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Dear Scientist,

The seventh International Congress on Advances in Veterinary Sciences & Technics (ICAVST) was hybrid organized in Aksaray, TÜRKİYE. We are very happy for organizing this congress in such a beautiful city and country that we have strong historical ties.

We wanted to make this conference little bit special by bringing scientist together from different disciplines of veterinary area and to open new research and cooperation fields for them. In this sense, we desired to bring the distinguished scientist together to get know each other and to develop and implement new joint projects.

The scientist joined the congress was from different country and mostly from Turkey. Total over the one hundred scientists were registered in the congress. The total number of submissions were 52 and after a careful evaluation 45 submissions were accepted by our scientific committee and 9 of them were accepted as poster presentation and 36 of them were accepted as oral presentation and all those presentations was taken place in the conference booklet.

We would like to send our special thanks to the International University of Sarajevo, Universiti Teknologi Malaysia, and Prof Hesham El Enshasy, Kyrgyzstan-Turkey Manas University, and Prof İsmail Şen for their contributions. Also, we would like to express our special thanks to the organization team especially Mr. Musa Köse and Mr. İsmet Uzun, ZENITH Group workers, and the scientific committee. And finally, most importantly we thank all the participants individually to join this conference.

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Abbreviation

FVM: Faculty of Veterinary Medicine

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Program Schedule

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Invited Speakers

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INVITED SPEAKERS

THE FUTURE OF ANTI-INFECTIVES: BEYOND CONVENTIONAL ANTIBIOTICS

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Nowadays, antibiotics are widely used worldwide with many therapeutic applications. Since the initial commercial production of antibiotics in 1930s starting with successful commercialization of penicillin's (as model β -lactam antibiotic) followed by the discovery of tetracyclines group (tetracycline, oxytetracycline, and chlorotetracycline), many antibiotics have been discovered by different groups of researches worldwide. For more almost 100 years for now antibiotics saved life of many people worldwide. It was estimated that if antibiotics were not existed in treatment protocol, the number of deaths could be tripled. However, with the extensive use of antibiotics with miss-use and miss-dose problems in addition of the extensive uses of antibiotics in non-medical fields such agriculture, aquaculture, and animal feeding many problems have been created. Continuous exposure of human body to subclinical doses of antibiotics, lead to the development of new generation of microbes which are resist to many known antibiotics. In addition, extensive uses of antibiotics in human body can lead to the significant reduction of natural human microbiomes (probiotics) which play significant role in general human health. Therefore, the need of applying other natural anti-infectives which can not lead to microbial resistance over time without inhibition of nautral microbiota is needed. In this lecture, the new trends of anti-infective development will be presented, providing a futuristic view of novel antimicrobial bioactives of the future.

Keywords: Antibiotics, Anti-infective, Future

BIOPROCESSING AND BIOCATALYSIS FOR A POST COVID WORLD

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Current climate change concerns and our post COVID world continue to change the way we used to live, sometimes opening opportunities for sustainable societies by deploying better human creations. For instance, biotechnology approaches are mentioned as key option in several worldwide initiatives, including the UN Sustainable Development Goals, COP26 and more. Bioprocessing and biocatalysis are major parts of biotechnology for materials transformation. Biomass instead of petroleum, coal or controversial food feedstocks can produce cheaper, safer, faster and environmentally friendlier products and services. For instance, advanced biofuels, bioplastics, biooil, sugars, biofertilizers, proteins and foods to cite a few. In the current bioeconomy, the global biotechnology market grew 2.9% in 2022 and could be US\$2.44 Trillion in 2028. The biotechnology market contributes 2.7% to the GDP in OECD countries. By 2030, the biotechnology market could be greater in non-OECD countries; more than 50% of total world agricultural output and 35% of chemicals and related output would depend on biotechnology. Over 40 countries have a national strategy related to bioeconomy and 13 have a dedicated bioeconomy strategy. Bioprocessing and biocatalysis are key players to build up a more sustainable future offering a better quality of life to people worldwide.

Keywords: Bioprocessing, biocatalysis, COVID

ORAL PRESENTATIONS

THE INHIBITORY EFFECTS OF TYROSOL ON CLINICAL CANDIDA GLABRATA PLANKTONIC AND BIOFILM CELLS

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Biofilm formation is an important problem in the healthcare industry and veterinary medicine and is very common in natural, industrial or hospital environments. Microorganisms can become very resistant to antimicrobials and environmental factors by biofilm forming on biotic or abiotic surfaces. There is a need to develop new, effective and specific antimicrobials that can reduce pathogenicity in biofilm formation that threatens public health due to their role in medical device-related or infectious diseases. *Candida* species are opportunistic pathogenic yeasts and can cause superficial or disseminated infections. Especially *C. glabrata* is one of the most common microorganisms causing fungal infections in immunocompromised patients and drug resistance is observed when associated with biofilm. Tyrosol (2-[4-hydroxyphenyl] ethanol) can act as both a quorum sensing molecule and an exogenous agent on *Candida* species. In this study, the antifungal activity of tyrosol against a clinical *C. glabrata* isolate was investigated on both planktonic and biofilm forms. Broth microdilution test results demonstrated the inhibitory effect of tyrosol on *C. glabrata*. Transmission electron microscopic findings showed that tyrosol affected the planktonic *C. glabrata* cells in a multi targeted manner, and in the groups treated with tyrosol, significant damage was observed in the cell wall, cell membrane, cytoplasm, nucleus and mitochondria. Also, scanning electron microscopic images confirmed biofilm reduction in pre-/post-biofilm applications as a result of tyrosol treatment. In conclusion, tyrosol may be a potential alternative candidate for reducing the *C. glabrata* biofilm.

Key words: *Candida Glabrata*, Tyrosol, TEM, SEM, Mic

Support / sponsor note: "This study is supported by Eskisehir Osmangazi University Scientific Research Projects Coordination Unit FDK-2022-2228 Grant N.

THE EFFECTS OF POMEGRANATE PEEL EXTRACT, N-ACETYLCYSTEINE, AND THEIR COMBINATION WITH ORNIPURAL AGAINST CADMIUM INDUCED TOXICITY IN RATS

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Cadmium, one of the important environmental pollutants, is one of the highly toxic metals. It was hypothesized to determine the effects of pomegranate peel extract, N-acetyl cysteine alone and along with Ornipural on Cadmium-induced toxicity. Forty-six Wistar Albino male rats were divided into 6 groups and the groups were formed into healthy control, Cadmium group (5 mg/kg/day), Cadmium + Pomegranate peel extract (500 mg/kg), Cadmium + N-acetyl cysteine (100 mg/kg), Cadmium + Pomegranate peel extract (500 mg/kg) + Ornipural (1 mL/kg) and Cadmium + N-acetyl cysteine (100 mg/kg) + Ornipural (1 mL/kg). Cadmium highly accumulated in both liver and kidney tissue. While N-acetyl cysteine and Pomegranate peel extract alone administration reduced Cadmium levels in both tissues. N-acetyl cysteine treatment prevented the increase in ALT and MDA levels by Cadmium damage. Cadmium partially increased liver TNF- α levels, its level decreased in the treatment groups. N-acetyl cysteine+Ornipural treatment inhibited the increase in liver 8-OHdG level. N-acetyl cysteine and N-acetyl cysteine + Ornipural treatments prevented the reduced serum MMP2 level. N-acetyl cysteine and Pomegranate peel extract + Ornipural treatments significantly reduced the increased liver iNOS level.

In conclusion, N-acetyl cysteine and Pomegranate peel extract alone can reduce cadmium-induced damage with different mechanisms of action although Orn combinations may not be enough. In future studies, these treatment options should be tested in different doses and with chelators in cadmium toxicity.

Key words: Cadmium, Pomegranate, N-Acetylcysteine, Heavy Metal, Toxicity

Support / sponsor note: This study was supported by Scientific Activities Support Program of Selcuk University Scientific Research Project

DETERMINATION OF HEMATOLOGICAL VALUES OF CARP (CYPRINUS CARPIO) CAUGHT IN LAKE MAMASIN

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The aquaculture sector is among the fastest growing sectors in the world and in Turkey. While aquaculture in the world has decreased over the years, a continuous increase is observed in the amount of products obtained through aquaculture. According to TUIK data, aquaculture in our country increased by 1.8% in 2021 compared to the previous year. Despite the negative impact of Covid-19 on the growth of almost all sectors, the increasing continuation of aquaculture production shows its importance in terms of its contribution to our country's economy. In our study, the carp fish caught in the Mamasin lake in Aksaray province, where our university is located, were obtained from the hunters in the region. The fish were brought to the embryo transfer center under cold chain. During the blood collection procedure, the tail vein (caudalis vein) was taken into 2 ml vacuum EDTA tubes under anesthesia. Blood samples taken into tubes were analyzed in MS4S hemogram device. As a result of the analysis, the values of the blood samples are as follows; WBC (10⁹ /L) 7.836, RBC (10¹² /L) 1.62, HGB (g/dL) 9.02, Hct (%) 38.49333, MCV (fL) 240.2, MCH (pg) 56.884, MCHC (g/dL) 23,952, RDW (%) 8.05, MPV (fL) 5.98, PCT (%) 1.118, PDW 9.14. This study is important because it will pioneer different studies on carp in the region and will bring these values to the literature.

Keywords: Mamasin Lake, Carp Fish, Hematology,

EFFECT OF PARAOXANASE - 1 ON PREGNANCY IN HAIR GOATS

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Small ruminants are animals that bring unproductive pastures with poor vegetation to the economy with products such as meat, milk leaf/mohair and create employment. Although the transportation and management of Hair Goats is difficult compared to sheep, they make better use of unproductive pastures than sheep. The birth rate of Hair Goats is high, but the multiple birth rate in most cases (1%) is quite low. This study aimed to determine relationship between antioxidant paraoxonase -1, and the offspring yield in the Hair Goats. In a private enterprise, 100 head of female goats with a live weight (CA) of 45-50 kg at the age of 2-6 years and 20 heads of male goats with a live weight (CA) of 60-70 kg CA were used. In the second week of September, 100 females were randomly selected and blood samples were taken 15 days before the introduction of male goats to the herd from both males and females. Blood was taken from the same animals again before starting milking in May. Paraoxonase-1 PON - 1) values were found to be low and significant in both sexes in October compared to May. It was determined that there was a statistical difference ($p \leq 0.05$) at PON - 1 level in terms of genders and birth type. It was observed that the PON -1 level of twin-breeding hair goats was like that of male goats and single-breeders, while it was insignificant between single-breeders and non-breeders. It was found that a low value of Paraoxonase-1 was associated with low fertility whereas twin births were closely related to high value of Paraoxonase-1. Paraoxonase-1 value was found to be important for multiple births ($p \leq 0.05$). As a result, it was concluded that the PON - 1 level increased the birth rate and offspring yield in hair goats during the goat breeding season.

Keywords: Hair Goats, Paraoxanase - 1, Pregnancy, twinning, infertility

CLINICAL OUTCOME OF OVSYNCH APPLICATION IN A BITCH

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A 2-year-old, 35 kg Malaklı crossbreed dog was brought to Aksaray University Veterinary Faculty Animal Hospital with the complaint of swelling in the right 5th mammary gland. According to the anamnesis taken from the owner, it was learned that a hormone was administered to the patient to get her pregnant, and an abnormally large mass was formed in the mammary gland a few weeks later. The general condition of the patient was good. Infection findings in the blood analysis and pyometra (closed pyometra) were detected in the ultrasonographic examination. No metastases were found in the lung on thorax radiographs.

After induction of general anesthesia with Propofol, the patient was orotracheally intubated. Anesthesia was maintained with isoflurane. Median laparotomy was preferred, and it was observed that there was no uterine corpus but only uterine cornu, and this was interpreted as a congenital defect. Numerous cysts were found in the ovaries, due to the hormones applied. Mammary tumor extirpation was performed after both uterine cornu and ovaries were carefully removed during the operation. The histopathological examination revealed that the mass was adenocarcinoma. *E. coli* was detected in the microbiological analysis of both mammary gland and uterine contents.

As a result; mammary tumors are a pathological condition mostly encountered in older dogs. It has been reported that it develops as a result of genetic reasons or hormone applications to increase fertility in young bitches. It is known that ovarian hormones (Estrogen and P4) play a role in the formation of mammary tumors. Surgery is the primary choice in the treatment of mammary tumors in female dogs. Concomitant OHE with total or local mastectomy is considered a standard procedure. Thus, if ovarian steroid hormones are responsible for the development of the tumor, the related hormone is eliminated. Estrus synchronization programs used in farm animals to increase fertility in dogs have very low success rates and a high risk of CEH-pyometra complex formation.

Keywords: Ovsynch, Mammary Tumor, Bitch

EFFECT OF CARBON QUANTUM DOTS ON MALE RAT REPRODUCTIVE SYSTEM: EVIDENCE FROM TESTICULAR HISTOLOGY AND SPERMATOLOGY SCREENS

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Carbon quantum dots (CQDs), carbon-based nanomaterials having a diameter of less than 10 nm, have gained great interest recently regarding their unique bioactivities. This study was implemented to examine the effect of CQDs on testicular tissue and epididymal sperms characteristics in rats. Twenty adult male Wistar rats were categorized into four equal groups including control (0.50 mL normal saline; intra-peritoneally (IP), single dose), CQD1 (2.50 mg k⁻¹; IP, single dose), CQD2 (10 mg k⁻¹; IP, single dose) and CQD3 (40 mg k⁻¹; IP, single dose). All animals were euthanized after 35 days and testicular histo-architecture and epididymal sperms characteristics were studied. As a result, CQDs not only didn't exhibit any toxic effects on rats testicular tissue and epididymal sperms, but also at the highest studied dosage (40 mg k⁻¹) caused improvement in testicular histo-architecture as well as epididymal sperms characteristics. These findings suggest CQDs as safe and repro-protector nanoparticles in rats.

Keywords: Carbon Quantum Dots, Rat, Sperm, Testis

Support / sponsor note: This study is supported by Scientific Activities Support Program of Urmia University.

THE EFFECT OF PERIPARTURIENT PERIOD PROBLEMS AND NEGATIVE ENERGY BALANCE ON UDDER HEALTH IN COWS

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In this study, it was aimed to evaluate the effects of periparturient period problems and negative energy balance periparturient period in dairy cows on udder health at the end of the voluntary waiting period in dairy cows. The animal material of the study consisted of 44 Holstein and 59 Simmental cows. In the periparturient period, animals that experienced dystocia, retention of the placenta, uterine prolapse, metritis, ketosis, hypocalcemia, lameness were determined as the Group-I (n=48), and healthy animals without any problems were determined as the Group-II (n=55). Blood and milk samples were collected on ≤ 42 and 43-80 days in milk. Negative energy balance was determined by β -hydroxybutyric acid (BHBA) and non-esterified fatty acids (NEFA) analyzes in blood samples. In milk samples, udder health was evaluated by somatic cell count (SCC) and microbiological analysis. Mastitis was observed in 32 (30,8%) of 103 cows in the study. In the study, eleven (22,9%) of 48 animals in the Group-I, and 21 (38,1%) of 55 animals in the Group-II were detected as mastitis. Microbiological analysis results were positive in only 14 of 33 animals with mastitis. When the udder health status of 48 animals with pathology in the periparturient period was evaluated, no significant difference was found in which udder health was negatively affected. As a result, there was no significant difference in terms of adverse effects on udder health in cows with metabolic and reproductive diseases compared to healthy cows ($p > 0.05$). However, it was concluded that more comprehensive udder health evaluation studies, which would be planned specifically for each disease or by increasing the number of samples with these reproductive and metabolic diseases, would be productive.

Keywords: Cattle, Mastitis, Negative Energy Balance, Periparturient Period, Somatic Cell Count

Support/ sponsor note: This thesis work; supported by Afyon Kocatepe University Scientific Research Projects Coordination Unit (BAPK).(20.SAG.BİL.17)

RESEARCH OF EFFECTIVENESS OF HYPOCHLOROUS ACID IN CATS WITH BACTERIAL CYSTITIS

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This study, it was aimed to reveal the efficacy of hypochlorous acid in cats with bacterial cystitis. The animal material of the study consisted of 14 cats who were brought to Afyon Kocatepe University Veterinary Health Application and Research Center Internal Diseases Clinic a private veterinary clinic in Balıkesir and diagnosed with bacterial cystitis as a result of the examinations. After the diagnosis of bacterial cystitis, the cats were divided into two groups fluid therapy+enrofloxacin+vitamin C+nitrofurantoin (Group I, n=7) and fluid therapy+enrofloxacin+hypochlorous acid (Group II, n=7). Both groups were treated for 7 days. It was observed that clinical recovery was faster according to the clinical scoring table created in the cats in Group II, and bacterial growth in the urine was eliminated more quickly and effectively as a result of urine cultures. As a result, it was concluded that hypochlorous acid is effective in clinical improvement and elimination of bacteriuria in cats with bacterial cystitis.

Keywords: Cystitis, Hypochlorous Acid, Cat, Fic

Support / sponsor note: This study is supported by Afyon Kocatepe University Scientific Research Projects Coordination Unit (20.SAĞ.BİL.15)

INFLAMMATORY BOWEL DISEASE AND INTUSSUSCEPTION AFTER PARVOVIRAL ENTERITIS IN A ROTTWEILER

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A 7-month-old Rottweiler female dog was brought to Afyon Kocatepe University Animal Hospital with a history of bloody diarrhea, vomiting, loss of appetite, and weight loss that lasted for 1 month after parvoviral enteritis. Clinical examination revealed the body temperature was 38.4°C, the heart rate was 130, the respiratory rate was 28, the pallor of mucous membranes, and depression. Inflammatory bowel disease was diagnosed as a result of C-CRP measurement, esophagogastroduodenoscopy, and colonoscopic examination. Fluid-electrolyte therapy, cefazolin, dexamethasone, sucralfate, famotidine, mesalazine, maropitant treatment, and nutritional supplements were administered to the patient as therapy. After the treatment, stool consistency returned to normal, the amount of blood in the stool decreased, and the general condition of the patient improve. On the 14th day of the treatment, the patient was brought back to Afyon Kocatepe University Animal Hospital with complaints of small bloody diarrhea, abdominal pain and prolapse of the rectum due to the owner's disruption of the treatment. As a result of the examination, the patient was referred to the department of surgery with the suspicion of invagination. The patient died during the pre-op process. Inflammatory bowel disease and invagination were confirmed by necropsy. In conclusion, this case report revealed that inflammatory bowel disease may occur as a complication after parvoviral enteritis and that this complication may have an important role in the mortality of parvoviral enteritis by demonstrating its similarity with Crohn's disease in humans.

Keywords: Inflammatory Bowel Disease, Parvoviral Enteritis, Intussusception

MINERAL BOLUS USED DURING PERIPARTURIENT PERIOD IN WATER BUFFALOES METABOLIC PROFILE AND ITS EFFECTS ON THE IMMUNE SYSTEM OF BORN BUFFALO CALVES

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In the presented study, it is planned to prevent yield and animal losses in buffalo and trowel by investigating the effects of long-release mineral boluses on the metabolic profile of buffaloes used as breeding, as well as the effects of born malach on the immune system. The study was conducted on 20 healthy buffaloes (10 controls, 10 studies) who gave birth at least once and were in the periparturient period. The buffaloes in the study group were given long-term slow-release mineral boluses at the beginning of the dry period. Only blood was drawn from 10 buffaloes in the control group. Blood was drawn from water buffaloes at -60, -45, -30, -15, -7, 0 (birth), 7, 15, 30, 45, 60th days, serum BHBA, NEFA, ALT, AST, GGT, Glucose, Total Cholesterol, Triglyceride, HDL, LDL measurements were made. After the malachs are born, colostrum is drunk and blood is drawn 24 hours after birth, and Ig G levels are measured with ELISA kits. Differences were detected between groups in ALT, AST, GGT, Chol, HDL and Glu values from blood samples taken.

Keywords: Water Buffalo, Ketosis, Liver, Hepatic Lipidosis, Mineral

Support / sponsor note: This Study is Supported by Afyon Kocatepe University Scientific Research Projects Unit (16.KARİYER.133).

THE INVESTIGATION OF PREANTRAL FOLLICLE POPULATION AND THE EFFECT OF ESTROUS CYCLE ON ANTRAL FOLLICLES IN ANATOLIAN WATER BUFFALOES: MORPHOMETRIC STUDY

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This study aimed to investigate preantral follicle population and morphological changes in antral follicles during luteal and follicular phases of estrous cycle in Anatolian Water Buffaloes. The materials of this study were the ovaries of ten nonpregnant, healthy, aged between two to five years Anatolian Water Buffaloes slaughtered in different slaughterhouses in Afyonkarahisar. Ovaries were transported to the laboratory, and the estrous cycle stage was classified as luteal phase or follicular phase. The preantral follicle populations of Anatolian Water Buffaloes were varied between 3.905 and 43.136, and significant individual differences were observed between animals about preantral follicle populations. Ultrastructural characterization revealed that theca internal and granulosa cells showed different activities during luteal and follicular phases. In conclusion, it was demonstrated that there were significant individual differences in preantral follicle populations between animals and ultrastructural changes in the antral follicles during estrous cycles. The theca cells were more active than the granulosa cells in the luteal phase, and the granulosa cells were more active in the follicular phase of the estrous cycle.

Keywords: Anatolian Water Buffalo, Preantral Follicle Population, Antral Follicle, Estrous Cycle

Support / sponsor note: This study was supported by Afyon Kocatepe University BAPK (Project Number: 10.VF.06)

ANTIBIOGRAM RESULTS OF ESCHERICHIA COLI IN CALF DIARRHEA AND ESCHERICHIA COLI FACTOR IN AKSARAY PROVINCE IN THE LAST THREE MONTHS

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Enterotoxigenic Escherichia coli (ETEC) colonizing the small intestine, enterotoxin-producing, neonatal calves 0-30. It is a contagious bacterial disease that occurs between days of birth and causes neonatal diarrhea. *ETEC* is shed into the environment by infected animals and causes disease by infecting newborn calves with contaminated food or tools-equipment soon after birth. Innate immunity to *ETEC* may not be protective in calves born and raised in modern livestock conditions. For this reason, neonatal calves are vaccinated to protect them from diseases and passive immunity is provided through colostrum.

In this study, a total of 20 visceral samples were taken from calf death cases in 20 different dairy farms in Aksaray city center and its districts. *E.coli* was isolated in 12 (60%) of the samples. According to the antibiogram results of the samples, 50% of the isolates were Amoxicillin and Erythromycin, 33.3% Tetracycline, 58.3% Trimethoprine-sulfamethoxazole, 66.6% Streptomycin, 75% Flofenicol, Gentamycin and Enrofloxacin, and 83.3% Cefloxacin and Cefloxacinium. was found to be sensitive.

Keywords: Neonatal Calf, Diarrhea, *E.coli*, Antibiogram

INVESTIGATION OF VIRAL SHEDDING DURATION OF EHV-1 IN AN INFECTED HORSE

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Equine Herpes Virus 1 (EHV-1) infection is one of the most important horse diseases worldwide. Horses infected with EHV become lifelong carriers of the virus due to latent infection. EHV-1 is activated after stress and causes clinical symptoms as well as infection in healthy horses. The clinical findings contain abortion, respiratory system symptoms, and neurological findings. In particular, the abortion storm caused by EHV-1 could affect the equine industry. The EHV-1-related respiratory symptoms and abortion storm could be prevented by vaccinations. However, short-term virus shedding may occur in vaccinated animals in some cases, and this may cause infection in healthy horses. Therefore, the duration of EHV-1 shedding in infected horses is critical. Even if the horses are given supportive care after showing clinical signs, transmission can occur. In this study, it was aimed to investigate the viral shedding duration of EHV-1 in an infected horse. For this purpose, nasal swab samples were collected from a horse with clinical signs on the day of clinical symptom beginning (day 0). After the detection of EHV-1 by real-time PCR, nasal swab samples were collected on the days of the 12th, 18th, and 28th days. According to the real-time PCR analysis results, it was detected the amount of virus nucleic acid decreased gradually and did not remain on the 28th day. The result of this study will guide establishments and veterinarians to implement the required biosecurity precautions and the duration of quarantine in order to prevent the transmission of the viruses to healthy horses.

Keywords: Equine, Abortion, Equine Herpesvirus 1, Transmission

SEROLOGICAL INVESTIGATION OF AVIAN HEPATITIS E VIRUS INFECTION IN POULTRY ENTERPRISES IN AEGEAN REGION

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Avian Hepatitis E Virus causes Big Liver and Spleen Disease (Hepatitis – splenomegaly syndrome) in poultry. This infection has a serious economic impact in poultry industry as a result of a severe drop in egg production and elevated mortality rates in chickens. Although the infection has been recognized and studied in the world since the early 2000s, there is not much information about the disease. AHEV infection is occasionally encountered in the field with similar findings and samples sent for diagnosis to laboratories, there is not any substantial information about the presence and prevalence of the infection or any epizootiologic report.

This research, as far as known, is the first scientific report on the presence and prevalence of aHEV infection in poultry industry in Turkey.

In this study, 1821 serum samples from 948 broiler breeder, 490 broiler, 20 layer breeder and 363 layer, in Aydın, Manisa, Muğla, İzmir, Uşak and Denizli, were screened for the presence of anti aHEV antibodies by using a commercial BLS Enzyme Linked Immunosorbent Assay (ELISA) The Big Liver and Spleen Disease Antibody Test Kit (BioChek, Berkshire, UK).

As a result of the study, 7.80% (142/1821) seropositivity was detected in all the chicken. Seropositivity rates were found as 5.31% (26/490) in broiler chickens, 5.38% (51/948) in broiler breeders, 17.91% (65/363) in layers and 0.00% (0/20) in layer breeders. Although poultry HEV infection is reported as a disease of broiler breeder and layers in the literature; in this study, high seropositivity was detected also in broiler chickens in Aegean Region. The seroprevalence was also increased with increasing age range. The increase of seropositivity was observed along with age increase.

Keywords: Antibody, Avian Hepatitis E Virus, Chicken, ELISA, Seropositivity

SEROLOGICAL INVESTIGATION OF SCHMALLEMBERG VIRUS INFECTION IN AYDIN, DENIZLI, MANISA PROVINCES

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Schmallenberg virus (SBV), transmitted through stinging flies and first identified in Europe in 2011, infects cattle, sheep and goats. Clinical symptoms of the infection include reduced milk yield, abortion, mummified fetus, preterm birth, stillbirth and congenital anomalies, leading to an epidemic disease and consequently causing economic losses. There are no scientific data on the presence and/or prevalence of the infection in our region. The aim of this study was to investigate the presence and prevalence of SBV infection in Aydın, Manisa, and Denizli provinces. Blood serum samples were obtained from 464 goats, sheep, and cattle housed in breeding farms in Aydın, Denizli, and Manisa provinces. Samples were tested for the presence of antibodies against SBV with a commercial indirect Enzyme Linked Immunosorbent Assay (ELISA). Overall, SBV-specific antibodies were found in 25.86% (120/464) of all animals. Seropositivity rates in all animals were 42.86% (66/154) in Aydın, 22.73% (35/154) in Denizli and 12.18% (19/156) in Manisa. Seropositivity was 27.85% (44/158) in goats, 21.15% (33/156) in sheep and 28.67% (43/150) in cattle. Effects of geographical location, age, and breed, but not species and gender, on seropositivity rates were statistically significant. In the study, it was concluded that SBV infection is common in the Western Aegean Region and may cause economic losses. The results of the study draw attention to the necessity of developing and taking precautions in combating, protection, and control against the SBV infection.

Keywords: Antibody, Elisa, Ruminant, Schmallenberg Virus, Seropositivity

Support / sponsor note: This study is supported by Scientific Research Projects Unit of Adnan Menderes University

THE EVALUATION OF THE EFFECT OF HYPOCHLOROUS ACID, 0.1% RIVANOL AND IODINE SOLUTIONS AT THE RAT MODEL .

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In this study, 64 Whistar rats were used. Rats were divided into 4 groups with 16 subjects in each group. Subjects in group I hypochlorous acid, Subjects in group II is povidone iodine, subjects in group III. subjects in group rivanol and IV. group was determined as the control group.

3rd day: It was observed that fibrosis proliferation and neovascularization did not form at all in the group I, and mild hyperplasia with epithelialization. Severe inflammation was observed in the group II. In the group III, on the other hand, fibrosis proliferation and neovascularization were not formed. There was no significant difference between the group IV and the others.

5th day: Group I showed a significant similarity with the groups II and III for fibrosis proliferation, epithelialization and neovascularization formation. Group II, inflammation and edema were found to regress, and fibrous proliferation observed. It was observed that edema was severe in the group III and IV.

7th day: It was observed that edema and inflammation in the group I were severe. It was noted that edema and inflammation in the group II were similar to the rats which groups in the 5th day. It was thought that there was a positive development in terms of recovery in the acute phase in the group III. It was evaluated that the process progressed in the direction of improvement in the group IV.

On the 10th day, although edematous changes were severe in the group I, it was observed that the inflammatory changes regressed. Group II, the inflammation and edema regressed, and it was found to be severe to moderate. Group III It is similar to the animals in the other groups, with edematous changes in the group and noticeable regression in inflammation. Findings in the group IV were positive for improvement.

Keywords: Hypochlorous Acid, Povidone Iode, Rivanol, Control,Rats, Inflammation, Fibrosis, Edema, Wound

RESEARCH ON FREE-LIVING POTENTIALLY PATHOGENIC AMOEBAE THAT CAN INFECT HUMANS AND ANIMALS AND THEIR PREVALENCE IN THE WORLD

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Acanthamoeba, Naegleria, Balamuthia mandrillaris and Sappinia spp. are free-living Amoeba, but also aerobic, eukaryotic and protist species. Free-Living Potentially Pathogenic Amoebae (FLPPA) can cause potentially opportunistic infections in humans and animals worldwide. They can be found in soil, dust, air, sea water, drinking water, swimming pools, sewage, eye wash solutions, contact lenses, dental treatment units and dialysis units. Because these amoeba are capable of existing in nature as free-living organisms and only occasionally invade a host and live as parasites within the host tissue, they are also called amoebae. The FLA taxonomy has been revised several times based on recent data from genomic sequencing studies by zoologists and morphological, biochemical and molecular approaches. So far, all four amoeba species are known to cause central nervous system (CNS) infections. Various species of Acanthamoeba (*A. castellanii*, *A. culbertsoni*, *A. hatchetti*, *A. polyphaga*, *A. rhyodes*), the only known Balamuthia species, *B. mandrillaris*, two species of Sappinia, *S. diploidea* and *S. pedata*, and only one Naegleria species, *N. fowleri*, known to cause disease in humans and other animals. Sappinia sp. agents have not been reported to be fatal in humans and animals. One survivor of an immunocompetent young person with encephalitis has been reported. Under dry conditions, the trophozoites can become resistant cysts that allow survival as well as dispersal in the air, and the cysts may also be resistant to chlorination. Most of the species are thermophilic, and may cause the etiology of symptoms such as fever, allergic alveolitis, shortness of breath, and cough. Some bacteria, such as Legionella and Parachlamydia, can be resistant to Acanthamoebae lysosomal enzymes and can live symbiotically in these amoebae permanently in the phagosome.

In this paper, information about potential opportunistic infections of Free-Living Potential Pathogenic Amoeba (SYPPA) in humans and animals, including studies and reports available within the scope of research, and visual presentations about the prevalence of infection in the world will be given.

Keywords:Free-Living Potentially Pathogenic Amoeba, Acanthamoeba Spp., Naegleria Fowleri, Balamuthia Mandrillaris

ASSESSMENT OF SYSTEMIC INFLAMMATORY AND OXIDATIVE STRESS MARKERS IN NATURALLY OVERWEIGHT CATS

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Being naturally overweight in cats, is one of the growing problems as it can cause a variety of health problems. In this study, it was aimed to evaluate the parameters related to systemic inflammation, oxidative stress and liver in naturally overweight cats. In the study, a total of 20 cats, including 10 naturally overweight (BCS=7) cats and 10 cats that were evaluated as having the ideal BCS score (BCS=4-5) considering breed characteristics and age, were used. Systematic clinical examinations of the cats were performed, and blood samples were drawn from the cephalic vein into tubes without anticoagulant. C reactive protein (CRP), total protein, albumin, alanine aminotransferase (ALT), aspartate aminotransferase (AST), triglyceride, cholesterol, high density lipoprotein (HDL), total antioxidant, total oxidant and paraoxanase-1/arylesterase (PON-1) and MDA levels were determined in these blood samples. In comparison with the values found in cats with the ideal BCS score, AST ($p=0.02$), CRP ($p<0.001$) and MDA ($p=0.024$) values measured in naturally overweight cats were statistically significantly higher, but triglyceride ($p<0.001$) and PON-1 ($p<0.001$) values were found to be statistically significantly lower. It was concluded that the level of AST, which is one of the enzymes related to the liver, and the levels of CRP, MDA and PON-1, which are the parameters of systemic inflammation and oxidative stress. These are very valuable parameters for the evaluation of metabolic and physiopathological changes in naturally overweight cats.

Keywords: Naturally Overweight Cats, Systemic Inflammation, Oxidative Stress, Liver-Related Parameters

Support/ sponsor note: This study supported by TUBITAK 2209 Scientific Activities Support Program. (Project no: 1919B012107505)

NATIONAL ANATOLIAN BUFFALO BREEDING PROJECT IMPLEMENTED IN TURKEY; KÜTAHYA SUBPROJECT

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It has become one of the essential livestock sectors in Turkey in recent years due to the valuable products obtained from Anatolian buffalo meat and especially from its milk. As of 2021, there are approximately 185 thousand Anatolian buffaloes in Turkey. With this number, Turkey ranks second in Europe after Italy. The province of Kütahya, where is National Anatolian Buffalo Breeding Project is implemented, is located in the Inner West Anatolian Section of the Aegean Region. The project was initiated in 2012 by the Ministry of Agriculture and Forestry (TOB), General Directorate of Agricultural Research and Policies, in order to increase the number of buffaloes in the region and the incomes of the breeders, and to produce breeding buffalo bulls.

The project implemented in Kütahya province is carried out in 3 districts (Altıntaş, Tavşanlı, Merkez) and 25 villages. There are 174 breeders and approximately 949 Anatolian buffaloes in the project. Production systems are generally family-type enterprises and the number of buffaloes per enterprise is approximately 5 heads. The buffaloes in the project are supported by TOB every year. The technical staff working on the project goes to the enterprises and keeps the productivity records of the buffaloes. For growth characteristics, live weights of buffalo calves at birth, 6 and 12 months are taken. In order to increase milk yield, milk yield measurements are taken for at least 5 control days, once a month during a lactation period. All received data are recorded in the database named 'Manda Yıldızı' developed for the project. The project leader makes use of this database in the selection and selection of breeders in herds. The aim of this study is to introduce the practices for the breeding project applied in breeder conditions in Kütahya province and to share information with Anatolian buffalo breeders.

Keywords: Anatolian Buffalo, Breeding Project, Kütahya, Turkey

Support / sponsor note: This project is financed by the Ministry of Agriculture and Forestry, General Directorate of Agricultural Research.

THE PROTECTIVE EFFECTS OF ORAL *L. PLANTARUM* ADMINISTRATION ON SERUM AND TISSUE ANTI-MULLERIAN (AMH) HORMONE LEVELS IN FEMALE RATS EXPOSED TO CHRONIC CADMIUM (CD) TOXICITY

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The aim of the present study was to investigate the effects of oral *Lactobacillus plantarum* (*L. Plantarum*) administration on serum and tissue Anti-Mullerian (AMH) hormone levels in female rats exposed to chronic cadmium (Cd) toxicity. For this reason, rats (n=32) were randomly divided into 4 equal groups as control (C), cadmium (Cd), *L. Plantarum* (Lp), and Cd+Lp after the adaptation period (2 weeks). All animals were kept in individual cages throughout the trials. In the Cd group, a dose of 2.04 mg/ml cadmium chloride (CdCl₂) was administered orally (dissolved in water) to animals for 28 days. Besides, an active-live *L. plantarum* (in skim milk powder medium at 10⁹ cfu /ml) was given orally to rats for 28 days. In the Cd + Lp group, both applications mentioned above were applied together in the same way and time. No application was performed to rats in the C group except fresh water and standart pellets. At the end of the twenty-eight-days trial period, the rats were euthanized and blood (serum) / tissue (uterus) samples were collected for the analysis. Although serum AMH levels were dedected the lowest in Cd group, it was not found any statistical changes among the experimental groups according to serum AMH levels (p>0,05). Tissue AMH levels was determined the highest in the Lp group compared to other experimental groups (p<0,05). Besides, tissue AMH levels were higher in Cd+Lp group when compared to Cd group (p<0,05). In conclusion, oral Lp administration exhibits potential protective effects on tissue (uterus) AMH levels in rats exposed to Cd.

Keywords: Cadmium, Anti-Mullerian Hormone, Rat, Serum, Uterus

Support / sponsor note: This study founded by TAGEM, Project No: TAGEM/HSGYAD/B/20/A3/P1/2085

IDENTIFICATION OF OVINE ADENOVIRUSES IN LUNG SAMPLES FROM SMALL RUMINANTS

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Adenoviruses (AdVs) are non-enveloped viruses with icosahedral capsid containing a linear dsDNA genome. They have been detected in a wide variety of animals. So far, eight types of AdVs from sheep and two types of AdVs from goats have been described, belonging to two distinct genus Mastadenovirus and Atadenovirus. Usually, pneumo-enteritis is a term used to describe adenovirus-induced disease in small ruminants, which has been associated with both enteric and respiratory symptoms of varying severity. The aim of this study was to detect and identify AdVs in the Mastadenovirus genus of small ruminants. For this purpose a total of 47 lung samples from small ruminants were used in this study. Following the viral DNA extraction, PCR was carried out by using the primers targeting hexon gene in order to detect mastadenoviruses. Four of the samples produced the expected size amplicons of the hexon gene fragment. Following the sequencing of the amplified fragments, the data revealed the presence of two types of OAdV, OAdV-3 and OAdV-4. Specifically, OAdV-3 was detected in two sheep and a goat while OAdV-4 was found in only a sheep. There is still limited data on the genetic diversity of adenovirus, especially in small ruminants. In our country, previous reports showed that OAdV-3 and OAdV-5 had been isolated and also seroprevalence studies revealed a high seroprevalence to a number of different AdV serotypes in both sheep and goats. However, no molecular characterization data of these viruses has been reported yet. In conclusion, the detection of AdVs in lung tissues of small ruminants in this study suggests that these viruses may have contributed to the disease and/or predisposed to other respiratory agents. This study revealing the molecular identification of two different OAdV types in sheep and a goat provides valuable data understanding of the prevalence and genetic evolution of OAdVs.

Keywords: Mastadenovirus, Ovine Adenovirus, PCR, Sheep, Goat

BOVINE ABORTION ASSOCIATED WITH LEPTOSPIRA SPP

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Leptospirosis is recognized as a common global zoonotic disease of both human and all livestock species. Meanwhile, it causes economic losses in ruminants by leading to abortion and a decrease in milk production. This study aimed to investigate the molecular prevalences of the *Leptospira* spp in abortive cattle cases using the bacterium-specific PCR method. For this purpose, 206 abortive materials were analyzed which were encountered in all three geographic areas of Turkey (need to specify these regions). The samples include 112 vaginal swabs of aborted cattle and 94 stomach contents of aborted calves. As the result, 8 (3.8 %) of the stomach contents and 26 (12.6 %) of the vaginal swabs samples were found to be positive for *Leptospira* spp. According to the results, we obtained with this study, it was observed that abortions caused by leptospirosis in cattle were not negligible. As a consequence, it was recommended that leptospirosis should be included in the differential diagnosis of cattle abortions as well as other abortive bacterial agents.

Keywords: Cattle, Leptospirosis, Pcr

A CASE OF CHRONIC CONSTIPATION RELATED TO NUTRITIONAL SECONDARY HYPERPARATHYROIDISM IN A CAT

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Nutritional secondary hyperparathyroidism (NSHPT) is a metabolic disease. This study aimed to report clinical findings, especially constipation, and serum biochemical changes related to NSHPT in a cat. The Material of the study consist of a 5-month-old female domestic British shorthair cat which had been eating beef and liver for a long time, and included chronic constipation, abdominal pain, severe tenesmus, growth retardation, and lameness. On the physical examination growth retardation, abdominal pain, abdominal tension and irritated anal area detected. An enlarged colon was detected on radiographic examination. It was determineted that there was an increase in ALP, P and PTH values, and a decrease in the Ca:P ratio compared to the reference value. The typical clinical signs of NSHPT in kittens include anorexia, weight loss, depression, hyperesthesia, constipation, joint pain and lameness. Researchers report various clinical and radiographical findings related to NSHPT. In the present study chronic constipation, abdominal pain, severe tenesmus, growth retardation, lameness, abdominal tension, irritated anal area and enlarged colon was detected. The clinical and radiological findings reported in this study were consistent with what the researchers have reported. It is thought that constipation is caused by hypocalcemia and hyperphosphatemia leading to intestinal motility. Common laboratory findings associated with NSHPT are increased serum PTH, P, ALP and decreased Ca:P ratio. In the present study, it was detected that there was an increase in ALP, P and PTH values, and a decrease in the Ca:P ratio compared to the reference value. In conclusion, this case demonstrates that NSHPT can leads to constipations in cats and, if enlarged or megacolon present, prognosis is poor.

Keywords: Cat, Constipation, Hyperparathyroidism, Nutritional

EFFECT OF WHOLE SAFFLOWER SUPPLEMENTATION ON CONCEPTION RATE OF HUNGARIAN-MERINO EWES DURING SHORT-TERM MEDROXYPROGESTERONE ACETATE ADMINISTRATION

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The present study was aimed to investigate effect of safflower seed which is rich of linoleic acid, supplementation on conception rate in Hungarian Merino ewes during the nonbreeding season. In the study, 44 adult Hungarian Merino ewes were allotted into two homogenous treatment groups with respect to their live weight and parity. Ewes were treated with vaginal sponge containing progestagens (60 mg medroxyprogesterone acetate, Esponjavet®, Hipra, Spain) for 7 days during the season (April) (day 0). PMSG 500 IU (Oviser®, Hipra) was injected intramuscularly on the day of removal of the sponge (day 7). Ewes in oestrus were mated with a proven fertile Merino rams (ewe:ram ratio of 5:1). Ewes in control group (n = 22) were not given any oilseeds. Ewes in safflower group (n =22) were fed with daily 75 g /ewe whole safflower seeds in addition to the standard ration during the 7-day sponge period. In all ewes, transabdominal ultrasound examination (Hitachi EUB-405, 3.5 MHz convex probe) was performed to diagnose pregnancy on day 50 post mating. The results obtained in the experiment showed that oestrus rates were same (90.9%, 20/22) within both of group. However, conception rates were 70% (14/20) in control group and 50% (10/20) in safflower group. These results revealed no significant differences between the groups (P>0.05). In conclusion, during the non-breeding season, whole safflower seeds decreased conception rate of Merino ewes. However, this decrease was not found statistical importance. Conducting the present study in herds with more animals would clarify the effect of linoleic acid on reproduction.

Key words Safflower, Ewe, Medroxyprogesterone Acetate, Conception Rate, Linoleic Acid

Support / sponsor note: This research received no grant from any funding agency/sector.

EFFECT OF WHOLE OIL SEEDS SUPPLEMENTATION ON COLOSTRUM IMMUNOGLOBULIN G AND SERUM TOTAL PROTEIN AND ALBUMIN CONCENTRATIONS IN DOES

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In the present study, the effect of supplemented whole oilseeds (safflower, linseed, sesame) in diet, starting 3 weeks before kidding, on colostrum IgG and serum total protein and albumin levels was investigated. A total of 42 German Fawn x Hair cross (75% German Fawn and 25% Hair) goats in the second lactation were used in the study. At the beginning of the experiment, the goats were divided into 4 groups with similar body weight and body condition scores, which were the control group (n=10), safflower group (n=10), linseed group (n=11) and sesame group (n=11). Oilseed groups received 100 g oilseeds (safflower, linseed, sesame) in addition to the control group ration until kidding. In order to determine the colostrum IgG level, colostrum samples were taken into 50 ml tubes immediately after birth, and the Brix value was determined with a refractometer. In addition, blood samples were taken from all does and total protein and albumin levels were determined. Total protein and albumin concentrations of the groups were similar ($P > 0.05$ for both parameters). Oilseed supplementation increased the colostrum IgG level ($P=0.049$) and the highest IgG concentration (68.8 g/L) was found in the linseed group. This group was followed by sesame (63.4 mg/L), control (62.7 g/L) and safflower (62.4 g/L), respectively. In conclusion, linseed supplementation during the prepartum period increases colostrum IgG concentration, but does not affect serum total protein and albumin levels.

Keywords: Safflower, Linseed, Sesame, Igg, Goat

Support / sponsor note: This research supported by Çukurova University Scientific Research Coordination, Adana, Turkey (Project Number 2020-12685)

RISK AREAS AND SEASONAL DISTRIBUTION OF PESTE DES PETITS RUMINANTS (PPR) DISEASE

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Peste des petits ruminants (PPR) is a viral disease affecting small ruminants and causes significant agricultural damage. The World Organization for Animal Health (OIE) has classified PPR as an animal disease that must be reported immediately. In this study was aimed to understand of spatial and seasonal epidemiology of PPR in Türkiye and provide information by using Geographical Information Systems (GIS). Descriptive and analytical statistics were used in the study, logistic regression analysis was applied to assess the effect of season and species factors on PPR outbreaks occurring in Türkiye. Data were obtained from the World Animal Health Information System (WAHIS) database of OIE. Between 2017-2019, 337 outbreaks, 18467 cases and 11526 deaths were reported 57 provinces of Türkiye and the highest number of PPR outbreaks, cases and deaths were reported in The Central Anatolia Region. On time-wise examination, the PPR risk-areas revealed changes with different levels of endemicity. The Central Anatolia Region were the top outbreaks reported region during 2017-2018, whereas The Marmara Region reported more outbreaks during 2019. PPR outbreaks occurred throughout the year in all seasons, but were most frequently encountered during the winter season (December to February) and the results showed that seasonal and species factors are important in the spread of the disease. PPR has widely distributed throughout the country, and the epidemiological picture suggests that the disease has become an endemic infection in the country. The spatial and seasonal distribution of PPR in Türkiye gives useful information on hotspot areas, allowing managers to make informed decisions about prevention and control in different parts of the country. In accordance with the PPR Global Control and Eradication Strategy, the study also outlines when and where extensive surveillance, vaccination, and biosecurity measures are required for the control and eradication of the disease in Türkiye.

Keywords: Epidemiology, Peste Des Petits Ruminants (PPR), Risk, Spatial Analysis, Türkiye.

REASONS FOR THE INADEQUACY IN THE FIGHT AGAINST BOVINE TUBERCULOSIS IN TÜRKİYE

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A national epidemiological research project was carried out to define the dynamics affecting the epidemiology of bovine tuberculosis (bTB) infection in Türkiye. Official Veterinarian (OV) and breeder original questionnaires were produced separately as part of this study to collect thorough data regarding the disease from the field. The number of questionnaires that needed to be filled out was decided by 95% confidence interval and 5% margin of error. 371 OVs from 72 provinces across Türkiye and 317 breeders from a total of 61 provinces, 59 from designated provinces and 2 from other provinces answered the questionnaires. 74.1% of OVs stated that they didn't find the program implemented by Ministry of Agriculture and Forestry (MoAF) in the fight against bTB disease insufficient or partially sufficient. When we asked what OVs thought about the reasons for this situation, they were in the first three ranks of the graph; Inability to fully control animal movements(181), failure to implement a long-term and effective program as a state policy to fight the disease(165) and not to apply disease tests while implementing social projects(135). 46.3% of breeders stated that they didn't find the program implemented by MoAF in the fight against bTB disease insufficient or partially sufficient. When we asked what breeders thought about the reasons for this situation, they were in the first three rows of the graph; breeders' not to timely report suspected bTB cases in their premises(76), the program applied to fight the disease isn't effective(70) and failure to detect all diseased animals with the applied test(69). It has been determined that the main reasons for the inadequacy in the fight against bTB are the inability to control animal movements, the lack of state policy, the lack of timely reporting of suspicious cases and the inadequacy of diagnostic tests.

Keywords: Bovine Tuberculosis, Epidemiology, Fight Disease, Mycobacterium Bovis, Questionnaire

Support / sponsor note: This study founded by TAGEM, Project No:
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DETERMINATION OF D-DIMER AND FIBRINOGEN RATIO IN DOGS COINFECTED WITH MONOCYCTIC EHRLICHIOSIS AND VISCERAL LEISHMANIASIS

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In cases hemostatic dysfunction which originated from coagulopathy, mortality may be significantly elevated. Visceral Leishmaniasis (VL) and Monocytic Ehrlichiosis (ME) are caused similar coagulopathy disorders in dogs. Renal and/or hepatic damage or autoimmune platelet disorders are caused vasculitis that trigger to thrombocytopenia and thrombocytopathy. D-dimer is a biomarker that product of fibrin degradation with low sensitivity. Fibrinogen is an acute phase reactant which has been influenced from haemodynamic disorders, infections and neoplastic masses. On account of this, D-dimer/Fibrinogen ratio (DFO) is more spesific than D-dimer in case of coagulopathy. In literature research carried out by us, there is no research on DFO value in dogs coinfectd with VL and ME. In this research, its aimed to detection of DFO value in dogs coinfectd with VL and ME. Within the scope of the study, dogs are included (n=10) which clinical sings compatible with VL and ME such as epistaxis, lymphadenopathy and loss of appetite and determined VL and ME via rapid tests (SNAP 4Dx+, SNAP Leish). Dogs are included (n=10) which brought to routine check and/or vaccine application and applicated same clinical and laboratory procedure with coifected group for determination of healthful. In the results of resarch, DFO value of the coinfectd group (7.33±1.24) was found to be statistically significantly higher (p<0.003) when compared to the healthy control group (4.18±0.369). Hence, DFO value may be considered as diagnosis of coagulopathy diseases in dogs such as coinfectd with VL and ME. Additionally, it was concluded that longitudinal studies are needed for prognostic value of DFO in dogs coinfectd with VL an ME.

Keywords: Coagulation, Coinfectd, D-Dimer, Ehrlichiosis, Fibrinogen, Leishmaniasis, Ratio

IMMUNOLOCALIZATION OF DESMIN AND VIMENTIN FILAMENTS IN THE HEART OF BOVINES DURING PREGNANCY

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Intermediate filaments, a sub-member of cytoskeletal proteins are the main proteins of the nucleus and cytoplasm that provide cellular organization and cytoplasmic integrity. These proteins are; It has critical roles in the regulation of many cellular activities, especially cell movements, by taking part in providing intracellular signals and bringing microtubules together. The desmin and vimentin proteins involved in the intermediate filament classification are also one of the main components involved in these cellular events, ensuring the alignment and contraction of myofibrils. In addition to these, it is known that vimentin and desmin have many effects on heart and skeletal muscles during early development. Based on this information, our study; The aim of this study was to immunohistochemically reveal the distributions of vimentin and desmin in bovine fetal heart during pregnancy and to determine their roles in possible physiological processes. In the study, 27 clinically healthy fetuses belonging to the first, second and third periods of pregnancy were used. Heart tissue samples taken from each period were detected in 10% formol-alcohol solution for 18 hours, and then subjected to routine histological procedures and immunohistochemistry technique. As a result of staining, it was determined that desmin caused an intense cytoplasmic immunoreactivity in heart muscle cells and Purkinje cells at every stage of pregnancy, and the intensity of this immunoreactivity in cardiac muscle cells has decreased slightly in the last period. On the other hand, it was observed that vimentin caused a strong immune reaction in the nuclei of some heart muscle cells, endothelium and vessel walls in every period of pregnancy, but it was negative in Purkinje cells. As a result; the heart, which plays a key role in the maintenance of life in all living things; It was determined that desmin and vimentin may have critical roles in the development, growth and continuation of the functions of the heart during pregnancy in bovine. It was also thought that desmin might have a greater effect on these processes in bovine.

Keywords: Bovine, Desmin, Vimentin, Fetal Heart, Immunohistochemistry

EVALUATION OF ¹H NMR SPECTROSCOPY OF CEREBROSPINAL FLUID IN DOGS WITH TICK PARALYSIS

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Introduction: The damage caused by ticks, both directly and indirectly, causes important diseases in both human and veterinary practice. The most important toxic phenomenon among indirect damages is tick paralysis, which is characterized by sudden onset of lower motor neuron weakness and respiratory failure. In terms of pathophysiology, tick paralysis is similar to other acute flaccid paralysis such as Guillain-Barre syndrome, Myasthenia gravis, botulism and lyme borreliosis.

Hypothesis: Although the presence of ticks in the patient's body in typical cases facilitates the diagnosis, atypical cases in which the tick cannot be detected are difficult due to the lack of a specific test for tick paralysis. Therefore, nuclear magnetic resonance (NMR) evaluation of cerebrospinal fluid (CSF) samples from dogs with tick paralysis may reveal new potential diagnostic markers and help forming a differential diagnosis list.

Material and Methods: CSF samples were obtained from 2 dogs of similar size and weight with typical tick paralysis (presence of engorged ticks, regurgitation, respiratory distress and quadriplegia) with the appropriate method. The samples were prepared for NMR evaluation (Samples frozen at -80 °C were thawed on ice at 4 °C, 100 µL sample was taken, extracted in 650 µL (DMSO) extraction solvent, vortexed, centrifuged at 13,200 rpm for 5 minutes at 4 °C. After mixing with 100 µL of NMR buffer stock solution containing 550 mM sodium phosphate buffer, 100 mM sodium phosphate buffer (pH 7.0), 2 mM trimethylsilyl-propionic acid (TSP) and 10% D₂O were added) and measured on a 400 MHz ¹H NMR device and profiled with Bruker topspin 3.1 (Bruker GmbH, Germany).

Results: As a result of the ¹H NMR spectroscopy, differences were detected in the expressions of glutamine, pyruvate, glucose, valine-isoleucine-leucine in the CSF samples of dogs with typical tick paralysis.

Conclusion: Evaluation of metabolomics detected by NMR spectroscopy of CSF samples taken from dogs with tick paralysis may facilitate the diagnosis of acute flaccid paralysis cases that are difficult to distinguish clinically, and may help to establish new treatment protocols by correcting impaired metabolite and pathway expressions.

Keywords: Tick, Flaccid Paralysis, NMR, Metabolomics, Dog

Support / sponsor note: This study is supported by Scientific Research Projects Department of Harran University

EVALUATION OF THE EFFICACY OF SOME BLOOD AND ECHOCARDIOGRAPHIC PARAMETERS IN CASES OF VISCERAL LEISHMANIASIS

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Introduction: Visceral Leishmaniasis (VL) is a vector-borne zoonotic disease caused by *Leishmania infantum* in Türkiye. There is no curative or effective treatment for *Leishmania infantum*, which is transmitted to dogs by Phlebotom flies, and the disease course is progressive. Death is usually due to multiple organ dysfunction syndrome (MODS) and disseminated intravascular coagulopathy (DIC).

Hypothesis: Clinical staging protocols have been developed to facilitate the initiation of an appropriate therapy and monitoring the prognosis in dogs with VL. Stage 1 is clinically characterized by mild papular dermatitis, localized lymphadenopathy, and laboratory evidence of creatinine <1.4 mg/dL, urine protein/creatinine ratio <0.5 and negative or low positive antibody titer. However, in Stage 1, which does not have sufficient clinical findings to suspect VL, the investigation of some vasculitis-related parameters together with the routine hematological parameters may be helpful in demonstrating the presence of pathological changes.

Material and Method: A total of 7 dogs with Stage 1 of VL whose lymph node aspirate examination was negative for the causative agent, had alopecia and lymphadenopathy as clinical findings; creatinine <1.4 mg/dL and urine protein/creatinine ratio <0.5 as laboratory findings consisted the Leishmania Group. 7 healthy dogs with similar age ($p < 0.811$) and body weight ($p < 0.240$) to the diseased dogs consisted the Control Group. Venous blood samples were taken from all dogs and echocardiographic examinations were performed using a 7.5 MHz sector probe from the right parasternal region with short axis M mode. APTT, PT, fibrinogen, NT-ProBNP, D-Dimer, cTnI, EF, FS, WBC, lymphocyte, monocyte, granulocyte, RBC, Hb, Hct, MCV, MCH, MCHC, RDW, Plt parameters were evaluated.

Results: Compared to the Control Group, the Leishmania Group had higher levels of APTT, fibrinogen, NT-ProBNP, granulocyte, MCHC, RDW, Plt ($p < 0.032$) and lower lymphocyte, RBC and Hct levels ($p < 0.038$). ROC analysis revealed that the diagnostic performances of lymphocytes, RBC and Hct were insufficient (AUC < 0.204).

Conclusion: Based on the evaluated parameters, it was concluded that pathological changes may occur in dogs with Stage 1 of VL with clinical findings that cannot clinically differentiate VL and by evaluating the present parameters, appropriate treatment protocols can be initiated in the early period.

Keywords: Leishmaniasis, Dog, Coagulation, Hemogram, Diagnosis

THE EFFECT OF DISTANCE OF PRE-SLAUGHTER TRANSPORT ON THE TEXTURE AND COOKING LOSSES OF CHICKEN FILLETS

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When evaluating meat quality, texture characteristics and cooking losses are two significant parameters. One of the most important factors affecting these parameters is stress. Unusual factors (heat, vibration, noise, transport distance, etc.) that occur during transportation from poultry houses to slaughterhouses cause stress to animals and negatively affect meat quality.

The purpose of this study is to examine some textural characteristics and cooking loss values in broilers (Ross 308; 42 days old) from various distances transported to the slaughterhouse.

In the study, analyses were started in breast meat 24 hours after slaughter from animals brought from poultry houses located at a long distance (4 hours 20 minutes) and a close distance (1 hour 35 minutes). The samples (chosen at random) were moved to the lab under cold chain conditions. During the analysis, the samples were kept at a temperature of +4 °C. On the 1st, 3rd and 6th days after slaughter, some texture profile analyses (Hardness, Adhesiveness, Springiness, Chewiness) and cooking losses were determined on the left pectoralis major (PM) in each group (n = 12). At a confidence level of 0.05, Repeated Measure ANOVA analysis was employed to compare means. At the end of the study, it was determined that while the cooking loss value increased over time ($P < 0.05$), the hardness, adhesiveness, and springiness values decreased ($P < 0.05$). The distance to the slaughterhouse did not differ between the groups in cooking loss and springiness values. It was determined that the hardness value ($P < 0.05$) in long-distance meat samples and the adhesiveness value in close-distance meat samples were higher ($P < 0.05$). It was determined that the chewiness value decreased over time in close-distance meat samples ($P < 0.05$).

This study may contribute to the information about texture studies and cooking loss, which are important in consumer preference.

Keywords: Broiler, Cooking Loss, Meat, Texture Analysis

Oral Presentation

EVALUATION OF P WAVE DISPERSION IN DOGS COINFECTED WITH VISCERAL LEISHMANIASIS AND MONOCYTTIC EHRlichIOSIS

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Canine Visceral Leishmaniasis (CVL) is a multisystemic disease that considered among the alarming zoonotic diseases by the World Health Organization and causing deadly disturbance such as cardiovascular system disorders. Therewithal, Canine Monocytic Ehrlichiosis (CME) is a vector-borne disease that causing cardiovascular system disorders as in CVL. P wave dispersion (Pd) is a electrocardiographic (ECG) marker that used as an indicator of atrial fibrillation, especially with atrial arrhythmias. It could not be detected data on P wave dispersion in dogs co-infected with these diseases known to cause cardiovascular disorders in the literature research carried out. In this research, it aimed to determine Pd which is an important indicator of atrial electrical conduction disorders for revealing the risk of atrial fibrillation that may occur in dogs coinfecting with CVL and CME. In the study, rapid test kits (Snap Leish, Snap 4Dx Plus) were applied for diagnosis of co-infection and free from other diseases that can causing similar disorders in dogs (n=10) brought which compatible with CVL and CME. Additionally, same test and clinical examination were applied to healthy dogs (n=10) brought rutin check and/or vaccination application. Pd values of coinfecting and healthy dogs were determined with 12 channel ECG. As a result of research, there was a statistically significant difference (p=0.000) between coinfecting (24,1±7,75) and healthy (10,8±3,46) dogs. In line with these results, atrial fibrillation and atrial arrhythmias risk has been identified in coinfecting dogs with CVL and CME. It is suggested that antiarrhythmic application and monitoring for cardiac arrest should be included in the therapeutic and monitoring approach of coinfecting dogs with CVL and CME.

Keywords: Coinfecting, Dispersion, Dog, Ehrlichiosis, Electrocardiography, Leishmaniasis, P Wave

RED ALARM: HEAT STRESS, ZONULIN/LACTATE LEVELS AND CALVES

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Contemporary climatic alterations influence incidence/spatial distribution and vigour of heat stress (heSt) conditions. As a reverberation of heSt, disfigurement of intestinal epithelial barrier integrity in relationship with hyperthermia/hypoxia due to blood repartition, might take place. The latter conditions might participate within a leaky gut accompanied by transfer/penetration of luminal pathogenic bacteria, endotoxins and probable antigens. Given heSt is capable of changing intestinal permeability, the purpose of this prospective field trial was to determine the gastrointestinal permeability of calves exposed to heSt at 2 different time points. Apparently healthy (otherwise) 27 calves were subjected to blood sampling and circulating serum zonulin levels were detected in March 2021 and August 2021. Inter-group and intra-group comparison showed statistically significant differences ($p < 0.05$) among circulating mean serum zonulin levels (ng/mL) in August Group (26.07 ± 11.41) analytes in comparison to March Group (14.58 ± 9.32) (self control). Hyper-L-lactatemia (plasma L-Lac > 2.2 mmol/L) was evident in 50 % of calves. Given existing heat-health warning systems in Europe along with red alarm for humans, available results in this study should be cautiously taken into consideration, in which heSt influence intestinal integrity and gastrointestinal disturbances are at the gate endangering intestinal health of calves. May be it is time for red alarm against heSt for calves.

Keywords: Heat Stress, Calves, Zonulin, Lactate

CHANGES IN EXPRESSION LEVELS OF ENDOPLASMIC RETICULUM STRESS PATHWAY-RELATED GENES IN SPERM OF DIFFERENT BREEDS OF FROZEN-THAWED MICE

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The endoplasmic reticulum (ER) is the organelle responsible for protein folding and post-translational regulation. During the cryopreservation of sperm, structural and functional damages in sperm cause the protein folding capacity of the ER to be exceeded and ER homeostasis to be impaired. In this study, the effects of freezing-thawing on sperm quality parameters and gene expression levels of sperm in inbred (BALB/c) and outbred (CD1) mouse strains were investigated. Progressive sperm motility and plasma membrane integrity were found to be significantly higher in CD1 frozen-thawed (CD1-FT) group (35%±3.7 and 60.4%±4.2, respectively) compared to the BALB/c-FT group (17%±3 and 38.8%±5.3, respectively) ($p<0.001$). Sperm viability was found to be significantly higher in the CD1-FT group (58.4%±5.7) compared to the BALB/c-FT group (37.6%±4.4) ($p<0.05$). Then, the expression levels of genes in the ER stress (CHOP, IRE1, XBP1, and GRP78), apoptosis pathway (Bax and Bcl-2), and cryopreservation sensitive (TCP11 and PDIA3) genes were analyzed. The expression levels of IRE1, XBP1 and GRP78 genes in the BALB/c-FT group were found to be significantly higher compared to the CD1-FT group ($p<0.001$). Meanwhile there were no significant difference between CD1-F, CD1-FT, BALB/c-F, and BALB/c-FT groups in the CHOP gene ($p>0.05$). Bax and Bcl-2 gene expression levels were not found to be different in the BALB/c-FT group compared to the CD1-FT group ($p>0.05$). Although, there was no significant difference in the TCP11 gene expression level in the CD1-FT group compared to the BALB/c-FT group ($p>0.05$), PDIA3 gene expression level significantly increased ($p<0.001$) after frozen-thawed. These results show that ER stress is more induced in the inbred mouse strain compared to the outbred mouse strain during the freezing-thawing process, the expression levels of apoptosis-related genes did not differ by mouse strain in the freezing-thawing process, and the cryopreservation sensitive gene was more expressed in the outbred mouse strain.

Keywords: Endoplasmic Reticulum, Mouse, Sperm, Motility, Cryopreservation

Support / sponsor note: Supported by HMKU BAP

DETERMINATION OF RADIAL STRAIN AND STRAIN RATES BY SPECKLE TRACKING ECHOCARDIOGRAPHY IN DOGS WITH HEART FAILURE

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It is aimed to assess radial systolic myocardial function with speckle tracking echocardiography in healthy dogs and in dogs diagnosed with hearth failure. Twenty one client-owned dogs were included in the study: 10 healthy (CHg) and 11 diagnosed with heart failure (HFg). Speckle tracking echocardiography analysis of radial strain and strain rate in systole was performed at the level of papillary muscle of the left ventricle. Raw records obtained and were evaluated retrospectively by using computer software. The difference between the two groups in terms of total peak systolic strain was statistically significant according to the results of the two-way ANOVA test ($p<0.001$). The introduction of the speckle tracking echocardiography technique into routine clinical practice for evaluating left ventricular systolic and diastolic functions will benefit early diagnosis in veterinary cardiology cases.

Keywords: Dog, Speckle Tracking Echocardiography, Hearth Failure

POSTER PRESENTATIONS

OCCURRENCE OF FIBROMA IN WHITE SKIRT TETRA (GYMNOCORYMBUS TERNETZI): A CASE STUDY WITH LITERATURE REVIEW

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In fishes, neoplasia is generally a benign condition. However, few malignant diseases have been reported previously. Fibromas are benign and non-functional tumors composed of bundles of spindle-shaped cells having fibroblastic appearance arranged in a whorling or storiform pattern along with abundant collagen. A surgically removed mass from second dorsal fin of white skirt tetra (*Gymnocorymbus ternetzi*) with the history of unbalance swimming was referred to the Diagnostic Pathology Laboratory, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran. Light microscopy revealed the presence of abundant collagen fibers in repetitive interwoven patterns along with spindle-shaped fibrocytes arranged in a whorling pattern presenting the histopathological feature of fibroma. Since carcinogenic compounds, viruses, irritants and parasites can be involved in fish benign tumors development, predisposing factors should be monitored carefully to promote animal welfare.

Keywords: *Gymnocorymbus Ternetzi*; Fibroma; Fin; Histopathology; Animal Welfare

Support/ sponsor note: This study is supported by Scientific Activities Support Program of Urmia University.

DETECTION OF HUMORAL AND CELLULAR IMMUNITY ON B. ABORTUS S19 VACCINATED COWS WITH CONJUNCTIVAL ROUTE AND MONITORING OF THE IMMUNE RESPONSE

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Brucellosis is a contagious, chronic, necrotic and inflammatory disease that causes abortion and infertility in animals such as cattle, sheep, goats, rams, pigs and dogs, especially by localizing in genital organs such as testicles, breasts and uterus. As it is known, Brucella agents are intracellular and immune response development is both humoral and cellular. The main cytokine that causes cellular immune response stimulation is interferon gamma (IFN gamma). Lipopolysaccharide (LPS) and oligopolysaccharide (OPS) are widely used as diagnostic antigens in serological tests. For use in this study, blood was collected from 60 cattle conjunctivally vaccinated with B. abortus S-19. Blood was collected from 30 calves (3-5 months old) who were vaccinated for the first time before vaccination and on the 46th, 85th and 169th days following vaccination to obtain serum and plasma. Blood was collected from 30 cattle vaccinated a year ago, aged 15-17 months, before the second vaccination and on the 46th, 85th and 169th days following the second vaccination. While the data obtained as a result of the study show that the humoral immune response based on the antigens used for vaccine follow-up is not sufficient for long-term follow-up of immunity, the detection of IgG response at the rate of 100% in young people and 96.6% in adults on the 46th day indicates that the first 46-day period of the study may be important in terms of monitoring immunity. In the study, it was determined that the IFN γ results were not significant between the groups in terms of monitoring the immune response.

Key words Brucellosis, Immune Response, Vaccine

Support / sponsor note: This study is supported by Scientific Research Projects Program of 19 May University

COMPARISON OF THE SPECIFICITY AND SENSITIVITY OF THE SALMONELLA INVA GENE WITH LAMP AND CONVENTIONAL PCR METHODS

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Salmonellosis is an infectious disease characterized by diarrhea and systemic infections in humans and animals caused by Salmonella bacteria. Although the disease affects all types of pets; young, pregnant and lactating animals are most susceptible.

The Loop Mediated Isothermal Amplification (LAMP) technique is a diagnostic method characterized by its simplicity, in which the reaction components are subjected to isothermal conditions and all amplification and detection are performed in a single step. The LAMP method is based on the isothermal strand-displacement activity of the Bsm (Bacillus subtilis) or Bst (Bacillus stearothermophilus) polymerase enzyme. This enzyme, when combined with four target-specific primers, allows a single temperature amplification of a highly specific fragment from a DNA template to be obtained in larger quantities than in an equivalent PCR. Moreover, this high amplification efficiency can also be directly detected visually by colorimetric methods.

LAMP requires less specialized equipment than traditional PCR technologies and has therefore become a powerful alternative to PCR for pathogen detection in clinical samples and food matrices. In addition, it is an easily accessible method for laboratories in developing countries.

In our study, it was aimed to diagnose the Salmonella invA gene with the LAMP method and to compare the sensitivity and specificity of this method with the classical conventional PCR test. As a result, it was determined that invA gene diagnosis using LAMP method is faster and more sensitive than PCR test.

Key words Salmonellosis, LAMP, PCR

Support/ sponsor note: This study is supported by Scientific Research Projects Program of 19 May University

EVALUATION OF SOME BLOOD VALUES IN TERMS OF KIDNEY FUNCTIONS AND PROTECTIVE EFFICACY OF OLIVE OIL IN MALE RATS EXPOSED TO HIGH DOSES OF BPA FOR A LONG TIME ORALLY.

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The effect of Bisphenol A on kidneys and the protective effect of olive oil were evaluated. Adult male rats grouped (n=10) as follows: 0.5 mL olive oil, high dose (25mg/kg/day) Bisphenol A dissolved in olive oil and control groups. Olive oil and BPA was applied by oral gavage for 30 days. Urea, creatinine and BUN levels in blood serum were evaluated using colorimetical method. In the group only olive oil was applied via oral gavage; urea, creatinine and BUN levels in blood serum were evaluated much lower than the other two groups. In the group which BPA dissolved in olive oil and administered by oral gavage same parameters showed lower amounts compared to the control group but higher from the olive oil group. The results may speculate that the olive oil addition to the daily diet can lower the toxicity on kidneys caused by BPA.

Keywords: Böbrek, BPA, Oral, Rat, Serum (Kidney, BPA, Oral, Rat, Serum)

Support / sponsor note: This study was supported by Kırıkkale University Scientific Research Coordination Unit with project number 2021/068..

REGIONAL EPIDEMIOLOGY OF ANIMAL RABIES

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Rabies is important viral infection with an acute course and results in death that transmissible to all mammals. Rabies virus is classified in the genus Lyssavirus (neurotropic virus) of the family Rhabdoviridae. All lyssaviruses a bullet-like virion morphology with an envelope. The lyssavirus genome a single negative stranded (-) RNA molecule and encode 5 viral proteins; nucleocapsid (N), phosphoprotein (P), matrix (M), glycoprotein (G) and large (L) polymerase protein. Lyssavirus genus that seven distinct genetic lineages can be distinguished within by cross-protection tests and molecular biological analysis; classical rabies virus (RABV, genotype 1, serotype 1), Lagos bat virus (LBV, genotype 2, serotype 2), Mokola virus (MOKV, genotype 3, serotype 3), Duvenhage virus (DUVV, genotype 4, serotype 4). The European bat lyssaviruses (EBLV1, genotype 5 and EBLV2, genotype 6) and the Australian bat lyssavirus (ABLV, genotype 7). Rabies is zoonoses and infection causes nervous system disease that ends in death. Dogs are the main reservoirs in tropical developing countries where all most of all human cases occur. Vampire bats especially important where transmit rabies to cattle, horses, and other domestic animals, and humans.

In this review, the epidemiological study of suspected rabies samples (cat, dog, fox, cattle) in the last 7 years in Samsun Veterinary Control Institute in the area of responsibility (Samsun, Sinop, Amasya, Tokat, Sivas, Ordu, Giresun, Trabzon and Rize). For this purpose, 503 samples were applied with FAT and MIT tests and %21,6 positive %78,4 negative results were found.

As a result, the decrease in the rate of samples and positive results, especially after 2017, may lead to the conclusion that the oral vaccination campaign is effective in wildlife.

Keywords: Rabies, Virus

INFLAMMATION AND CYTOKINE STORM

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The cells of the natural immune system are the first line of defense against pathogens. These cells recognize pathogens and produce cytokines to destroy them through phagocytosis. Cytokines are peptide or glycoprotein substances that are synthesized by some somatic cells, lymphocytes, monocytes, macrophages to increase the activity of immune cells. Cytokines act in the formation and arrangement of inflammatory responses as well as provide natural and specific immunity. The change in activation-inhibition balance in the steps stimulated by cytokines in inflammatory events causes uncontrolled inflammation response, as well as abnormal cell deaths and excessive increase of immune cells. This hyperactive immune response is called a cytokine storm. Cytokine storm consists of an increase in circulatory amounts of pro-inflammatory cytokines, including IL-1, IL-6, TNF- α and interferons. Although the term of the cytokine storm was first used in 1993 for Graft Versus Host (GVHD) disease; viral hemorrhagic fever, influenza, flower, SARS, malaria, African tripanosomia, visceral laysmanyazis, systemic inflammatory response syndrome (SIRS), acute respiratory failure syndrome (ARDS) can be seen during many diseases. The term cytokine storm has recently been used for COVID-19 patients who have caused social and economic problems worldwide. It has been stated that the cytokine storm seen in Covid-19 causes damage to the vascular barrier, capillaries and alveoli together with the imbalance in intercellular interaction, causing dysfunction in many organs and ultimately death. In this review, inflammation, the physiopathology of inflammation, cytokines and the pathophysiology of cytokine storm are discussed.

Keywords: Inflammation, Covid-19, Cytokines, Cytokines Storm

BREED AND AGE DISTRIBUTION ON DOGS AND CATS REFERRED TO CLINIC DUE TO MAMMARY TUMOR IN AFYONKARAHISAR

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The present study investigated the breed and age distribution of mammary tumor cases in dogs and cats in Afyonkarahisar province. The materials of this study were the dogs and cats brought to Animal Hospital of Afyon Kocatepe University and private veterinary clinics with mammary masses. History of cases including breed and age information were recorded during a clinical examination. Totally 23 dogs and 8 cats with mammary tumors were evaluated in the study. The most frequent breed was Terrier (34.8%), mixed breed (21.7%), Pointer (17.4%), Cocker (13%), Golden Retriever (4.3%), German Shepard (4.3%), and Belgium Malinois (4.3%), respectively in dogs. In the cats, Tabby cat (87.5%) and a mixed breed (12.5%) were detected with mammary tumors. The age distribution was 8.08 ± 3.46 as the mean age in dogs and 11.12 ± 1.72 in cats. The results of this study revealed that dogs are at risk of mammary tumors at early ages as two years old. Nonetheless, the mammary tumors seen in cats are usually older. In conclusion, the mammary tumor is a common pathology in dogs and cats. Animal owners should give detailed information about this pathology, and they should immediately seek medical advice and treatment.

Keywords: Dog, Cat, Mammary Tumor, Breed, Age

Support / sponsor note: This study was supported by Afyon Kocatepe University BAPK (Project Number: 17.KARİYER.146)

A RETROSPECTIVE STUDY ON RUMINANT DISEASES OCCURRED IN SAMSUN VETERINARY CONTROL INSTITUTE PATHOLOGY LABORATORY BETWEEN 2015-2021

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In this study, it was aimed to retrospectively examine the histopathological findings of ruminant samples sent to Samsun Veterinary Control Institute Pathology Laboratory between 2015-2021. Diseases identified in the organ and tissue samples of cattle, sheep and goats sent from 9 provinces (Amasya, Samsun, Tokat, Sivas, Giresun, Sinop, Trabzon, Ordu, Rize) registered in the laboratory archive and within the responsibility area of the Institute Directorate were emphasized. Pathology laboratory results regarding bacterial, viral, parasitic or undetermined diseases of ruminants are important as they serve to obtain general information about the diseases observed in our region, to develop regional and national control programs and to take necessary precautions.

MATERIAL AND METHOD

Carcass, necropsy and biopsy samples of cattle, sheep and goats sent from the provinces within the scope of our institute were used as material. The distribution of cases by years on the basis of provinces was classified as histopathologically specific and nonspecific diseases. The results obtained were evaluated by performing classifications and statistical analyzes of the lesions detected in the necropsy and histopathological examinations, according to the organ they were located or anatomical pathological characters, taking into account the anamnesis and suspected disease information provided by the veterinarian who sent the sample in accordance with the protocol.

RESULTS

As a result of the examination of the records, it was determined that 978 (51.3%) cattle, 765 (40.1%) sheep and 160 (8.4%) goats out of a total of 1903 samples belonging to various enterprises in a 7-year period. In these samples, 378 specific diseases, 1525 organ diseases, nonspecific diseases and 233 parasitic infestations of sarcocystosis were detected.

- The most common diseases diagnosed in our laboratory are shown in Table-3. Among them, it was determined that Sheep Goat Pox Disease came first.
- It has been revealed that the numbers of Sheep Peste des Petits Ruminants and Sheep Goat Pox Diseases increased in 2018 and 2019.
- In addition to these diseases, White Muscle Disease, Nodular Exanthema of Bovines, Listeriosis, Leptospirosis, Mycoplasmosis, Pasteurellosis, Mannheimiosis, Pulmonary Adenomatosis, Leiomyosarcoma, Fibropapilloma, Coenurus Cerebralis, Dicrocoeliasis, Coccidiosis are the other diseases diagnosed.
- Nonspecific organ diseases classified histopathologically are shown in Table-4. Accordingly, it was determined that Pneumonia cases due to various reasons were the leading ones.

Keywords: *Pathology *Regional Diseases *Medical Statistics *Regional Disease Prevalance

ANTIBIOTIC RESISTANCE PROFILES OF PSEUDOMONAS AERUGINOSA STRAINS ISOLATED FROM DOGS

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P. aeruginosa is a pathogenic Gram-negative bacterium that is frequently isolated in canine otitis externa cases. It is known that it is resistant to many antibiotics from different antibiotic groups and can easily develop multi-drug resistance. The aim of this study is to determine the antibiotic resistance profiles of *P. aeruginosa* strains isolated from dogs with otitis externa symptoms. All 20 isolated *P. aeruginosa* strains were subjected to disk diffusion susceptibility testing. The resistance profiles of *P. aeruginosa* strains against the antibiotics tested in the antibiotic susceptibility test were as follows: 100% to oxytetracycline, 4.76% to ciprofloxacin, 14.28% to enrofloxacin, 19.04% to gentamicin, 100% to neomycin, 4.76% to amikacin, 0% to polymyxin B found. Multi-drug resistance was detected in a total of 2 (10%) *P. aeruginosa* strains. As a result, it was observed that isolated *P. aeruginosa* strains showed low resistance to aminoglycoside and fluoroquinolone group antibiotics, which are frequently used in veterinary medicine. In addition, it was determined that the sensitivity to polymyxin B was highest and the sensitivity to oxytetracycline and neomycin the lowest.

Keywords: Antibiotic Resistance, Dog, Otitis Externa, *Pseudomonas Aeruginosa*.

LIFETIME ACHIEVEMENT AWARD:

DR. TAMERCAN MORKOÇ

" CONTRIBUTIONS TO THE VETERINARY PHARMACEUTICAL INDUSTRY"

BEST ORAL PRESENTATIONS

1ST SERCAN HÜSEYİN BAYENDUR

"RESEARCH OF EFFECTIVENESS OF HYPOCHLOROUS ACID IN CATS WITH
BACTERIAL CYSTITIS"

2ND ERDEM GÜLERSOY

"EVALUATION OF THE EFFICACY OF SOME BLOOD AND
ECHOCARDIOGRAPHIC PARAMETERS IN CASES OF VISCERAL
LEISHMANIASIS"

3RD İLKNUR DAĞ

" THE INHIBITORY EFFECTS OF TYROSOL ON CLINICAL CANDIDA GLABRATA
PLANKTONIC AND BIOFILM CELLS"

BEST VISUAL PRESENTATIONS

1ST GÜLNUR SERDAR

"COMPARISON OF THE SPECIFICITY AND SENSITIVITY OF THE SALMONELLA
INVA GENE WITH LAMP AND CONVENTIONAL PCR METHODS"

2ND ALI SHALIZAR-JALALI

"OCCURRENCE OF FIBROMA IN WHITE SKIRT TETRA (GYMNOCORYMBUS
TERNETZI): A CASE STUDY WITH LITERATURE REVIEW"

3RD KAMIL BATUR

"ANTIBIOTIC RESISTANCE PROFILES OF PSEUDOMONAS AERUGINOSA
STRAINS ISOLATED FROM DOGS"

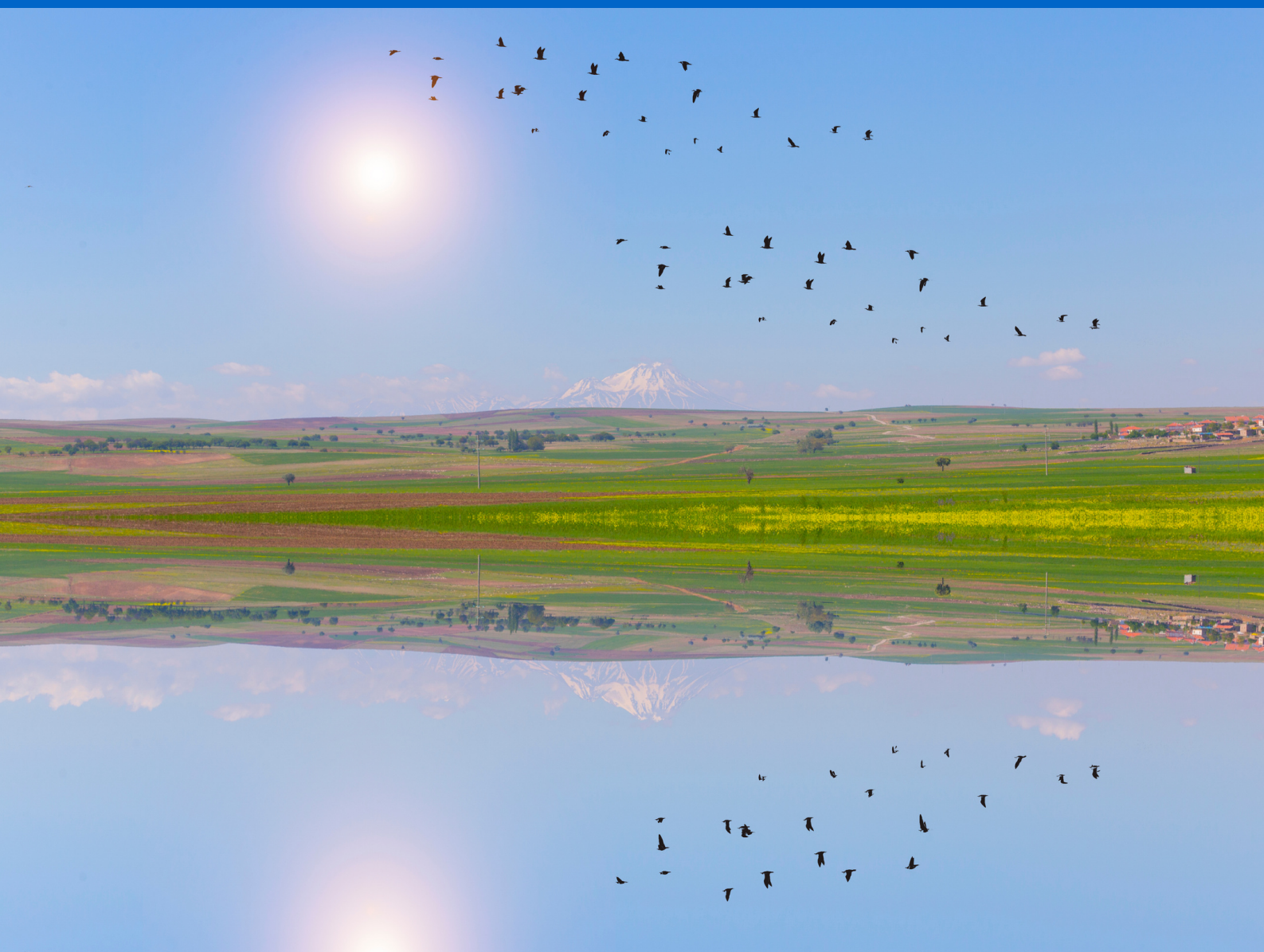
HONORABLE MENTION

GAYE BULUT

FOR HER LONG-TERM ACADEMIC CONTRIBUTIONS TO THE CONGRESS

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