

THE RESEARCHES REGARDING DIGESTIVE PARASITISM IN HERBIVOROUS FROM ZOOLOGICAL GARDEN TIMISOARA

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Summary

By coprological examinations were determined parasitic species from the digestive tract of six species of herbivores from Timisoara zoo: common deer (*Cervus elaphus*), fallow deer (*Capreolus apreolus*), reindeer (*Rangifer tarandus*), guanaco (*Lama guanacue*), dwarf goat (*Capra aegagrus f. hircus*), and the Shetland pony (*Equus caballus*).

The prevalence of parasitism in these species was 67.8%. To deer, fallow deer, reindeer, guanaco and pygmy goat have found parasited by *Eimeria spp.*, *Nematodirus spp.* and other species trichostrongylids. Ponies were parasites with digestive strongylid and *Parascaris equorum*.

Key words: digestive parasitism, herbivorous, Zoological Garden Timisoara

THE STUDY OF SOME HAEMATHOLOGICAL PARAMETERS IN INFECTION WITH CRYPTOSPORIDIUM SPP. AND OTHER ENTEROPATHOGENS IN CALVES

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Summary

Serum samples were collected from 44 diarrheic calves, aged between one and four weeks of life, from four farms and haematocrit (Ht), hemoglobin (Hb), eritrocite count, mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH), mean corpuscular hemoglobin concentration (MCHC), total leucocytes count and leucocyte formula were determined. Using ELISA, were previously identified four categories of diarrheic calves: with cryptosporidial infections, with associated infections (*Cryptosporidium spp* + other enteropathogens), infected with other enteropathogens and with diarrheas generated by undetermined cause.

Regardless of the cause of diarrhea, at calves, it was found erythrocytosis, probably because of dehidratation and hemoconcentration. It was also observed a reduction of mean

corpuscular volume and mean corpuscular hemoglobin and a light eosinophilia. The variations of some hematological parameters are connected especially with the individual clinical evolution, then to different causal agents involved in natural diarrheic infections in calves.

Key words: haemathological parameters, *Cryptosporidium*, enteropathogens

THE IDENTIFICATION OF *TOXOPLASMA GONDII* INFECTION IN SHEEP BY ELISA FROM ARAD COUNTY

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Summary

To establish the prevalence of *Toxoplasma gondii* infection in sheep from Arad County, 250 of serological samples were assayed using ELISA test. The samples were collected from five localities. From each flock were collected 50 samples from sheep, working with similar lots.

Generally, the positivity for *Toxoplasma gondii* infection was more than 40%, with variations between 26 and 70%.

Key words: prevalence, Arad, *Toxoplasma gondii*

EPIDEMIOLOGICAL STUDY USING ELISA OF THE PARASITISM WITH *NEOSPORA CANINUM*, AT BOVINES, FROM WESTERN ROMANIA

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Summary

For this study researches were carried out between January and March 2009. 186 bovines aged between three months and 16 years, from five localities of Arad, Bihor and Timis Counties, were investigated. The BIO-X NEOSPORA CANINUM ELISA KIT COMPETITION (BIO K 218) which identifies antibodies from serum was used. A number of 50 samples (26.88%) out of the total analyzed serum samples were positive for the *Neospora*

caninum infection. Per general, the seroprevalence of the infection with *Neospora caninum*, in cattle was 26.88%. the highest prevalence was 50% and the lowest one was 23.1%, respectively.

Key words: *Neospora caninum*, bovine, ELISA

FIRST GENETIC IDENTIFICATION OF *CRYPTOSPORIDIUM* SPP. IN CATTLE IN ROMANIA

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Summary

This is the first study in molecular epidemiology of cryptosporidiosis that has been made in Romania. *Cryptosporidium* species involved in pre-weaned cattle were determined by PCR-RFLP. From 25 cattle diarrheic samples studied, seven (28 %) were positive for *Cryptosporidium* infection. A total of seven positive cases were genotyped. The molecular characterization of bovine cryptosporidiosis has been carried out by PCR-RFLP analysis of SSU rRNA gene and results indicated that *Cryptosporidium parvum* is responsible for diarrhea in pre-weaned calves in Romania.

Key words: *Cryptosporidium*, SSU rRNA, PCR-RFLP, cattle, Romania

TIME SPENT BY SOME BLOWFLIES ON STANDARD TRAPS BAITED WITH LIVER AND AMMONIA

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Summary

Time spent by calliphorid blowflies on standard traps baited with liver and ammonia was monitored for three genera: *Calliphora*, *Lucilia* and *Protophormia*. Over 75% of *Calliphora* blowflies spent more than 10 seconds on the trap. In *Lucilia* 54.67% of blowflies inspected the trap in the first 8 seconds, and in *Protophormia* 67.60% of blowflies were

noticed on the trap in the 2-8 seconds interval. *Protophormia* spent the shortest time on the trap, while *Calliphora* spent the longest one.

Key words: blowflies, time, standard trap.

EPIDEMIOLOGICAL ASPECTS REGARDING THE TRICHINELLOSIS IN WILD BOAR (*SUS SCROFA*, LINNAEUS, 1758) AND THE RISK OF TRANSMISSION TO HUMAN

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Summary

The investigation took place during 2003 – 2007, and had as target the hunting fund of the Vaslui district (the Hunting and Fishing Association - AJVPS), aiming to study the extensiveness (E%) of the trichinellosis in wild boar, the risk of perenisation and of transmission of the parasitosis to the human beings. The evaluation of the wild boars has been done in quantity (numerical) and in quality during the hunting seasons. The data regarding the epistemological antecedents of the trichinellosis in wild boar were taken from the records and were handled specifically. From the hunted wild boars there have been drawn muscular tissue samples that have been directly examined on the trichinelloscope with screen and projector oc. 10, ob. 5, 8.

The results show that during the analyzed interval, the extensiveness of *Trichinella spiralis* infestation in wild boar was of 3.00% on an annual average population of 335 individuals, administered by the Direcția Silvică and of 2.43% on a population of 445 individuals, administered by the AJVPS. The existence of a wild boar population with an annual average of 788 individuals and an extensiveness of infestation of 2.66% constitutes an active natural reservoir for *T. spiralis* in the Vaslui district. The wild boar population randomly spread throughout the whole territory of the district shows that the risk of infestation for the human beings through the consumption of the meat from the hunted animals that has not been examined by trichinelloscopy is much higher, contributing to the apparition of severe morbid episodes in humans, sometimes with lethal outcome. Poaching increases the risk of infestation for the human beings with *Trichinella spiralis*.

Key words: wild boar, trichinellosis, reservoir, epidemiology

**THE AGGRESSION OF THE *TRICHINELLA SPIRALIS* LARVAE
ON THE MUSCULAR TISSUE OF THE WILD BOAR (*SUS
SCROFA*, LINNAEUS, 1758) AND THE LOCAL REACTIVITY**

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Summary

The investigations have been made on the muscular tissue samples from wild boars hunted in the Vaslui area, aiming at revealing the aggression of the *Trichinella spiralis* larvae on the tissular architecture, the induced modifications and the local reactivity towards this aggression. From the hunted wild boars there have been drawn muscular tissue samples from the elective areas that have been directly examined on the trichinelloscope with screen and projector oc. 10 x ob. 5 and 8. The infested samples have been specifically handled for the histopathological examination, included in paraffin, sectioned at 5 μ m and colored by the HEA and MGG methods. The examination and the microphotography have been achieved using the Motic microscope, oc. 10 x ob, 10, 20, 40, and 100.

The results reflected a chronic infestation in which the *Trichinella* cysts occurred in various calcification stages. The calcification is cantoned at the cystic wall, over thickening it. In some cases, the adjacent muscular fibers present no visible reaction, in other cases the cysts that underwent an advanced calcification are surrounded and sequestered by abundant conjunctive tissue. The observed aspects, define a long, chronic evolution, lacking the infiltrating elements that have an immediate action, such elements being replaced with slow processes of destruction of the *Trichinella* cysts by calcification, conjunctive tissue hyperplasia, etc. The calcification processes isolate the larvae into the cyst, and the antigenic signals are no longer perceived by the parasited organism, which ends up by accepting them as belonging to itself.

Key words: *Trichinella spiralis*, larvae, wild boar

EPIDEMIOLOGICAL INVESTIGATIONS IN HUMAN CRYPTOSPORIDIOSIS. PRELIMINARY STUDY

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Summary

We examined coprological samples from children aged between 1 month and 6 years from two places: Children Institution and the Children Hospital „Louis Țurcanu”, of Timisoara, Timis County, Romania and from patients diagnosed with infectious diseases characterized by immunodepression (HIV, lung TBC) treated in the City Hospital of Arad, Arad County, Romania. The samples were examined by direct smear method and Ziehl Nielsen coloration modified by Pohlens and Henriksen. The results obtained after examining 54 coprological samples showed 16.66% cryptosporidiosis incidence. Cryptosporidiosis was diagnosed as follows: in the 0-1 year age category – 1 case; 2-6 years age category – 4 cases; 20-30 years age category – 4 cases. Seven cases out of nine diagnosed with cryptosporidiosis showed HIV primary etiology. The positive cases were equally found in patients both from the city and from the country side.

Key words: cryptosporidiosis, epidemiology, humans

DIROFILARIOSIS IN DOG CASE REPORT

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Summary

This work deals about some pathological manifestations found in dogs' dirofilariosis. The dogs were examined in the Parasitology and Parasitological diseases and Small Animal Pathology clinics of the Faculty of Veterinary Medicine, Timisoara, Romania. The pathological manifestations were studied on 4 dogs of different sex, breed and age.

In chronic evolution of heartworm disease in most infected dogs do not show clinical signs. Serological tests for heartworm disease can be negative in non-endemic areas and that's why additional methods are compulsory. The application of prophylactic measures in dogs throughout the period of mosquito activity can be decreased incidence and dissemination of dirofilariosis.

Key words: dirofilariosis, dog, diagnostic, pathological manifestation

THE PREVALENCE OF TRICHINELOSIS IN COVASNA COUNTY BETWEEN 1997- 2007

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Summary

This study was carried out in Covasna County, during 11 years. It was observed that in pigs home-slaughtered, the mean infestation rate was 1.79%. This rate is 3.6 times higher than the mean positive rate (0,5%) of the country reported by Ionescu et al. (2003) and by Murrell and Pozio (2000). The mean rate of this disease in wild boars examined between 1997 and 2007 was 9.52% and in samples from bears, examined in the same period, the mean rate was 38.3%. The dates obtained involve and gives a big responsibility to the Sanitary - Veterinary Authorities from Covasna County and to local Authorities for adopting and administer the measurements for sanitary-veterinary supervision of this parasitary zoonoses.

Key words: trichinelosis, prevalence, domestic pig, wild boar, bears

SPECIFIC CELL MEDIATED IMMUNE REACTIVITY TO EXPERIMENTAL INFESTATION WITH *ASCARIS SUUM* IN PIGS

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Summary

Cell/cell interactions are crucial in a large number of physiologic functions. The experiment aimed to investigate the influence of *A. suum* infection of specific cell mediated responses. Recent studies investigate the effect of *Ascaris suum* on lymphocytes. The antigen of *A. suum* shows a high affinity for the T lymphocytes but the mechanism is involving the other immune cells as well(monocytes, macrophages, eosinophils, B lymphocytes) (4).

To study population kinetics during *Ascaris suum* infection, 2 groups of 5 pigs each were inoculated with 1000 infective eggs, and a single group with 5 animals was control. One group from infected category was treated with mebendazole. Blood samples (n=8) were collected on heparine and subjected to leukocyte blast transformation test. *A suum* antigen exerted stimulating blastogenic effects in infected animals compared to controls and infected but treated, as well as PHA proved it exert a stimulating effect.

Key words: *Ascaris suum*, cell mediated immune reactivity, pig

ETIOLOGICAL STUDY IN CHICKENS EIMERIOSIS FARMS FROM WESTERN ROMANIA

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Summary

In this study was identified *Eimeria specie* in chicken in the western Romania farms and was establish some morphological traits easy to be recognize by the practitioners on the field diagnosis. Were identified the following species *Eimeria acervulina*, *E. maxima*, *E. mitis*, *E. praecox* and *E. tenella*. *Eimeria maxima* is the specie that can be recognized most easily by the oocysts microscopical size and appearance. On the base of injuries caused at intestinal level, the most recognizable coccidia species are: *Eimeria tenella*, *E. acervulina* and *E. maxima*. For the species that have a natural source infestation the medium sporulation time prove to be less usefull, this parameter being important only for scientifically point of view. On a simultaneous infestation with many eimeria species the individual diagnose is difficult because of the morpho-clinical table complication, being necessary additional laboratory examinations to identify the responsible eimeria.

Key words: *Eimeria*, chickens, etiology, diagnosis

**TESTING OF THERAPEUTIC EFFICACY OF SAME
ANTICOCCIDIALS IN NATURAL INFESTATION WITH *EIMERIA*
SPP. IN CHICKENS**

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Summary

In this study was tested some anticoccidials efficacy in the natural infestation occurred in the poultry extensive exploitation system. As *Eimeria* parasitism identification there followed the existent species by necropsic and coproscopic examination. The eimeriosis therapy was effectuated Esb₃, Unicoцин and Coccistop. In the natural infestation of the chickens with *Eimeria mitis* and *E. tenella* the therapy intervention with Esb₃, Unicoцин and Coccistop reduced the oocysts discharge through feces but did not induced the extinction of the registered values. If the anticoccidics are not maintained in the water or in the forage, there were recorded explosive peaks of oocysts discharges at an interval that ranged between three to seven days post therapy, deed that necessitate an intervention with the change of the anticoccidic.

Key words: eimeriosis, chickens, natural infestation, therapy

**PARTICULAR EVOLUTIONARY PHENOMENA IN ONTOGENESIS OF
VARROA DESTRUCTOR MITE**

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Summary

The *Varroa destructor* mite ontogenesis has an embryonic and a post-embryonic development. The post-embryonic development in both sexes has four evaluative stages that present particularities regarding the development evolution and the mobility and immobility of the protonymph and deutonymph. From the biological cycle there are removed pre-larval and tritonymph stages in order to reduce the development of the mite. The larval calyptostatic inhibition is the regression phenomenon when the mite larvae is immobile, does

not feed and shows morphological changes. During its evolution, to the most Gamasida larva, the fourth pair of legs disappeared, excepting the *Phalangi acarus broseti* (*Opilioacaridae*) larva where, there is present in a rudimentary form.

Key words: *Varroa destructor*, ontogenesis, calyptostatic inhibition, stages

THE IDENTIFICATION OF GASTROINTESTINAL NEMATODES SPECIES IN SHEEP IN FIVE LOCALITIES FROM TIMIS COUNTY

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Summary

Our aim was to identify gastrointestinal nematode species/genera with the help of micrometrical and morphological traits to five sheep flocks in Timis County, using Dikmans and Andrew's identification keys (1933). The following gastrointestinal nematodes were identified in those five sheep flocks: *Trichostrongylus* spp. (37%), *Chabertia ovina* (33%), *Cooperia* spp. (15%), *Bunostomum trigonocephalum* (27%), *Ostertagia circumcincta* (30%) and *Haemonchus contortus* (26%), respectively.

Key words: sheep, gastrointestinal nematode, prevalence

TRIXACARUS CAVIAE INFESTATION IN GUINEA PIGS CASE REPORT

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Summary

An 1 year-old guinea pig (*Cavia porcellus*) was presented for examination because of a pruritic skin condition which had commenced approximately one month after the animal had been purchased from a pet store (Moll, Timisoara). The medical exams were: anamnesis, general examination and dermatological exam. Skin scrapings were performed and revealed numerous sarcoptid mites (adults and eggs) consistent with *Trixacarus caviae*. Weekly dips with 2.5% Taktic (Amitraz) were prescribed for six treatments. After the second bath the lesions were remitted and pruritus was absent.

Key words: guinea pigs, trixacarus caviae, amitraz

ADVOCATE – THERAPEUTICAL SOLUTION IN PARASITICAL INFESTATION IN FRILLNECK LIZARD (*CHLAMYDOSAURUS KINGII*) AND BEARDED DRAGON (*POGONA VITTICEPS*)

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Summary

This is the first study in treatment with Advocate in bearded dragon (*Pogona vitticeps*) and for frillneck lizard (*Chlamydosaurus kingii*) that has been made in Roumania. Six bearded dragon (*Pogona vitticeps*) and for frillneck lizard (*Chlamydosaurus kingii*) were examined by clinical method. The faeces samples were examined by direct smear method and Willis method. The patients were treated with Advocate (imidacloprid and moxidectin), spot-on administration, 0,2 ml/kg, repeated after 14 days (total 3 treatments). The treatment was efficacious and faecal samples were *Kalicephalus* and *Oxiuris* negative. Treatment with Advocate did not eliminate *Isospora oocysts*.

Key words: advocate, frillneck lizard, bearded dragon, parasitological infestation

PRELIMINARY OBSERVATIONS OF AN EPIDEMIOLOGICAL SURVEY IN DIROFILARIOSIS OF DOGS FROM TIMIS COUNTY

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Summary

This study was conducted to determine the prevalence of *Dirofilaria* infection in dogs from Timis County, Romania. Blood samples were collected from 94 dogs from February 2008 to March 2009 and were examined by modified Knott's technique, *Fresh blood smear* and specific antigen test-Speed[®] DIRO / HEARTWORM (Bio Veto Test, France).

Of the total of 94 dogs, 4 were positive for *Dirofilaria spp.* with a prevalence value of 4.25%.

Key words: dirofilariosis, dog, prevalence, Timis County

**MOLECULAR STUDIES REGARDING TO THE DIFFERENTIATION
BETWEEN STRAINS OF *TRICHINELLA SPIRALIS* AND *T.
PSEUDOSPIRALIS***

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Summary

Trichinella is an emerging and re-emerging causative agent of trichinellosis in humans, a food-originated zoonosis. In Europe it was found that domestic pigs are predominantly infected with three species of *Trichinella*, and at least two of these can coexist in the same animal. For adoption of correct epidemiological and therapeutic decisions, the discrimination and quantization of the infestation degree can be achieved only by molecular methods, since the tests based on morphological characters are not able to differentiate the isolates at the species level and to detect few larvae. For detection and discrimination between *Trichinella spiralis* and *Trichinella pseudospiralis* in this study we developed classic and real-time PCR methods, as single or multiplex, Sybr Green or Taqman reactions, based on *hsp70* and *shsp* genes, respectively.

Key words: *Trichinella spiralis*, *Trichinella pseudospiralis*, PCR

**A PRELIMINARY TRIAL TO EVALUATE THE GAMMA-
INTERFERON ASSAY FOR THE DETECTION OF TUBERCULOSIS
IN CATTLE UNDER LOCAL CONDITIONS IN SERBIA**

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Summary

The early preclinical stages of bovine tuberculosis (BTB) can be detected in live animals by the use of tests of cellular mediated immunity, such as tuberculin skin test and gamma-interferon assay. None of the tests currently available for routine diagnosis of tuberculosis, in cattle provides a perfectly accurate determination of infectious status. In Serbia, like the most of other countries, primary diagnostic tool for detection of bovine tuberculosis is skin testing, although various factors can influence the sensitivity and specificity of these. When γ -interferon (γ -IFN) assay complements the skin tests it is capable

to improve the overall probability of detecting infected cattle in regions and herds accounting for a high incidence of BTB.

The paper presents and compares results of tuberculin skin tests and γ -interferon test in ante mortem diagnosis of BTB. Single intradermal cervical test (SICT) was used as routine screening test. All the animals (60) that yielded positive or suspicious reactions were retested 50 days later and single intradermal comparative cervical test (SICCT) was performed with addition of blood based γ -interferon test for confirmation of late hypersensitivity. The obtained results showed that when the SICCT alone was used positive reactions were detected in 40 (66.66%), negative reactions in 18 (30%) and inconclusive in 2 (3.33%). When SICCT and γ -IFN were used in parallel 46 (76.66%) animals were diagnosed as BTB positive.

Key words: bovine tuberculosis, diagnosis, SICCT, gamma-interferon

THE IMPORTANCE OF SAMPLE KINDS FOR SALMONELLA SPP. ISOLATION

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Summary

Poultry and its products are one of the most frequent sources of food born diseases caused by *Salmonella*. Since it is a dangerous zoonosis, examination of its presence is required by regulations and the control of flocks is compulsory. *Salmonella* may not be isolated with equal certainty in different material, what may cause suspicion towards the obtained findings.

The subject of our research was to follow presence of *Salmonella* in different organs and poultry feces with the aim to determine if there is a correlation between positive findings and the type of samples.

Materials for this trial were the poultry samples delivered to our Laboratory as part of regular examinations on *Salmonella*. In the paper are presented the findings from 2005, 2006 and 2007 year. Isolation of *Salmonella* was carried out on selective and differentiating media. The isolates were determined by their physiology characteristics, and confirmed by serotyping of sera.

The obtained results show that in the year 2007, when the majority of materials were feces, the findings of *Salmonella* were 3.42% comparing to the year 2005 and 2006 when the majority of the samples were from the organs, and positive finds of *Salmonella* were over 6%. Based on these data it may be concluded that examination of poultry organs was more successful much better comparing to the examination of feces, in determines *Salmonella* presents in poultry production.

Key words: poultry, organs of poultry, feces of poultry, salmonella

**CANINE DISTEMPER:
STILL A MAJOR CONCERN IN CENTRAL EUROPE**

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Summary

Despite the development of efficient and safe vaccines against canine distemper virus (CDV) infection, the disease still represents a major concern in Central and Eastern Europe. Even though vaccines developed more than half a century earlier seem to be provide sufficient protection in the susceptible canine population, the number of infected animals is still high. Following reverse transcription polymerase chain reaction (RT-PCR) based diagnostic testing out of the 214 analyzed samples 58 (27.1%) proved to be positive for CDV. The subsequent phylogenetic analysis of 20 CDV strains revealed that currently there are several CDV genotypes present in Hungary: strains belonging to the European, Arctic and European wildlife groups. CDV infection was also demonstrated in other species as well: in a fox (*Vulpes vulpes*), raccoon (*Procyon lotor*) and ferret (*Mustela putorius furo*), emphasizing the major reciprocal reservoir role of pet and exotic animal populations, as well as the necessity of application of specific prophylactic measures in case of exotic and wild receptive species.

Key words: canine distemper, RT-PCR

**DETECTION OF CLASSICAL SWINE FEVER VIRUS IN BLOOD
SAMPLES IN EXPERIMENTALLY INFECTED
PIGLETS OF DIFFERENT IMMUNOLOGICAL STATUS**

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Summary

An experimental study was conducted to investigate the detection of classical swine fever (CSF) infection in blood samples from piglets of different immunological status. The experiment was carried out in 24 piglets (age 28, 35, 44 and 54 days old) from vaccinated sows and in 14 non vaccinated piglets, originated from none CSF vaccinated sows. Two piglets from the each age group originating from vaccinated sows were challenged by intramuscular injection of CSF virus. Four piglets of the same age from vaccinated sows and two piglets derived from unvaccinated sows were added to the challenge-group to determine

contact (horizontal) infection. After challenge, blood sampling from every animal was carried out on day 0, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27 and 29. Blood samples were examined on presence of CSF virus specific antibodies and for presence of viral antigen (ELISA test) i. e. viral RNA by RT-PCR technique. On the basis of the obtained results it can be concluded that not all piglets born to a vaccinated sows have maternal antibodies at a detectable level, and the issue of the efficiency of passive immunization need to be evaluated in the future.

Key words: classical swine fever, passive immunity, viraemia, RT-PCR

PREVALENCE OF *EHRlichia CANIS* INFECTION IN THROMBOCYTOPENIC DOGS

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Summary

In the present study the aim was to investigate the prevalence of *Ehrlichia canis* infection in thrombocytopenic dogs, and diagnostic role of thrombocytopenia in the infection. Blood samples were collected from 224 dogs of different ages and of both sexes. Samples were separated to three groups according to their thrombocyte counts (thrombocyte counts higher than 201.000 μ /L; thrombocyte counts between 101.000–200.000 μ /L, thrombocyte counts below 101.000). In blood samples, *E. canis* was determined using IFAT. Eighty one (36,2%) of 224 dogs were positive to *E. canis*. Sixty nine of 143 thrombocytopenic dogs (48,3%) and 12 of 81 non-thrombocytopenic dogs (14,8%) were *E. canis* positive, respectively. A statistically significant difference was found among the degree of thrombocytopenia and *E. canis* prevalence. In conclusion, it was suggested that as the degree of thrombocytopenia elevates the incidence of *E. canis* infection increases and thrombocyte counts could not be evaluated specifically for *E. canis* infection, therefore could be used for surveillance test for experiencing forward diagnostic applications. Increase in the degree of thrombocytopenia causes increase the incidence of *E. canis* infection and determination of the thrombocytes number could not be a specific test for the possible diagnosis of *E. canis* infection but could be referred a transition for these tests.

Key words: *Ehrlichia canis*, prevalence, thrombocytopenic dogs

**RESEARCHES ON THE ZONOTIC POTENTIAL OF BOVINE
TUBERCULOSIS IN NORD-WESTERN ROMANIA**

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Summary

At present, epidemiological research represents the main tool for quantifying the biological phenomena through the application of mathematical methods and simulation (9). Such methods, as well as statistical approach of bovine tuberculosis allow an estimate of its epidemiological traits and zoonotic potential. Investigations of the last decades on human and bovine tuberculosis were mainly focused on improving diagnostic and control methods and combat in order to eradicate the disease. This study aimed to evaluate the incidence of pathogenic mycobacteria in bovine from Satu-Mare, Cluj and Bistrita-Nasaud (free of tuberculosis since 1997) counties as well as the incidence of mycobacterial strains pathogenic to animals in human patients suffering of tuberculosis in the same area, based on the records of Veterinary County Directions, County Hospitals and of the Pneumophtisilog Hospital Cluj as a national reference center.

Investigations on descriptive epidemiology methods lasted for 5 years (2004-2008), the obtained data being processed by use of mathematical formulas for incidence and centralized in tables. Of all the identified species, only *M. africanum* is involved in cattle tuberculosis pathology. This bacillus showed intermediate characters between *M. hominis* and *M. bovis* (5), therefore it was difficult to achieve a net distinction between the two types of bacteria.

Key words: tuberculosis, bovine, human, zoonotic impact, epidemiology

**ANTIMICROBIAL POTENTIAL OF SOME LAMIACEAE
ESSENTIAL OILS AGAINST ANIMAL MULTIRESISTANT
BACTERIA**

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Summary

A considerable scientific interest is exhibited nowadays to the antimicrobial screening of bioactive herbal extracts or constituents, due to their unique and complex biological potential. The aim of the present study was to investigate the antibacterial properties of some essential oils derived from several herb species belonging to *Lamiaceae* family against animal pathogens well known for their elevate antibiotic resistance level: *Staphylococcus aureus*, *Salmonella enteritidis*, *E. coli* and *Pseudomonas aeruginosa*. The antimicrobial potential was determined performing the disc diffusion assay and also minimal inhibitory (MIC) and bactericidal (MBC) concentrations were established by broth microdilution method. The inhibitory ability manifested by the herbal products against the bacterial strains varied significantly depending fundamentally on herbal source and concentration, but also on bacterial species. The most resistant bacteria proved to be *Pseudomonas aeruginosa*, with MIC and MBC values between 2 and 4% for the most active herbal products. The results suggest that some of the screened herbal extractions could be considered for further investigations regarding the therapeutic use in animal bacterial pathology.

Key words: *Lamiaceae essential oils*, antimicrobial potential

**ANTIBIOTIC RESISTANCE LEVEL IN STAPHYLOCOCCUS SPP.
STRAINS ISOLATED FROM DOGS WITH OTITIS EXTERNA**

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Summary

The purpose of this study was to determine the antibiotic resistance pattern of *Staphylococcus spp.* strains isolated from dogs with otitis externa. A total of 82 bacterial

samples were evaluated for susceptibility towards 16 antimicrobial agents. The results indicated a high level of antimicrobial resistance for the tested isolated, most frequently implying antimicrobials like penicillin, erythromycin, gentamicin, kanamycin, streptomycin, lincomycin, sulphamethoprim, cephalotin, polimixin B and amoxycillin. This study highlights the multidrug resistance of canine *Staphylococcus spp.* and emphasizes the need for susceptibility testing before electing the antimicrobial therapy.

Key words: antibiotic resistance, *Staphylococcus spp.*, otitis externa, dog

PROTECTIVE ENHANCEMENT AGAINST NEWCASTLE DISEASE BY THE *IN VIVO* USE OF DIFFERENT VEGETAL EXTRACTS IN VACCINATED HENS

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Summary

A less investigated field of the vegetal extracts' use, but one with exquisite practical perspectives, is that of identification of novel adjuvants for vaccines, a stage considered to be essential in the development of modern vaccines.

Twenty, 67 weeks old Rosso hens were injected twice (days 2 and 10) with alcoholic *C. officinalis* and *E. angustifolia* extracts, to monitor the influence of extractive principles on antibody titers against Newcastle disease virus in individuals vaccinated with a live attenuated vaccine.

Blood samples were taken on days 0, 9 and 17 of the experiment and subjected to haemagglutination inhibition test. Natural logarithms of the antibody titers were calculated and statistically interpreted.

The *Calendula* extract positively influenced the anti-Newcastle disease antibody titers, but these were lower than in alcohol treated controls. There was a statistically significant increase of the mean antibody levels after the *Calendula officinalis* extract treatment by the end of the experiment ($p < 0.05$). Injecting the hens with *Echinacea* extract altered the antiviral antibody synthesis, mainly during the primary immune response.

Key words: Newcastle disease, vegetal extracts, vaccinated hens

ADMINISTRATION ROUTE DEPENDENT *IN VIVO* CELL-MEDIATED IMMUNE REACTIVITY IN VEGETAL EXTRACT TREATED CHICKENS

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Summary

Vegetal extracts from various sources are more and more often used, showing favorable influence in diminishing the negative impact of numerous agents or in increasing the non-specific or specific resistance of the body to infections (3, 4). The research aimed to investigate the influence of *Calendula officinalis* and *Echinacea angustifolia* alcoholic extracts' effects on graft rejection, depending on administration route in immunologically mature chickens. Fifty six, 47 days old chickens were fed or injected with alcoholic extracts of *Calendula officinalis* and *Echinacea angustifolia*, 0.5 ml/bird/day, for 7 days, and injected with 0.1 ml of a sheep lymphocyte suspension (5×10^6 cells/ml) in the wattles. Estimates of the local reactions were made at 24, 48 and 72 hours pi.

The results obtained following *Calendula* and *Echinacea* extracts' administration to 47 days old chickens indicated that their influence was differentiated according to the chemical composition and administration route of the extracts. Oral treatment with vegetal extractions increases the graft rejection after repeated contact with the xenogenic cells when compared to the injected treatment. *Calendula officinalis* extract was a stronger inhibitor of graft rejection than the *Echinacea* extract in both groups; still, it enhanced the persistence of the reaction for longer than *Echinacea* extract in orally treated group.

Key words: *Calendula officinalis*, *Echinacea angustifolia*, graft rejection

THE ANALYSIS OF THE ANTIBIOTIC RESISTANCE PHENOMENON OF VARIOUS PATHOGENS TO STREPTOMYCIN

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Summary

This study shows the sensibility of bacterial pathogens from *Staphylococcus*, *Escherichia*, *Citrobacter*, *Enterobacter*, *Klebsiella*, *Salmonella*, *Proteus*, *Pasteurella*, and *Pseudomonas* genus to streptomycin. The strains were isolated from animals and tested through antimicrobial agar disk diffusion method.

Resistance in 100% percentage was registered for staphylococci and also pathogens from *Citrobacter*, *Enterobacter*, *Proteus*, *Pasteurella*, and *Pseudomonas* genus. There was also resistance for *Escherichia coli* strains - 90%, and *Salmonella* - 50%.

Intermediary values of the antibacterial inhibition zones presented *Salmonella* (50 %) and also *Escherichia coli* pathogens (10%).

The only genus that was sensitive to streptomycin was *Klebsiella*.

The frequency of resistance phenomenon to streptomycin was 87,5%, intermediary values for the inhibition zones – 8,33% and only 4,17% of the strains showed sensibility to this antibiotic.

Key words: antibiotic resistance, streptomycin

SYNERGISM AND POTENTIATION BETWEEN FLORFENICOL AND AMINOPENICILLINS IN BACTERIAL STRAINS ISOLATED FROM SOWS WITH ENDOMETRITIS

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Summary

The antibiotic resistance phenomenon had been remarked in many situations, especially in clinical cases from intensive breeding farms, and rises particular problems in therapy.

The antimicrobial agar disk diffusion method was used for the testing of the pathogens (*Streptococcus*, *Escherichia coli*) from a farm where registered endometritis in sows were and that had been resistant to the antibiotic treatments. The results of the antibiograms were interpreted according to international standards.

There were tested antibiotics from the groups of aminopenicillins and phenicols and the most extended antibacterial inhibition areas were observed when florfenicol was use into antibiograms. Besides that, a potentiation effect induced by amoxicillin and amoxicillin-clavulanate on florfenicol was observed in the strain no 1 of *Streptococcus* genus. It was registered also the presence of synergism in *Escherichia coli*, between florfenicol and amoxicillin-clavulanate.

We recommend the combination therapy when a phenomenon of potentiation or synergism between antibiotics can be registered.

Key words: sows endometritis, aminopenicillins, florfenicol

BINDING OF CONGO RED, PHENOTYPICAL MARKER FOR DISCRIMINATION OF APEC STRAINS

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Summary

Research has been performed on a total of 121 *E. coli* strains isolated from broilers corpses of different ages with lesions of colisepticaemia. Classification of strains in APEC pathotype was realized by identifying genes *OmpA*, *iss* and *fimH* by the multiplex PCR technique. The binding of Congo Red was tested on TSA agar.

The epidemiological marker followed, respectively the binding of Congo Red, was present in 112 strains, respectively 92.56% of the strains tested.

Multiplex PCR technique has allowed detection of the genes *OmpA*, *iss* and *fimH*, which generates the synthesis of some virulence factors specific to APEC strains, in 118 of the strains tested, respectively 97.52%.

Key words: APEC strains, Congo Red

RESISTOTYPES IN THE APEC STRAINS

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Summary

Research has been performed on a number of 121 *E. coli* strains genotypically and phenotypically classified in the APEC pathotype.

In the investigations were pursued resistotypes in 121 APEC strains isolated from broilers of different ages, in intensive growth system.

The obtained results show that in these strains was revealed the phenomenon of resistance to one or more of the antibiotics used.

Analyzing these results is observed that against to 9 antibiotics, the strains tested were resistant ranged between 61.98% and 100%.

Only 12.40% of isolates tested were resistant to amoxyclave and the phenomenon of resistance has not been observed to florfenicol.

Key words: APEC strains, resistotypes

EVOLUTION OF CLASSICAL SWINE FEVER IN ROMANIA BETWEEN 2001 AND 2007

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Summary

In the paper is presented the evolution of classical swine fever (CSF) in Romania between 2001 and 2007.

Comparing the evolution of the disease between 2001 and 2007, it results that in the interval 2001 and 2006 a level of maintaining and proliferation was kept as a result of stopping the vaccination. In 2007 a significant decrease of outbreaks was registered, due to the application of more severe methods of prophylaxis starting with December 2006.

Key words: classical swine fever, vaccination, epidemiology

EVOLUTION OF RABIES IN ROMANIA BETWEEN 2000 AND 2007

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Summary

In the paper is presented the evolution of rabies in Romania between 2000 and 2007.

In the studied period the evolution of rabies in our country was fluctuating and seems to resemble the European evolution. Domestic animals, wild animals and humans were affected by the disease. The cases of rabies increased mainly because of the increasing number of cases in wild animals.

In Romania was elaborated in 2007 a surveillance, control and eradication program as a result of the increasing number of rabies cases in the last years, especially based on the increasing number cases in foxes. This program will be applied to the whole effective of foxes on a period of 10 years.

Key words: rabies, epidemiology

**EVOLUTION, PREVENTION AND FIGHTING AGAINST THE
CLASSICAL SWINE FEVER IN BIHOR COUNTY, IN THE PERIOD
BEFORE ROMANIA'S ADHESION TO THE EUROPEAN UNION**

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Summary

According to the European Community stipulations regarding the intra-common trade with pigs, pork and pork-based products, the major condition for the carrying out of this trade was the eradication of the classical swine fever, which can be obtained and justified only through renunciation of vaccination.

Under such conditions, beginning with 2001, the measures regarding the control, prevention, fighting against and eradication of the classical swine fever in Romania have changed almost yearly, in concordance with the European Community directives, the objectives of these measures being essentially the gradual renunciation (until the end of 2005) of the prophylactic vaccination against the classical swine fever, in Romania, and disease sanitation under conditions of non-vaccination.

These measures have not led, in all cases, to the expected effect; the number of classical swine fever outbreaks have recorded an explosive increase, in Bihor county (from a single outbreak in 2001 to 28 outbreaks in 2003), and at national level as well (from a single outbreak in 2001 to 155 outbreaks in 2003). A very important epidemiological factor, which should have been paid much more attention in the application of measures regarding the classical swine fever prevention, fighting against and eradication, was the dramatic change occurred in our country, in swine breeding system, during the period of pre-adhesion to the European Union: about 90% of the swine livestock was transferred in households, without a previous preparation and without assuring the minimal biosecurity conditions.

Key words: classical swine fever, evolution, prevention, Romania

**AN OUTBREAK OF MAREK'S DISEASE IN BROILER CHICKENS:
EPIDEMIOLOGICAL, CLINICAL AND ANATOMOPATHOLOGICAL
ASPECTS**

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Summary

Marek's disease, even if it is an infectious disease noted for a long time, continues to be loss-making in the farms of broiler chickens, although there are vaccines, which are administrated in the first day of life.

The researches from this article aim to study the epidemiological characteristics, clinical findings and necropsy findings in Marek's disease, which evolved in an effective of broiler chickens.

The epidemiological exam of the effective revealed that the relative grave evolution in Marek's disease was possible because the broiler chickens haven't been vaccinated against Marek's disease. The cumulative mortality of broiler chickens was of 12.06 % by beginning with the fourth week of life, from which 9 % pursuant to the evolution of Marek's disease in the effective. In histopathological examination it was noted high cellular polymorphism: lymphocytes, limphoblasts, fibroblasts, and red cells and tumoral infiltrations focal or diffuse.

Key words: Marek's disease, epidemiological, clinical, anatomopatological aspects

AN OUTBREAK OF MYCOPLASMAL ARTHRITIS IN BROILERS

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Summary

The paper presents an outbreak of mycoplasmosis with *M. synoviae* in broiler 21 old days. The first observable signs in a flock affected with infectious synovitis are pale comb, lameness, and retarded growth. Morbidity in flocks with clinical synovitis varies from 2—75%. Mortality is usually less than 1%, ranging up to 10%.

Key words: mycoplasmal arthritis, broilers

CONTROL STRATEGIES OF SRRP IN NEW CONTAMINATED FARMS

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Summary

PRRS is one of the most economically significant diseases, causing to the swine industry million dollars losses. Starting with 1998, Romania has been reporting an increasing number of PRRS outbreaks; therefore monitoring programs are strongly recommended. Usually, the control measures for PRRS include the implementation of biosecurity rules, the management of incoming replacement gilts and the vaccination. These measures are helpful to reduce the risk of PRRSV spread within and between Romanian herds. Our investigations was carried upon a swine population about 4000 animals, divided in five groups: Suckling pigs, Gilts, Sows, Growing-finishing pigs (115 days) and Nursing/weaned pigs, 20 dead pigs (suckling pigs, young animals) were examined post mortem using the previously described necropsy protocol. PRRS suspicion in the farm raised up based on the characteristic reproductive troubles experienced by most of the gilts and sows associated with respiratory signs observed in growing pigs, as well as the increased mortality in suckling pigs unit. The pulmonary lesions registered at the post mortem exam of suckling pigs and young animals are also suggesting the presence of PRRS virus. To assess the natural exposure to the field PRRSV we used HerdChek PRRSV-Ab Test Kit (IDEXX Lab, Inc., USA). Serum samples from sows and suckling pigs show 100% positive results, and the gilts' have been proven to have antibodies against PRRSV in 75% cases. These data proved an increased level of PRRSV contamination in the examined herd, requesting the emergence vaccination of all population, change of management of replacement gilts and strengthening of biosecurity protocols used.

Key words: PRRS, control strategies

MANAGEMENT OF PSEUDORABIES VIRUS INFECTION IN SWINE HERDS

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Summary

Aujeszky's disease or Pseudorabies is a viral disease usually involved in swine pathology (the natural host). Sporadic cases occur in dogs, cats, cattle, sheep, goats, horses, foxes and rodents, without being a zoonosis. Our investigations was carried upon a swine population of about 4000 animals, divided in five groups: Suckling pigs, Gilts, Sows, Growing-finishing pigs (115 days) and Nursing/weaned pigs, 20 dead pigs (suckling pigs, young animals) were examined post mortem using the previously described necropsy protocol. To assess the exposure to the PRV we used HerdChek PRV-Ab Test Kit (IDEXX Lab, Inc., USA). The results of the tests carried on serum samples from suckling pigs (1-5) and gilts (6-9), using the Idexx ELISA Test Kit, have demonstrated the presence of the antibodies (Ab) against viruses in all samples. 83% of the sows' serum samples have been proven to have antibodies against PRV. In the nursing pigs unit 60% of the serum samples were positive, while in growing-finishing pigs unit only 20%.

Key words: pseudorabies virus infection, swine

THE VALIDATION OF AN ELISA KIT FOR RUMINANT PARATUBERCULOSIS DIAGNOSTIC

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Summary

A kit (ELISA PARA – Ruminant) for ruminant paratuberculosis diagnostic was developed and validated. The method is based on indirect ELISA, including pre-absorption of samples with *M. phlei*. The kit is addressed to cattle, sheep and goats sera, pools up to 10 sera, as well as to milk samples. The validation parameters were estimated according to the reference documents with reference SR EN ISO / CEI 17025:2005, SR EN ISO 16140:2005 and the OIE Manual. The performance parameters determined in this study were: relative specificity and sensitivity, limit of detection, precision by repeatability and reproducibility, relative accuracy, measurement uncertainty.

Key words: ruminant paratuberculosis, diagnostic, ELISA, validation

**VALIDATION OF AN IMMUNOENZYMATIC ASSAY FOR
DETECTION OF ANTIBODIES AGAINST
EGG DROP SYNDROME VIRUS**

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Summary

It was developed and validated a diagnostic kit - ELI-EDS - for detecting EDS antibodies, based on the indirect ELISA technique, using a single dilution of sera to be tested. The validation parameters were estimated according to the reference documents with reference SR EN ISO / CEI 17025:2005, SR EN ISO 16140:2005 and the OIE Manual. The performance parameters determined in this study were: relative specificity and sensitivity, limit of detection, precision by repeatability and reproducibility, relative accuracy, measurement uncertainty.

Key words: EDS, ELISA, validation

**STUDY OF CORRELATION BETWEEN DIFFERENT
DIAGNOSIS TESTS IN BOVINE MASTITIS**

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Summary

In a dairy herd clinical and subclinical mastitis were detected by R-Mastitest and Mast-O-Test, as field tests, and milk samples were collected for bacteriological examination.

Between the two field tests used for the detection of clinical and subclinical mastitis and the bacteriological diagnosis there was a positive correlation. There was also a positive correlation between the two field methods.

Bovine mastitis can be diagnosed by Mast-O-Test or R-Mastitest in different phases of evolution, but for implementation of a good treatment, is indicated that the trace and positive reactions in the field tests to be confirmed by bacteriological examination.

In most cases of bovine mastitis, bacteriological, was diagnosed staphylococcal mastitis, most of them were clinical ones.

Key words: field tests, bacteriological examination, bovine mastitis

ANTIBIOTIC SUSCEPTIBILITY OF PATHOGENS ISOLATED FROM MASTITIC MILK IN CATTLE

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Summary

There was tested the antibiotic susceptibility of etiological agents isolated from mastitic milk samples, based on bacteriological examination and antibiogram, in order to find the most efficient medication, to decrease the bacteriological load of milk and, finally, to decrease economical losses due to bovine mastitis. The antibiotic susceptibility of pathogens was tested to tetracycline, neomycin, novobiocin, cephalotin, amoxyclave, ampicillin, oxacillin, penicillin G (only for *Streptococcus spp.*), streptomycin, erythromycin and there was also tested the resistance to sulfonamides.

Key words: antibiotic susceptibility, bovine mastitis, antibiogram

SEROLOGICAL PROFILES OF PORCINE CIRCOVIRUS INFECTION IN ROMANIAN SWINE HERDS

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Summary

Definition of circuit of PCV2 on flow technology in a swine herd requires an epidemiological investigation of PCV2 infection in all swine categories (from sows to fattening pigs) in a farm affected by PCV2 associated diseases. To achieve this goal the swine herds were evaluated for the presence of PCV2 antibodies using an ELISA and indirect-fluorescent antibody procedure following the kinetics of PCV2 antibodies to subclinical infected (PCV2 positive) animals and PMWS/PDNS affected pigs.

Key words: circovirus, serological profile, swine

**SERUM N-ACETYL-MURAMYL-HYDROLASE (LYSOZYME)
CONCENTRATIONS IN PCV2 AFFECTED (PMWS, PDNS) AND
PCV2 POSITIVE HEALTHY PIGS**

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Summary

The n-acetyl-muramyl-hydrolase (lysozyme) is a factor of the innate humoral immunity, play primary role in the natural resistance of both animals and humans against various infectious diseases. The study of the function and determination of this parameter is very important for the health and productivity of domestic animals. Currently no data are available on the description of serum lysozyme concentration in porcine circovirus infection. In this study were investigated the concentration of serum lysozyme in PCV2 affected (Postweaning multisystemic wasting syndrome; Porcine dermatitis and nephropathy syndrome) and PCV2 positive healthy pigs.

Key words: lysozyme, PCV2 affected, PCV2 positive, pig

**CHARACTERIZATION OF SOME *YERSINIA* SPP.
USING THE API 20 E SYSTEM**

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Summary

The research intended to study the biochemical characteristics for 10 bacterial strains of *Yersinia enterocolitica* (3 bacterial strains isolated from pigs and 7 provided by labs, from their collections), using the API 20 E identification system for *Enterobacteriaceae* and other Gram (-) rods.

All the bacterial strains under study were initially characterized and identified through the standard conventional microbiological tests, which include morpho-biochemical differentiating criteria for genus and species. In order to achieve isolation and characterization of *Yersinia enterocolitica* strains, there were used two standard reference methods comparatively: ISO/DIS 10273/1994 and the proposed FAO/1992 method for isolation and identification of *Yersinia enterocolitica* spp.

Key words: *Yersinia* spp., API 20 E

COMPARATIVE RESEARCHES CONCERNING PHISICO-CHEMICAL AND MICROBIOLOGICAL PARAMETERS OF RAW MEAT IN MEDIUM SIZE UNITS FROM BUCHAREST CITY

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Summary

The paper analyzes the phisico-chemical and microbiological parameters of the raw meat from three medium size units from Bucharest city, Romania Three series of samples were obtained from each analyzed units. For physico-chemical parameters, natrium hydrolyzed, fat, water, NaCl, nitrites, pH and protein content was analyzed. For microbiological parameters, total number of germs (TNG), *E. coli*, *Staphylococcus* c.p. and *Salmonella* were analyzed. For physico-chemical properties of the analyzed meat, some samples were not into the norm limits concerning fat, water, NaCl and protein content. Microbiological parameters of the analyzed samples were in the norm limits (EC 1441/2007), even if some of them showed values near the extremis of the legal admissions.

Key words: mince meat, physico-chemical parameters, microbiologic parameters

INVESTIGATION METHODS USED FOR IDENTIFYING THE PRESENCE OF TICK-BORNE ENCEPHALITIS VIRUS (TBEV) IN VECTOR ARTHROPODS

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Summary

Tick-borne Encephalitis Virus (TBEV) was classified by CDC (Centres for Diseases Control) and NIAID (National Institute of Allergy and Infectious Diseases) in category C - biological agents used for terrorist purposes, based on the possibility of being bioengineered

for mass dissemination in the future because of: availability; ease of production and dissemination; and potential for high morbidity and mortality rates (in humans and animals) and major health impact. TBEV is a RNA zoonotic member of the family Flaviviridae, that was initially isolated in 1937, and which naturally circulates primarily between ticks of the *Ixodes ricinus* complex (*I. ricinus* in Western Europe and *I. persulcatus* in Central Siberia and the Far East) and small rodents and insectivores. Ticks act as both the vector and reservoir for TBEV. Based on nucleotide sequence homologies three subtypes of the TBEV are known until now: Western subtype (W-TBEV), Far- Eastern subtype (FE-TBEV) and Siberian subtype. All known TBEV isolates from Europe belong to the W-TBEV subtype, while isolates from eastern Russia, China and Japan belong to the FE-TBEV subtype. The main hosts are small rodents, with humans being accidental hosts. Large animals are considered to be amplifying hosts for the tick vectors and feeding hosts for the ticks, without playing a role in maintaining the virus. In most of the cases, infected livestock appear to be asymptomatic and only produce low viraemia, but TBEV is excreted in the milk and local human outbreaks have been associated with consuming raw milk from goats, sheep or cows, or milk products such as cheese. The virus can chronically infect ticks and it seems to be transmitted both transstadially (from larva to nymph to adult ticks) and transovarially (from adult female tick through eggs). TBE cases occur during the highest period of tick activity (between April and November), when humans are infected in rural areas through tick bites.

Investigation methods for TBEV seek to determine its presence in vector arthropods, through specific tests performed on host animals which are sensible to TBEV infection or cell cultures. Obtaining viral strains from arthropods (*Ixodes ricinus*) and testing their viability through serological and molecular methods provides valuable information regarding the presence and spread of TBEV in Romania.

Key words: Tick-borne Encephalitis Virus, vector arthropods

CLASSICAL AND MOLECULAR MONITORING OF THE PREVALENCE OF *SALMONELLA* SPP. CARRIAGE IN FREE-LIVING AND CAPTIVE NATIVE VIPERA SNAKES IN ROMANIA

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Summary

Reptile-associated salmonellosis in humans is an increasing public health issue. Apparently, bacteria from the genus *Salmonella* are component of the normal intestinal microbial community for most of the snakes, emerging snakes as a significant source of human salmonellae infections. We screened 16 free-living and 10 captive native *Vipera* snakes for presence of *Salmonella*. Fresh cloacal samples were collected from the individuals with a sterile cotton swab and immediately processed according to a standard

protocol for the detection of *Salmonella* (according the OIE). *Salmonella* was isolated from 5 captive and from 10 free-living snakes (50% and 62.5%, respectively), obtaining a total number of 19 isolates. Concurrent shedding of multiple strains of the bacteria was detected in four free-living snakes. We observed significant differences between the species, the European adder having higher prevalence than the other two species (87.5, 44.44% and 44.44% respectively). 15 isolates out of 19 belonged to *Salmonella* Arizonae, while the other 4 strains were identified as *Salmonella* spp. with our methodology.

Key words: *Salmonella* spp., viper snakes

GENETIC CHARACTERIZATION OF *BACILLUS ANTHRACIS* R1190 STAMATIN VACCINAL STRAIN

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Summary

The non-encapsulated *Bacillus anthracis* 1190R Stamatin strain, obtained in 1937 - 1938, is used as spores' suspension in production of vaccine intended to the control of anthrax in animals. In the plasmid profile analysis, *Bacillus anthracis* 1190R Stamatin strain proved harboring a plasmid of 182 kb, equivalent to the pX01 plasmid. The vaccine *Bacillus anthracis* 1190 R Stamatin strain ranged into the genotype pag⁺ / sap⁺ / cap⁻, as results obtained by classical PCR techniques, applied to reveal the genes that encode the protective antigen, S antigen and capsular antigen respectively. By RAPD technique all six tested primers generated patterns of amplification that can be considered as specific and used in comparative epidemiological and stability studies.

Key words: anthrax, Stamatin strain, PCR

BRAXY (BRADSOT) IN LAMBS – A CASE REPORT

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Summary

In the paper is presented one case of braxy in a farm from Timis county, where many lambs around the age of 4 weeks died. The diagnosis was established by corroborating the results of the lesions and laboratory exams.

Key words: braxy (bradsot), *Cl. Septicum*

**RESEARCHES REGARDING FUNGAL SPECIES FOUND IN
NATURAL ASSOCIATION WITH ADULTS OF *MUSCA
DOMESTICA* FROM ANIMALS SHELTERS**

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Summary

The objective of this study was to isolate and identify fungal species found in natural association with adults of *Musca domestica*. The adult insects were collected from two natural breeding grounds: one pig and one cow shelters. Proportion of the isolated fungi from the flies captured was: genus *Aspergillus* 27.66 in pig shelter and 2.22 in the cow shelter with species *A. flavus*, *A. niger*, *A. oryzae*, genus *Penicillium* 19.15 in pig shelter and 17.78 in the cow shelter with species *Penicillium communeae*, *Penicillium aurantiogriseum*, *Penicillium crysogenum*. Also were isolated species from genus *Fusarium*, *Alternaria* and yeast The specie *Beauveria bassina* has only one isolate, on the flies from the pig shelter

Key words: *Musca domestica*, fungi – isolation, animal's shelters

**RESEARCHES REGARDING THE CORRELATION BETWEEN
NTG AND NTF AND THE PRDC INCIDENCE IN A CLOSED
CYCLED FARM**

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Summary

The researches were conducted in 4 shelters of the farm, for reproduction young sows, two with natural ventilation system, shelters A and B, and two with computer assisted ventilation system, shelters C and D. The factors taken into consideration here were the biological air parameters, total number of bacterial germs (NTG) and total number of fungus (NTF) from the shelters air. The obtain date were correlated with the incidence of porcine respiratory disease complex (PRDC). In case of the NTG, the dates show an exceeded by 2.52 times, in shelter A and by 2.12 times in the in shelter B for sows with the natural ventilation. The total number of fungus, NTF, in both tips of ventilation system was on hygienically norms. In the shelters with computer assisted ventilation the number of morbidities due to the evolution of PRDC, decreased by approximately 1.82%. In the shelters with computer assisted ventilation the number of mortalities due to the evolution of PRDC, decreased by approximately 2.16%.

Key words: NTG, NTF, PRCD incidence

RHEOLOGICAL STUDY OF *EUPHORBIA CYPARISSIAS*' NANOPARTICLES BASED OINTMENTS

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Summary

Knowing the active parts structure of *Euphorbia cyparissias* (Cypress spurge) extracts, nanoencapsulated, concentrations of 5 and respectively 10% obtained previously where included in a simple ointment base (unguentum simplex) and pharmaceutically tested.

The rheology behaviour, according to the „Loop”, „Creep”, „Amplitude sweep” and „Frequency sweep” curves was accomplished with the help of a MCR-300 ^(Paar Physica) model rheometer in parallel side cells, with 20mm i.d. and 1mm interstices.

The rheologic study revealed complexes who presented pseudoplasticity and thixotropy as “Loop” tests proved, and also viscoelastic behaviour as results after “Creep”, “Amplitude Sweep” and “Frequency Sweep” tests.

From viscosity curves were obtained viscosity values η_{∞} at infinite great shear speeds for each sample.

From “Amplitude Sweep” diagrams were obtained the critical deformation values of samples. The temperature samples' behaviour is complex, their viscosity obey to an Arrhenius dependence only on certain temperature intervals.

Making a correlation of these intervals for η -t experimental data after Arrhenius formula the values for activation energy of viscous flow were obtained.

The samples are changing to a certain temperature the value of activation energy of viscous flow.

The samples are sensibly changing them rheologic proprieties with temperature, tension, respectively shear speed.

Key words: *Euphorbia cyparissias* / β -cyclodextrines, ointment, rheology, testing

RESEARCHES REGARDING “IN VITRO” TESTING OF SOME ANTIBIOTICS’ EFFICACY ON *E. COLI* STRAINS

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Summary

Collibacilar infections are the main cause of high mortality in broilers throughout their exploitation.

94 broilers anatomopathological examination was conducted, also bacterioscopic and bacteriological examination, after which the “in vitro” antibiotic and quinolon testing was conducted, based on antibiograms.

A high sensitivity of *E. coli* strains was observed to Amoxiclav, Fluorfenicol and Gentamicin and the resistance of these strains to Erithromicin, Amoxicilin and Oxiotetracilin.

Because the antibioresistance phenomenon is a major problem, the septicemic collibacilosis remains the main cause of economical loss in the industrial system of broiler exploitation.

Key words: collibacilosis, broilers, *E. coli*

ACUTE-PHASE PROTEINS IN IMMUNE RESPONSE

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Summary

Innate (natural/nonspecific) processes of defense are accomplished with participation of some barriers and cellular and molecular effectors which have extremely diversified functions. Among the effectors, molecules have an important place because of their direct actions and participation in almost all cellular and barrier-dependent mechanisms of innate immunity.

The pathways involved and their material components (i.e. cells, molecules) are common for defense response against all or almost all pathogens, thereby being nonspecific. Also, unlike specific mechanisms, the nonspecific ones are deprived of immunological memory. Innate immunity is common to all animals, vertebrates and nonvertebrates, and adaptive immunity is a characteristic only for vertebrates, starting with fishes.

Innate defense molecules are synthesized by numerous populations and types of cells, according to many criteria appertain to multiple categories (groups), and have diversified structures. In this review study are presented the most important acute-phase proteins and their role in various species defense natural mechanisms.

Key words: acute-phase proteins, immune response

IMMUNOSTIMULANT EFFECT OF FUNGAL POLYSACCHARIDES UPON HUMORAL IMMUNE RESPONSE IN BROILER CHICKENS

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Summary

In this study we followed the immunostimulant effect of an alcoholic total extract from *Pleurotus ostreatus* administered in 5 and 15% concentration to broiler chickens vaccinated against infectious bursal disease. The immunogen was represented by two vaccines (Biavac and Biaromvac) used in infectious bursal disease prophylaxis. Vaccination was made at the age of seven days in six groups of broilers. We followed the two vaccines effects, combined with *Pleurotus ostreatus* alcoholic extract, administered in mentioned concentrations, upon immune response by specific antibodies.

Specific antibodies concentrations were measured by immunoassay (ELISA) in Immunology Laboratory of D.S.V.S.A. Timis. The laboratory results showed that fungal polysaccharides have a stimulant action upon humoral immune response, the higher concentration of specific antibodies being registered in group treated with 15% *Pleurotus* extract.

Key words: broiler chickens, immunomodulation, specific antibodies, fungal polysaccharides

THE IMMUNOMODULATORY EFFECT OF PROPOLIS: A REVIEW

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Summary

Propolis has attracted the interest of the researchers' in the last decades because of several biological and pharmacological properties, such as immunomodulatory, antitumoral, antimicrobial, antiinflammatory, antioxidant, among others (3).

Propolis-containing products have been intensely marketed by the pharmaceutical industry and health-food stores (4). Propolis, sometimes called "nature's penicillin", is a complex mixture of mostly pollen and waxes that bees collect from plants and then use to sterilize, cement, and varnish the hives. Propolis also protects the colony from diseases because of its antiseptic efficacy and antimicrobial properties (19). It is rich in amino acids, trace minerals, flavonoids, and vitamin K. Although in preclinical studies propolis has been confirmed to be effective as antibacterial, antifungal, and anti-inflammatory, clinical studies are needed to confirm these roles and determine the therapeutic dosages and conditions for which it is best suited (8).

There seem to be promising uses for propolis as an alternative antibiotic and anti-inflammatory drug, especially due to lack of side effects encountered in other categories of medication.

This review aimed to discuss the immune stimulating effect of propolis.

Key words: propolis, immunomodulatory effect

THE IMMUNOSTIMULATORY ACTIVITY OF PROPOLIS FROM DIFFERENT ORIGIN

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Summary

The study investigated the immunological activity of various concentrations of ethanolic propolis extracts, from different locations, on periferic blood leukocytes' blast transformation as well as on their *in vitro* phagocytic activity (carbon particle inclusion test) in bovine with subclinical mastites.

The phagocytosis of the control was significantly decreased during the second half of the incubation ($p < 0.001$), indicating a poor defense capacity of the cells. There were

statistically significant differences ($p < 0.05-0.001$) between the two variants of propolis extracts, probably due to their different chemical compositions.

The blast transformation index was higher in all propolis treated variants, except P3 and P5 ($p < 0.05$). The ethanolic propolis P1, P2, P4 and P6 preparations could be used, according to the results obtained, to stimulate the immune response. The stimulating or inhibiting effect of the propolis on phagocytosis and/or blast transformation of leukocytes depends on chemical composition rather than on the concentration in ethanol.

Key words: propolis, immunostimulatory activity

CLINICAL, IMMUNOLOGICAL AND HISTOLOGICAL ASSESSMENT OF SKIN ALLOGRAFT REJECTION IN POULTRY

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Summary

The purpose of this study was to assess the clinical, immunological and histological features associated with skin allograft rejection in poultry. There have been used 30 COBB 500 hybrids in which full-thickness allografts (from Ross hybrids) were engrafted at four weeks age. The subjects have been monitored daily during the first five days after transplant and then each two days, looking at the macroscopic characteristics of the transplanted tissue. The lymphocyte T subsets were determined in blood by flow cytometry before engraftment, and tisular samples were gathered in day five after transplant. All data obtained suggests that allograft rejection in poultry is an acute one, similar to mammals.

Key words: skin allografts, reject, poultry