (CSF) infection in piglets deriving from sows vaccinated with China strain vaccine. The experiment was carried out in 24 clinically healthy weaner pigs, divided in four groups. Each experimental group consisted of 6 piglets, aged 28, 35, 44 and 54 days. Two piglets from each group were randomly selected and challenged by intramuscular injection of CSF virus. After that, challenged pigs were reintroduced into their respective pen, in order to detect the possibility of horizontal infection. All experimental animals were examined clinically. After death or sacrifice pathomorphological changes in all piglets were evaluated. The results of our experiment indicate that infection of piglets is possible despite the fact that they originate from vaccinated sows. In all animals clinical signs, that are distinctive for CSF were not detected. However, pathomorphological findings after death and / or sacrifice pointed on successful experimental infection. Certain variation in expression and distribution of pathomorphological changes in survived piglets were discovered.

**Key words:** classical swine fever, passive immunity, China strain

## **UNCONVENTIONAL IMMUNOSTIMULATORY MANAGEMENT OF DOGS' PARODONTITIS WITH AUTOLOGUS STAPHYLOCOCCAL BACTERINE**

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### **Summary**

Periodontal infection in dogs is one of more important and frequent disease among oral inflammation. Actually sufficient data exist sustaining the intervention of immune mechanisms in evolution of periodontal diseases but the usefulness of immune therapy is unclear. Despite this controversy the utility of diverse immune-modulator products have practical support and popularity in the human stomatology.

These discussed aspects lead to the needful or to the opportunity of rethink in the future the orientation of the periodontal therapy. In this study we analyzed the benefic effect of staphylococcal bacterin on the evolution of periodontal disease on dogs.

## **EPIDEMIOLOGICAL COMPARATIVE INQUIRY IN DERMATOMYCOSIS OF CARNIVORES**

**NARCISA MEDERLE, GH. DĂRĂBUŞ**

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### **Summary**

In an epidemiological comparative inquiry on carnivores, the most frequent dermatomycosis was microsporia. The following fungi species were identified: *Microsporum canis*, *M. gypseum*, *Trichophyton mentagrophytes*, *T. concentricum*, *Malassezia pachidermatis*, *Candida albicans*, *Alternaria sp.*, *Aspergillus sp.*, *Penicilium sp.* The dermatophytes were identified not only on the animal body, but also on the unsterilized equipment, whereas *Malassezia pachidermatis* was isolated only on animals. *Microsporum* had a higher prevalence in Pitbull, Teckel, Rottweiler and German Shepherd races, and *Trichophyton* in Rottweiler, German Shepherd, Boxer, and Chow-Chow races, especially in the 1 – 3 years of age category. In cats, microsporia prevalence was higher in the European race, with a growing trend until 3 years of age, and then it reduces.

**SCREENING OF HERBAL ESSENTIAL OILS' AND ALCOHOLIC  
EXTRACTIONS' ACTIVITIES ON OEDEMA DISEASE  
ASSOCIATED *E. COLI* STRAINS**

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**Summary**

The antibacterial efficacy of the ethanol extracts and essential oils of *Thymus vulgaris L.*, *Calendula officinalis L.*, *Salvia officinalis*, and *Hippophae rhamnoides L* was studied *in vitro* against swine strains of *Escherichia coli*. A broth microdilution method was performed in order to determine the antimicrobial potential of these plants and to obtain data regarding the minimal inhibitory concentration (MIC) and minimal bactericidal concentration (MBC). No antimicrobial activity was observed when the ethanol extracts were tested (MIC and MBC > 4%), whereas two of the essential oils, those obtained from *Thymus vulgaris L* and *Salvia officinalis*, showed strong antimicrobial activity against all isolates, at a concentration that ranged from 0.125 to 1% (v/v). Essential oils of *Thymus vulgaris L* were significantly bactericidal at a minimal concentration of 0.125% (v/v), while *Salvia officinalis* essential oils were less efficient, when compared to *Thymus vulgaris L* ones (MIC and MBC 1%). *Hippophae rhamnoides L.* and *Calendula officinalis L.* essential oils showed no antimicrobial properties.

Our results showed that *Thymus vulgaris L* and *Salvia officinalis* essential oils could be considered as natural antimicrobial agents.

## CURRENT EPIZOOTICAL STATUS OF VOJVODINA PROVINCE FOR AUJESZKY'S DISEASE

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### Summary

The epizootical data concerning Aujeszky's disease (AD) in the Province of Vojvodina for the last ten years are summarized for the first time. In order to estimate AD status we used the data from: Epizootiological Reports of the Ministry of Agriculture, Forestry and Water Management, Statistical Year Book of Serbia and a questionnaire that was sent to farm owners, practicing veterinarians, veterinary inspectors and regional epizootiologists. The swine population in Province Vojvodina was estimated 1.246.000 animals. The majority of pig holdings (about 70%) are farrowing and finishing farms. In regard to farm structure, about 30% of swine production is carried out on large industrial farms (more than 100 sows) and 70 % belongs to small farms and backyard stocks. During the past ten years infection was diagnosed in seven different animal species: swine, dog, cat, cattle, sheep, donkey and badger. In the same period the ADV infection was detected on eight large swine farms of industrial type, out of which six were involved in vaccination program. There is no special decree issued by the Veterinary Authorities that regulate AD control neither does national or regional eradication program exist. On some industrial farms control is based on the surveillance and voluntary use of locally developed live attenuated non g-E deleted vaccines. The average ADV seroprevalence of unvaccinated breeding pigs was estimated at 32.8%. The swine population in Vojvodina region is enzootically infected with ADV. Occasionally infection was diagnosed in different domestic and wild life mammals. Vaccination with live attenuated non g-E deleted vaccines precludes the serodiagnosis of infected pigs, thus making eradication of the disease impossible.

**Key words:** Aujeszky's disease, pigs, seroprevalence, Vojvodina, epizootical status,

## IMPORTANCE OF *CAMPYLOBACTER SPP.* IN LAYING HENS

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### Summary

Bacteria belonging to *Campylobacter* genus present microorganisms that, besides *Salmonella* and some *E. coli* spp., present one of the most important food contaminants. They are the most frequent reason for food poisoning, when present in food of animal origin. Spreading of *Campylobacter* in nature is connected to domestic and wild animals, on one side, and the environment on the other. Because of the role that humans have in nature, they constantly follow circulation of this bacteria and influence its presence. Poultry meat and its products are the most common sources of *Campylobacter* infection and therefore it is necessary to know all the routes of its transmission. The **scope** of this work was bacteriology examination of the samples from laying hens on presence of *Campylobacter spp.*, with the **aim** to determine if they are present and to draw attention to their importance. Cloacal swabs, parts of digestive and reproductive tracts of laying hens were used as **material** for examination. Isolation was determined by the method of microaerophil cultivation on selective liquid and solid media, and identification was carried out by determining physiologic activity using biochemical characteristics. Out of all the material *Campylobacter jejuni* and *Campylobacter coli* were isolated. The results show that *Campylobacter spp.* are present in the flocks of laying hens. This has an important role in spreading of these microorganisms on humans.

**Key words:** *Campylobacter jejuni*, *Campylobacter coli*, laying hens

**DNA-FINGERPRINTING AND PULSED-FIELD GEL ELECTROPHORESIS OF  
SALMONELLA ENTERICA SEROTYPE INFANTIS STRAINS ISOLATED FROM  
POULTRY**

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**Summary**

*Salmonella* Infantis has been the most common serovar in Hungary in the last two years, both in the fields of human and animal health. Pulsed field gel electrophoresis (PFGE) using restriction enzyme *Xba*I, and enterobacterial repetitive intergenic consensus (ERIC-PCR) were compared with respect to their ability to detect genetic differences among 31 *Salmonella* Infantis isolates from 21 poultry farms in Hungary. Results of ERIC-PCR showed that the isolates were indistinguishable. In addition PFGE analysis distinguished *Salmonella* Infantis strains into two clusters. The results of this work demonstrate the genetic diversity and expansion of *Salmonella* Infantis associated with epidemic changes.

**THE EVOLUTION OF THE CLASSICAL SWINE FEVER IN  
ROMANIA BETWEEN 2001 AND 2005**

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**Summary**

In the paper are presented the evolution of classical swine fever, in Romania, between 2001 and 2005. Starting from 1<sup>st</sup> of January 2002 the vaccination against CSF forbidden in 12 counties in western Romania. After this a lot of other CSF outbreak appeared so that in 2002 there have been discovered 52 cases.

Because of the epidemiological situation between 2001-2005 we consider that the reviewal of the prophylaxis strategy is necessary, a fact that happened.

**THE CLINICAL TESTING OF THE POLYVALENT INACTIVATED  
VACCINE USED FOR THE IMMUNOPROPHYLAXIS IN OVIN  
CLOSTRIDIOSIS**

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Summary

The goal of this paper's researches is the clinical testing and immunological effectiveness of the ULTRACHOICE 8 vaccine destined for the immunisation against the clostridiosis that develops in sheep.

The researches have been made respecting the testing protocol of the ULTRACHOICE 8 product of the PFIZER ANIMAL HEALTH – USA company, under the coordination of the I.C.P.B.M.V. Bucuresti, for the assimilation, registering and marketing of the vaccine in Romania.

**HELICOBACTER INFECTION AND GASTRIC COMPARATIVE PATHOLOGY**

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*Summary*

*Helicobacter pylori* represents one of the most common and medically prominent infections worldwide. Infection with this bacterium has an association with histological gastritis, gastric atrophy, gastric cancer, and mucosa-associated lymphoid tissue (MALT) lymphoma in the stomach. Humans infected in early childhood are especially at risk for the development of multifocal atrophic gastritis and subsequent gastric adenocarcinoma. The disease has been declining in most industrialized countries, it remains the second most common cause of cancer death worldwide and is, in theory, a largely preventable disease. Subclinical to chronic progressive gastritis associated with different *Helicobacter* species has been demonstrated (experimentally or naturally) in several animal species including mice, rats, Mongolian gerbils, guinea pigs, ferrets, cats, dogs, pigs, macaques, and hamsters, most of these animals do not develop gastric cancer. Such clinical diversities are caused by variations of *H. pylori* pathogenicity, host susceptibility, environmental factors, and interactions of these factors.

## **THE IMPORTANCE OF TUMOUR MARKERS IN VETERINARY ONCOLOGY**

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### **Summary**

Present subject is almost unknown in veterinary medicine from our country and few used in other countries, but in Romania carcinosis frequency in pets is extremely high on behalf a major reason of mortality. Tumour markers entry becomes a priority for diagnosis and appreciation of carcinosis process in dog and cat. Being a breaking new ground for us, this new inquiry technology, we will brief this work only to the theoretical presentation of the introduction of these investigations beside all that diagnosis methods done in veterinary oncology.

**OBSERVATIONS REGARDING SOME  
HISTOPATHOLOGICAL ASPECTS OF BROMADIOLONE  
BAITS POISONING IN COMMON BREED DOGS**

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**Summary**

Bromadiolone is a compound of synthesis used for destruction of mice and rats and belongs to the second generation of rodenticide anticoagulants. The intoxication with bromadiolone baits is frequently encountered in dogs of commune breed, especially in the actual context, when not using these substances is not possible yet.

Our study included two dogs intoxicated with bromadiolone. They have been brought to the clinic, samples have been taken for laboratory analysis, but they died shortly after receiving the specific treatment.

During the necropsy liver, kidney, lungs, esophagus and spleen samples have been taken. The samples have been included in histopathological preparations and investigated.

The micro lesions founded were ischemia in the first case and stasis in the second case. In both cases we could observe deterioration of vessels endothelium and necrosis in different stages. The differences between the two cases were, probably influenced by the death of the first subject that occurred more rapidly end by some preexistent diseases.

## **FREQUENCY OF CANINE TESTICULAR TUMORS: STUDY ON 100 DOGS**

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### **Summary**

Testicular tumours occur both in canine and human species. However, while the incidence of these tumours in man is has been constantly investigated and demonstrated an increase during last decades, a few data is published about the frequency of testicular tumours in canine species. The present study attempts to give an up-date on the frequency of testicular tumours in dogs. The histological examination of testes collected at necropsy from 100 dogs revealed the presence of testicular tumours in 21 subjects (21%). A total of 41 tumours were observed: 19 seminomas, 16 interstitial cell tumours and 4 Sertoli cell tumours. Bilateral tumours were detected in 8 of the 21 dogs. Moreover, 5 dogs showed more than one type of testicular tumour.

The results of the present study demonstrate a high frequency of testicular tumours in the dog. Recently, the pathogenesis of human testicular tumours has been associated with the exposure to pesticides and plastic derived phthalates. Further studies are required to investigate if these substances can also play a role in the pathogenesis of canine testicular tumours.

## EFICIENCY OF IMMUNOGLOBULIN ABSORPTION IN NEWBORN CALVES RECEIVING ORAL CLINOPTILOLITE TREATMENT

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### Summary

Experiment was carried out on total number of 30 newborn calves, which were immediately after parturition separated from their dams and placed in individual pens. Calves were divided in two experimental groups, with 15 calves each. All calves were bottle-fed two times/day with their mothers colostrum in 12 hours interval during first 48 hours after partus, starting two hours after partus. One group served as a control while second group received 20 mL of oral clinoptilolite suspension per meal during first 48h. Blood samples were taken from the jugular vein of calves at 6h, 24h. and 48h after birth. Colostral sera was obtained from first colostrum after fatt and casein removal. Blood serum and first colostrum serum immunoglobulin G concentration was determined using single radioimmuno-difussion method (sRID). Apparent efficacy of absorption (AEA%) was calculated for individual calves at 6h after partus, by the method of Husband et al., (1973). The results were subjected to analysis of variance ANOVA with two factors (clinoptilolite x time) and 15 replicates (2x3x15 model). Statistical significance of differences between mean values were calculated using LSD test, at 95% and 99% probability.

Calf blood serum IgG concentration was increased in clinoptilolite treated group of calves at periods of investigation. Significant increase in the AEA value at 6h after partus was also evident in the clinoptilolite-treated compared to the control group of calves. Negative correlation between value of AEA and mass of IgG in the colostrum fed was evident in both experimental groups of calves.

**Key words:** newborn calves, IgG, AEA

## **METALS COMPOSITION OF SOME FUNCTIONAL FOOD COMPONENTS: TOMATO SAUCE AND DEGREASED SOY**

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### **Summary**

It were analyzed the total metals contents for some tomato sauces and degreased soy samples. The analysed metals were: Na, K, Ca, Mg, Fe, Mn, Zn, Cu, Cd, Ni, Co, Pb and Cr. Flame atomic absorption spectrometry (F-AAS) with high-resolution continuum source ContraA 300 spectrometer was used to determinate the total metals contents. The results were statistically interpreted using multivariate analyses.

**Key words:** minerals, functional food, flame atomic absorption spectrometry, multivariate analyses

## **HEAVY METALS CONTENTS OF BEE'S POLLEN FROM DIFFERENT LOCATIONS OF ROMANIA**

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### **Summary**

This study reports the heavy metals contents of eight bee pollen purchased from eight different locations of Romania. The quantified metals for each sample were: Fe, Mn, Zn, Cu, Ni, Pb and Cr. Heavy metals contents were determined by flame atomic absorption spectrometry (F-AAS) with high-resolution continuum source ContrAA 300 spectrometer. Multivariate analyses were used to interpret statistically the obtained results.

**Key words:** heavy metals, bee's pollen, flame atomic absorption spectrometry, multivariate analyses

**MALIGNANT LYMPHOMAS AND CHRONIC LYMPHOID  
LEUKEMIA (ANATOMOCLINICAL STUDY)**

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**Summary**

The authors hold forth to create a standard for positive and differential diagnosis between malignant lymphomas and chronic lymphoid leukemia on canine specie. The study was drawn reviewing 97 cases studied at the Faculty of Veterinary Medicine in the last years (82 cases were malignant lymphoma and 15 cases were chronic lymphoid leukemia).

**Key words:** canine malignant lymphoma, canine chronic lymphoid leukemia, hematology, cytology

## **DEUTERIUM DEPLETED WATER- ANTIOXIDANT OR PROOXIDANT?**

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MIHAELA PUP, M. FLORIN, ILEANA BRUDIU**

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### **Summary**

In the present work we studied the changes in some red blood cell antioxidant enzymes which are involved in the organisms antioxidant system after administration of deuterium depleted water (DDW) in rats, during a 60 days experimental period. There was determined that in a short time treatment, DDW had a prooxidant effect (malondialdehyde values are increasing) but after a longer time administration, DDW stimulated the cell antioxidant defense system. GSHred ( $p < 0.001$ ), respectively SOD registered increased values ( $p < 0.05$ ). These conclusions were revealed by the determination of glutathione average values, glutathione peroxidase, glutathione reductase, catalase and superoxid dismutase activities.

**Key words:** deuterium depleted water, oxidative stress, oxidoreductase, rats

**THE INFLUENCE OF THE DEUTERIUM DEPLETED WATER IN  
THE EXPERIMENTAL CADMIUM CHLORIDE INTOXICATION ON  
LIVER FUNCTION IN RATS**

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**Summary**

The present work deals with the antioxidant effect of deuterium depleted water (DDW) on rats' liver with cadmium induced oxidative damages (20 ppm Cd/ b.w. single dose as cadmium chloride). There was determined that In a short time treatment DDW has a prooxidant effect (MDA values are increasing), stimulated protein synthesis, 61days, DDW administration did not cause great differences in the activities of ALT and AST and could partially counteract the damages due to Cd intoxication.

**Key words:** cadmium, deuterium depleted water, malondialdehyde, transaminase, rats

## **THE URINE TEST AFTER THE ADMINISTRATION OF THE NONIONIC CONTRAST SUBSTANCE ULTRAVIST 300 TO THE DOG**

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### Summary

It is a known fact that functional and structural modifications of different intensities determined by different factors can occur regardless of the contrast substance used by radiology. The most important factors are the structure and chemical properties of the contrast substance responsible for the modifications of the vascular bed and for the adverse reactions. From this point of view, the osmolarity and the content of active substance are the most important factors, inevitably followed by the characteristics of the species, race, age, sex and individual, all with great importance in the field of veterinary medicine. These factors must be taken into account in a serious manner as differences of both localisation and intensity of the reactions can occur on an individual level even if the individual is part of a group.

Once the nonionic low osmolarity contrast substances were discovered, the secondary reactions were lower in intensity, thus favorizing their administration to a larger number of patients, for a larger number of investigations.

Urine, a secretion product of the kidneys basically formed by three fundamental processes such as ultrafiltering the plasma at the glomerular level, the reabsorption and secretion of certain constituents at the tubular level, was subjected to a physical and biochemical exam.

## **HAEMATOLOGICAL MODIFICATIONS IN SOME MALIGNANT TUMOURS OF COMPANION ANIMALS**

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### **Summary**

We performed the haematological examination on 30 companion animals (dogs) that have been precisely diagnosed with various histopathological types of malignant tumour in Faculty of Veterinary Medicine, Bucharest. Next we reviewed and construed the haematological results in three situations of cancer: sarcoma, acytemic lymphoma (without tumoral cells in peripheral blood) and carcinoma.

**Key words:** haematological examination, sarcoma, acytemic lymphoma, carcinoma

## THE LEVEL OF THE ASCORBIC ACID FROM THE TABLETS OF DIFFERENT ORIGIN

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### Summary

The present study aims at determining the content of the ascorbic acid from the tablets of different origins and different vitamin C content, aromatized and non – aromatized, and at interpreting the statistic differences between the means with the same vitamin C concentration.

The determination method was the potassium iodide tetrameter method described in F.R. 10<sup>th</sup> edition.

We could notice that the aromatized tablets (with the exception of the strawberry ones) have a content very close to the ideal content (over 99mg %) while the strawberry flavor has a lower content, of only 93, 4 mg % (a smaller value than the minimum allowed by F.R. 10<sup>th</sup> edition).

The non-aromatized tablets both of 80 mg and 200 mg have C vitamin contents in quantities which range within the limits allowed by FR 10<sup>th</sup> edition. (95 -105mg %)

**Key words:** tablets, aromas, ascorbic acid

## **ESTROGENIC DEPRIVE IN TREATMENT OF MAMMARY TUMOURS AT DOGS**

**L.C. BURTAN, I. BURTAN , M. FÂNTÂNARU, S. CIOBANU, ROXANA TOPALĂ**

### **Summary**

This study presents the results of ovariectomy as associate method, in mammary cancer treatment. Palliative ovariectomy increases the survival period with 64%, depending of age and tumoural morphologic aspects. Ovariectomy associated to mastectomy in the advanced mammary cancer increases the survival period on the average with 73%. Ovariectomy should precede mastectomy with 3 weeks in associate treatment. Regarding metastasis prophylactic treatment this two surgical interventions should not be done concomitantly.

## **ESTABLISHING THE CAUSAL FACTORS IN THE DEVELOPMENT OF CHORIOPTIC MANGE IN CATTLE**

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### **Summary**

Establishing the causal factors in the development of chorioptic mange in cattle from I.C.P.C Brașov were achieved in tow stages (2000-2001; 2001-2002) and allowed the classification of cattle as sources of *Chorioptes bovis* with a direct role in the transmission of mange, 78.63% (between 2000-2001) and 78.69%(between 2001-2002) of the receptive individuals were susceptible; 2% were susceptible and showed clinical signs, 35.77%-36.32% of the receptive and susceptible animals did not show clinical signs; 42.85%-41.32% of the population were receptive unsusceptive. For evaluating "milk production "as a risk factor in contracting the disease, we obtained *Odds ratio* values of 1.15 (2000-2001) and 1.37(2001-2002), which indicates that a milk production higher than 20l/day is a important risk factor in the clinical manifestation of the disease.

## **THE BIOCHEMICAL MODIFICATIONS OF SOME IRON PARAMETERS IN PROPOLIS TREATED AND CADMIUM INTOXICATED RATS**

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### **Summary**

A propolis extract effect on sideremia, total iron binding capacity, haemoglobinemia, methaemoglobinemia, and methaemoglobin reductase activity was studied on Wistar male rats. The rats were pretreated with a hydroalcoholic propolis extract, intoxicated in single doze with CdCl<sub>2</sub> (20ppm/kg b.w) and treated with the same extract 2 weeks more.

There was observed that the propolis extract protect the hemoglobin from oxidative reactions and stimulates the iron absorption and the activity of methaemoglobin reductase.

**Key words:** cadmium, propolis, sideremia, haemoglobinemia, total iron binding capacity, rats

## **THE PROPOLIS EXTRACT PROTECTIVE ROLE ON RED BLOOD CELLS ANTIOXIDANT ENZYMES IN CADMIUM INTOXICATED RATS**

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### **Summary**

The present work deals with the cadmium effect, administrated in a single dose (20ppm/kg b.w.) on propolis hydroalcoholic extract both preventive and treated rats. The following parameters were determined: malonildialdehyde (MDA), glutathione (GSH), catalase (CAT), superoxid dismutase (SOD), glutathione peroxidase (GSHpx) and glutathione reductase (GSHred).

The obtained results revealed that the hydroalcoholic propolis extract significantly decreased the lipid peroxidation. The preventive treatment decreased the red blood cells CAT, SOD, GSHpx and GSHred activities after 24 hours from the Cd intoxication. After a further hydroalcoholic propolis extract treatment, an increasing of the studied enzymes activities was observed.

**Key words:** cadmium, propolis, antioxidant enzymes, rats

## **ESTIMATION OF QUAIL EGG YOLK PLASMA PHOSPHOLIPIDS AFTER FRAGMENTATION BY THIN LAYER CHROMATOGRAPHY METHOD**

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### **Summary**

The purpose of this study was the separation and dosage of quail egg yolk plasma phospholipids. The phospholipids have been fragmented using the thin layer chromatography method, while their dosage has been made by estimating phosphorus, after the perchloric acid digestion. The obtained results have demonstrated the presence of phosphatidylcholine in large quantity (74.8%), as well as the presence of the other phospholipids: phosphatidylethanolamine (11.3%), phosphatidylserine (4.3%), sphingomyelin (6.5%) and lysophosphatidylcholine (3.1%). Due to the high level of phosphatidylcholine, as well as the presence of sphingomyelin, the use of quail eggs in diets is highly recommended, as these phospholipids contribute to the decrease of lymphatic absorption of cholesterol.

**Key words:** quail, egg, phosphatidylcholine, sphingomyelin

## **PRODUCTIVE PERFORMANCE IN FULLFAT SOYA DIETS**

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### **Summary**

Nutritional value of full fat soya (FFSBM) products is limited of ten by high content of antinutritive factors causing different physiologically undesirable effects after usage in food or feed of crude beans. It explains the necessity of development of special technologies of productions of full fat Soya products.

The objective of this works was to asses the effect of various supplementation in terms of nutritional efficiency, especially about the Ca and P level from feed and bones of broiler chickens.

## **SOME HEALTH PARAMETERS CHANGES TO FULLFAT SOYA FED BROILERS**

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### **Summary**

The European Union Commission decides the ban on use meat and bone meal in animal feed and came into effect in 1 January 2001. Soybean meal or SBM is the primary replacement protein source for meat and bone meal lost from compound feed. They have asulphur containing amino-acid deficiency and a variety of antinutritive factors (phytic acid, tripsininhibitor, soine or fazein, natural anthyroid substances were found in KB and SB, ascorbidase, allergic factors, lizinalanine, unusefull methionine, nitril-glycosizs). The objective of this study is to assess the effects of SBM and FF SBM on performance and health of broilers.

## **INFLUENCE OF THE ENVIRONMENTAL ALUMINUM CONCENTRATIONS UPON ENCEPHALON MORPHOLOGY IN POULTRY**

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### **Summary**

The extension of the anatomic-pathological researches upon the variety of neuropathies affecting bigger and bigger territories and livestock will generate new results in domestic animals neurology and neuro-pathology. The diagnosis of these various forms of disorders in the nervous system is still a novelty, especially if we take into consideration that a great part of these affections do still have an unknown etiology.

Aluminum is one of the most spread oligominerals within lithosphere, representing 8% of total minerals (1, 3, 4, 5), but it may be found in extremely small concentrations in plants and animal tissues (7).

We must take into consideration that, as a result of various human activities (industrial, iatrogenic), the concentration of aluminum within the environment (water, food, air) has changed and it is still changing permanently, achieving levels to which the live organisms cannot adapt and which can be harmful or even fatal.

With this paper work, we intend to research the microscopic morphology of poultry encephalon in correlation with the concentration of aluminum within the nervous system, due to the environmental contamination, caused by aluminum-processing industry.

## **EPIDEMIOLOGICAL AND PARACLINICAL ASPECTS IN CANINE DIROFILOARIOSIS**

**COMAN SOFIA, B. BACESCU, T. COMAN, GHE. PARVU, CRISTINA DINU, T. PETRUT, N. BERCARU, ADRIANA AMFIM**

### **Summary**

The ascending incidence of dirofilariosis in dogs and the potential implications for human health through of the zoonotic character of helminthiasis, is the argumentation for the need for scientific investigation at world level. The clinicians in the field of human pathology signal the presence of nodules in the pulmonary parenchyma, in the conjunctive tissue and in the ocular globe in the Dirofilariosis infestation, lesions that are often taken for neoplastic formations in the radiological examination. According to Italian researchers, pulmonary dirofilariosis is a mosquito transmitted zoonosis. The death of the parasites is followed by an embolemia in the pulmonary capillaries and the presence of the solitary nodules in the parenchyma can be diagnosed in the radiological examination (2).

Numerous researchers have conducted investigations upon the incidence of Dirofilariosis infestation in dogs, with results showing a frequency rate of 50.3%, with the mentioning of the zoonotic aspect of the helminthiasis (3,4,5).

**Key words:** dogs, paraclinical, epidemiological, dirofilariosis

## **RESEARCHES CONCERNING SOME CLINICAL AND PARACLINICAL ASPECTS OF CHOLECYSTOPATHIES IN DOGS**

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### **Summary**

In this paper work are presented the results of clinical and paraclinical exams in some gall bladder disorders in dogs.

These disorders appeared in low frequency (1-2%), but some aspects of gastric intolerance, colic and low hepatic insufficiency can be explained through paraclinical exam.

We have investigated three dogs, different age and breed, with dyspeptic syndrome: emesis, colic, icterus, anorexy.

Biochemical and haematological exams were performed in these dogs. To establish the precise diagnostic ecography was used as common method.

**Key words:** dog, ecography, liver, icterus.

## PROPOLIS' ACTIVITY ON SOME BLOOD PARAMETERS IN RATS

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### Summary

Propolis' activity on some important blood parameters was analysed in 64 Wistar rats divided in three lots: injected with propolis dilutions (**P**); injected only with solvent (**S**) and, respectively, control lot (**C**); (untreated). Propolis alcoholic solutions 10% were diluted ten times with bidistilled warm water and 0.5 ml/rat, was injected via subcutaneous way. The blood samples were gathered by cardiac puncture.

Chosen methods were: erythrocyte's sedimentation speed (VSE) (a), haemathocrit (Ht.) (b), haemoglobin (Hb.) (c), white blood cell formula (d) and *in vitro* oxygen consumption (through Warburg micrometry) (d).

a. Registered VSE values after 1 hour, showed that in administrations were propolis dilutions was administered, the values exceeded of five times ( $2.5\text{mm} \pm 1.9$ ) the normal values ( $0.5\text{mm} \pm 1.2$ ), which can be considered as being significant.

b. Comparative haemathocrit values between control ( $41 \pm 1.7\%$ ) and those of propolis injected lot ( $45.5 \pm 1.8\%$ ), were with 4.5% greater than the control's one, which can be considered as statistically insignificant. Values for the lot L2 ( $40.5 \pm 3.0\%$ ) were close to the control one.

c. Interesting data were obtained in lot L1, after propolis administration. Here blood haemoglobin rose to  $9.9 \pm 0.5\text{g/dl.}$ , comparatively with control lot (L3) ( $8.4 \pm 0.4\text{g/dl.}$ ), suggesting the positive action on sanguine pigment and, respectively, erythrocyte's pile up. Values for L2 were close to those registered for L3.

d. Experiment's ascertains about white blood cells formula showed the following situations:

- Neutrophils:  $23.5 \pm 0.5\%$ , for L1,  $22.0 \pm 1.0\%$ , for L2 and  $18.5 \pm 0.7\%$  for L3;
- Eosinophils:  $1.0 \pm 0.8\%$ , for L1,  $2.0 \pm 0.2\%$ ,  $2.0 \pm 0.5\%$  for L3;
- Basophiles:  $1.0 \pm 0.4$ , for L1,  $1.0 \pm 0.5\%$ , for L2,  $1.5 \pm 0.5\%$ , for L3;
- Lymphocytes:  $77.5 \pm 1.5$ , for L1,  $72.0 \pm 5.0\%$ , for L2,  $70.0 \pm 4.0\%$ , for L1 and, respectively
- Monocytes:  $2.0 \pm 0\%$ , for L1,  $3.0 \pm 0.5\%$ , for L2 and  $3.0 \pm 0.2\%$  for L1.

e. *In vitro*'s activity of propolis was studied through energogenesis of some essential organs, by oxygen consumption measurements. Thus, *in vitro* oxygen consumption for 100 mg fresh tissue per one hour was:

- Liver:  $75.5 \pm 1.4\%$ , for L1,  $65.0 \pm 1.0\%$ , for L2 and  $68.0 \pm 1.7\%$ , for L3.
- Thymus:  $55.5 \pm 0.8\%$ , for L1,  $40.0 \pm 2.4\%$ , for L2 and  $45.0 \pm 2.0\%$ , for L3.
- Spleen:  $71.5 \pm 1.0\%$ , for L1,  $62.0 \pm 1.1\%$ , for L2 and  $64.0 \pm 0.9\%$ , for L3.

The significance of these results is that the propolis increases the tissular respiration in all searched organs, where oxygen positive trend consumption being of: 6.5 microliters for liver, 10.5 microliters for thymus and respectively 7.5 microliters for spleen. The greatest registered values for thymus confirm once again the promptitude in reactive consistence of this lymphoid organ.

Propolis administrated in Wistar rats has been determined:

- Risen of erythrocytes sedimentation speed.
- Hemathocrite's augmentation.
- Haemoglobins' concentration increase.
- White blood formula change with lymphocytosis and neutrocytopenia.
- Significant *in vitro* increasing of oxygen consumption of liver, thymus and spleen.
- It is excluded the possibility that only the solvent might determine significant effects.
- Propolis can be used parenteral, being yet a searchable way in animals.

**Key words:** *propolis solutions, blood parameters, in vitro, rats*

**CLINICAL AND ANATOMOPATHOLOGICALLY SIGNS IN FELINE  
INFECTIOUS PERITONITIS (FIP)  
- CASE STUDY -**

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**Summary**

Feline Infectious Peritonitis (FIP) clinical signs were first time described in 1960. Afterwards, studying anatomopathologically lesions in FIP by electron microscopy technique, these lesions were associated with corona virus, named Feline Infectious Peritonitis virus. Clinical and anatomopathologically signs noticed in FIP are direct consequence of blood vessel inflammation and intern organs lesions. Are known two basic clinical appearances: effusive and non-effusive. In effusive appearance is affected many blood vessels, aspect witch generate to issue the liquids and proteins in body pocket. In non-effusive appearance, clinical signs are correlated with intern organs affected.

## **OTITIS EXTERNA IN CATS – EPIDEMIOLOGICAL STUDY**

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### **Summary**

In cats, otitis externa is frequently, this disease can affect between 2 and 10 percentage by feline case presented to consultation. Hearing parasite – *Otodectes cynotis*, is responsible for almost half cases with otitis externa in cats (1, 2). For all that, are other causes of otitis externa in cats: inflammation, other infections. By 20-30% of auricle chronic disease, stay unknown (3, 4). Generally, causes of otitis externa in cat are divided in three categories: elementary (parasitic infestations, fungal and mushroom infections, dermatophytes, viruses etc.); susceptibility (immunosuppressant reoviruses, systemic disease) and habitual causes, like opportunistic bacteria (4, 5, 6).

**ELECTROCARDIOGRAPHIC AND HAEMATOLOGICAL  
PARAMETERS AND HEART BEAT FREQUENCY IN ARABIAN  
THOROUGHBRED HORSES ACCORDING TO THEIR  
ADAPTABILITY TO EFFORT**

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**Summary**

The capacity of 4.5 years old Arabian thoroughbred horses' adaptability to standardised physical effort was determined. The electrocardiographic and haematological parameters and heart beat frequency were measured before and after the effort. At the end of the race, the racing horses displayed 10.7% longer PR interval and 23.5% longer duration of the electric ventricular systole compared to the horses that were not adapted to effort. Right after the effort, the horses with better physical condition had the erythrocyte to leukocyte ratio of 1-1.2 and 50% hematocrit value.

## HENS' ANTIBODIES PRODUCTION STIMULATION BY ADMINISTRING *ESCHERICHIA COLI* F5 K99 FIMBRIAL ANTIGENS

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### Summary

The studies evaluated the interference of *Calendula officinalis* extracts with antibacterial antibodies production and IgY transovarian transfer in extensive raised hens. We obtained fimbrial *E. coli* antigens and we used four hens groups raised in extensive system divided as following: witness group inoculated with salina, the second group was inoculated with antigen, the third group with antigen and alcohol and the fourth group with antigen and alcoholic extract of *Calendula officinalis*. All the groups were inoculated three times in the days 0, 21<sup>st</sup> and 45<sup>th</sup> of the experiment. IgY synthesis dynamics in serum and yolk was followed by microagglutination reactions. Formoled *E. coli* B41 F5K99 strain proved to have good antigenic properties inducing Ig synthesis in inoculated hens organisms with an ascendent curve after the first inoculation to all the groups inoculated, with the higher value after 45 days from the first inoculation. An active Ig transfer from serum to yolk was registered starting with 5 days after the second inoculation. High yolk agglutinants antibodies (IgY) levels were detected (over 1/11658) starting with 21 days – the moment of the second inoculation. Hidro-alcoholic *Calendula officinalis* extract may constitute a hen's colibacilar fimbrial adjuvant alternative, and yolk rich in specific Ig may be an alternative in treating and preventing bacterial digestive diseases.

**Keywords:** Adjuvant, *Calendula officinalis*, *Escherichia coli* F5 K99, fimbrial antigens

## **OBSERVATIONS UPON THE DEVELOPMENT OF A PSEUDOMONOSIS EPISODE IN A BROILER FARM**

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### **Summary**

*Pseudomonas aeruginosa* is the representative of the genus with the highest importance in aviary pathology, causing systemic and localized infections. The epidemiological examination has revealed the following aspects: broilers were bred on soil and the forage was quantitatively and qualitatively concordant with their age; hygiene conditions within shelters were bad (lateral walls with condense). We have not performed determinations concerning the microclimatic parameters.

During the whole exploitation period, within the three sheds we have recorded a cumulative mortality of 39.67%H1, 24.36%H2 and 24.17H3.

The anatomic-pathological examination has revealed the following data: catarrhal enteritis, splenic hypertrophy, pneumonia, green coloration in the content of the glandular and muscular stomach, intestines.

From 9 inseminations performed with the samples taken from the three sheds, we have isolated from bone and liver 7 strains of *Pseudomonas aeruginosa*, which had the following characteristics: only glucose has fermented, under anaerobic conditions the reaction was positive for ADH.

The tests of sensibility to antibiotics have proved that the strains of *Pseudomonas aeruginosa* have ranged as sensibility to antibiotics, but most of them proved to be sensible to gentamycine.

## **IN-FIELD ASSESSMENT OF BREEDING HENS' WELFARE IN A FARM FROM ILFOV COUNTY**

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### **Summary**

The researches were run in December 2006 and aim to establish the livestock welfare level in an Ilfov county farm of laying hens reared in intensive system on litter. During the study there were assessed two shelters divided in two compartments each, where are housed parent flocks of Hybro PG+ industrial broiler.

The method used in order to assess the hens' welfare is an Austrian assessment system, respectively Animal Needs Index 35. The method consists in combining as a unique result engineering-based parameters (details concerning shelter architecture and endowments) with animal-based parameters (physiological e.g. feathers condition, skin condition or ethological e.g. number of cocks in the flock). The parameters are ranged in five areas of influence – locomotion, social interaction, flooring, light and air, stockmanship; being scored either based on measurements, anamnesis data or direct observation of the flocks, or based on investigations with last generation devices as BK 2250 sonometer (used to assess noises level), Drager Miniwarn gas-meter (used to assess air quality) and LM-8000 multifunction devices (used to assess draughts velocity, airflow and light intensity). In order to assess the parameters feathers condition and skin condition were used the methods suggested by R. Tauson in 2004. The final ANI 35 score are obtained by summing scores for all parameters.

The hens' welfare final score at the farm studied was 15,5 points in shelter 1 compartment A and shelter 2 compartment B, 16 points in shelter B compartment A and 17 in shelter A compartment B. These value shows that the welfare of the laying hens are poor in the first two compartments (final scores being between 11 and 16 points) and average in the last two (final scores being between 16 and 21 points).

**THE MORPHOTOPOGRAPHY OF THE ORGANS IN THE  
THORACIC AND ABDOMINAL CAVITIES IN THE CHIROPTERS  
FROM THE FAM. *RHINOLOPHIDAE***

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**Summary**

Because of the human disturbances many European species of chiropters has decreased their populations (1, 5).

All species of chiropters are protected in our country by the law (2).

The mystery surround the bats and the protection program introduced in our country in 1995 conducted to the study of morphotopography of the organs in bats from the cave nr. 4 placed in Valea Jiului (3, 4).

**Key words:** chiropters, splanchnology.

**RESEARCHES ON THE VARIATION OF THE MEAN ELECTRICAL  
AXIS IN DOGS DEPENDING ON THE ECG RECORDING  
POSITION**

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**Summary**

The aim of the present paper is to evaluate the cardiac electric axis in two ECG recording positions: standing position and right lateral recumbency.

The results indicated 6.95% bigger values of MEA under the conditions of right lateral recumbency, comparative to those specific to the standing position. This difference is significant.

As the position of the animal affects the MEA value, it is recommended in the clinic, to corroborate these data with the morphometrical analysis of ECG recording, in order to diagnose the volume changes of the cardiac compartments.

## **STUDIES ON THE DURATION OF SOME ECG PARAMETERS IN CATS**

**M. GHIȚĂ, G. COTOR, C. BRĂSLAȘU, R. BOTEZATU**

\*Faculty of Veterinary Medicine Bucuresti, Romania

### **Summary**

The purpose of the present paper is to establish the duration of all the components regarding the cat's electrocardiogram.

This subject is very important as the cardiac electrical phenomena precede and determine the mechanical events of the heart and the studied ECG parameters can be modified in case of arrhythmia. This is a reason we consider the duration of ECG parameters an important reference points in diagnosis.

We consider that the set of values obtained by us can be used as a set of comparative landmarks with the purpose of diagnosing some arrhythmia.

## **RESEARCH CONCERNING HISTOSTRUCTURE OF CECAL TONSILS IN SOME SPECIES OF DOMESTIC BIRDS**

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### **Summary**

Researches were carried out on two domestic gallinaceae species – the domestic hen (*Gallus domesticus*) and the Japanese quail (*Coturnix coturnix japonica*) and two domestic palmiped species – the domestic duck (*Anas domesticus* sin. *Anas platyrinchos*) and the domestic goose (*Anser domesticus* sin. *Anser anser*).

All fowls were adult. In a symmetrical position as to the ileum and supported by ileocecal ligaments, the ceca are caudalo-cranially oriented; both free cranial extremities are caudally recurved. The caudal extremity of each cecal sac is opened at the limit between ileum and colon. The cecal tonsils are located close to the ceca openings, at the limit between ileum and colon, in the ceca walls. From a histological point of view, the tonsils are covered with a monostratified epithelium associated to follicles. The lymphoid tissue is formed of germinative centres and lymphocytes homogenously positioned. The centres are positioned close to the muscular or at the base of the cecal tonsil folds. In the cecum wall, in the ileocecal ligament insertion point there is diffuse lymphoid tissue in the mucous membrane. In geese there are nodules with obvious lymphatic sinus in the cecum mucous depth and even in its muscular.

**RESEARCH CONCERNING METHODS OF STUDY OF  
LYMPHATIC VESSELS IN DIFFERENT SPECIES OF DOMESTIC  
FOWLS**

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**Summary**

Researches were carried out on two domestic gallinaceae species – the domestic hen (*Gallus domesticus*) and the Japanese quail (*Coturnix coturnix japonica*). All fowls were adult. The lymphatic vessels that drain the lymph at the thoracoabdominal cavity viscera level and the thoracic duct may be highlighted by administration of lymphagogue substances (vegetal and animal fats) administered in fodder. The limb lymphatic vessels may be highlighted by methods as used in human medicine – that is injection of coloured substances and / or radiopaque substances. By subcutaneous injection of trypan blue or China ink the lymphatic vessels on the cadavers were highlighted. Using the injection technique with radiologic contrast substances under the shape of buttons in the interdigital zones and the pulvinus metatarsalis for the pelvic limb and on the metacarpal level and of the tela interdigitalis for the thoracic limb and the serial radiographing on 5 minutes series, the lymphatic vessels were highlighted on the live animal. The period between two radiographies was that short because the contrast substance was hydrosoluble and, consequently, it was rapidly eliminated from the organism.

## **CONTRIBUTIONS AT THE TREATMENT OF ARTICULAR CHONDRAL DEFECTS**

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### **Summary**

Performing preliminary studies regarding cell biology, osteoarticular biomechanics and scaffolds parameters. Isolation and cultivation of cell types required for seeding on the 3D supports. Elaboration of technologies for achieving scaffolds in osteoarticular reconstruction. Seeding and cell culture on 3D supports. In vivo animal experimental studies concerning the aplicability of the developed techniques. Achievement of protocols required for moving on to clinic assessment of used biomaterials and procedures.

## **ASSESSMENT OF SOME MYCOTOXINS IN MEAT AND MEAT PRODUCTS**

**L. ILIE, C. SAVU, CARMEN PETCU, L. TUDOR, F. FURNARIS**

Faculty of Veterinary Medicine– Bucharest

### **Summary**

By their metabolism, microorganisms from the food affect their quality, salubrity and freshness, more precisely they can increase or reduce the quality of the food which may not be consumed as result of microorganisms pathogenic action, degradation and toxic compound synthesis.

Every nutrient usually contains some microorganisms' species which may be developed, having different metabolic properties. The conditions offered by a certain alimentary product and by its environment lead to the fact that only microorganisms able to adapt could develop. Following their multiplication, in the product appear some changes which permit other microorganisms species from the substratum to develop, even if before these changes, they weren't able to develop.

**Key words:** mycotoxins, aflatoxins, meat, meat products, chromatography

**ASSESSMENT OF SOME CONTAMINANTS IN RAW MEAT,  
MAJOR PREMISE FOR FOOD SAFETY**

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Faculty of Veterinary Medicine– Bucharest

**Summary**

The main minimum condition in assuring the population's health is represented by the consumption of salubrious food, lacking those factors which could produce illness. The contamination or pollution of food with his organism or chemical substances causes the risk that a food became potentially harmfully to man. The main causes that influence the hygienic quality of the food products could be shortly presented as: natural toxicity, chemical  
Key words: heavy metals, spectrophotometer, food safety physical respectively biologic contamination or pollution.

The existence of toxic substances residues in food represents a major problem for food hygiene, because these can modify the state of health of all age consumers.

The main aim of Heavy metal residues determination from raw meat was to discover the action mechanisms of these substances, the development of development theoretical aspects of toxicology, the possibility of a more ample generalization of research conclusions through emphasizing antagonistic relations between the analyzed parameters (ex. cadmium and zinc. The zinc reduces considerably the toxic effect of air, waters or food pollution with cadmium, not only through inhibition of transfers from the intestinal wall, but also through it's interfering in other metabolic sequences, thus it can be used in the case of cadmium intoxication).

**THE IMPORTANCE OF THE STRESS  
IN THE ETIOLOGY OF THE CHRONIC SUPERFICIAL KERATITIS  
IN GERMAN SHEPHERD**

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**Summary**

The chronic superficial keratitis in German Shepherd or pannus is the subepithelial proliferation of vessels and connective tissue in cornea. It is a frequent disease in German Shepherd characterized by corneal superficial opacity and gray to red roughened covering this structure of the eye.

Although the aetiology of the disease is thought to be immune mediated, the studies made in Surgery Department of the Faculty of Veterinary Medicine revealed that stress is the most important element in trigger and recurrence of the disease.

**Key words:** cornea, chronic superficial keratitis, stress

**GROSS LESIONS IN FERAL PIGEONS IN SOME CASES OF  
ORGANOPHOSPHORIC ACUTE POISONING**

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**Summary**

A synthesis of necrotic investigation conducted on 10 years (1996-2006) on sporadic events of death involving feral pigeons is trying to underline some common features which may define the gross lesions picture in organophosphoric poisoning in birds. The necropsy findings mainly centred round the circulatory changes constantly observed in the subcutaneous tissues of the neck and pre-pectoral zone, particularly along the oesophagus and crop \*(permit to) might describe a common picture of injuries, useful for a rapid diagnostic orientation.

Some pathogenesis consideration based on the double toxic effect upon the endothelial structure and the autonomous nervous system try to explain the sudden death and the pattern of the out coming lesions picture.

## **IMAGE ANALYSIS OF ANIMAL HAIR: MORPHOLOGICAL FEATURES USEFUL IN FORENSIC VETERINARY MEDICINE**

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### **Summary**

The microscopic investigation of animal hair samples may provide valuable information helpful for both biology and forensic laboratory science. Hair samples from some autochthonous domestic and wild ruminants belonging to the family *Bovidae*, including the *subfamily Caprinae*, and the family *Cervidae*, including the *subfamilies Cervinae* and *Capreolinae*, were evaluated in this study. The main hair structures (cuticle, cortex and medulla) were investigated. The guard hair shaft diameter, the medullary index, the scale length and the medullar vacuolated-cells diameter were measured using an image analysis software. The data obtained in this study suggest that the microscopic morphologic analysis of the animal hairs is a valuable diagnostic tool for species differentiation.

## **PECULIARITIES OF THE SELF-CONTROL PROGRAM IN A POULTRY CUTTING PLANT**

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### **Summary**

Food products may cause sicknesses to the consumers either due to infringing the sanitary –hygienic norms, or by violating the manufacturing technologies applied to obtain the raw material and the final product. The illnesses that are caused by infections from the food products are an international problem and they may be expressed clinically in different ways, with various symptoms, from less aggressive clinical signs, up to very severe signs that might even lead to death.

In view of obtaining safe and good quality food, at an acceptable price and able to provide a correct nutrition, it was necessary to conceive and to apply adequate programs which are able to control food. The control of the food products contributes to the consumers' state of health, by commercializing safe aliments. Food safety is a health problem for the producer, consumer and government organisms.

The international, European and national sanitary veterinary legislation, regarding the manufacturing of foods, requires the application of the HACCP self-control system in food products reception units, in storing units, as well as in the processing and commercializing units of aliments.

The quality and safety of food products are subjects of a major importance and are followed up with utmost attention by the constituted organisms in view of protecting consumers' health. In order to promote safe food products commerce, certain self-control programs, such as SSOP, GMP, HACCP, have been introduced in manufacturing units.

## IMPROVING PHOSPHORUS AVAILABILITY IN BROILER DIETS BASED ON CORN-SOYBEAN MEAL USING MICROBIAL PHYTASE

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### Summary

The effects of the microbial phytase in nutrition of broilers on carcass and meat quality were observed. Trial was carried out on 300 Arbor Acres broilers of both sexes divided into six groups. The broilers in control groups (K and K+) were fed with complete mixtures of standard raw materials and chemical composition, in which dietary available phosphorus (AP) level was formulated at the level of 0.46%. In diets for broilers in the experimental groups, by reducing (O-I and O-I+) and complete excluding dicalcium phosphate (O-II and O-II+), the AP in mixtures was reduced to 0.25% and 0.10%, respectively. Diets for broilers in the experimental groups (K+, O-I+ and O-II+) were supplemented with phytase. During the experiment, that lasted 42 days performances were investigated. At the end of the trial dressing percentages (yields) and carcass conformation measures were monitored.

Reduction of the dietary TP and AP level for experimental broilers induced lower body mass, gain and feed consumption as well as higher feed conversion. However, by introduction phytase into diets negative effects of P reduction were, to some extent, alleviated. The obtained results show that dressing percentages of broilers from the experimental group varied less comparing to the broilers from the control group. Supplementation of phytase into diets increased the share of the breast part and waister thigh in chicken carcasses.

**Key words:** broilers, phytase, production performance, slaughter yield

**GENERATING THE FIRST ANTIBODY FOR AN ENZYME IMMUNOASSAY DEDICATED TO SERUM PROGESTERONE DETERMINATION. EVOLUTIONS OF TOTAL PROTEINS, ALBUMINS, GAMMA GLOBULINS AND HAEMATHOLOGICAL PARAMETERS SUBSEQUENT TO RABBITS IMMUNIZATION USING Progesterone 3-(O-carboxy-methyl) oxyme (SIGMA)**

**MIRCU C., H.CERNESCU, G.OTAVĂ, V.ARDELEAN, GH.BONCA, VIOLETA IGNA, ILINCA FRUNZĂ, TIMEA CZAPP, A.ARDELEAN**

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**Summary**

The immunosorbent assays, or assays using antibodies as specific bounding reagents are usual methods in research labs (Tetin and Stroupe, 2004). In an ELISA, the antibody which binds to the antigen (the primary antibody) should be from a different species to the conjugated (secondary) antibody used in the next step of the assay. In the present work are described the results obtained in the process of generating the first antibody (directed against progesterone) on rabbit, as an element of the sandwich-type immunoassay we do intend to develop for serum progesterone assessment. Two groups consisting of three female rabbits each were immunized against progesterone BSA oxyme, using two different protocols, based on the same schedule: first administration represented by antigen and Freund's Complete Adjuvant and four boosters, represented by antigen and Freund's Incomplete Adjuvant. Total proteins, albumins and gammaglobulins were assayed for immune response characterization. The initial immunization was followed by an increase of total protein levels and of gammaglobulins (significant for both G1 and G2), accompanied by a decrease of albumins. Consequent boosters, all values returned near basic levels, for all investigated parameters (excepting gammaglobulins which remained high), in both groups. For both groups, total protein, gammaglobulins, albumins and hematological picture ranged in normal field during entire duration of study. Variations of total protein, gammaglobulins, albumins and hematological picture subsequent to four immunizations could represent a mark of immune response in rabbit.

**DEVELOPING AN ENZYME IMMUNOASSAY FOR SERUM  
PROGESTERONE DETERMINATION. EVOLUTIONS OF TOTAL  
PROTEINS, ALBUMINS, GAMMA GLOBULINS AND  
HAEMATHOLOGICAL PARAMETERS SUBSEQUENT TO SHEEP  
IMMUNIZATION USING RABBIT IgG AGAROSE (SIGMA)**

**MIRCU C., H. CERNESCU, G. OTAVĂ, V. ARDELEAN, GH. BONCA, VIOLETA  
IGNA, ILINCA FRUNZĂ, TIMEA CZAPP, A. ARDELEAN**

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**Summary**

Serum progesterone level represents a crucial marker for reproduction, indicating pregnancy, infertility or other reproductive pathological conditions. There are several ways for progesterone assaying, between them immunoenzyme assay being the most appropriate, because fulfils sensitivity, expenses and equipment requirements. In this paper we are describing the results obtained in the process of generating the second antibody on sheep, useful for developing our progesterone immunoassay. Two groups consisting of three ewes each were immunized against rabbit gammaglobuline, using two different protocols, based on the same schedule: first administration represented by antigen and Freund's Complete Adjuvant and four boosters, represented by antigen and Freund's Incomplete Adjuvant. Total proteins, albumins and gammaglobulins were assayed for immune response characterization. The initial immunization was followed by an increase of total protein levels (significant for G1) and of gammaglobulins, accompanied by a decrease of albumins. Consequent boosters, all values returned near basic levels, for all investigated parameters, in both groups. For both of the groups, total protein, gammaglobulins, albumins and hematological picture ranged in normal field during entire duration of study. Variations of total protein, gammaglobulins, albumins and hematological picture subsequent to four immunizations could represent a mark of immune response in sheep.

## **RESEARCHES CONCERNING THE INDUSTRIAL POLLUTION AND ITS INFLUENCE ON WATER, FORAGES AND HORSES IN A LIMITROPHE AREA OF A NON - FERROUS CHEMICAL UNIT**

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### **Summary**

In the limitrophe area of a non-ferrous ore processing unit there were harvested biological samples (organs – liver, kidney, lung, spleen, heart, hair and long bone) from dead horses, water and forage samples (hays, maize, green lucerne).

From the samples there were assessed Cd, Pb, Cu and Zn concentrations.

The method used for establishing the heavy metals content was the atomic absorption spectrophotometry.

The results interpretation was made differently, depending on sample type, conformingly to the stipulated standards. Following the researches we have reached to the conclusions presented bellow. In water, hay and cereal samples, the admitted limits for copper, lead and zinc were exceeded in the two sampling points. Also, cadmium and lead exceeded the normal values in hair samples by 5 – 14 times (hair representing a suggestive biomarker for chronic cumulative poisoning with Cd and Pb). Cd exceeded the admitted limit in bone and organ samples. Pb and Zn have also exceeded the maximum admitted limits stipulated by order 97/2005 in all organ samples, the highest value being recorded in Micasasa sampling point.

By all the obtained data it may conclude that in the area of the chemical unit evolves a chronic poisoning with heavy metals, especially with Cd, as a result of contaminated water and forages ingestion.

**Key-words:** pollution, organs, forages, water, admitted limits, poisoning, heavy-metals

## RESEARCHES CONCERNING THE WATER QUALITY IN DAMBOVITA RIVER ALONG LACUL MORII - GLINA

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### Summary

Water quality in Dambovita River, along Lacul Morii was established by sampling in five checkpoints.

After sampling there were carried out the chemical and physical parameters: temperature, pH, calcium, ammonium, nitrites, nitrates, orthophosphates, and dissolved oxygen, chemical and biochemical consumption of oxygen.

The sampling, transport and analyze methods used for the quantitative establishing of the quality indicators are the ones stipulated by standards.

The interpretation of the data was made regarding 1146/2002 Order concerning surface water classifying.

Following the determinations we can conclude:

- from the oxygen regime point of view (dissolved oxygen, CCO-Mn, CBO<sub>5</sub>), Dambovița-River water is framed within the first quality class in all checkpoints, excepting downstream Glina section where the quality is "degrade".

- in nutrients category (N – NH<sub>3</sub>, N – NO<sub>2</sub>, N – NO<sub>3</sub>) the recorded values are framed into the second and the third quality classes in four checkpoints; but in downstream Glina sector in the fifth quality class.

- in general ions (calcium, magnesium, natrium, chlorines, sulphates, fixed residue) Dambovita River water is framed in the first and the second quality classes for all 5 checkpoints.

**Key words:** water, quality classes, parameters

**THE CORRELATIONS BETWEEN TOTAL ANTIOXIDANT  
CAPACITY AND TOTAL POLYPHENOLS CONTENT  
ESTABLISHED FOR TOMATOES**

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**Summary**

Tomatoes (*Lycopersicum esculentum*) are the most popular garden vegetable crop in world [6]. Tomatoes have been reported to be an important source of antioxidants such as lycopene, phenolics, and vitamin C in human diet [1], and have been linked with reduced risk of prostate and various other forms of cancer, as well as heart diseases [2].

The aim of the study was to determine the total antioxidant capacity and total polyphenol content and to establish some correlations between this parameters in two summer-autumn tomatoes varieties (Campbell 1327 and Ace Royal), cultivated in field condition, in west area country. The analyses were performed on control soil samples (without extra fertilization substances) and soil sampled after differentiated NPK fertilization in variable dozes: N<sub>30</sub>P<sub>30</sub>K<sub>30</sub>, N<sub>45</sub>P<sub>45</sub>K<sub>45</sub>, N<sub>60</sub>P<sub>60</sub>K<sub>60</sub>, N<sub>120</sub>P<sub>60</sub>K<sub>60</sub>.

The total antioxidant capacity was studied using FRAP method and the total polyphenol content by Folin-Ciocalteu method.

**INVESTIGATIONS CONCERNING ON HAEMATOLOGICAL  
PROFILE OF PARTRIDGES ``*PERDIX PERDIX*`` IN CAPTIVITY IN  
WESTERN PART OF ROMANIA**

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**Summary**

Investigațiile s-au efectuat pe 20 potârnicchi dintr-o fermă de creștere în sistem intensiv a speciei ``*Perdix perdix*`` din județul Timiș. În unitatea din care provin probele nu s-a semnalat nici o boală infectocontagioasă, fiind însă confirmat diagnosticul de singamoză. De asemenea în unitatea respectivă au fost efectuate toate acțiunile sanitare veterinare confirmând planul tehnic. S-a efectuat examen clinic și examenele hematologice cantitative și calitative prin metode uzuale. La examenul clinic, potârnicchii au prezentat anorexie, astenie, dispnee și dificultate locomotorie. La examenul macroscopic, s-a constatat mărirea în volum, consistența friabilă a ficatului, rinichilor și cordului.

**Key words:** partridge, haematological

## THE CONSEQUENCES OF EXPOSURE TO LEAD ALONG THREE GENERATIONS ON MORPHOLOGICAL BIOMARKERS OF MALE REPRODUCTIVE FUNCTION: GENITAL ORGANS AND ACCESSORY SEXUAL GLANDS WEIGHT

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The study carried out on rats exposed to lead acetate along three generation emphasized: general tendency of testis weight increase comparative to control group, indirect correlation between testis weight, exposure level and duration; significant decrease of epididymis weight (excepting, not significant, in F<sub>0</sub> generation at 1000 and 2000 ppm exposure level, F<sub>1</sub> at 3000 ppm exposure level and significant increase in F<sub>1</sub> generation at 1000 ppm exposure level) comparative to control group, indirect correlated, significantly, to exposure level and duration (excepting, not significant, F<sub>1</sub>/F<sub>0</sub>); significant decrease of seminal vesicles weight (excepting, increase in F<sub>1</sub> generation) comparative to control group and indirect correlated, significant, to exposure level (not significant in F<sub>0</sub> generation and in F<sub>2</sub> generation in case of tripling of exposure level); direct correlated, significantly in F<sub>1</sub> generation at tripling of exposure level; significant decrease of prostatitis weight (excepting F<sub>0</sub> generation, not significant at 2000 and 3000 ppm exposure level; F<sub>0</sub> generation at 1000 ppm and F<sub>1</sub> generation – significant increase) comparative to control group and indirect correlated to exposure level and duration (excepting, direct correlation, in F<sub>2</sub> generation); significant decrease of bulbo-urethral weight (not significant in F<sub>0</sub> generation and F<sub>1</sub> generation at 3000 ppm) comparative to control groups and indirectly correlated, significantly to exposure level (excepting, not significant in F<sub>0</sub> generation, direct correlated, significantly, in F<sub>1</sub> generation) and exposure duration.

**Key words:** lead, male rats, reproductive function, biomarkers

**ASPECTS CONCERNING MORPHOPHYSIOLOGY OF CELL  
POPULATION FROM SMALL RUMINANTS' MILK**

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**Summary**

The model of the milk cytoqram on slides with degreased milk sediment was used in order to investigate cell population from sheep and goat milk secretion. The differentiation was performed by morphological criteria and activity stages of typical cell structures. The milk cytoqram of small ruminants was characterized by increased macrophage frequency (45.6 – 48%) and epitherial cells (7,1 – 8,3%) in colostrums and PMN leukocytes in milk (26,5 – 47,9%). The high level of lymphocytes (26,4 – 32,5%) represented a particularity for sheep milk secretions, amd abundance of atypical cells and reaminders for goats.

## **INGLUVIAL, HEPATIC AND RENAL HISTO-PATHOLOGICAL CHANGES IN BROILERS CAUSED BY THE MYCOTOXINS DON, OTA AND MICOFIX PLUS**

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This paper work aimed at the morphopathological highlight of the tissue, ingluvial, hepatic and renal lesions in broilers; broilers have received, within their feed, the product Microfix Plus (Biomim) and mycotoxines DON and OTA, for 42 days. The product MP (Biomim) was included within feed in order to annihilate the digestive adsorption and DON and OTA effects upon organism.

The most significant histopathological changes were noticed in the broilers from group T<sub>2</sub> (DON 1000 ppb and OTA 500 ppb), expressed through severe vascular, degenerative and necrosis changes within liver, kidneys and ingluvium. In the chicken from group T<sub>3</sub> and T<sub>4</sub> (DON 1000 ppb, OTA 500 ppb and Micofix Plus 0,5 – 1 ‰), the hepatic, renal and ingluvial changes were less intense and reversible, compared to group T<sub>2</sub>.

Mycotoxins are metabolic products of the toxinogenous mycetes, which cause diseases in human and animals, being known as myco-toxicoses (3, 5). Dioxinivalenol or vomitoxin (DON) is a tricotecen, a fungi metabolite elaborated by mycetes from the genus *Fusarium* (*F. tricinatum*, *F. solani*, *F. roseum*, etc.), which causes the reduction of appetite and implicitly the refuse of animals of eating fodder. Ochratoxin A (OTA) is a mycotoxin produced by *Aspergillus ochraceus/A. alutaceus*, which develops well on coffee and cocoa beans, soy, peanuts, rice, maize and condiments, stored in improper conditions of temperature, humidity, etc. (2, 6). OTA is considered to be the strongest mycotoxin for poultry, having numerous pathogenic effects: nephrotoxic and hepatotoxic, delays sexual maturity and causes circulatory disorders, bone and intestinal fragility, it decreases egg production and increases mortality (1, 3, 4).

**THE INFLUENCE OF FEED WITHDRAWAL AND  
TRANSPORTATION ON WEIGHT LOSS, MORTALITY RATE AND  
CARCASS QUALITY IN BROILER CHICKENS AT SLAUGHTER**

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**Summary**

Our investigation was conducted in order to determine the effect of feed withdrawal, light regimen, farm location and duration of transport to abattoir together with holding time at slaughter facility on clearing out of intestines and faecal contamination, weight loss and mortality rate.

Stress induced by transport may occur as a combination of external factors like loading, transportation, crowding, movement, temperature fluctuations and water and feed withdrawal. These stress factors can cause increase in corticosteroids hormone level and decrease of intestinal wall's strength. Stressed animals exhibit increased peristaltic movement of gut content and increased excretion of pathogenic microorganisms.

It is hard to recommend an optimal duration of feed and water deprivation because of different ambient conditions. Broilers weighting 2.4kg submitted to additional three hours of feed withdrawal (15 hours instead of 12 hours) will lose 0.9% (22g) compared to broilers weighting 2.4 kg that starve three hours less (12 hours). The loss of weight during 6-8 hours of feed withdrawal is a consequence mostly because of emptying the gastrointestinal tract, a process that reduces the risk of faecal contamination of carcasses in slaughter line.

Key words: broilers, feed withdrawal, transport stress, faeces, loss of weight

## **PROBIOTIC PREPARATIONS USED TO ALLEVIATE THE WEANING CRISIS**

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### **Summary**

The experiments were conducted on 96, Synthetic Line Peris 345, suckling piglets (12 sows × 8 piglets per litter) reared within the intensive system. Piglets were weaned at 35 days. The experimental period was 42 days. The enzymatic preparation was incorporated 3% into the vitamin-mineral premix (Multigerm at E1 and Probios at E2). The total gain, from farrowing to the age of 42 days, was higher in the groups treated with growth promoting preparations: 15% higher in the group treated with **MULTIGERM** and 21% in the group treated with **PROBIOS**, the differences being statistically significant. The liveability index was improved by the two growth promoting preparations: 8% in the control group, 4% in group E1 and 2.5% in group E2, because the preparations modified the intestinal microbial balance favouring the health state of the animals.

## THE PROPHYLACTIC EFFECT OF GROWTH PROMOTERS ON NONSPECIFIC DIARRHOEA

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### Summary

The experiment was conducted on 72, Synthetic Line Peris 343 piglets, from 9 sows. The piglets of group V1 received 3 ml Multigerm/piglet/day until the prestarter compound feed was given to them. The piglets from the experimental group 2 (V2) received 3 ml of the biopreparation per os when the diarrhoeic states appeared. In the suckling piglets **Multigerm** had a prophylactic effect against the states of unspecific diarrhoea when given per os during the first 8 days and then included 3% in the dietary vitamin-mineral premix and a curative effect when given in amount of 3ml per os, being an alternative to the antibiotics treatment.

## **MONITORING AND THERAPY OF SOME AFFLICTIONS MET IN THE WATER BIRDS OF BUCHAREST ZOOLOGICAL GARDEN**

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### **Summary**

For establishing this paper, there were studied few water-birds species - flamingoes, ducks, geese, pelicans and swans, in the Bucharest Zoological Garden.

Pelican has a great importance for Romania, being a protected species and representing the symbol of the Danube Delta. It lives in large colonies, during summer is a visitor in the Delta, but at the beginning of autumn it leaves to hotter places.

In Japsa Militarova, in the Danube Delta, a famous place for birdwatching there are met together many birds, including swans, due to much food.

The present material is the base of a licence paper, considering the students of the veterinary medicine faculty have to know things about the history of the wild life in captivity and these animals` place in the world culture.

**Key words:** pelican, flamingo, duck, goose, swan.

**THE ANATOMO-TOPOGRAPHICAL FEATURES OF THE  
ORGANS FROM THE THORACO-ABDOMINAL CAVITY IN  
LIZARDS**

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**Summary**

Many species of lizards could be classified as wonderful pet animals. Due to their metabolism that doesn't generate enough warm and considerate animals with "cold blood" the reptiles have been adapted through several changes of the body. The specialization of the digestive, respiratory and circulatory systems of the reptiles generates better knowledge of the morphology and topography of the organs from the thoraco-abdominal cavity (1, 2, 3, 4, 5).

**Key words:** lizard, anatomy, organs

## **ESTABLISHING PELVIMETRIC PARAMETERS BY COMPUTER TOMOGRAPHY IN ROTTWEILER BITCHES**

**M. PENTEA, CARMEN VANDA GANȚĂ**

Faculty of Veterinary Medicine Timișoara

### **Summary**

The computed tomography (CT) is a new technique used in establishing the diagnostic and can be utilized in pelvimetry (1, 2, 3, 4, 5, 6). The values obtained through CT are precisions and are used for the reconstructions of the bony pelvis.  
The pelvimetric coefficients in the Rottweiler females were performed.

## **THE STUDY OF MECHANICAL STRESS OF THE THORACIC APPENDICULAR SKELETON IN DOG**

**M. PENTEA, CARMEN VANDA GANȚĂ**

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The bone as a complex system with several levels of organization, anatomical, molecular, cellular is influenced by many biomechanical factors which determines its adaptation to the different mechanical stress (1, 3, 4).

The healing of fractures is different, caused by the bone's structures and composition (2).

Due to the features of the bones the type of bone behaviors under the mechanical stress applied static and dynamic are very different (2, 5).

**Key words:** mechanical longitudinally stress, dog, bone.

## **THE IMPLEMENTATION OF THE INTEGRATED QUALITY AND FOOD SAFETY MANAGEMENT SYSTEM IN THE FOOD INDUSTRY UNITS**

**CARMEN PETCU\*, C. SAVU\*, ELENA MITRANESCU, SIMONA CHIRILA\*\***

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### **Summary**

Any organisation that wants to function successfully must be coordinated and controlled in a systematic and transparent way. Success can be achieved by implementing and maintaining of a management system designed for continuous improvement of performance, that takes into consideration the necessities and wishes of every interested part, of the organisation as well as of their clients'.

**Key words:** safety, quality, implementation, certification.

## THE EFFECT OF DEUTERIUM DEPLETED WATER ON THE OSMOTIC RESISTANCE IN CADMIUM CHLORIDE INTOXICATION

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### Summary

The aim of this study was to show the effect of deuterium depleted water (DDW) treatment on the osmotic resistance and haemoglobin values in cadmium chloride intoxicated rats. The intoxication with cadmium chloride induced oxidative stress to rats; the oxidative stress is revealed at the membranes' level through the modification of their fragility. It was observed that DDW administration (preventive and also as treatment after the cadmium chloride intoxication in rats) has the property to increase the red blood cells membrane's permeability, bringing it back to the initial value at the end of the experiment.

**Key words:** rats, deuterium depleted water, red blood cells fragility, cadmium chloride.

## RESEARCHES REGARDING THE HEMATOLOGICAL PROFILE OF HAFLINGER AND LIPIZZAN HORSES

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### Summary

Taking into account the fact that blood, through its constituents, represents the mirror of the animal health (reacting rapidly and many times specifically to the aggressions caused by external and internal factors); we have chosen to carry out some hematological investigations in clinically-healthy animals. The quantitative change of the sanguine constituents represents a diagnosis revealer and it is the consequence of some functional disorders – either organic lesions, or caused by the self-defense reaction as a results of some aggressions. Their dosing allows the assessment of a disease prognostication, too. Current pathology orientation towards the insight of the metabolic health aims at the discovery, as early as possible, of the critical metabolic area between normal and abnormal, at the prevention of the clinical diseases and at the establishment of the limits of physical oscillations caused by different internal metabolites; such variations represent undoubtedly a useful step in the achievement of data with regards to the future prevention of dismetabolies.

The objective of this paper work was to establish the reference data concerning the hematological profile in two horse breeds: Haflinger and Lipizzan, used as recreation animals.

The paraclinic investigation were made on Haflinger and Lipizzan horses from Hungary and Sâmbăta de Jos stud farm. The blood samples were taken from 14 horses (7 samples from Haflinger and 7 samples from Lipizzan horses).

From the hematological parameters investigated, semnificative higher values were found in hematocrit, hemoglobin and VEM at Lipizzan horses compared to Haflinger horses. In the first 30 minutes, VSH has higher medium values at Haflinger horses compared to Lipizzan horses, without outrun the normal limits recomanded by the literature.

**Keywords:** horse, hematological, variation, blood, Lipizzan, Haflinger

## **THE OSTEOLOGICAL FEATURES OF THE SKELETON IN OSTRICH (STRUTHIO CAMELUS)**

**C. POP, M. PENTEA**

Faculty of Veterinary Medicine Timișoara, Calea Aradului no. 119

In our country in the last years the anatomy of the ostrich has become an important challenge researcher and for practitioners.

From this point of view its been considerate the presentation of the osteological features due to the similar development of the appendicular and axial skeleton in ostrich and other animals.

**Key words:** osteology, ostrich.

## THE ROOTS OF THE BRACHIAL AND LUMBOSACRAL PLEXUS IN MYOCASTOR COYPUS

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### Summary

The topography of the brachial plexus is different between species. Therefore, in horses and ruminants the brachial plexus issues from the interlacing of ventral branches of the cervical nerves VI, VII, VIII and the thoracic nerves I, II, in the swine from the cervical nerves V, VI, VII and VIII and 1<sup>st</sup> thoracic nerve, in dogs from cervical nerves VI, VII, VIII and 1<sup>st</sup> and 2<sup>nd</sup> thoracic nerves, in cat from the cervical nerves VI, VII, VIII and 1<sup>st</sup> thoracic nerve (87).

The variations of the lumbosacral plexus are due to the different number of the lumbal and sacral vertebrae. Thus, all lumbal nerves do not compose the lumbosacral plexus in some species. The ventral branch of the 1<sup>st</sup> lumbal nerve doesn't participate to the plexus and the 2<sup>nd</sup> lumbal nerve is variable (59, 87).

The roots of the brachial and lumbosacral plexus were identified.

**Key words:** anatomy, nervous plexus, Myocastor coypus.

## MINIMUM CONCENTRATION OF PENICILLIN RESIDUES IN COW MILK AFTER INTRAUTERINE APPLICATION

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### Summary

The residues of antibiotics in milk are commonly determined by qualitative biological detection methods. However, among all possibilities of quantitative determination of antibiotic residues in milk, the method of preparing of milk dilutions can be used, along with any qualitative biological detection method (Vukovic, 2005).

Purpose of sample dilutions is to obtain values between last ambiguous or positive and the first negative result. One way to indicate concentration of antibiotic residues in milk is minimal concentration, which represents the basis for determination of approximate, medium, variable and exact concentration of antibiotic residues in milk.

In total, 16 milking cows, clinically in good health condition, East Frisian sort, are divided into two equal groups. First group of cows was treated with 400.000 i.u. each, and second group with 800.000 i.u. each. The milk samples of treated cows were examined on the presence of penicillin residues with resazurin test, with *Str. termophilus* as test microorganism, diluted with sterilised skimmed milk, and obtained results were statistically analysed. The retaining period of penicillin residues in milk, minimum concentration, minimal secreted quantities and minimal percentage of dosage secreted by milk after intrauterine application of penicillin, were monitored.

**Key words:** milk, penicillin, residues, minimal concentration

**BIOLOGICAL IMPACT OF POLYFLORAL HONEY ON ANTIBIO-  
RESISTANT *STAPHYLOCOCCUS AUREUS* ISOLATED FROM  
CANINE DERMATITIS**

**IULIA KRISZTINA RINDT, MIHAELA NICULAE, F. BRUDAȘCĂ**

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**Summary**

The antibacterial activity of honey was evaluated in vitro against *Staphyococcus aureus* strains isolated from canine patients with dermatitis, compared to an artificial honey solution.

Performing a broth microdilution protocol, supported by agar plate cultivation, we determined the minimal inhibitory concentration (MIC) and minimal bactericidal concentration (MBC). Antimicrobial activity was observed in the polyfloral honey tested (MIC - 1.563% and MBC - 12.5%)(v/v), when compared to the artificial honey, weaker in its antibacterial efficacy.

In conclusion, the results showed that floral honey could be considered, even diluted, included in topical medication, as an alternative treatment in canine recurrent dermatitis.

**ANTIBACTERIAL ACTIVITY OF HONEY AND PROPOLIS  
MELLIFERA AGAINST STAPHYLOCOCCUS AUREUS**

**IULIA KRISZTINA RINDT, MIHAELA NICULAE, F. BRUDAȘCĂ**

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**Summary**

The antibacterial activity of honeydew honey and propolis was evaluated *in vitro* against *Staphylococcus aureus* strains isolated from canine patients with dermatitis.

Performing a broth microdilution protocol we determined the antimicrobial potential of honeydew honey and propolis and obtained data regarding the minimal inhibitory concentration (MIC) and minimal bactericidal concentration (MBC). The sensitivity of *Staphylococcus aureus* strains to honeydew honey was compared with an artificial honey solution, while the sensitivity to propolis was compared to 96° alcohol.

Honeydew honey showed bactericidal effects against the bacterial tested *S. aureus* stains, but was less efficient than the propolis at certain concentrations. Artificial honey also displayed antimicrobial activity to a certain extent.

In conclusion, our results show that honeydew honey and propolis could be considered as an alternative treatment in canine recurrent dermatitis.

**RESEARCHES REGARDING THE DISTRIBUTION WAY OF THE  
CAELIAC ARTERY IN GOOSE**

**PETRONELA MIHAELA ROȘU\*; G. PREDOI\*; I. DUMITRESCU\*; C. BELU\*;  
FLORINA DUMITRESCU\*\* ; B. GEORGESCU\***

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**Summary**

Due to the fact that the specialized literature has summary data, some of them contradictory in what concern the vascular of the digestive tube in domestic bird anatomy, I have considered necessary the elaboration of this study regarding the distribution of the caeliac artery.

## **ELISA -KIT FOR DIAGNOSIS OF SHEEP AND GOATS PARATUBERCULOSIS**

**M. SAMARINEANU, ANA CISMILEANU, RODICA MEDEANU, VIVIANA CIUCA**

Pasteur Institute, Bucharest

### **Summary**

A LAM -antigen from culture of *Mycobacterium paratuberculosis* was prepared and used for antibody capture in an ELISA kit for the diagnosis of sheep and goat paratuberculosis. The kit was checked using positive and negative sera tested by ELISA using a commercial kit, registered in Romania, as reference. The results indicated a good kit behavior and agreed with those for the reference kit as to sensitivity and specificity. The kit was registered as ELIPARA-OC.

**Key words:** LAM- antigen, ELISA, paratuberculosis, diagnosis, sheep, goat.

## **VEGETAL EXTRACTION INDUCED INNATE CELL-MEDIATED IMMUNE RESPONSE IN VACCINATED HENS**

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### **Summary**

The need for non-toxic, novel adjuvants with increased bio-availability and efficacy, added to an improved accessibility represent a primary aim in modern veterinary vaccinology. The experiment was carried out on two groups of birds, vaccinated (n=25) and saline injected control (n=35). The vaccines used were directed against Newcastle disease, infectious bursitis, infectious bronchitis and viral arteritis (Quadtractin) as well as against fowl plague.

*In vitro* carbon particle clearance test was used to monitor the phagocytosis before and three weeks after the vaccination. Spectrophotometrical readings of the optical densities of a blood and carbon particle mixture, with alcohol and alcoholic nettle extraction, respectively, or without supplements, were done after 20 and 30 minutes of incubation at 37°C. The alcoholic nettle plant extraction sharply enhanced the phagocytic activity when compared to the control, non-vaccinated birds and the *in vitro* control variants. The results of the research led to the conclusion that, on short term, the alcoholic nettle plant extraction sharply enhances the *in vitro* phagocytic activity, suggesting a possible use in stimulating the innate cell-mediated immune response during priming and therefore a better encounter of the vaccine antigen.

## **ECHOCARDIOGRAPHICAL ASPECTS IN CARNIVOROUS CARDIOPATHIES**

**F. SIMIZ, T. MOT, M. CRISTESCU, V. CIULAN, D. MORAR**

Faculty of Veterinary Medicine Timisoara

### **Summary**

Investigations have been performed on two different-breed dogs, with ages of 4 and 10 years old, and on one 4 month old Birman cat.

The echocardiographical examination, in the module B, reveals the presence of cavity liquids, lesions of cardiac hypertrophy, and within the module M – a deficiency in the enclosure of the mitral orifice, with interventricular septal thickening and left atrium-ventricular dilation (mitral-insufficiency dog). We have also noticed a thickening of the papillary muscles and of the interventricular wall (cat with concentric ventricular hypertrophy).

As complementary investigation procedure, the echocardiography represents a non-invasive and non-painful method.

**Key words:** dog, cat, cardiomyopathy, echocardiography

## **COMPARATIVE STUDY OF ENDOCYTOSIS BETWEEN NORMAL CELLS AND THOSE THAT HAD BECOME TUMOR CELLS**

**MARIANA ȘINCAI\*, DIANA ARGHERIE\*, DIANA GANGA\*, DOINA BICA\*\***

Faculty of Veterinary Medicine Timișoara, \*\* Laboratorul de Fluide Magnetice-Academia Română, filiala Timișoara.

### **Summary**

Comparative studies were made regarding endocytosis between some normal cells and the same type of cells with tumoral changes. Cells with a high endocytosis capacity (secretory and absorbing epithelial cells and fibroblasts) were chosen. These types of cells, both normal and tumoral, were placed in direct contact with magnetic nanoparticles. It was observed that the tumor cells lost their specific endocytosis capacity and to survive they took a high quantity of foreign particles from the extracellular matrix.

Gradually, the tumor cells were overloaded with magnetic nanoparticles that could no longer be eliminated from the cell. In time a part of the tumor cells were destroyed and some were petrified. The main observation is that the tumoral process is stopped.

**Key words:** endocytosis, magnetic nanoparticles, tumor cells

## **ALCOHOLIC HERBAL EXTRACTIONS INFLUENCE THE *IN VITRO* PHAGOCYTOSIS IN FARMED HERBIVORES**

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Faculty of Veterinary Medicine  
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### **Summary**

The experiment was carried out to investigate the immunestimulating/modulating potential of certain alcoholic vegetal extractions (*Calendula officinalis*, *Echinacea angustifolia*, *Urtica dioica*) on the *in vitro* phagocytic activity in farmed herbivores. The spontaneous *in vitro* phagocytic activity was the highest in bovine, followed by horses and goats, with a various distribution within the two periods of reading. The alcoholic *Calendula officinalis* extraction was more active in bovine than in goats while the *Echinacea angustifolia* extraction was more active in large ruminants (bovine) during both periods of reading. The nettle plant (*Urtica dioica*) extraction was inhibiting during the first and stimulating during the second period of reading in horses. All alcoholic extractions were either inhibiting or stimulating, showing a rather an immunomodulating than a stimulating potential.

## **THE EFFECTS OF A NEW SYNTHESIS COMPOUND OF SALICYLIC ACID ON RATS ERYTHROCYTES FRAGILITY**

**LETIȚIA STANA**

Faculty of Veterinary Medicine, Timisoara, Romania

For a long time, pathological studies of red blood cell membrane and membrane interference have been based on indirect assays. Actually, the relation between molecule structure and function alteration [10] is more obvious. All over the world are many studies about benefic effects of some medicamentary substances and their possible adverse reactions [2,5,6,9], but a small number of studies made a point to the effect of new synthesis drugs on osmotic resistance of erythrocyte membranes and membranes permeability. Our study goal is the effect of administration of a new salicylic synthesis derivative like a possible medicament on rats erythrocyte membrane. This chemical synthesis product is the amide of chlor salicylic acid with sulphanilamide (5 ClSA-SA) (6) and it has been administrated intraperitoneal. The results shows an increasing membranes fragility by increasing hemolysis grade in hypotonic solutions depending on the days of administrations. This is possible to be issue of some toxic action of the synthesis product used in this experiment.

**Key words:** rats, salicylic acid derivatives, erythrocyte membrane

**COMPARATIVE STUDY ON ERYTHROCYTE MEMBRANE  
FRAGILITY IN RATS CONSECUTIVELY WITH THE  
ADMINISTRATION OF SALICYLAMIDE, SULPHANILAMIDE AND  
A NEW SYNTHESIS COMPOUND OF SALICYLIC ACID**

**LETIȚIA STANA\*, ALEXANDRA TRIF\*, ALFA XENIA LUPEA\*\*, MIRABELA  
PĂDURE\*\*, CORINA GRĂVILĂ\*\*\*, F. MUSELIN\*, ROXANA IVANCOV\***

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\*\*Industrial Chemistry and Environmental Engineering Faculty, Timisoara, Romania

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**Summary**

In specialty literature database are many drugs obtained by skeletal engraftment, some physiologically active substances, wich realise an sinergism of action. We have been studied the impact on red blood cell membrane consecutively with administration of a new synthesis product (the amide of 5 chlor salicylic acid and sulphanilamide, 5CISA-SA) [7, 9] comparative with the effects of salicylamide and sulphanilamide. Salicylamides and their halogened derivatives have a major importance in antimicrobial action mechanism in the nucleus [3]. In normal concentrations, sulphanilamides have a bacteriostatic effect, but at high concentrations may be bactericides and may lead to adverse manifestations [1]. In our in vivo experiment we observed this negative effect on red cell membranes by increasing membranes fragility and hemolysis grade in hypotonic solutions (sulfanilamide had the most pronounced effect).

**Key words:** rats, membrane fragility, salicylic acid derivatives, sulphonylamide.

## **MORPHOCLINICAL ASPECTS IN EXPERIMENTAL HAEMORRAGICAL DISEASE VIRUS OF RABBITS**

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Faculty of Veterinary Medicine Timisoara

### **Summary**

Rabbit haemorrhagic viral disease is a virotic infections disease highly contagious, with an acute evolution, characterised by fever, haemorrhagic syndrome, necrotic hepatitis and high morbidity and mortality.

The disease may occur as a natural infection or an experimental one. The aim of this study is to present some morphoclinic aspects in an experimental infection with haemorrhagic virus on rabbits.

**Key words:** rabbits, haemorrhagic, liver, disease.

## **THE INCIDENCE OF CARDIAC ARRHYTHMIAS DURING INTUBATION IN DOGS**

**LARISA SCHUSZLER, C. IGNA, S. MARIUS, V. VÎNĂTU, ROXANA DASCĂLU**

Faculty of Veterinary Medicine Timișoara

### **Summary**

The research was carried out on 104 dogs submitted in surgery clinic for programmed surgical interventions. These patients were prepared for intubation using in premedication acepromazine or xylazine and for induction of general anesthesia thiopental or propofol. For observe cardiac dysrhythmias the ECG electrodes were places in Lead II. During intubation in 11,53% of dogs were recorded isolated premature ventricular contraction (75% of cases) and 5-10 seconds periods of transient ventricular tachycardia (25% of cases). 18,75% of dogs that received xylazine-propofol combination show up alteration of T wave associated with ST segment infra-disleveled. There is a low incidence of cardiac arrhythmias during orotracheal intubation meaneuver. These changes were transient and have no clinical significance.

**Key words:** intubation, premature ventricular contraction, ventricular tachycardia, dog.

## **IMMUNE MECHANISMS INDUCED BY A MYCOPLASMA IMMUNOGEN**

**E. TÎRZIU, R. TRIF, ILEANA NICHITA, C. CUMPĂNĂȘOIU, R. V. GROS**

Faculty of Veterinary Medicine Timișoara

### **Summary**

The research was conducted on two sheep batches, one batch was vaccinated against sheep's catching agalactie at the beginning of the experiment and 21 days after. The immune response through antibodies has been determined through ELISA, the indirect version, at the moment of the first vaccination, and than at 14, 28 and 42 days.

Test results have shown that the vaccine against this disease influences positively and meaningfully the specific and non-specific, ummoral and cellular immune effectors synthesis. So, in vaccinated animals the concentration of non-specific immune effectors as well as antibodies grows following the first vaccination, amplifies after the second vaccination and reaches a maximum level 42 days after the first vaccination.

**Key words:** immunity, sheep, Mycoplasma

**ASPECTS CONCERNING THE SKULL MORPHOLOGY  
IN NANDU (RHEA AMERICANA )**

**A.I. TOADER\*, G. PREDOI\*, C. BELU\*,  
I. DUMITRESCU\*, PETRONELA ROȘU\*, CARMEN BIȚOIU\*\***

\* - F.M.V. București

\*\* - A.N.S.V.S.A. - București

**Summary**

The study of 10 skull which proceeded from birds of different sexes and different ages, lined out the fact that this skull are likewise respect the shape with the anseriform birds skull.

Maximum width of the dorsal face is on the level of processus postorbitalis. The orbital cavities are wide and are separated by a orbital septum. In the middle part this septum is membranous. The internal nares are long. The hard palate is formed by palated processes of incisive and maxillary bones. Only the medial mandibulary processes is very developed.

The actual information about the skeletal system by Nandu is a summary, that way we realized a detailed study of it. At skull we find interesting peculiarities. In ratite this is very small relating to the body weight.

## **EPIDEMIOLOGICAL STUDIES OF OTITIS EXTERNA AT CARNIVORES**

**ROXANA TOPALĂ, I. BURTAN, M. FÂNTÂNARU, S. CIOBANU, L.C. BURTAN**

### **Summary**

Otitis externa is the most common disease of the canine and feline ear canal, which involves an acute or chronic inflammation of the epithelium of the external auditory meatus.

The goal of this study was to determinate the prevalence rate of otitis externa and the influence of species, breed, age, sex and climatic variation. The researche was performed on 356 canine and 83 feline which were atended in Clinics of Veterinary Medicine Faculty and private veterinary clinics.

Dogs and cats of all breeds and ages may be affected, but some groups are at higher risk: Cocker, Labrador, Setter, German Shepherd had the highest incidence. Dogs between 5-8 years of age and cats under 1 year are commonly affected. There is no apparent sex predisposition to otitis externa in either species.

**THE CONSEQUENCES OF CHRONIC EXPOSURE TO ALUMINIUM ON SOME MORPHOLOGICAL BIOMARKERS OF REPRODUCTIVE FUNCTION (BODY, GENITAL ORGANS, SEXUAL ACCESSORY GLANDS WEIGHT, SEMINIFEROUS TUBULES DIAMETER) IN MALE RATS**

**ALEXANDRA TRIF, F. MUSELIN, DIANA ARGHERIE, EUGENIA DUMITRESCU, I. MĂCINIC**

Faculty of Veterinary Medicine Timisoara

**Summary**

The study carried out on 32 male, white Wistar rats divided in three experimental groups (E) which received six month 200, 400 and 1000 ppb aluminium as aluminium sulphate in drinking water and one control group (C) emphasized: significant decrease of body weight comparative to control group (exception, not significant at 200 ppb Al exposure level); significant decrease of genital organs (testis, epididymis) weight comparative to control group (exception, not significant, testis weight in group exposed to 200 ppb Al); significant decrease comparative to control group of sexual accessory glands: seminal vesicles, prostatitis (exception, not significant, in the groups exposed to 200 and 400 ppb Al), bulbo-urethral glands (exception, not significant, at 200 ppb Al exposure level); significant decrease of seminiferous tubules diameter comparative to control group (exception, not significant at 200 ppb exposure level); indirect correlation between aluminium exposure level and the studied morphological biomarkers values.

**Key words:** male rats, genital organs, weight, seminiferous tubules

**THE INVOLVEMENT OF CHEMOKINES TO NORMAL AND PATHOLOGICAL IMMUNE RESPONSES**

**C. VIOR, E. TÎRZIU, R. TRIF**

Faculty of Veterinary Medicine Timisoara

**Summary**

Chemokines (CMK) belong to a complex biological superfamily including structurally and functionally related proteins. They are elaborated, constitutively or inducible, by various populations of cells. CMK are basic polypeptides deprived of glucidic residues and exist in many biologically active forms (monomers, dimers, trimers and tetramers). CMK superfamily includes four classes: alpha, beta, gamma and delta chemokines, differentiated by the amino acids sequences and by the cellular types they act upon. Signals represented by CMK become active by interactions with membrane receptors. Their functions are characterized by redundancy and robustness. Chemokines exert multiple actions upon various cell populations (stimulation of the migration, expressing the activity of specific cellular granules, modification of cellular adhesiveness, amplification of NK cellular activity, enhancing of bactericidal activity of neutrophils, etc.). They play a major part in many immune and pathological mechanisms (angiogenesis, hematopoiesis, acute and chronic inflammations, infectious processes, neoplasia etc.).

**STUDY OF FREQUENCY OF SALMONELLA STRAINS ISOLATED FROM  
MEAT, MEAT PRODUCTS AND ORGANS**

**CARMEN DAVID<sup>2</sup>, R. TRIF<sup>1</sup>, E. TÎRZIU<sup>1</sup>, ILEANA NICHITA,  
ROXANA IRIMESCU<sup>1</sup>, R. V. GROS<sup>1</sup>**

1 - Faculty of Veterinary Medicine, Timisoara, Romania  
2 - Sanitary Veterinary Direction and Food Safety, Timis County

**Summary**

The aim of this study was to isolate and to identify the *Salmonella* serovars from meat, organs and meat semiproductions. From 564 analyzed samples 124 strains were isolated and were bordered in four serogroups (B, C, E and G). After the serologic identification of 31 strains selected from each serogroup, there have been identified the following serovars:

- serogroup B: *Salmonella derby*, *Salmonella saint paul*, *Salmonella typhimurium*;
- serogroup C: *Salmonella infantis*, *Salmonella virchow*, *Salmonella manchester*;
- serogroup E: *Salmonella norwich*, *Salmonella give*;
- serogroup G: *Salmonella kedougou*

**Key words:** salmonella meat, meat products

**RESEARCHES REGARDING THE ANTIBIOTIC RESISTANCE OF  
STAPHYLOCOCCI STRAINS ISOLATED FROM RAW MILK**

**ILEANA NICHITA, CARMEN DAVID, R. TRIF, E. TÎRZIU, R.V.GROS**

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2 - Sanitary Veterinary Direction and Food Safety, Timis County

**Summary**

A total of 503 of staphylococcus strain isolated from raw milk were tested using the disk diffusion method taken in consideration eight antibiotics. All most of the strains were sensitive to tetracycline (58.39%) and neomycin (48.13%). A big number of staphylococci strains were resistance to ampicillin (53.68%) penicillin (45.13%) and erythromycin (35.19%). Also, was observed that a big number of staphylococci strain were resistance to methicilin. Both positive and negative coagulase staphylococci strain were resistant to ampicillin, penicillin and erythromycin.

**Key words:** staphylococci, antibiotics, raw milk

**STUDY OF CORRELATION BETWEEN PRINCIPAL PATHOGENIC FACTORS  
OF SOME STAPHYLOCOCCUS SPECIES**

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Faculty of Veterinary Medicine Timisoara, Romania

**Summary**

*Staphylococcus aureus*, but some other staphylococci species also, is capable to produce toxins and some extracellular proteins like: enterotoxins, coagulase, A protein, hemolysins, fibrinolysins, nucleases and staphylokinases (2). It is well known that major factors of pathogenicity of species belonging to *Staphylococcus* genus are represented by enterotoxins, hemolysins and coagulase (6, 7, 8).

Data from specialized literature specify that regardless of specie, the majority of *Staphylococcus* strains are not capable to synthesize all pathogenicity factors.

Considering this characteristic of species belonging to *Staphylococcus* genus, this research try to establish a correlation between the principal factors of pathogenicity represented by coagulase, hemolysins and enterotoxins.

**THE MICROBIOLOGICAL QUALITY ANALYSIS OF SOME MEET PRODUCTS  
TRADED ON BUCHAREST MARKETS**

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**Summary**

The researches have been effectuated for determining the contamination grade of market meet products, following the supposition that all products are delivered on right analysis documents. It was analyzed a total number of 768 meet products samples. The samples have been harvested from 9 kinds of meet products from different market places. The obtained statistical analyzed results have been permitted the conclusion that entire types of meet products have been recorded unconformity samples. It have been remarked either the getting over of some microbial parameters (coliforme bacteria's, coagulase-positive staphylococci, sulphite-reducing bacteria) or the presence of some pathogen and pathogen-conditioned bacteria (Clostridium perfringens has been isolated from 2.61 % samples, Proteus sp. has been isolated from 1.3 % samples).

**Key words:** meat products, analysis, bacteria's, contamination

**ASSESSMENT OF NITRATE AND NITRITE CONTENT  
OF ROMANIAN TRADITIONAL CHEESE**

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**Summary**

The nitrate and nitrite levels were determined in 275 samples of traditional cheese or semi-processed cheese, which are produced in Romania by different type of raw milk: cow raw milk, sheep raw milk, combined cow and sheep raw milk (in different percent of combination). The analyzed samples were harvested from the most frequently assortments and type of cheese produced and commercialized in our country. Following the analyses the obtained results reveal a variation of nitrate level between 0.87 to 17.52 mg nitrate/kg (with an average of 3.29 mg/kg) and for nitrite was recorded a variation level between 0.28 to 21.16 mg nitrite/kg (with an average of 3.53 mg/kg). The highest level of nitrate and nitrite were revealed in green cheese (curds) obtained from sheep raw milk.

The nitrate and nitrite contents in analyzed samples of cheese or semi-processed products could be referable to different type of external source (like as contamination by fertilizers sources or the presence of this chemical substances in water which are used in technological process for cheese) but also can be attributed to addition of nitrate or nitrite in curds or green cheese like preservation additive.

**Key words:** nitrate, nitrite, green cheese, cheese, assortments.

**RESEARCHES REGARDING BEEF CATTLE PUERPERIUM SUPERVISION  
AND GUIDANCE IN A SATU-MARE COUNTY PRIVATE FARM**

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**Summary**

The researches were carried out in a Satu-Mare county private farm during September 2005 and April 2006 on 36 puerperal cows (FLECKVIEH), divided into 4 plots. Before experiments, blood samples were aleatory collected to accomplish the methabolic profile. For the first plot we administrated Prosolvin product (15 mg), for the second one Eucacomp product (10% solution), for the third plot the Plantistim product (10% solution), plot 4 being kept as a control sample.

The individuals of the four plots were supervised regarding the puerperium evolution observing the quantity and quality of lochias secretions, uterine involution, ovarian activity recommencement as well as the first ovarian cycle apparition. Using F<sub>2α</sub> prostaglandine, despite a quick corpus luteum regression and an early uterine involution, local puerperal affections were observed (4 cows, 50%). For in-uterine instillations the local puerperal infections were prevented, showing the efficiency of the products used. The use of these fitotherapeutical products for the puerperium control and supervision are in advantage as it regards the costs as well as the non-invasive activity and the lack of after-effect.

**GENOTIPIC DIFFERENTIATION OF BACTERIAL STRAINS ISOLATES FROM  
ORAL CAVITY FROM DOGS WITH PERIODONTAL DISEASE BY RAPID  
(RANDOM AMPLIFICATION OF POLYMORPHIC DNA)**

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**Summary**

RAPD (Random Amplification of Polymorphic DNA) is a technique for rapidly detecting genomic polymorphism, utilizing a single short oligonucleotide primer of arbitrary sequence in a polymerase chain reaction (PCR). RAPD analysis has been used in numerous application including detection of strain diversity, gene mapping, epidemiology, population analysis and the demonstration of phylogenetic and taxonomic relationships (1, 3, 4). RAPD analysis it enables the quick detection of polymorphism at a number of different loci using only nanogram quantites of genomic DNA. The amount of genomic DNA in a RAPD reaction can vary from as little as 1 ng to as much as 100 ng (1, 2).

The aim of this paper was to evidentiare genomic diversity of the Gram positive and Gram negative bacteria isolates from dog's periodontal disease.

**PLASMID PROFILE OF SOME GRAM POSITIVE STRAINS ISOLATES FROM  
DOG'S ORAL CAVITY**

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**Summary**

Some virulence factors can be mediated by extrachromosomal DNA elements carrying genes able to synthesis substances destroying host tissues. In this study, the plasmid profile of some Gram positive strains isolates from dog's oral cavity were evaluated. Plasmids were classified into two groups according to size.

**USAGE OF PHENOXYPEN WSP IN TREATING THE  
NECROTIC ENTERITIS IN BIRDS**

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**Summary**

There has been made an experiment in order to test the efficiency of Phenoxyphen WSP (penicillin V) antibiotic in treating the necrotic enteritis produced by *Clostridium perfringens*.

The experiment has been conducted on three lots of birds with ages between 2-14 weeks. Phenoxyphen WSP is an acid resistant derivative of benzyl penicillin (penicillin G) and possesses a wide spectrum of activity which includes: streptococci, staphylococci, beta-hemolytic streptococci, *Listeria monocytogenes*, *Corynebacterium spp.*, and *Clostridium spp.*

**Key words:** Phenoxyphen WSP, birds, necrotic enteritis

**NON-SPECIFIC AND SPECIFIC CELL-MEDIATED RESPONSES IN EIA  
SEROPOSITIVE HORSES**

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**Summary**

The phagocytic function represents one of the important aspects of the innate immunity, while the blast transformation is a measure of the specific cell-mediated reactivity. In the present study we investigated the alterations of the cell-mediated immune response induced by equine infectious anemia virus (EIAV) in eight EIAV positive animals compared to eight EIAV negative horses. Carbon particle inclusion test was used to monitor spontaneous innate phagocytosis, and the *in vitro* blast transformation test was performed with two experimental variants: untreated control and phytohaemagglutinin (PHA) M supplemented cultures (1 microliter/ml of culture). RPMI 1640 was the medium used to cultivate white blood cells. The spontaneous phagocytic activity was decreased in EIAV positive horses when compared to the EIAV negative ones. The spontaneous blast transformation capacity was slightly increased in infected horses ( $67.55 \pm 13.59$  %) compared to the healthy ones ( $68.99 \pm 10.06$  %), while the response to PHA M was decreased in positive horses ( $82.77 \pm 7.19$  %) versus the healthy individuals ( $80.37 \pm 5.34$  %). The infection with equine anemia virus led to a decreased innate response while the specific cell-mediated reactivity was stronger, suggesting the activation of lymphocytes versus phagocytes subsequent to the infection.

**OXIDATIVE-STRESS INDUCED CHANGES IN CORRELATION WITH  
SEROCONVERSION IN EIA SEROPOSITIVE HORSES**

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**Summary**

The objective of the present experiment was to verify the hypothesis that oxidative stress characteristic changes are correlated with the presence of the equine infectious anemia virus (EIAV) in infected horses. The research was based on the results obtained at the agar gel immunodiffusion test (Coggins test), which represents the prescribed test for international trade at the present time (OIE). From the investigated horses (n=23) blood samples were collected in order to quantify the activity of the main antioxidant enzymes – superoxid-dismutase (SOD), cathalase and the general peroxidaze activity - in parallel with the lipidic oxidative level, the concentration of the total blood lipids and uric acid. Results were statistically analyzed using the "r test" (estimation of the correlation quotient) giving scores for the positivity regarding the agar gel immunodiffusion test - Coggins (value 1) respectively for the negativity (value 0). The obtained results show that the enzymatic activity of superoxid-dismutase (SOD) and the general peroxidaze activity markedly decrease in the EIAV infected horses compared to the healthy ones, while the cathalase activity decreases moderately in these animals. The cathalase activity in the healthy horses is positively correlated with the Coggins test results, with a level of signification smaller then 0.01, while the other enzymes do not have statistically representative changes. The level of lipid peroxidation in the infected horses is the only indicator of oxidative stress which has a positive correlation with the presence of EIAV (highly significant increase –  $0.001 < p < 0.01$ ). Lower values of the uric acid in the seropositive horses can confirm his antioxidant role in vivo in horses.

**SPECIFIC CELL-MEDIATED IMMUNE CHANGES INDUCED BY THE *IN VITRO*  
ADMINISTRATION OF VARIOUS VEGETAL EXTRACTIONS IN ANTIGEN  
PRIMED HENS**

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**Summary**

A number of immunomodulatory effects have been attributed to the medicinal plants *Calendula officinalis* and *Echinacea angustifolia*; however, little is known about whether treatment with these plants can enhance antigen-specific immunity. Two groups of birds, a vaccinated group (n=25) and a saline injected control (n=35), were subjected to the blast transformation test. The birds were primed with two water-in-oil emulsified vaccines, against Newcastle disease, infectious bursitis, infectious bronchitis and viral arteritis (Quadtractin) as well as against *Pasteurella multocida*, serotypes 1,3 and 5 (Cholerin triple), were administered subcutaneously, in a dose of 0,5 ml/bird, as antigen priming. The blast transformation test was done *in vitro*, using five alcoholic vegetal extractions (*Calendula officinalis*, *Echinaceea angustifolia*, *E. purpureea*, *Urtica dioica* and *Aloe vera*) and monitoring their effect in comparison with alcohol and/or no treatment, at each of the samplings, three weeks apart. The results indicated that, in the dosage applied *in vitro* and at the moments selected for the testing of blast transformation capacities, the alcoholic extractions of *Calendula*, *Echinaceea angustifolia*, *E. purpureea*, *Urtica dioica* and *Aloe vera* could not restore the level of cell mediated reactivity to its ante-priming values on short term. Still, antigen primed, vegetal extraction treated cells gave a better *in vitro* response. This effect was due to the combined treatment, not to the vaccination alone.

**EXAMINING ALKALI PHOSPHATASE ACTIVITY AFTER APPLYING THREE  
INCREASING DOSES OF SULFADIMIDINE IN RATS**

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**Summary**

In this work we examined the toxicity of sulfadimidine sodium, that was administered to Wistar strain through drinking water supplemented with three increasing doses (0.066%, 0.2% and 0.6%) during 8 weeks. We observed the influence of this treatment on creating alkali phosphatase in blood sera of the rats. The trial was carried out on 96 female rats Wistar strain, body weight ranging from 172.6 to 179.5 g. The rats were divided in 4 equal groups, out of which one was a control group. Weeks 2, 4, 6 and 8 of the experiment were used as time for observing alkaline phosphatase. Based on the experiment and the obtained results it can be concluded that sulfadimidine sodium administered in drinking water, as a therapeutic dose, but also in three time lower concentration, resulted in the changes of alkaline phosphatase activity in blood sera of the rats, but its intensity depended on the doses. However, alkaline phosphatase concentration in the control group, that received the highest tested concentration of the drugs, was significantly higher than the findings in the control group and other two experimental groups of the animals.

**SEROLOGICAL CONTROL ON *SALMONELLA* IN SOME POULTRY FLOCKS IN VOJVODINA REGION**

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**Summary**

In our study we conducted the serology control in several broiler breeder and commercial layer flocks, using ELISA test. Our goal was to determine *Salmonella* status in selected poultry flocks and to emphasise its potential to serve as a source of infection for poultry and poultry products.

In spite of the vaccination, breeder flocks were negative 4 weeks after the first vaccination, while during the production there was a strong immunological response in all tested farms. Layer flocks tested at the end of the rearing period showed low level of antibody titre that is considered negative. On contrary, during the production layer flocks tested positive. Our results showed that it would be very helpful to perform serology testing especially at the end of the rear and after the peak of production in breeder and layer flocks. Nevertheless applying serology monitoring it was possible to estimate the seriousness of the problem and ELISA test should be taken into consideration in the future.

Bacteriology means of *Salmonella* detection is still the golden standard because of the antibiotic resistance evaluation and because of the possibilities to characterize strains at the molecular level. All three aspects of *Salmonella* control are now days unavoidable and have to be considered as a comprehensive and useful tools to detect and recognize contaminants in poultry industry.

**Key words:** *Salmonella*, broiler breeders, layer flocks, ELISA, control.

**A HISTOLOGICAL STUDY OF THE RETE MIRABLE AT DOMESTIC MAMMALS**

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**Summary**

The study of the histological aspects was made by using the rete mirables from two taurines and four ovines.

The space which is circumscribed by the venous cavernous sinus and without possibility to distend it, which is offered to the rete mirable induces an important polymorphism to the blood sanguiferous vessels which structure the rete mirable.

The small artery's vascular wall from the rete has the median tunic flanked on both sides by endothelium, the adventitia being absent.

The arterial endothelium can structure small intravascular "pillows" with meaning to control the sanguin flow capacity at the level of encephalon.

The rete mirables play, for the beneficiary species, a fundamental role in controlling the sanguin flow at the level of encephalon (1, 6, 9). Since in speciality literature we didn't come across dates about hystological particularities of the arterioles that structure the rete admirable, we considered the hystological study of these structures to be necessary (2, 3, 4, 5, 7, 8, 10, 11, 12).

**COMPARATIVE ASPECTS REGARDING SOME SKULL BONES IN NANDU  
(*RHEA AMERICANA*) AND OSTRICH (*STRUTHIO CAMELLUS*)**

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CARMEN BIȚOIU, A.I. TOADER, ANCA ȘEICARU**

**Summary**

In most adult birds the bones of the cranium have coalesced so completely as to be undistinguishable. But in the adult struthious bird in a greater o less extent, the boundaries of the various bone are obvious enough. We remarked on the studied species (Rhea and Struthio) that the hard palate is formed generally by premaxillaries, maxillopalatines, palatines, provomer and the skull base is formed by presphenoid, basisphenoid and basioccipital. Although, there are many differences into this species, whitch are presented extensively as follow.

**ANTI-*Actinobacillus pleuropneumoniae* HEMOLYSINS ANTIBODIES  
DETECTION BY ELISA IN PIG SERA**

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**Summary**

An ELISA Apx test was proposed as a diagnostic test for infectious pleuropneumonia produced by *Actinobacillus pleuropneumoniae* in pigs. The antigen extracted from bacteria was characterised using serum from a vaccinated rabbit. Optimal antigen concentration of 1 µg/ml was found and used for evaluating two pig sera with known diagnostic. Relative good sensibility was observed but specificity not tested.

**Key words:** *Actinobacillus pleuropneumoniae*, Apx, ELISA.

**DETERMINATION OF AFLATOXIN M<sub>1</sub> LEVELS IN CHEESE SOLD IN İZMİT PROVINCE**

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**Abstract**

This study was conducted to determine the the AFM<sub>1</sub> levels of Turkish white and kashar cheese purchased from different markets and sellers in İzmit province. AFM<sub>1</sub> was determined by ELISA technique in total of 185 cheese samples including 102 Turkish white and 83 kashar cheese. The aflatoxin clearance was carried out with r-biofarm Rida®Aflatoxin (Art.No. R5001/R5002) immunoaffinity column, AFM<sub>1</sub> analyses were performed with r- biofarm Rida®Aflatoxin M1 test kits (Art.No 1101). Of the total of 185 cheese samples, 123 (66.5%) were found AFM<sub>1</sub> positive. 75 (73.5%) of positive samples were white cheese samples while 48 (%57.8) of which were kashar cheese. The mean AFM<sub>1</sub> levels were 189.47 ng/kg and 229.79 ng/kg for white and kashar cheese respectively. 16 samples belonging to each of white and kashar cheese, exceeded the corresponding maximum permissible limit (250 ng/kg) laid down in Turkish Food Codex.

**Key Words:** Aflatoxin, cheese, ELISA