

EVOLUTION OF *VARROA DESTRUCTOR* INFESTATION IN *APIS MELLIFERA* BEE COLONIES UNTREATED WITH ACARICIDES

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Summary

In bee families untreated with acaricide substances during the active season population trends of infestation with *Varroa destructor* mites by determining indicators, daily natural mortality, level of infestation of adult bees and level of infestation of the brood, was monitored. In results interpretation was established that, in climatic conditions of western Romania, *V. destructor* mite populations in bee families under active season may reach, in the fall at the end of the active beekeeping season, damaging levels in the absence of specific treatment.

Keywords: *Varroa destructor*, infestation evolution, *Apis mellifera*

DIFFUSION OF TICK BORNE DISEASE IN RUMINANT IN SOUTHERN ITALY

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Summary

Ticks are one of the major constraints on livestock production being responsible for the transmission of pathogens such as *Anaplasma*, *Babesia* and *Theileria*. Tick-borne zoonoses affect people living in the countryside in developed and developing countries. The diffusion of tick borne disease is due to a large number of factors, including among others, environmental (such as weather, soil, types of vegetation), genetic (predominant bovine breeds), ecological (such as composition and interactions of the tick populations, the presence of other animal species), and animal management. In this paper are reported epidemiological data regarding tick borne disease due by *Anaplasma*, *Babesia* and *Theileria* in domestic ruminant breeding in southern Italy regions. Anaplasmosis is spread in cattle, sheep and goats with an high prevalence of infection followed by theileriosis. *Anaplasma phagocytophilum* is also present but in a moderate way and babesiosis shows low prevalence in cattle and sheep, absent in goats.

Key words: *Anaplasma*, *Babesia*, *Theileria*, Epidemiology, Italy.

**SEROSURVEILLANCE (IFAT) OF *LEISHMANIA INFANTUM*
IN ITALY**

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Summary

In Italy, Istituti Zooprofilattici Sperimentali (IZS), set up a network which covers all Italian territory of collaborating laboratories for serological diagnosis. Since 2003 by Ministry of Health was found Leishmania National Reference Centre in Palermo (C.Re.Na.L.) that provide epidemiological surveillance collecting serological data from each Italian regions improving the official epidemiological report on "Leishmaniasis state of art" in Italy. According to the policy of service quality and applying EEC Directives on inspection and evaluation of Good Laboratory Practices (OIE) the indirect immunofluorescent-antibody test (IFAT), is performed in our network since 1987, and now thousands of animal sera are monitored every year. The authors show serological data collected in all Italian regions by the IIZZSS network through 2005-2009.

Key words: Epidemiology – Seroprevalence – IFAT - Leishmaniasis

**SCREENING FOR *TOXOPLASMA GONDII* AND FARM
MANAGEMENT IN SICILY**

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Summary

Toxoplasmosis is a world wide zoonosis affecting all warm blood animals from birds to mammals. It is recognized that it is a food or water borne infection in both human beings and animals and seroprevalence ranging from 20 to 80% are present in many countries. In Sicily we screened so far a large number of sheep farms, and several different farms of goat, bovine and black swine of Nebrodi. The general screening on different animal populations by serological and biological methods indicate the big impact of farm management in the parasite circulation and that the results can be highly divergent among nearby farms.

Key words: Toxoplasma, animal screening, farm management.

FLEA INFESTATION OF DOGS AND CATS IN SERBIA

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Summary

Flea infestation is the most common ectoparasitic condition of dogs and cats with worldwide distribution. From an ongoing country-wide study on the spectrum, the epidemiology and the population dynamics of flea infestations in dogs and cats, important preliminary results from the areas of Belgrade, Novi Sad, Pozarevac, Kraljevo and Sabac are presented. Three flea species were found parasitizing dogs and cats. *Ctenocephalides felis felis* was the most abundant (79.21 % of fleas identified), followed by *Ctenocephalides canis* (19.29.%) and *Pulex irritans* (1.50 %).

Key words: fleas, cats, dogs, Serbia

PREVALENCE OF ENDOPARASITES, BY COPROSCOPICAL EXAMINATION, ON DOGS FROM SOME URBAN AND RURAL AREAS IN SOUTH OF ROMANIA

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Summary

Uncontrolled population of stray and semi-domesticated dogs in close proximity of humans or other animals increases the risks of disease transmission. It is important to perceive dogs as a potential reservoir of parasitic infections. The aim of this study was to evaluate the prevalence of various intestinal parasites in dogs from some urban (Bucharest) and rural (Valcea County) areas in south of Romania. One hundred sixty-eight faecal samples were collected as follows: 134 from urban stray dogs and 34 from rural dogs. The faecal samples (134 from urban dogs and 34 from rural dogs) were examined by Willis flotation technique, followed by microscopy. Parasitic elements (eggs or oocysts) were identified in 111 of the samples analyzed, with an overall prevalence of 66.07%. Infestation with a single parasite genera was predominant, being found in 60 (54.05 %) of faecal samples, while simultaneous infections with two or more parasites were observed in 51 (45.94%). The following parasites were detected and recorded in order of total prevalence of examined samples: *Ancylostoma* spp. in 83 samples (49.4%), *Trichocephalus vulpis* in 40 samples (23.8%), *Toxocara canis* in 21 samples (12.5%), *Isospora* spp. in 18 samples (10.71%), *Dipylidium caninum* in 14 samples (8.33%) and *Taenia* spp., *Eimeria* spp., *Neospora caninum*/*Hammondia heydorni* in equal proportion, each one being found in three samples (1.78%) and *Capillaria aerophila* in one sample (0.59%). A higher prevalence of parasitosis was registered in dogs from rural areas, 85.29% (29/34), compared to those from urban areas (61.19%; 82/134). Overall all identified species of parasites had a higher prevalence in rural areas, except for *Trichocephalus vulpis* and *Neospora caninum*/*Hammondia heydorni*. Parasites with zoonotic potential were the most frequently observed, with a total prevalence of 61.9% from examined dogs. Stray dogs from shelter had a higher prevalence of parasitic infection (78.72%), than stray dogs from public places (51.72%). Helminthic infections (63.69%) were more frequent than protozoan (12.5%).

Key words: endoparasites, dogs, prevalence, Romania

**FIRST EVIDENCE OF THE PRESENCE OF *DEMODEX CORNEI* IN
WESTERN ROMANIA. CASE REPORT**

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Summary

Demodicosis is one of the most important dog skin diseases. The hair follicle mites can be also found in other animal species like cats, horses, cattle and others, including humans. This paper describes the first case of demodicosis due to *Demodex cornei* in Western Romania. A one month old puppy was diagnosed with a generalized double infestation with *Demodex* mites: *D. canis* and *D. cornei*. 30 days after onset of treatment *D. cornei* was no more identified in skin scrapings, but *D. canis* was still present. 40 days after onset of treatment no clinical signs were seen, but the puppy still was positive to mites in skin scrapings. 60 days after onset of treatment the puppy was cured.

Keywords: dog, *Demodex cornei*, *D. canis*, first mention, Western Romania

**SEROPREVALENCE OF ANTI-BORRELIA BURGENDORFERI
SENSU LATO ANTIBODIES IN DOGS FROM TIMIȘ COUNTY**

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Summary

The aim of this study was epidemiological surveillance of dogs from Timiș County for establishing seroprevalence of anti *Borrelia burgdorferi* sensu lato antibodies by immunofluorescence antibodies test. 85 blood samples were collected from dogs from Timiș County. From serum samples presence of IgG antibodies against *Borrelia Burgdorferi* by IFAT was tested with MegaScreen® FLUOVET® (Diagnostik MegaCor, GmbH) kit. Four out of 85 serum samples from dogs were positive for antibodies against *B. burgdorferi* sl. at IFAT FluoBorrelia. The prevalence of antibodies in serum samples from dogs was 4.7%. During the study were not serologically positive females identified, all the positively dogs were de male.

Key words: *Borrelia*, Dog, Immunofluorescence, *Borrelia burgdorferi*, Antibodies, Diagnosis

SEROPREVALENCE OF ANTI-*EHRlichia* ANTIBODIES IN DOGS FROM TIMIȘ COUNTY

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Summary

In this study blood was collected from 94 dogs older than 2 months from Timis County. From serum samples presence of IgG antibodies against *Ehrlichia canis* by IFAT was tested with MegaScreen® FLUOVET® (Diagnostik MegaCor, GmbH) kit. Thirteen out of 94 serum samples from dogs were positive for antibodies against *Ehrlichia canis* at IFAT FluoEhrlichia. The prevalence of antibodies in serum samples from dogs was 13.8%. The presence of *E. canis* antibodies in the serum of dogs in Timis County was demonstrated for the first time and is indicative of canine infection with *Ehrlichia*. The seroprevalence of *E. canis* infections in dogs from our study was lower than prevalence in dogs from other study, but large enough to worry us. In this study, the exposure rate was similar between males and females and no significant sex differences were detected.

Key words: *Ehrlichia canis*, Dog, Serology, Diagnosis

**OCCURENCE AND ZONOTIC RISK OF *CRYPTOSPORIDIUM*
INFECTION IN LAMBS - PRELIMINARY RESULTS**

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Summary

Diarrheic fecal samples from 116 lambs originating from nine sheep farms located in western Romania were microscopically screened for the presence of *Cryptosporidium* oocysts using direct smear technique. Overall, 15 (12.9%) samples were found positive. Two samples were subjected to molecular analysis by polymerase chain reaction (nested PCR) in two steps of SSU rRNA gene followed by RFLP analysis with SspI, VspI and MboII restriction enzymes. The restriction patterns showed characteristic bands for *Cryptosporidium parvum*. These results suggest that *C. parvum* isolates originating from lambs have zoonotic potential.

Key words: *Cryptosporidium*, lamb, western Romania, occurrence

**TOXOPLASMOSIS SEROPREVALENCE IN PIGS FROM
ARAD COUNTY**

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Summary

To determine the prevalence of *Toxoplasma gondii* infection we examined serological samples from 700 domestic pigs from 14 localities (CSV) of the Arad County.

Serological samples were processed by immunoenzymatic technique (ELISA). There were included in the study 50 pigs from each CSV. The seroprevalence of *Toxoplasma gondii* infection in pigs was 16.28%, with variations between 0 and 64%.

Key words: Arad County, domestic pigs, *Toxoplasma gondii*

**SEROPREVALENCE OF *TOXOPLASMA GONDII* INFECTION IN
CATS AND SHEEP IN ARAD COUNTY**

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Summary

To establish the prevalence of *Toxoplasma gondii* infection in Arad County, were tested 250 of serological samples from sheep and 36 samples of serum and faeces from cats. The serological samples were assayed using ELISA test and the faeces - coproscopical.

The medium positivity for *Toxoplasma gondii* infection in sheep was 42.40%, with variations between 26 and 70%. From all samples tested from cat 80.55% were positive. The seroprevalence was higher in household, European breed, adult, male, cats from rural area, fed with raw meat.

Coproscopically, in cats, we didn't detect *T. gondii* oocysts in any sample.

Key words: sheep, cats, Arad County, *Toxoplasma gondii*

LUCRĂRI ȘTIINȚIFICE MEDICINĂ VETERINARĂ VOL. XLIV(1), 2011, TIMIȘOARA

**EFFICACY EVALUATION OF MOXIDECTIN SPOT-ON IN THE
TREATMENT OF DOGS NATURALLY INFECTED WITH
DIROFILARIA REPENS MICROFILARIAE**

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Summary

Moxidectin is considered a safe and effective medicine against *Dirofilaria immitis* (*Heartworm*) microfilaria. So far no microfilaricide and adulticide treatment for *Dirofilaria repens* is registered. The aim of the present study was to test the microfilaricidal efficacy of the topical formula of moxidectin 2.5%/imidacloprid 10%, in 18 dogs naturally infected with *D. repens*. The product Advocate® (Bayer), spot-on was tested. Treatments were applied to 16 dogs once a month for 3 months (eight dogs) or 6 months (five dogs), and every 2 weeks for 3 months (three dogs). Two dogs remained untreated. Four weeks after the initial treatment all treated dogs were negative. After 90 days from the last treatment, all dogs were serologically retested and the result was negative.

Key words: *Dirofilaria repens*, moxidectin, treatment, efficacy, dog

EVALUATION OF DIFFERENT METHODS FOR DIAGNOSIS OF *DIROFILARIA* IN DOGS

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Summary

In this study we examined a total of 38 blood samples from dogs using: Knott modified method, direct blood examination and ELISA (EVL Netherlands). Ten blood samples were examined using rapid test-Speed® Diro Heartworm (Bio Veto Test, France). For species diagnosis modified Knott method and polymerase chain reaction were used. Three dogs were diagnosed using necropsy, because they had various malignancies and a serious clinical condition, they were euthanized with their owners accept. Dogs examined were from the following counties: Timis, Arad and Hunedoara.

The aim of this paper was to highlight the use of an accurate diagnostic method in dog dirofilariosis, taking into account the spread of this parasitosis in our country.

Specificity and sensitivity of diagnostic methods were calculated using Fisher test. The sensitivity and specificity obtained was: by modified Knott method (100%, 100%), by morphological characters were identified *D. repens* microfilaria, diagnosis confirmed by PCR (Budapest) and necropsy examination, by direct examination of fresh blood (92.10%, 100%), by rapid test (100%, 77.7%) and by ELISA test (100%, 100%).

Key words: sensibility, specificity, methods, dirofilaria, dog

**MORPHOMETRIC STUDY OF NOSEMA SPORES ISOLATED
FROM HONEY BEE IN WESTERN ROMANIA**

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Summary

Nosema spores identified and isolated from 12 samples of bees with nosema disease symptoms collected in three apiaries located in three counties in western Romania (Arad, Timis and Caras-Severin) were measured and the results were compared with data from literature. Morphometric characterization of *Nosema* spores isolated did not reveal the presence of the new species *N. ceranae*. Spore dimensions obtained from measurements are between 5.33 mm and 6.06 mm long and 2.51 mm and 2.79 mm wide and fall in the average size of *N. apis* spores.

Keywords: morphometry, *Nosema ceranae*, *Nosema apis*

**MORPHOLOGICAL STUDY OF SOME GASTROINTESTINAL
NEMATODES IN SHEEP IN THREE-DIMENSIONAL
VISUALIZATION SYSTEM (3D)**

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Summary

This study has as objective the development of image in three-dimensional sistem (3D), made using a special computer program called Blender, performed by a specialist in three-dimensional graphics. Five species were represented by gastrointestinal nematodes, respectively *Teladorsagia circumcincta*, *Haemonchus contortus*, *Nematodirus filicollis*, *Trichostrongylus colubriformis* și *Oesophaostomum venulosum*.

Key words: gastrointestinal nematodes, three-dimensional system

LUCRĂRI ȘTIINȚIFICE MEDICINĂ VETERINARĂ VOL. XLIV(1), 2011, TIMIȘOARA

EPIDEMIOSURVEY BY IMMUNOFLUORESCENCE OF *BABESIA CANIS* IN DOGS FROM BANAT REGION

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Summary

The importance of tick-borne diseases has increased in the recent years due to frequent travel of dogs in endemic areas or by importing them from regions with endemic occurrence.

In our study 100 dogs from Banat area were tested for the presence of *Babesia canis* antibodies using indirect fluorescent antibody test (IFAT). 29 of the sera samples showed positivity at 1:32 titre. It is concluded that canine babesiosis is becoming more prevalent in Banat region, Romania. This is the first report on seroprevalence of *Babesia canis* in Romania.

Key words: *Babesia canis*, dogs, IFAT

PARASITISM WITH *GIARDIA* SPP. IN CATS IN TIMIS COUNTY

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Summary

This study was conducted to determine the prevalence of the *Giardia* spp. infection, in cats from Timis County and to analyze the potential risk factors that support this infection (gender, age). The examination of the samples was accomplished using flotation method (Willis), direct examination using Lügol solution. Parasitic fauna of cats from Timis County was represented by *Giardia* spp. total 47.36%; *Giardia* spp. single parasite 28.94%; *Giardia* spp. with other parasite 18.42%; *Giardia* spp. with *Toxocara* spp. and *Ancylostoma* spp. 5.26; *Giardia* spp. with *Ancylostoma* spp. 2.63%; *Giardia* spp. with *Toxocara* spp. 10,52%; *Ancylostoma* spp. single parasite 2.63%; *Toxocara* spp. single parasite 21,05%; *Toxocara* spp. with *Coccidia* spp. 5.26%; *Coccidia* spp. with *Ancylostoma* spp. 2.63%; *Aelurostrongylus abstrusus* single parasite 2.63%.

Key words: cats, *Giardia* spp., parasitic fauna, prevalence

**TOXOCARA CANIS – THE RISK FACTORS FOR LARVA
MIGRANS VISCERALIS**

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Summary

In the present article was broached the risk factors for Larva Migrans Visceralis. The parasitic roundworm *Toxocara canis* is present in dog population all over the world. This parasite is the etiological agent for *Toxocariasis*. The canine fecal contamination and the potential transmission of parasite to human and canine populations represent a public health problem of cosmopolitan importance. It is important to know the biology of this parasite, pathways and sources of contamination, to prevent the infections in dogs and to protect humans from these infections.

Key words: *Toxocara canis*, larva migrans visceralis

THERAPEUTIC RESEARCH IN GYRODACTILOSIS

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Summary

In this study we have made research on effectiveness of some substances against the *Gyrodactylus monogenean* identified on rainbow trout (*Onchorhynchus mykiss*). Treatments with ammonium hydroxide reduce in totality the infection with *Gyrodactylus* and treatments with formaldehyde and sodium chloride could only reduce the intensity of infection by these monogeneans. Intensified research is needed in order to develop new and better control methods for this helminthosis. Especially measures that optimized the effectiveness, productivity and profitability of trout fisheries could be search.

Key words: *Gyrodactylus spp.*, rainbow trout, brook trout, antiparasitic treatment

**CHARACTERIZATION OF SOME *STREPTOCOCCUS SUIIS*
STRAINS ISOLATED FROM PIGS**

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Summary

In the paper are presented the results obtained by bacteriological exam, concerning *Streptococcus suis* infection, from 37 cadavers of suckling and young piglets aged between 40 and 100 days.

Bacterioscopic and bacteriological examination together with the biochemical characteristics allowed classification of the isolates into *Streptococcus suis* species.

The isolated strains were resistant to most of the antimicrobials tested. There wasn't registered any sensitive strain to 7 out of the 11 antimicrobials (gentamicin, amoxicillin, erythromycin, neomycin, doxycycline, enrofloxacin, trimethoprim). Only regarding the amoxicillin-clavulanic acid the number of sensitive strains was superior to that of the resistant strains, probably due to the reduced usage of this antibiotic in pig farms.

Keywords: *Streptococcus suis*, antibioticsensitivity

**EPIDEMIOLOGIC, CLINIC AND ANATOMOPATHOLOGIC
RESEARCH IN AN OUTBREAK OF CHICKENS WITH
TRANSMISSIBLE VIRAL PROVENTRICULITIS**

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Summary

Transmissible viral proventriculitis (TVP) is an infectious disease evolving in broilers, was first reported in Holland, then in the U.S. and Australia. In intensive aviculture this disease is associated with runting or stunting syndrome, causing significant economic harm.

In 1996 in USA, Goodwin *et. al* identify through electron microscopy a virus who was called by others researchers adenovirus-like.

Was taken to study an outbreak of broiler chickens, 6120 in number, being made epidemiologic, clinic and anatomopathologic examination (macroscopic and histological exam).

The frequent of TVP was followed by necropsy examination, made biweekly, and the results are shown in Table I.

The clinic examination highlighted the uneven appearance of the chickens has increased from week III. Diseased chickens presented a cyclic polymorphism similar with malabsorption syndrome.

Macroscopic anatomopathologic lesions was reported only in proventriculus. This organ is enlarge and friable, and the isthmus are enlarge also, transition between the two organs are not well defined. The mucosa of proventriculus have pronounced lobular aspect because the glands are enlarge and on the digital pressing is removed a white-viscose content.

Key words: broiler chickens, proventriculitis, viral

NECROSIS OF THE FEMORAL HEAD IN BROILER CHICKENS

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Summary

In 1972 was diagnosed for the first time, the chickens, necrosis of the femoral head at that time the etiology of this disease is controversial. Subsequently, several research teams have studied the etiology and pathogenesis of this disease, proving that occur: avian reovirus, *E. coli* (APEC strains), staphylococci, enterococci and other bacteria.

This study was made in a number of broilers, increased ground, with a herd of 6500 heads. Pathological examinations were conducted twice weekly, starting on the first day of life until the 7 week - when a flock of chickens was slaughtered. There were 153 necropsied cadaver that followed the frequency of necrosis of the femoral head and the presence of other infectious diseases.

To identify potential pathogens were performed bacteriological and serological examinations.

The pathological examination determined the prevalence of this disease was, throughout the series, this indicator with a value of 63.40% relative, reported the number of bodies autopsied and 13.16% reported in mortalitaea cumulative.

Bacteriologic analysis of samples performed revealed the presence of one bacterial species, namely *E. coli*, all isolates were classified in the APEC pathotype.

The results of serological examination confirmed the presence of avian reovirus infection in flocks of chickens under observation. The antibody titers postinfection obtained after harvesting the II has demonstrated the presence of seroconversion phenomenon reovirosis consecutive evolution.

Key words: broiler, femoral head, necrosis

ANOTHER WAY OF TESTING THE QUALITY OF COW'S MILK

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Summary

The principle of Transmittance (T) is proposed for a test to detect mastitis *cow side* with the aid of a portable electronic device, called Milktester RMM. Transmittance value depends on the concentration, color and homogeneity of a sample, crossed through by a beam of monochromatic electromagnetic radiation. Milktester RMM is a prototype designed to detect and quantify modifications of homogeneity and color which characterizes an *abnormal milk*, in accordance with the current Regulation (EC) No 853/2004 of the European Parliament. The proposed optical device is able to measure, calculate and display, in a few seconds, the transmittance coefficient of intensity (TCI) and deviation coefficient (DC) which, in their turn, is influenced by at least three kinds of alterations: concentration in different substances, color and turbidity. Every reading for every quarter is taken into account and calculated by comparison to the average value of the other two quarters, belonging to the same animal, considered normal, healthy and taken as reference.

Key words: abnormal milk, milk tester, mastitis detection

**A COMPARATIVE EVALUATION OF *IN VIVO* AND *IN VITRO*
TUBERCULIN SENSITISATION OF IMMUNE CELLS IN SKIN
TEST POSITIVE BOVINE**

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Summary

Delayed type hypersensitivity was the first immune function recognized as having cellular basis. This function found to be mediated only by T_H1 cells but not by T_H2 cells. The experiments comparatively investigated the *in vivo* and *in vitro* T-lymphocyte and macrophage reactivity in *M. tuberculosis* primed animals, to both avian and bovine tuberculin, classically used to diagnose infected animals. The *in vivo* measurements envisaged the changes that occur during the intradermal test in the thickness of the skin and local changes. The *in vitro* test was carried out on blood samples from animals reacting as simple or comparative simultaneous test (CST) positive (n=7) or negative (n=18). Blood from these animals, sampled on heparin was subjected to the leukocyte migration inhibition test.

There was a strong, statistically significant ($r = -0.894$, $p < 0.001$) reverse correlation between allergic (skin) tests and the *in vitro* leukocyte migration inhibition test, in bovine positive to intradermal injections of avian and/or bovine tuberculin. The leukocyte migration inhibition could be used as an alternative method for the diagnosis of tuberculosis, but obtaining accurate results presumed a better standardization of the test in bovine.

Key words: tuberculin skin test, leukocyte migration inhibition, bovine

**SKIN TEST DEPENDENT DYNAMICS OF THE *IN VITRO* CELL
MEDIATED IMMUNE RESPONSE TO TUBERCULIN IN POSITIVE
BOVINE**

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Summary

Cell to cell interactions are crucial in a large number of physiologic functions and similarly, cell-mediated immune responses dominate in either field cases or experimental *M. bovis* infections. The experiment aimed to investigate the effect of booster skin test on the dynamics of both non-specific and specific cell mediated responses in positive bovine.

The researches were carried out on 32 intensively farmed Romanian Spotted lactating cows. The comparative skin test was performed with bovine and avian PPD tuberculins and repeated after 45 days in positive animals. From the reactive animals, blood samples were collected after each skin test on heparine and subjected to *in vitro* carbon particle inclusion and leukocyte blast transformation tests

Tuberculin skin test positive animals showed a slightly diminished spontaneous phagocytosis, with pronounced reactivity to both tuberculins ($p < 0.05$) after the first skin test but not after the second. Intradermal injection of tuberculin sharply increased the *in vitro* response of the negative animals to both avian and bovine PPD. There were no significant differences in blast transformation indices between samplings and groups.

Key words: tuberculinic skin test, phagocytosis, blast transformation, bovine

**THE MOST COMMON PATHOGENIC CAUSES OF DISEASE IN
DAIRY BREED CATTLE AND PIGS IN FARM BREEDING**

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Summary

The evaluation of health status in calves and cows at dairy farm were performed. Diseases of respiratory and gastrointestinal tract are the most common disorders in health of calves in the first month of life. Good health of pigs is qualification for good reproduction and profitable production. Pig health can be improved in aim to achieve higher production. Disease like neonatal scour, oedema disease, esophagogastric ulcer, osteodistrophia, actinobacillosis, atrophic rhinitis, dysentery and recent time's proliferative enteritis could be competent services. Also, lot of various virus infections are very actually today at pig farm.

The recommendations for the industrial scale farms include application of measures aimed at reduction of risk associated with the effects of different pathogenic microorganisms, toxins, presence of certain physical and chemical environmental contaminants through introduction of multi-step monitoring of raw material and finished products quality, as well as application of appropriate protectors against toxic effects of different agents.

Key words: calves, cow, pig, pathogenic microorganisms

INVESTIGATION CONCERNING PROLIFERATIVE ENTHEROPATHIES IN SWINE

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Summary

Ileitis or proliferative enteropathy (PE) is a common infectious disease of worldwide distribution. It is caused by the intracellular bacteria *Lawsonia intracellularis* (1). PE is observed most commonly in the postweaned pig between 6 and 20 weeks of age.

The objective of this study was to determine the prevalence of PE in farms in the west of Romania and monitor the pattern of infection in positive herds.

In relation to the infection dynamic in the herd demonstrated an increase in the antibodies prevalence in animals from nursery to fattening and the low prevalence in the antibodies was detected in weanings pigs (35-40 days).

Key words: Porcine proliferative enteropathy, diagnosis, serological profile

**EPIDEMIOLOGICAL STUDIES ABOUT *ESCHERICHIA COLI* IN
BROILER CHICKENS**

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Summary

Infections with *E.coli* cause significant economic losses in poultry industry but at the same time, these strains are zoonotic risk.

During the researches there have been isolated and characterized 155 strains of *E. coli*.

The percentage of mortality increased with the age of broiler chickens from 13.71% in the first week of life to 62.65% over the age of 14 days old.

Key words: *E. coli*, colibacillosis, broiler chicken.

**INVESTIGATION OF DIGESTIVE DISORDER'S ETIOLOGY IN
PIGLETS FROM FARMS IN WEST OF ROMANIA**

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Summary

Diarrhea in suckling piglets is a complex problem and causes considerable economic loss to the pig production. Fecal samples and spleen collected from western part in Romania from suckling piglets with diarrhea were screened for the presence of rotavirus, *E. coli*, coccidia and *Balantidium coli* using microscopic, culture and ELISA assays. Rotavirus was the most frequently detected enteropathogen in combination with other agents or alone, followed by coccidia, *E. coli* and *Balantidium coli*. Our results show 56.4% from cases had a monofactorial etiology and 27.7% had multiple etiology in suckling piglets with diarrhea. Rotavirus was found in 21 samples (20.7%), coccidia in 19 samples (18.8%), *Balantidium coli* in 7 samples (6.9%) and *Escherichia coli* in 10 samples (9.9%).

Keywords: piglets, diarrhea, enteropathogens, *Escherichia coli*, rotavirus

**IN VITRO SUSCEPTIBILITY EVALUATION OF
STREPTOCOCCUS SPP. STRAINS**

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Summary

The susceptibility of 25 *Streptococcus spp.* strains isolated from diseased pigs to 7 antimicrobial agents was determined. For that purpose a diffusimetric method was used according to Comité de l'Antibiogramme de la Société Française de Microbiologie. The following antimicrobial agents were tested: Enrofloxacin, Florfenicol, Gentamicin, Penicillin, Linco-spectin, Oxytetracycline, Trimethoprim + Sulphamethoxazole.

Key words: *Streptococcus spp.*, antimicrobial susceptibility.

RESEARCH ON MILK AND MILK SHEEP PRODUCTS COMPLIANCE

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Summary

The purpose of this research to evaluate the compliance of sheep milk and dairy products from sheep's milk in the South East part of Romania. During 2008 and 2009 a number of 229 milk samples from sheep and 236 samples of fresh cheese, fresh and matured cheese from sheep's milk from the South East of Romania, were analyzed. The chemical composition of milk was determined using FTIR Lactoscope instrument (Delta Instruments). Microbiological methods of analysis of milk and dairy products have been listed in the current standards.

The analysis of sheep milk showed non-compliance probes in terms of fat content, protein content, amount of dry matter and density with an increase in the incidence in 2009. The microbiological analysis of sheep's milk showed a large number of non-compliant samples depending on the parameter examined. High incidence of non-compliance probes regarding chemical composition was obtained with a seasonal distribution. The microbiological analysis of sheep milk products reveals a small number of non-compliant probes for fresh and curd cheese.

Key words: sheep milk, sheep milk product, chemical and microbiological compliance

PRELIMINARY STUDIES ON COMPLIANCE OF MILK AND PRODUCTS DERIVED FROM GOAT MILK

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Summary

In this work we aimed to evaluate compliance with the standard of goat milk and milk products from goat milk in the area of Dobrogea, from the South East part of Romania.

During 2008 and 2009 were analyzed a number of 27 milk samples from goat and 30 samples of brine matured cheese from goat milk from the South East part of Romania were analyzed. The chemical composition of milk was determined using FTIR Lactoscope instrument (Delta Instruments), Microbiological methods of analysis of milk and dairy products have been listed in the current standards.

The analysis of goat milk showed non-compliance probes in terms of fat content, protein content, amount of dry matter with an increase in the incidence in 2009 and a seasonal distribution. The microbiological analysis of goat's milk showed a small number of non-compliant samples in terms of N.T.G.M.A., and coagulase-positive staphylococci and Salmonella spp.

Key words: goat milk, goat milk cheese, chemical and microbiological compliance

A SIMPLEX PCR ASSAY FOR THE IDENTIFICATION OF FISH MATERIAL IN FEED

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Summary

A simplex Polymerase Chain Reaction (PCR) assay was applied to feed analysis for the identification of fish materials. The fish specific primers were designed in different regions of mitochondrial DNA 12S rRNA. The primers generated specific fragments of 230 bp length. This method was successfully applied being highly reproducible, in our laboratory. The detection limit was settled at 0.001% fish material. By applying the PCR method it was possible to detect fish material contamination in commercial feed. The simplex PCR proposed in this study can be considered a valid alternative to the microscopic method for the detection of animal derived materials.

Key words: PCR analysis, fish, protein, feed

MATERIAL DEFICIENCY EFFECTS ON BIOFILM FORMATION ON SURFACES FROM MILK PROCESSING UNITS

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Summary

Biofilm formation on equipments in milk producing or processing units creates hygiene problems with potential health risks for consumers. During processing or cleaning of stainless steel equipments, imperceptible scratches may appear. Herein we analyzed by fluorescent and confocal microscopy the effects of a 4 μm scratch on the stainless steel surface on biofilm formation and bacterial cells viability using the LIVE/DEAD® BacLight™ Bacterial Viability Kit. One single such imperfection leads to a 766.67% increase in bacterial cell density within the biofilm and creates a microhabitat where bacterial viability is increased by 46.5%.

Key words: biofilm, stainless steel, bacteria viability

**TRANSFER OF *LISTERIA MONOCYTOGENES* BIOFILM FROM
STAINLESS STEEL TO PORK AND BEEF MEAT**

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Summary

The food borne pathogen *Listeria monocytogenes* has the ability to form biofilm and to persist for several years in food processing units, becoming a major concern for the food industry. Because surface to food transfer by contact is the most common manner in which food products become contaminated, the present study shows the potential contamination of pork and beef by simple contact between meat and a stainless steel surface. More than 70% of the biofilm can be transferred through simple contact, while the residual biofilm may carry on the contamination during several production cycles.

Key words: biofilm, beef, contamination, pork, *L. monocytogenes*

IDENTIFICATION OF METAL CONTAMINANTS IN SOME TYPES OF CANED FISH

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Summary

In order to assess the presence of heavy metal residues, while realizing also an assessment of the nutritional quality of fish by determining the composition of micro and macroelements in caned fish, were analyzed by ICP-MS samples of sardines in oil and tomato sauce canned in tins.

The results of the analysis performed, could be used to make a classification of canned sardines based on micro- and macroelements levels or degree of heavy metals contamination.

In the case of some mineral elements detected, no significant differences of mineral levels in samples of fish meat and in tomato sauce or oil in which has been conserved were observed, suggesting an easier solubilization of these mineral elements in the liquid preserving environment.

This paperwork includes the activity data related to research conducted in the laboratory for interdisciplinary study and modeling of heavy metal accumulation in the food chain – HEVMETFOOD of the Faculty of Veterinary Medicine Bucharest.

Key words: sardines, heavy metals, microelements, macroelements, ICP-MS

QUALITY PARAMETERS OF WILD BOAR MEAT (*SUS SCROFA FERUS*) HARVESTED IN NORTHEASTERN ROMANIA

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Summary

The aim of this study was to evaluate the current quality of hunted meat through physicochemical, technological and sensorial parameters (*m. longissimus dorsi* and *m. semitendinosus*), a total of 19 intact carcasses of wild boars (males and females) being investigated.

Texture profile analysis (TPA) and Warner Bratzler shear forces have described meat tenderness in correlation with thermal treatment, total fats and collagen content.

Technological parameters were higher at males than females, having a maximum percentage at *m. longissimus dorsi*, 40.25% WHC and 4.98% drip losses.

Colour affected by packaging, preserving and harvest conditions describes a meat with a lower lightness of tissue muscles from female's carcasses than males (31.58 vs. 35.42 and 33.68 vs. 34.29). To summarize the obtained results it can be concluded that, despite the specific method of harvest, wild boar meat quality variables confirm high culinary usability of game.

Key words: wild boar meat, chemical composition, meat tenderness, cooking loss, drip loss, sensory parameters

STUDY CONCERNING THE MICROBIOLOGICAL QUALITY OF HEN EGGS OBTAINED IN DIFFERENT BREEDING AND EXPLOITATION SYSTEMS

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Summary

A number of 256 samples of hen eggs obtained in different breeding and exploitation systems in southern Romania were analyzed in order to establish the microbiological quality of this type of product. The samples were first purchased from local markets, and the code according to the specific legislation was attributed in order to establish the type of breeding system in which every sample was obtained. The samples were analyzed by inoculation on plate count agar, in order to establish the total number of shell microorganisms, the total number of microorganisms found in the albumen and the total number of microorganisms found in the yolk. Also, concerning the importance in food safety, the samples were subjected to Salmonella detection, using three selective media: Mac Conkey agar, SS agar and XLD agar. On these three types of media, the yolk and the albumen were analyzed separately, to obtain their typical microbial load. The results showed in overall that 65 % from the total number of analyzed samples were contaminated with Salmonella (yolk or albumen), the microbial load being higher in organic eggs (21 % from the total number of samples) and the lowest in eggs obtained from hens raised in conventional cages. Also, the microbial load on the shell was higher in organic eggs (a medium value of 111 germs/cm²) and lower in eggs obtained from hens raised in conventional cages (a medium value of 51 germs/cm²). The total number of microorganisms in yolk and albumen presented values strictly correlated to Salmonella contamination of these parts of the eggs. The research has been financially supported through Sectorial Operational Programme for Human Resources Development (POSDRU in Romanian), in a doctoral scholarship project with the following code: POS-DRU/88/1.5/S/52614, implemented in UASVM of Bucharest from October 2009 until October 2012.

Keywords: hen eggs; Salmonella, shell microorganisms, egg safety

EVALUATION OF AFLATOXIN B1 CONTAMINATION OF SOME POULTRY AND PIG FEED

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Summary

Evaluation of aflatoxin B1 contamination of feed ingredients and mixed feed was done on 192 samples collected monthly during 2008-2009 by HPLC. The samples were represented by some feed ingredients used in poultry and pigs feed (wheat, corn, barley, soybean meal, sunflower meal, fish meal, bone meal), and mixed fodder for poultry and pig that were taken from feed-manufacturing plants.

In feed samples collected during the 24 month, aflatoxin B1 contents was found to vary from 0 to 124 ppb. A positive correlation between moisture and aflatoxin contents was found. In the studied years aflatoxin B1 levels (per month and season) were almost the same, probably because the weather conditions were not significantly different.

Among all types of feed ingredients and mixed feed analyzed the highest concentration of aflatoxin B1 was registered in maize.

Key words: aflatoxin B1, feed ingredients, poultry and pig mixed feed

**FINDINGS ON RHEOLOGICAL AND MINERAL PARAMETERS
AND HEAVY METAL CONTAMINATION OF HONEY BEES**

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Summary

For the evaluation of rheological and mineral parameters and heavy metal contamination were analyzed samples from different types of honey: multi-flower honey, locust tree honey and lime tree honey.

Honey viscosity differs greatly for all analyzed types. The rate of viscosity change with temperature may be used as a quality indicator and for inferences on honey behavior during processing and its use for food production.

The main potentially toxic heavy metals such as cadmium and lead were not found in honey samples analyzed, possibly because proper placement of hives at least 2 km of high traffic roads.

All types of honey samples analyzed contained residues of aluminum, and it represent a risk especially by its chronic effects after long repeated consumption, and its presence may be due utensils used for honey extraction and centrifugation.

This paperwork includes the activity data related to research conducted in the laboratory for interdisciplinary study and modeling of heavy metal accumulation in the food chain – HEVMETFOOD of the Faculty of Veterinary Medicine Bucharest.

Key words: honey, rheology, minerals, heavy metals contaminatin

THE MONITORING OF SOME XENOBIOTICS RESIDUES IN MILK

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Summary

Some microelements, such as copper, zinc and even nickel are important to the living organisms, but at high concentrations, they can become toxic. Other xenobiotics, as lead, cadmium and mercury are very toxic and they can appear in the organism following its exposure to polluted environment.

The presence of these chemical elements in milk is considered a significant risk for both adults and children; furthermore, some xenobiotics can affect milk's processing.

The purpose of this study was the quantitative determination of lead, cadmium, mercury, nickel, copper and zinc in milk samples collected from two milk-collecting centers and two farms around Bucharest.

The determinations were made between 2006 and 2009 on 100 samples (25 samples in each year) using atomic absorption spectrophotometry. Lead was detected in a percentage of 72% in analyzed samples, but in quantities lower than maximum admitted limit, while cadmium and mercury were not detected (they were below the method's detection limit). As for nickel, copper and zinc, these microelements were detected in all analyzed samples, in normal quantities.

Key words: milk, xenobiotics, residues

SEMI-QUANTITATIVE DETERMINATION OF ANTIBIOTICS RESIDUES IN MILK

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Summary

Nowadays, monitoring of antibiotics in milk is very important, considering the possibility that these substances can overtake organism's internal barriers and they can be eliminated through milk in risky quantities.

The purpose of this study was the semi-quantitative determination of the residues of antibiotics used in veterinary therapeutics from raw milk samples.

In this study, the confirmation of positive samples was done using semi-quantitative test based on microbial receptors; this test was applied for identification of antibiotics groups.

There were analyzed 1523 milk samples, as follows: 421 samples in 2006, 378 samples in 2007, 397 samples in 2008 and 327 samples in 2009.

Following the researches, the obtained results were: 32 positive samples in 2006 (7.60%), 24 positive samples in 2007 (6.35%), 23 positive samples in 2008 (5.79%) and 16 positive samples in 2009 (4.89%).

From these positive samples, in most cases there were detected antibiotics from only one group of antibiotics. The most detected antibiotics were those from betalactamines and tetracyclines groups, followed by macrolides and aminoglycosides groups.

In case of all detected antibiotics, the number of positive samples was lower in 2008 and 2009, being recorded a decreasing tendency of antibiotics residues presence in raw milk samples.

Key words: milk, residues, antibiotics, betalactamines

STUDY ON THE ANTI-LISTERIA ACTIVITY OF MICROFLORA ISOLATED FROM FOOD AND WATER

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Summary

The main goal of the study is to estimate the anti-Listeria activity of some bacterial species that are isolated from water and food.

Meat and meat products, egg products, vegetables, seafood and dairy products present a high risk of *Listeria spp.* contamination. *Listeria spp.* could coexist with a multitude of microorganisms (associated microflora) on different substrates and optimum growth condition (1). It is known that some bacteria could partially or totally inhibit growing and multiplication of other bacterial species in the antagonism by antibiosis process. The results are failure of isolation and identification of it.

There were cultivate five bacterial species in direct contact and simultaneous with *L. monocytogenes* on solid media. These species are *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Salmonella enteritidis*, *Enterococcus faecalis* and *Escherichia coli*.

By high and invasive power of growth and by diffusion of bacteriocin in medium, in some cases the results were demonstrate that are bacterial species that could faster and better use the nutrients for substrate. This process will inhibit partially or totally growing of *L. monocytogenes*.

Keywords: *Listeria spp*, anti-Listeria activity, antagonism

**EVALUATION OF TETRACYCLINES' AND CLORAMPHENICOL'S
RESIDUES LEVELS IN HONEY FROM TIMIS COUNTY BETWEEN
2007 AND 2010**

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Summary

The purpose of this study was to evaluate the tetracyclines' and cloramphenicol's residues levels in different types of honey samples collected from beekeepers between 2007 and 2010. There were analyzed 82 honey samples from Timis County for the detection of tetracyclines' and cloramphenicol's residues using the Elisa immunoenzymatic assays.

The results of the study pointed out that in 15 honey samples (18.29%) were detected tetracyclines residues and in three honey samples (3.65%) were detected cloramfenicol residues. The levels of tetracyclines and cloramphenicol residues in honey were under the maximum permitted level (MRL) for tetracycline and minimum residue permitted level (MRPL's) for cloramphenicol. The concentrations of tetracycline residues ranged between 16.85 and 19.81 μ g/kg and the concentrations of cloramphenicol residue between 0.063 – 0.212 μ g/kg.

No chloramphenicol's residues were detected in lime honey, sunflower honey and rape honeys, nor tetracycline's residues were detected in sunflower honey.

Key words: honey, residues, tetracyclines, cloramphenicol

**THE WATER CONTENT OF DIFFERENT TYPES OF HONEY
FROM TIMIS COUNTY DURING 2007 – 2010**

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Summary

Between 2007-2010 in the laboratory from the Sanitary Veterinary and Food Safety Directorate Timiș, 150 samples of honey were analyzed to determine the moisture content. The number of samples regarding their variety was as follows: 53 polyfloral honey, 32 acacia honey, 34 lime honey and 31 sunflower honey samples. The study emphasized that water content ranged between 14.4% and 20.3%. Mean water content of analyzed honey varieties were: polyfloral honey 17.14%±0.18; acacia honey 17.26%±0.20; lime honey 16.91%±0.17; sunflower honey 16.97%±0.17.

Key words: honey, water content

RHEOLOGICAL AND MINERAL CHARACTERISTICS OF SOME TYPES OF BREAD

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Summary

The texture profile analyses of sliced bread revealed significant differences between types of bread and during storage. Textural parameters during the first and second compression such as adhesiveness, and springiness may be used as major indicators of bread behavior during storage and consumers acceptability.

The differences between the mineral concentrations of the various bread kinds were significant. However there were no significant differences for mineral concentrations such as Cu, and Fe for the rye bread. The total Ca concentration of the rye bread varied between 0.0773% dw and 0.0108% dw and the total Fe concentration between 0.00259% dw and 0.00355% dw.

Although the nutritional value of brown bread is higher than the white bread the textural properties of the white bread makes it better accepted by consumers.

This paperwork includes the activity data related to research conducted in the laboratory for interdisciplinary study and modeling of heavy metal accumulation in the food chain – HEVMETFOOD of the Faculty of Veterinary Medicine Bucharest.

Key words: bread, texture profile, mineral elements

SUPPRESSION OF IMMUNE RESPONSE AFTER MYCOTOXINS ADMINISTRATION IN PIGS

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Summary

Mycotoxins can cause nonspecific immunosuppression phenomena suppressing or blocking both cellular and molecular events that induce immune response and those which form expression of the immune response (cellular and humoral effectors).

In this experiment we quantified the evolution of the key immunological parameters in pigs, in the context of modulation of the immune response by administration of mycotoxins in combination with an immunogenic, *Mycoplasma*. The research, conducted on two groups of 12 weeks old pigs, followed up the suppressor action exerted by fungi metabolites, expressed by severe immunological dysfunction, affecting both the specific and nonspecific immune effectors.

Key words: pigs, antibodies, lysozyme, properdin, leukogram, mycotoxins

**MIXED CHIMERISM AFTER INOCULATION OF BONE MARROW
MONONUCLEAR CELLS DOESN'T GUARANTEE SKIN
ALLOGRAFTS TOLERANCE IN COBB 500 HYBRIDS**

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Summary

The aim of the present study was to establish the techniques for induction of immunotolerance in allogeneic transplantation using mixed hematopoietic chimeras. There have been used 90 embryonated eggs (Cobb 500 hybrid embryos) which were inoculated during incubation with bone marrow mononuclear cells derived from Ross hybrids, isolated on Ficoll-Paque, and labeled with PKH2 dye. Three methods for inducing immunotolerance to allogeneic material were used: inoculation into chorioallantoic vessel, allantoic sac, and vitelline sac, at 9th, 6th respectively 5th day of incubation. After hatching, the resulting birds were tested for hematopoietic mixed chimerism, donor-recipient compatibility, and distribution of T cells subsets. Further checking was done by donors' skin transplantation on recipient poultries at the age of four weeks.

Intervention in 6th and 5th days of incubation yielded mixed chimerism (persistence of donor's leukocytes in recipients' peripheral blood), donor-recipient compatibility, and changes in lymphocyte profile (this means specific tolerance to antigenic material used in tolerance induction). Although skin allografts out-come was significantly improved compared to control groups, grafts' rejection indicate the absence of systemic immunotolerance status.

Key words: specific immunotolerance, systemic immunotolerance, mixed chimerism, allogeneic transplantation, poultry

FUNGAL AIRBORNE DYNAMICS INSIDE OF POULTRY HOUSE

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Summary

In this study the dynamics of airborne fungi from the indoor poultry house was determined using the sedimentation method. The air samples were collected during the four seasons of the year 2010, twice per month. The geometric means of fungi from the indoor poultry house varied from 5.68×10^3 to 16.78×10^3 colony forming units (CFU/ m³) along of the tested period. The highest cultivable fungi concentration was recorded in autumn month and lowest ones in the spring period. The fungi identification revealed eleven species ascribe to eight fungal genera and from which were taken in consideration only four (*Alternaria*, *Aspergillus*, *Cladosporium*, *Penicillium*) that are recognized for the implication in human air allergy and poultry disease. *Aspergillus* had a highest proportion (50.2%), followed by *Penicillium*, *Alternaria* and *Cladosporium*.

Key words: fungi, dynamics, poultry houses

**QUALITY AND SALUBRITY OF MILK SOLD TO AUTOMATIC
FRESH MILK VENDING MACHINE**

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Summary

The aim of this paper was to perform a screening of milk quality and wholesomeness of milk sold from vending machines in Timisoara (Banat County), in order to provide to the consumers and inspectors, an image of raw milk salubrity sold on this type of market. The chemical composition of milk (protein, fat, lactose solids non-fat and total solids), freezing point, number of milk somatic cells, residues of antibiotics and total number of germs were determined. The overall compliance of milk samples from two automatic milk-producing unit A showed a low percentage of compliance regarding the number of germs (25%). In a much smaller proportion were found exceeded permissible limits and the number of somatic cells (25%) and presence of inhibitors (16%). The percentage of non-compliant samples for machines supplied with milk from unit B was as follows: 38.5% for inhibitors, 92% for TNG, 70% NCS and 30% water added. The percentage of non-compliant samples collected and analyzed for milk machine C was 100 for TNG, 12.5 for the SCC and 18 for the presence of inhibitors. Significant variations of chemical composition determined the marketing of products with inconsistent nutritional value. The presence of antibiotic residues in milk sold in some automatic machines makes the products dangerous to the consumer.

Key words: raw milk, chemical composition, salubrity, vending machine