4th International VET*Istanbul* Group Congress

ABSTRACT BOOK

IV ХАЛЫҚАРАЛЫҚ ВЕТСТАМБУЛ ГРУПП КОНГРЕСІ
IV INTERNATIONAL VETISTANBUL GROUP CONGRESS

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4th International VET*Istanbul* Group Congress

ABSTRACT BOOK

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WELCOMING LETTER,

Kazakh National Agrarian University is pleased to inform you that we accept the proposal of VETIstanbul Group to organize and conduct the IV International VetISTANBUL CONGRESS- 2017 in the field in Veterinary Sciences in Almaty, Kazakhstan.

It is widely known among international scientific agrarian community all over the world that VETistanbul Group was founded in 2013 to facilitate cooperation among the universities' veterinary faculties and to enable sharing knowledge and research, academic mobility and exchanges of scientists and students as well as volunteer-based opportunities. Within this context, international congresses have already been organized in Istanbul, Saint Petersburg and Sarajevo. Top European universities' faculty members, academics and researchers, clinicians and graduate students from different countries have joined the previous congresses with innovative scientific findings in specific areas of veterinary sciences.

We suggest the Congress to be organized for the fourth time in Almaty, in May 11-13, 2017. We strongly believe that Kazakh National Agrarian University will make the Congress organization very successful.

Moreover, our beautiful, 1000- year old metropolitan city is waiting for you in the heart of Eurasia with its traditions, natural and historical sights as well as friendly and hospitable people.

We look forward to meeting you in Almaty and fruitful joint working at the forthcoming VETIstanbul Congress-2017.

Best regards,

RECTOR of
Kazakh National Agrarian University **Tlektes Yespolov**

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ORAL PRESENTATIONS

O-01

BORON AMELIORATES LIPID PEROXIDATION, ANTIOXIDANT STATUE AND TISSUE DAMAGE IN RATS EXPOSED TO ACRYLAMIDE

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The study investigated the effect of boron against acrylamide-induced toxicity in rats. Totally, 40 male Wistar albino rats were divided into 5 equal groups and fed with boron free rodent diet. I. Group: control group, II. Group: only 15 mg/kg acrylamide-treated by gastric gavage during 60 days. III., IV., and V. group received 15 mg/kg acrylamide with boron at a dose of 5, 10 and 20 mg/kg/day by gastric gavage during 60 days. Treatment of acrylamide significantly increased malondialdehyde levels blood, kidney, liver, heart, brain, lung, and testis tissues of rats. Conversely, treatment of acrylamide decreased glutathione levels in rat tissues. Additionally, acrylamide treatment increased antioxidant enzyme activities (catalase and superoxide dismutase) in erythrocyte and tissues. However, acrylamide plus boron treatment in rats caused decreased lipid peroxidation, enhanced the antioxidant enzymes activities, and protected against tissue damage. In conclusion, boron has a protective effect in rats against acrylamide-induced lipid peroxidation, regenerates rat tissues, and enhances antioxidant defence mechanism.

[#]This study was supported by a grant from the Afyon Kocatepe University Scientific Research Council, Afyonkarahisar, Turkey (Project no: 16.VF.02).

O-02

FREE RANGE BROILER CHICKEN BLOOD PARAMETERS FED WITH DIFFERENT PASTURE PLANT COMPOSITIONS

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In this research,the growth rate and performance of broilers raised in a free range system with different plant compositions.

Trials was applied to broiler chicken consisting of 4 decares of clover, Bromus inermis or clover + Bromus inermis planted field belonging to Research and Application Farm of Sel-uk Veterinary Faculty. Primarily, 8 numbers of mobile pens (dimensions: 4 x 2.25 m) that designed as to be surrounded and secured by steel wire 9 x 9 x 1,5 m in dimensions.

In trial, 480 number of one day old male broiler chicks were fed with starter diets composed of 3200 ME, 23 % CP between the days 1 to 28 during which they were housed in these pens. From day 28 to 84, broiler were given feed with 2800 ME and 20 CP. The broiler other than those in the control group were let to go outside at 29th day. The broilers were divided into four groups, namely control plus three of experimental.

Birds in the control group were fed indoor conditions till 42 day. Others (experimental groups; 2, 3 and 4) were fed inside (untill 42 day of study) followed by outside conditions from 42 day on. The second group was on concantrated feed plus let to grass on clover field. The third one is on concantrated feed plus let to grass on field of Bromus inermis and the fouth group was managed on three types of feding regimens, namely concantrated feed plus allowed to grass on fields of %50 clover and %50 Bromus inermis. Each subgroup was also fed with Origanum vulgare. Before given, feeds were prepared and weighted. Then, they were given to groups at the same time of and only once a day. Control groups were sent to slaughterhouse in the 42nd day of the study while for the others 84th day of study were waited for slaughtering.

The broiler chicks were slaughtered on 42th and 84th days of trial. There was no statistically significant difference on means of HDL, triglyceride and AST between the research groups ($p>0.05$). Despite significant diference were found on glucose, cholesterol, Ca and phospholipid parameters between the treatment groups ($p<0.05$).

* This work is a part of the project supported by The Scientific and Technological Research Council of Turkey (TUBİTAK) (Project No: 114O753).

O-03

IN VITRO ANTIMICROBIAL EFFECT OF NEUTRAL HYPOCHLOROUS DISINFECTANT ON STAPHYLOCOCCUS AUREUS

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Consumers are concerned about the intensive use of disinfectants to ensure food safety in food industry and possible outcome potential health problems. In that respect, disinfectants which are safe for public and environmental health, are being considered and related studies are constantly incresing. Neutral solution, which is the result of separation of brine ionisation, has been used in various area because it is non toxic and cheap structure and does not lead chemical residues, does not need rinsing. This neutral hypochlorous solution, which is especially preferred in the food industry, can be used even in direct contact with the product, such as washing vegetables and fruits. Staphylococcus aureus is one of the most important pathogens causing foodborne poisoning resulted from contaminations by food handlers. In this study, it was aimed to investigate the efficiency of neutral hypochlorous disinfectant (NHD) is on the gram (+) food pathogen Staphylococcus aureus (S. aureus).

20%, 50% and 100% concentrations of NHD were prepared and contacted with quercetin-based detergent-disinfectant resistant and non-resistant (ATCC 25923) S. aureus strains for 5, 30 and 120 minutes to observe the effectiveness of disinfectant.

Efficacy tests of the study were carried out by the method of TSE EN 1276. Pure suspension of micro-organisms (10^7 kob/ml) were contacted to disinfectant solutions. After exposure, 1 ml were transferred to tubes containing 9 ml of neutralizing solution and the survivors were counted. Sterile tap water was used as control group to determine disinfectant activity.

The present study showed that of 5 logarithmic decrease was observed in resistant strains with 100% concentration at the end of 5 and 30 min contact time, while a 6 log reduction was observed in nonresistant strains. In efficacy was achieved 50% and 100% concentrations, in 120 minutes of contact time for both resistant and nonresistant strains. No reduction was observed in the 20% concentration for 5 minutes. When compared with the 5 minute effect of 50% concentrations, 3 log decrease was found on nonresistant strains compared to the resistant strains. No decrease on both strains was observed in the control groups.

Regarding to the data sets of this study suggests that high concentration NHD is very effective on both resistant and nonresistant S. aureus, even in shorter times but longer contact times are being required in lower concentrations.

O-04

CLINICAL, OTOSCOPIC, RADIOGRAPHIC AND COMPUTED TOMOGRAPHIC EVALUATION OF MIDDLE EAR LESIONS IN CATS

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Clinical signs of middle ear lesions are neurologic and includes head tilt, incoordination, circling, protrusion of third eyelid and anisocoria in cats. The cats which are brought to Istanbul University, Veterinary Faculty, Surgery Polyclinic with these complaints was evaluated for middle ear lesions. For this purpose, after clinical and otoscopic examination, four position x-rays were taken which are ventrodorsal, rostrocaudal and bilateral 20^{o} oblique laterolateral that are specific positions for viewing of middle ear.

The patients in which the lesion was seen in the clinical and otoscopic examination and supported with x-rays was prepared for the surgery. In some patients it was not possible to make a diagnosis with just clinical examination and x-ray. For this kind of patients computed tomography was performed and the exact lesion was seen and after the diagnosis was made the surgical technique was decided and the surgical preparation was started. Due to the location of the lesions the appropriate surgical techniques were chosen and performed for the treatment.

In this study; the clinical, otoscopic, radiographic and computed tomographic findings were comparatively evaluated with the operative findings in cats that diagnosed as middle ear lesions and treated with surgical techniques.

O-05

EVALUATION OF CATTLE REPRODUCTIVE FUNCTION BY MOLECULAR GENETIC METHODS

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The aim of the study is to develop methods for assessment the reproductive function of cows and fertility of sperm produce bulls. Research was carried out on Holstein breed cows of LLP Bayserke-Agro and bulls of LLP Amiran. The prevalence of genetic variants of the TNF(tumor necrosis factor) α-locus in cows was determined by using primers: F ï 5'-GAGAAATGGGACAACCTCCA-3' and R ï 5'-CCAGGAACTCGCTGAAACTC-3', and it consisted genotypes GG-21 (13.81%), AG-97 (63.81%), AA - 34 (22.38%), the frequency of alleles was A-54.0, G-46.0. The insemination index was low in cows with heterozygous genotype AG at the TNFα locus compared to animals with the AA and GG genotype. The results of the study indicated that the polymorphism of alleles of the TNFα gene has a significant effect on the immune function and reproductive performance of cows.

The insemination index of dairy cows depends not only on their reproductive status, but also largely on the fertilizing capacity of breeder bullôs sperm. Research of the DNA fragmentation level and nuclear protein content in bull sperm was conducted using the "Nuclear Protein Assay" manufactured by the Indian company Sperm Processor Pvt. Ltd. It was found that in the frozen sperm of breeder bulls the content of protamine in spermatozoa was 100%, which indicates the absence of immature forms of spermatozoa in spermodoses. In the tested samples of sperm the content of spermatozoa without DNA fragmentation was 80.65-86.1%, with DNA fragmentation ï 13.0-17.15%, spermatozoa with degeneration ï 0.9-2.2%. So, strict adherence to the technology of freezing, storing and thawing of sperm of breeder bulls provides a low level of DNA fragmentation in spermatozoa.

O-06

CALF LOSSES AND REASONS IN THE ONE-YEAR PERIOD:A PILOT STUDY

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In this study, causes of death and the seasonal distribution in a dairy company for a year period were examined in 0-3 months.

Totally, 583 calves born in a year was followed in 650 dairy cows in the breeding enterprise. The cause of death in calves were evaluated based on clinical and laboratory examination.

A total of 583 calves, 74 were recorded to have died of various diseases or causes. Calves found to dead reasons such as premature birth (n = 15), respiratory diseases (n = 13), diarrhea and gastrointestinal infections (n = 12), clostridial infections (n = 11), mixed infections (n = 6), the anomaly (n: 4) individual accident (n = 2), bursitis + omphalitis (n: 1), hernia (n: 1) and timpany (n = 2). Calf deaths has been observed maximum respectively in March, August, April, July, November and December.
In conclusion, in this study presented as model, calf mortalities in a dairy enterprise for the one-year period may be due to different diseases and factors, the most significant losses was observed in that due to premature births, the respiratory and digestive system problems.

O-07

A REDISCOVERED ALTERNATIVE THERAPY TECHNICS IN HUMAN AND VETERINARY MEDICINE: HIRUDOTHERAPY

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Hirudotherapy is a medical treatment, which uses medicinal leeches. It is one of the oldest methods of the traditional ancient treatments for both animals and human beings. This alternative method is mentioned in Ionian, Greek, Roman, Indian and Arabic ancient medical literatures. In Egypt, the first written evidence of hirudotherapy is more than 3500 years old.

This treatment technics has actively been using in many countries such as France, UK, Russia, Germany, Sweden, Turkey, India and USA.

There are several species of leeches, which can be used in treatments such as Hirudo medicinalis, Hirudo verbana, and some other species sometimes can also be used such as Hirudinaria manillensis (Asia), Macrobdella decora (North America), Hirudo orientalis and Hirudo troctira.

Leeches particularly H. medicinalis, H. verbana and H. orientalis have a special secretion and therefore they can be used to assist in the treatment of abcesses, arthritis, glucoma, some venous disorders, mastitis, after plastic surgeries and some surgical operations to treat blood circulatory problems.

H.medicinalis is a hematophagous, hermaphroditic, aquatic, annelid worm. Its range extends over almost the whole of Europe and into Asia as far as Kazakhstan and Uzbekistan.
In this presentation the usage areas of leeches, how to use leeches, side and adverse effects of this treatment, possible complications and precautions will be described in details.

O-08

EXAMINATION OF OCCURENCE OF MYCOPLASMAS IN CANINE PYOMETRA CASES

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Mycoplasma species can cause infections in different animal species. In dogs, they cause respiratory diseases and urogenital system diseases. Due to their long and laborious isolation procedures, mycoplasmas are not being examined from pyometra cases in routine bacteriological examination processes. In this study, the possible role of Mycoplasma species beside the other aerob bacterial species in the development of pyometra has been examined.

For this purpose, uterine swabs were collected from dogs which were brought to Department of Obstetrics and Gynecology and diagnosed as pyometra and ovariohysterectomy suggested animals, at the operation period. Samples from clinically healthy dogs which were brought to the clinic for neutering procedures were collected, as well. Swab samples from both uterine content and mucosa of each cornu were collected from dogs with pyometra. The samples from clinically dogs were collected only from uterine cornu mucosa. With these procedures 42 swab samples from 13 dogs (8 with pyometra, 5 clinically healthy) were collected and bacteriologically examined.

As a result of the studies, no bacterial growth was observed in control group samples. Escherichia coli were isolated purely in 3 of the 8 bitches with pyometra, and E. coli and Streptococcus canis were isolated in a dog. Mycoplasma spp. was not isolated in any of the samples.

O-09

DETECTION OF THERMOPHILIC CAMPYLOBACTER SPECIES FROM MALLARD (*ANAS PLATYHYNCHOS*)

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Campylobacter species are zoonotic pathogens responsible for the majority of foodborne illness and gastroenteritis cases especially occured in humans. Although poultry play an active role in the transmission of these bacteria to humans, which are reported in many sources such as surface and groundwater, domestic and wild mammals and insects. Wild birds are also considered as important sources of contamination because of their direct or indirect contact with humans.

In this study, isolation and identification of thermophilic Campylobacter species from fecal samples taken from mallards (Anas platyhynchos) living near the Kars stream in Kars region were aimed. Stool samples taken from 75 mallards were used as research material. Samples collected via sterile swabs were put into tubes containing Carry Blair transport medium and delivered to the laboratory in 3-4 hours. Samples were streaked onto petri dishes comprising Campylobacter blood-free selective medium (Modified CCDA-Preston) (Oxoid, CM739) with CCDA (Charcoal cefoperazone-deoxycholate agar) Selective Supplement (Sefoperazon, Amfoterisin B) (Oxoid, SR0155) and incubated for 2-5 days at 42˚C and microaerobic conditions and in this way Campylobacter spp. were isolated. For purpose of phenotypical identification of isolates Gram stain, catalase, oxidase and motility tests were done and evaluated growth status of them. For molecular characterisation species specific PCR was applied. Thus, Campylobacter spp. were isolated from 6 (8%) of 75 stool samples. As the result of species-specific PCR isolates were genotyped as Campylobacter jejuni.

The determination of prevalence of Campylobacter species in wild birds will help for better understanding of epidemiology and ecology of these agents which may pose a risk in terms of human and animal health.

O-10

OZONE DISINFECTION AGAINST *SALMONELLA ENTERICA* SEROVAR TYPHIMURIUM AND *ESCHERICHIA COLI* IN WASHING WATER

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Nowadays, ozone disinfection has become as an alternative decontamination method for food industry to remove the bacterial population from food materials while it does not leave any residues. This disinfection method is preferred in surfaces that come into contact with food, the equipment and in the final product. Water is used in food industry both in formulation of the product and also cleaning of the surfaces and machines. Even if some various disinfection processes applied to water resources before it supplied to drinking water networks, contaminations can be still possible from various sources. The consumption of contaminated water directly or indirectly may be a vehicle for transmission of pathogenic bacteria to human yielded with outbreaks of gastrointestinal diseases.

For this purpose, ozone was applied for 5, 10, 15 and 20 minutes with 2.5 and 5 ppm to determine the inhibition of Salmonella enterica serovar Typhimurium and Escherichia coli which can be found in washing waters frequently used in food processing plants. The number of microorganisms in the tap water where the pathogenic bacteria were experimentally contaminated was found as 8.5682 ± 0.028 cfu /ml and 8.4914 ± 0.019 cfu /ml, respectively.

As a result, after 20 minutes of ozone treatment, the inhibition levels for Salmonella enterica serovar typhimurium were 1.73 log cfu/ml at 2.5 ppm and 2.97 log cfu/ml at 5 ppm and for Escherichia coli 2.81 log cfu/ml at 2.5 ppm and 4.05 log cfu/ml at 5 ppm. In the light of these data, disinfection treatment with ozone has been evaluated as an effective and practical method that can be applied into washing water in ready-to-eat food industry.

O-11

TURKEY FOR EDUCATION

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Turkey is one of the two countries, which have lands in both Asia and Europe. This enables Turkey to reflect diverse cultures and experiences. Turkish universities will help you to gain new perspectives and abilities keeping you one-step ahead of others in your career.

Various options are offered to foreign students who want to study at universities in Turkey. Some of them are Turkey Scholarship, Exam for foreign nationals (YÖS), Student's grade etc.

Turkey Scholarships is a government funded higher education scholarship program, which is designed for international students. Turkey Scholarships is offered for undergraduate, graduate, Ph.D., proficiency in art, and research level. The candidates are not required to know Turkish for the application. The Scholarships also include a Turkish language education for the candidates before they start their studies.
Exam for foreign nationals (YÖS), is an exam where foreign students who want to study in higher education institutions in Turkey. They can enter and use their results while applying for admission to these institutions. There are generally two tests, the basic learning skills test and the Turkish test. In this specially customised exam for every university, there is a cut-off of 50% marks. The student has the opportunity to choose the department according to his / her score with this exam regardless of the area he / she wants to study.

In this presentation, useful information to those who want to study in Turkey and detailed description about undergraduate education of Istanbul University Faculty of Veterinary Medicine will be given.

O-12

SYMBIOTICS: IMPROVING PREHARVEST FOOD SAFETY

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Food-borne pathogens are still one of the most important emerging public-health issue against current developments in production and having all advantages the recent technologies in farming and in food processing. Pre-harvest food safety approach is becoming a rising and one of the powerful food safety tools with its preventive and quality measures before obtaining food from animals. Pre-harvest food safety starts while food animals are alive. It also brings a leading animal welfare tools besides the animal hygiene and health. Keeping animals away from pathogens is the main target of the approach. Vaccination, competitive exclusion, substrate-adapted competitive exclusion, the use of probiotics and prebiotics together are the main examples of the intervention strategies of the pre-harvest food safety. Some are well adopted and some are under investigation. Prebiotics and probiotics could be used separately and also used together. Using them together in a combination of an application is being considered as symbiotic. Having the advantage of using symbiotics brings a powerful application into pre-harvest food safety strategies in decreasing the numbers of food pathogens from food animals. This presentation has been concentrated on the advantages and the mechanisms of symbiotics applied in pre-harvest food safety and the affect of succession of further post-harvest food safety. Future scientific breakthroughs will have powerful impact on food safety and no wonder on potential pre-harvest food safety strategies.

O-13

EFFECTS OF RECOMBINANT HUMAN GONADOTROPHINS DURING *IN VITRO* MATURATION OF DOMESTIC CAT OOCYTES

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The increase in the human population causes rapid depletion of natural resources and depletion or extinction of wild species. Today, thirty-six species of wild cats face this danger. Biotechnological methods such as Artificial Insemination (AI), In Vitro Fertilization (IVF), In Vitro Maturation (IVM), Embryo Transfer (ET) and Cloning are used in the protection or management of these animal species. The cat IVM studies have very variable results change from 2% to 78% in reaching metaphase II stage. Maturation medium contents, gonadotropin types added to the media, duration of maturation, estrous cycle phase and body condition of cats used as oocyte source are influential in the obtained results. LH and FSH used in the maturation of oocytes are obtained from extraction of sheep or pig pituitary gland. Obtaining of other substances or different hormones such as TSH with these hormones and different concentrations during each synthesis effect superovulation and IVM studies. Recombinant human gonadotropins are used in horses, cattle, sheep and cats in the reproduction studies, in order to avoid the problems caused by the method of obtaining gonadotropins with pituitary origin and reduce the costs. However, there has not been any study with the effects of different concentrations of recombinant human LH (rLH) and FSH (rFSH) (0, 0.5, 1 IU/ml) in vitro maturation of cat oocytes. In this study, it was aimed to investigate the effects of hormones at different concentrations on the Metaphase II rates of cat oocytes. Domestic cat ovaries from mixed breeds and various stages of estrous cycle were collected after routine ovariohysterectomy from Avcilar Municipality Stray Animals Sterilization and Rehabilitation Center. Cumulus oocyte complexes were isolated from the follicles by repeatedly slicing the ovaries. Modified SOF was used as IVM medium supplemented with antibiotics, 4 mg/ml BSA. Selected oocytes were maturated at 38 °C for 48 h in four-well petri dishes. Depending on experiment, this IVM medium was supplemented with different concentrations of rFSH, rLH, hypophysial LH(hLH) and FSH (hFSH).

The production of proteins is necessary for cytoplasmic and nuclear development and viability of oocytes in the in vitro maturation. However, the amount and source of rFSH and rLH hormones added to the maturation media effect MII stage rates and the amount of protein accumulated in the oocytes. Especially for the embryonic development of bovine oocytes, higher levels of rLH addition lead to higher rates of MII and blastocysts. However, in our study, metaphase II rates in 1 IU/ml hLH and 1 IU/ml hFSH group were lower than 0.5 IU/ml rLH and 0.5 IU/ml rFSH group (29%, 44%)($p < 0.01$).. This result indicates that human recombinant FSH and LH due to dosage support the MII development in the in vitro maturation of cat oocytes. In this study, 0.5 IU/ml rLH and rFSH concentrations that used for the first time in cat IVM showed similar MII rates(44.62%, 38%) with the same concentrations of pituitary originate hormone group ($p > 0.01$). This results showed that use of 0.5 IU/ml human recombinant FSH and LH in cat IVM studies is a good alternative in terms of achieving high rates of MII oocytes and costs.

O-14

CRANIOMETRIC MEASUREMETS OF THE MALE EURASIAN GRAY WOLF (*CANIS LUPUS*) FROM TURKEY

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The gray wolf or grey wolf (Canis lupus), also known as the timber wolf or western wolf, is a canine native to the wilderness and remote areas of Eurasia and North America. It is the largest extant member of its family, with males averaging 43–45 kg, and females 36–38.5 kg. Like the red wolf, it is distinguished from other Canis species by its larger size and less pointed features, particularly on the ears and muzzle. It's winter fur is long and bushy, and predominantly a mottled gray in color, although nearly pure white, red, or brown to black also occur.

The intention of this study was to determine the morphometric features of cranium in male wolf obtained from various regions of Turkey.

In the research, craniums of totally eight adult male wolf were used. After the scalps and superficial muscles of wolf were dissected, they were boiled and macerated. Then measurements were obtained from 46 different locations of the skull by using the electronic calliper (0.01, BTS, UK). Moreover indices were calculated. The measurements were analysed in the SPSS (20.0 version) package software.
According to the results obtained, it was determined that the maximum length of the cranium was averagely 245.08±15.32 mm, maximum width of the zygomatic was averagely 130.19±9.00 mm, greatest neurocranium breath was averagely 59.55±1.74 mm in male wolf. Skull index was averagely 53.12±1.70 in wolf.

Consequently, the osteometric measurements of the cranium in the male wolf were determined. It is thought that these data will be an essential data source related to the male wild dog or domestic dog in zooarchaeological gap in Turkey.

O-15

ANTIBACTERIAL AND ANTIFUNGAL ACTIVITY OF *TARAXACUM OFFICINALE* LEAVES EXTRACT

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Traditional herbal cures and remedies have played an important historical role in the treatment of a variety of illnesses and diseases. Upward trend in antibiotic resistance in the last decade has led to the search of new antimicrobial agents, especially to discover novel chemical structures mainly based on plant extracts. For this purpose, in the current study the antibacterial and antifungal properties of Taraxacum officinale were investigated.

The extract of Taraxacum officinale was obtained by the ethanol extraction method. The minimal inhibitory concentration (MIC) values were determined by agar dilution method for antibacterial activity and broth dilution method for antifungal activity (CLSI, 2006). The microorganisms used in the study were; B. cereus, B. subtilis, S. aureus, S. epidermidis, E. coli, K. pneumonia, P. aeruginosa, E. Faecalis, S. enteritidis, C. albicans, C. parapsilosis, C. krusei, M. pachydermatis, M. canis and T. mentagrophytes. Ethanol was used as negative control and Gentamycin (10µg) as positive control.

Ethanolic extract of Taraxacum officinale leaves was detected to demonstrate effectiveness in different concentrations against most of the bacterial strains. The highest effectiveness were presented to B. cereus (15.25 mg/ml) while the lowest effectiveness were E.faecalis, E.coli, P. aeruginosa, S.enteritidis, S. aureus and S. epidermidis (122 mg/ml). It was observed that the extract has no antimicrobial activity on K.pneumoniae. The Taraxacum officinale leaves were found to be effective against all fungal isolates used but only in high concentrations. Extract demonstrated the highest effectiveness against C. albicans and M. nanum (610 mg/ml) while the lowest effectiveness against C. krusei, C. parapsilosis, M. pachydermatis, M. canis, M. gypseum and T. mentagrophytes (1220 mg/ml).

O-16

EFFECTS OF 16L:8D PHOTOPERIOD ON GROWTH PERFORMANCE AND CARCASS CHARACTERISTICS OF MALE AND FEMALE PEKIN DUCKS

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The purpose of this study was to determine the effects of a 16L:8D photoperiod on growth performance and carcass characteristics of male and female Pekin Ducks. In this research, a total of 120 (60 male and 60 female) ducklings were used. Each sex group was randomly allocated into 2 photoperiod groups which were 24L:0D and 16L:8D. Body weight and feed intake were measured weekly for each pen. Feed conversion was calculated as the feed to gain ratio. All ducklings were slaughtered at the 42d of age and carcass characteristics were determined. Each carcass was cut into parts including wings with skin, neck, legs (thighs+drumsticks), and breast without skin, and subcutaneous fat with skin and abdominal fat. Ducks reared under the 24L: 0D photoperiod had higher body weight gain ($P < 0.001$); feed intake ($P < 0.001$); percentage of breast, wings, and skin with subcutaneous fat percentage ($P < 0.001$); and abdominal fat ($P < 0.05$). Sex of ducks affected body weight gain ($P < 0.05$; $P < 0.001$) and feed intake ($P < 0.05$) at days 1–42. In conclusion, body weight gain and carcass development of ducks reared under the 24L:0D photoperiod was higher than those reared under the 16L:8D photoperiod. 24L:0D photoperiod is recommended for growth and carcass development in intensive Pekin duck-rearing systems.

O-17

COMPARISON OF SEROPOTENCY OF *RHODOCOCCUS EQUI* CANDIDATE VACCINES WITH MONTANIDE IMS 3012 AND MONTANIDE PET GEL A ADJUVANS IN THOROUGHBRED ARABIAN MARES

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Rhodococcus equi (R. equi) is a Gram-positive, nonmotile, obligate aerobe, intracellular microorganism. Virulent R. equi causes pyogranulomatous bronchopneumonia in young foals aged from 1 to 6 months. Young foals may also develop extra pulmonary disease, such as septic arthritis, osteomyelitis, ulcerative enterocolitis, mesenteric lymphadenopathy, neonatal diarrhea, and sudden death. R.equi bacterium is present in soil and horse feces, and it is initially isolated from pulmonary lesions of foals. Foals are thought to become infected when, within the first few days of life, they ingest or breathe in soil, dust, or fecal particles harboring the bacteria.

In the this presentation, two inactive R. equi (K2002 strain) vaccine candiates were prepared, using two different adjuvants Montanide IMS 3012 (IMS) and Montanide Pet Gel A (PGA) (bacterin+VapA+IMS and bacterin VapA+PGA), and serological potency of these vaccines evaluated in thoroughbred Arabian mares. For each group, 10 pregnant mares were intarmuscularly vaccinated three times (to obtain high colostral antibody titers) at months 8th, 9th, and 10th during pregnancy. Blood samples were collected from mares at vaccination days and after the bird (approximately one month later from the last vaccination). To determine the antibody titers in the mares, a homemade ELISA tool which coated with VapA proteins or whole cells of R. equi (S2002 strain) was used.

For VapA proteins, the mean antibody titers were 1/1497, 1/6502, 1/21851, 1/79017 and 1/1140, 1/1792, 1/5734, 1/19699, for whole cell R. equi were 1/1321, 1/4840, 1/34715, 1/64948 and 1/1468, 1/1370, 1/5302, 1/26540 in mares vaccinated with PGA and IMS adjuvanted vaccines at 1st, 30th, 60th and 90th days, respectively.

As a result, it was detected that PGA adjuvanted R.equi vaccine is more effective than IMS to increase the antibody response.

O-18

PROTECTIVE EFFECTS OF TAURINE AGAINST SUBCHRONIC ACRYLAMIDE EXPOSURE IN RATS*

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Acrylamide is mainly produced for its polymerised form. Polyacrylamides are used in many industrial fields such as paper processing, water treatment, mining, and mineral processing. Also, acrylamide is produced from asparagine amino acid during high-temperature cooking of many starch-rich foods comprises French fries, potato chips, bread, biscuits, and cereals. Taurine is an amino acid and plays a crucial role in several essential biological processes such as membrane stabilisation, attenuation of apoptosis and cytoprotective effect according to its antioxidant activity.

The present study aimed to evaluate the possible protective effect of taurine on acrylamide-induced oxidative stress in rats. Totally, 35 Wistar albino male rats were fed standard rodent diet and divided into 5 equal groups. I. Group: control group, II. Group: acrylamide group (15 mg/kg acrylamide treated by gastric gavage during 60 days). III., IV., and V. group received acrylamide (15 mg/kg) + taurine (50, 100 and 200 mg/kg/day) by gastric gavage during 60 days. Malondialdehyde levels of rat tissues significantly increased with acrylamide treatment. However, this treatment caused to decrease glutathione levels in blood and tissues (kidney, liver, heart, brain, testis and lung) of rats. Additionally, acrylamide treatment decreased superoxide dismutase and catalase activities in erythrocyte and tissues of rats. On the other hand, treatment of taurine resulted in a reversal of acrylamide-induced oxidative stress, lipid peroxidation, and enhanced the antioxidant enzymes activities. Moreover, taurine exhibited protective action against the acrylamide-induced histopathological changes in tissues. In conclusion, taurine has dose-dependent protective effect in rats against acrylamide-induced lipid peroxidation and regenerates the tissues.

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O-19

DONKEY'S MILK KEFIR INCREASES APOPTOSIS AND SUPRESSES PROLIFERATION BY MODULATING ENOS-INOS ON EHRLICH ACID CARCINOMA (EAC) IN MICE *

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Lately the effects of nutritional elements in cancer patients has come to a remarkable point. Donkey's milk has been shown to exert antiproliferative effect and Donkey's milk kefir, a fermented milk product, has been shown to exert anti-mutagenic and antibacterial effects. Kefir, exhibits anti- tumoral activity in vivo; yet its mechanism of action remains elusive. In this study, we aimed to investigate the effects of Donkey's milk (DM) and Donkey's milk kefir (DMK) on eNOS and iNOS levels, apoptosis and proliferation on Ehrlich Acid Carcinoma (EAC) in mice.

In our study, 4 separate groups were formed from 34 young adult male Swiss albino mice. To all groups, except group 1, $2.5x10^6$ EAC cells were administered subcutaneously. Without making any application to group 1, the other groups received tap water, DM and DMK respectively for 10 days with gavage method. At the end of the study, animals were sacrificed with high dose anesthesia. With a precision caliper, the short and long diameters of the tumors were measured and tissues were processed with routine histological methods. Active caspase-3, eNOS and iNOS levels were determined by immunohistochemistry. Apoptosis has been shown with TUNEL technique and proliferation has been shown with PCNA antibody. The marked cells were indexed and the statistical analyses were carried out using GraphPad Prism 5.0.

Compared to control and DM administered group, tumor volume was decreased ($P<0.05$) in DMK administered group. Interestingly, compared to control and DMK administered group, the values were increased in DM administered group. With parallel to this values, in DMK group, compared to control and DM administered group, PCNA levels were highly decreased ($P<0.001$). Even compared to control, Apoptotic cell number was lower in DM group and the highest value was on the DMK group (active caspase-3, $P<0.001$; TUNEL, $P<0.01$). It was determined that DM application increased ($P<0.001$) eNOS levels and decreased ($P<0.001$) iNOS levels compared to control group. In the kefir group, iNOS levels were significantly lower than control ($P<0.001$) and DM ($P <0.001$) groups while eNOS levels were similar to control group.

Donkey's milk kefir has increased apoptosis and suppressed proliferation by lowering the eNOS and iNOS coexpression together while Donkey's milk has increased breast tumor development. According to this results Donkey's milk kefir is thought to be beneficial in the treatment of cancer.

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O-20

EFFECTS OF OVARY TRANSPORT AND STORAGE TEMPERATURE ON *IN VITRO* MATURATION AND CUMULUS CELL APOPTOSIS RATE IN CAT OOCYTES

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Long term storage of ovaries can provide opportunity to rescue oocytes from ovaries of endangered or recently dead felids. The objective of the study was to examine the effect of two ovary transport temperature (4 vs 37^{o}C) and time on cumulus cell apoptosis and maturation rates of cat oocytes in vitro. Ovaries were collected from 15 domestic cats at various stages of oestrous cycle by routine ovariohysterectomy following anaesthesia at different local veterinary clinics, and maintained in PBS (phosphate buffer saline) at 37 and 4^{o}C. In order to determine the effects of storing time, some of the ovaries were transported at 4^{o}C stored at the same temperature for 24 h. Selected COCs were maturated at 38 ^{o}C for 48 h in four-well petri dishes included 500µL modified synthetic oviduct fluid (mSOF) medium under mineral oil in a humidified 5% CO_2 incubator. The morphological features of apoptosis were analysed in the cumulus cells at the beginning of in vitro maturation (IVM) in both transporting temperature groups (4 and 37^{o}C) and after 24 h of cold stored group. The apoptosis rates were determined with TUNEL (terminal deoxynucleotidyl transferase-mediated dUTP nick end labeling) using ApopTag® Plus Peroxidase In Situ Apoptosis Kit (Millipore, S7101; Darmstadt, Germany). In all groups, IVM rates of oocytes were determined after maturation period using Hoechst (33342) staining. Although the apoptotic morphological features were seen rarely and similar rates in 37 and 4^{o}C transporting groups (19.40 and 21.55 %) but, it was seen more intensely in the 24 h cold stored group (34.80 %). The differences between two transport and cold stored groups rates were statistically significant ($p<0.001$). The IVM findings were 49.77, 44.55 and 18.90 % at 37^{o}C, 4^{o}C transporting and 24 h cold stored groups respectively.

In conclusion, the results of this study suggest that (I) cumulus cells of cat oocytes are partially exposed to apoptosis during transportation at both warm and cold temperatures, (II) the cumulus cells exposed at much higher rates after cold storing 24 h and (III) the cold storing of cat ovaries at 24 h, have deleterious effects on in IVM rate of oocytes.

O-21

PROFILE OF ETIOLOGIC AGENTS CAUSING SUBCLINICAL MASTITIS IN DAIRY CATTLE IN KARS REGION, TURKEY

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Mastitis is the inflammation of the mammary gland, characterized by physical and chemical changes in the milk and pathological changes in the udder tissue. Mastitis is one of the most important problems of dairy cow industry.

In this study, it was aimed to investigate bacterial agents causing subclinical mastitis in cow husbandry in Kars province. Within the scope of the study, it was taken 40 ml of milk samples from 120 cows that were determined to be subclinical mastitis by California mastitis test (CMT) and evaluated in the laboratory. For bacterial isolation, milk samples were streaked onto Blood Agar (containing 7% sheep blood), Eosin Methylene Blue Agar (EMB) and incubated at 37 °C for 24-48 hours under aerobic conditions. For Mycoplasma spp. isolation, milk sample was transferred to Pleuropneumonia-like Organisms (PPLO) broth. After the pre-enrichment, samples were transferred on PPLO agar and incubated at 37°C for approximately 10 days under microaerobic conditions. For phenotypic identification, cultures were evaluated according to colony morphology, haemolysis and gram stain properties, and then were subjected to biochemical tests. Molecular characterization was performed for coagulase positive Staphylococcus spp.

As a result of bacteriological studies, 229 Staphylococcus spp., 7 Corynebacterium spp., 16 Bacillus spp., 5 Acinetobacter spp., 2 E. coli, and 2 Mycoplasma spp. were isolated from milk samples of 120 cows. At the result of PCR 138 (60,3%) of 229 Staphylococcus isolates were identified as S. aureus.

Profile analysis of agents causing subclinical mastitis in cows was displayed large diversity and with the high isolation rate (60,3%) S. aureus is determined major causative agent of mastitis. For this reason, milk hygiene and environmental control are important for mastitis control.

O-22

DETERMINATION OF THE MICROBIAL FLORA, PH, TEMPERATURE CHANGES AND ITS EFFECT ON QUALITY AT CATTLE CARCASSES IN THE PROCESS OF CUTTING AND PRE-COOLING

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This research was conducted to determine the changes in microbial flora, Ph and internal temperature of cattle carcasses during slaughter stages. ort his purpose, swab samples were taken from five regions of the carcass, including two arms, two buttocks and briskets at the stages of skinning, evisceration, washing and after storage of the same carcass for 24 hours for microbiological analyzes. In total, 240 samples were taken from 12 cattle carcasses and analyzes were carried out. As the microbiological analysis, ocurrence of Salmonella spp., Enterobacteriaceae, and counting of total mesophilic aerobic microorganism populations were performed. Besides, total mesophilic aerobic microorganism and yeast levels were determined in the slaughtering area and chill room where the carcasses are stored. In the study, changes in pH and temperature were also determined in the limbs and buttocks of cattle carcasses after skinning, evisceration, washing and storage.

There was no statistically significant difference ($p > 0.05$) between the sampling stages in total aerobic mesophilic microorganisms and Enterobacteriaceae group microorganisms in limbs, buttocks and brisket areas in different processing steps of cattle slaughtering.
It was determined that pH and temperature values were decreased periodically in all carcass regions as the slauhtering stages progressed ($p < 0.05$). Salmonella spp was not detected of the 240 cattle samples analyzed in the study.

As a result, it has been determined that skinning, evisceration and storage can be regarded as the critical control points in terms of food safety and the effective application of slaughtering hygiene in slaughterhouses is particularly important for carcass shelf life, public health and economic value.

O-23

EFFECTS OF DIFFERENT GARLIC FORMS ON TURKISH SUCUK QUALITY

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Sucuk (Turkish type sausage) is a popular and one of the most consumed meat product in Turkey. Sucuk is produced by mixing meat (beef, sheep or buffalo meat), oil, salt, sugar, garlic, and a mixture of some spices. Sucuk produced in Turkey are classified into two groups as fermented and heat treated. However, fermented sucuk are more popular regarding its taste and aroma. To prevent growing of pathogenic or saprophytic bacteria in food, the use of natural compounds is increasing instead of using chemical substances which could be harmful to human health. Efforts to determine the antibacterial properties of some plants or extracts and different forms of them are ongoing. Garlic contributes to sucuk production as an antibacterial agent and as an additive for the formation of flavour and aroma. In this study, the possibility of using different garlic forms (clove of garlic, oil, powder) in sausage production has been investigated. For this purpose, the sucuk dough was prepared using a mixture of red meat, fat and spice. Then, sucuk dough was divided into three groups. Clove of garlic (Group A), garlic oil (Group B) and garlic powder (Group C) were added to these groups, respectively and the prepared dough filled into collagen casings. It was then fermented for 12 days (22-25 ^{o}C, 80-85 relative humidity). Samples were taken during the fermentation period on 0, 3rd, 7th, 12th days. On the same days, total aerobic mesophilic bacteria, lactic acid bacteria, yeast/mold and coliform bacteria counts, pH determination and moisture determination analyses were performed. At the end of the fermentation (day 12th), sensory examination of sucuk samples was carried out. The results of the study showed that difference between groups (A, B, C) were not statistically significant ($p>0.05$) regarding TAMB (7.39-7.65); LAB (7.15-7.59); and yeast/mold (4.06-4.35); pH (4.99-5.09); Humidity (36.76-37.30). The sensory examination points of the sucuk samples ranged from 7.50 to 7.90 ($p>0.05$).

As a result, no significant difference was found between the garlic forms (clove of garlic, oil, powder) used in the fermented sucuk samples. Therefore, it is suggested that one of the three garlic forms can be used for sucuk production, which is the easiest to find for producers.

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O-24

THE LEVELS OF TRACE ELEMENT AND MACROMINERALS IN CALVES WITH SEPSIS

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The aim of the study was to determine the levels of macrominerals and trace element in blood in newborn calves with sepsis. The study was carried out on a total of 30 calves, 2-35 days of age in different breed and gender, 25 with sepsis and 5 with healthy calves. Clinical and laboratory examinations of calves were performed. To determine the levels of hematologic, blood gases, macromineral and trace element, 8 ml blood was collected once from V. jugularis. Levels of mineral were determined by ICP-AES device and hematologic analysis was performed using an automated hematology cell counter. In clinical examination, an increase in refill time of capillary and tachypnea in calves with sepsis was observed. While the levels of blood Cu, K, lactate, and WBC of calves with sepsis were significantly high compare with the control group, levels of pH, Na, total and ionized calcium, HCO3 and BE were also significantly low compare with the control group. Furthermore, while the levels of blood Fe, Zn, S of calves with sepsis are low, however, the P level is high compare with the control group. However, there was no statistical difference.

As a result, it was determined that the levels of Na, Fe, Zn, S, total and ionized calcium in calves with sepsis were low, however the levels of P, Cu, K were also high.

O-25

DETERMINATION OF PATHOGENICITIES OF *STAPHYLOCOCCUS AUREUS* STRAINS ISOLATED FROM MILKS OF DAIRY COWS WITH MASTITIS

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This study aimed to determined pathogenicities of Staphylococcus aureus strains as “master seeds” to use mastitis vaccine.

Totally, On of 218 S. aureus strains isolated from milks dairy cows with mastitis were selected according to proterties of phenotyping and genotypic. Different concentrations (1x109, 1x108, 1x107 bacteria/ml) of each 10 S. aureus were prepared. Each bacteria concentrations to 10 mice were intramuscularly injected to back leg muscle.

Mice were observed for 20 days and evaluated for disease occurrence and death.

Ten S. aureus tested for patogenicities were found to be caused disease and death in mice at high concentration ($1x10^9$ bacteri/ ml). However, it has been shown that especially 2 isolates of S. aureus (31 and 58) are highly pathogenic at a lower concentration ($1x10^7$ bacteria/ml) and were caused a high number of deaths.

In conclusion, it was chosen 2 S. aureus isolates (31 and 58 isolates) that were more pathogenic to use S. aureus mastitis vaccine as "vaccine seeds".

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O-26

NEURAL FORM OF OVINE LISTERIOSIS IN KOSOVO

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An outbreak of ovine listeriosis with neurological clinical signs and fatality cases was investigated in a flock of sheep in Kosovo. Ten adult ewes and 8 lambs were affected out of 277 sheep during this outbreak in March 2015. Clinical examination showed in all animals circling movements, unilateral facial paralysis, stiffening and opisthotonus, corneal opacity and retention of food in mouth. Despite treatment with procain, penicillin G and B complex animals couldn't survive and died. Tissue samples from the brain were taken out from 2 dead ewes and one dead lamb to determine the histopoathological changes. For bacterial isolation and identification tissue samples such as brain liver, kidneys, spleen and urine were taken from dead animals and blood and milk samples from clinically diseased animals. For the identification of isolates MALDI TOF was applied. The isolates were also tested for antimicrobial resistance of the most antibiotics used in veterinary medicine. Histopathological examination showed perivascular infiltration of lymphomononuclear cells in medulla oblongata, Virchow-Robin spaces are enhanced and neuroparenchymal lesions appeared from flux of inflammatory cells. In our investigation L. monocytogenes was isolated from 3 brain and one urine sample of the total of 20 investigated samples originated from sheep with neural form of listeriosis. No listeria was isolated from blood, liver, kidney, spleen and milk samples. MALDI biotyper revelad Listeria monocytogenes and the molecular resotypisation reveled the Listeria monocytogenes serotype 4b. This study shows the risk of Listeriosis in the winter months due to the feed preparation, feed storage and feed handling practices and biosecurity and the most probable source of infection is to be considered silage and the risk of Listeria transfer to milk and further food production chain.

O-27

DETERMINATION OF THE EFFICACY OF ELECTROLYZED WATER ON REDUCING FOODBORNE PATHOGENS IN CUTTING BOARDS

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One of the most important source of foodborne pathogens is cross-contamination from cutting boards, knives and food preparation surfaces. Methods for reducing or inactivating pathogens from this sources are necessary for establishing food safety at homes, restaurants, and other food service units. Electrolyzed Water (EW) is currently gaining popularity as a sanitizer in the food industry. EW was initially developed in Japan and it has been reported to have strong bactericidal effects on most pathogenic bacteria. The major advantages of using EW are less adverse environmental impacts, it is safe for staff, non-irritating, has minimal toxicity and low cost.

The aim of this study was to determine the efficacy of EW for reducing or eliminating Salmonella Typhimurium, Listeria monocytogenes, Staphylococcus aureus and Escherichia coli on unscarred, wooden cutting boards. For this purpose 1 milliliter of each selected pathogen (10^9 CFU) was inoculated on a different 100 cm^2 (10x10) unscarred cutting board. Following the inoculation, the boards were air-dried for the attachment of the pathogens for 1 hour and then each cutting board immersed in 500 ml of EW (% 5 concentration) at room temperature for 10 min. After that, the surviving population of the pathogens on cutting boards and in soaking water was determined by sampling at minutes 0 (zero) and 30, and hours 2, 8 and 24. One cutting board which is contaminated but not immersed to the EW was evaluated as a control group for each pathogen, and the same sampling method was applied to them.

According to the control groups, it was detected that E. coli, S. Typhimurium and S. aureus attached 10^6 CFU, and L. monocytogenes 10^5 CFU. Soaking of inoculated cutting boards in EW reduced all the pathogens populations by 1 log CFU/100 cm^2 on cutting boards at minute 0 (zero). S. aureus and S. Typhimurium was not detected after the 8. hour, also E. coli and L. monocytogenes were not survive after 2 hour. All of the pathogens were not detected in soaked EW after the treatment. This study revealed that immersion of cutting boards in EW could be used as an effective method for reducing foodborne pathogens on cutting boards.

O-28

VIRAL PARTICIPATION ON CALF DIARRHEA

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Calf diarrhoea problem is a big financial issue of cattle industries. Bovine rotavirus and coronaviruses are mostly studied viral causative agents for diarrhoea. Recent studies indicate that more viral participation for early life diarrhoea in the cattle could be possible. The study handles the role of some viral agents belonging to Picornaviridae (Bovine enterovirus, Aichivirus B, Hunnivirus A), Caliciviridae (Bovine norovirus, Bovine nebovirus), Rotaviridae (Bovine rotavirus), Coronaviridae (Bovine coronavirus), Astroviridae (Bovine astrovirus), on the calf diarrhoea problem. A total of 127 stool samples from diarrheic calves were collected from the cities Sivas, Malatya and Elazığ from 2014 to 2015.

For the detection of these viral agents, except Bovine coronavirus and Bovine rotavirus, RT-PCR primers were designed by using benchling software. No viral agents were detected from 20.47% (26/127) of the diarrheic calves. Of the samples, 38.58% (49/127) for Bovine rotavirus, 29.92% (38/127) for Bovine coronavirus, 25.98% (33/127) for Aichivirus B, 24.41% (31/127) for Bovine nebovirus, 11.02% (14/127) for Hunnivirus A, 10.24% (13/127) for Bovine torovirus, 5.51% (7/127) for Bovine enterovirus and 3.15% (4/127) for Bovine astrovirus found to be positive.

On the other hand, one of the sample detected to be infected with 5 viral agent (rota, corona, toro, aichi, hunni) simultaneously. While, 4.72% (6/127) of stool samples detected as 4 virus mixed, 11.02% (14/127) of stool samples detected as 3 virus mixed, 23.62% (30/127) of stool samples detected as 2 virus mixed, 37% (47/127) of stool samples detected as one virus positive, and the sum of 79.53 (101/127) of stool samples found to be infected at least one of these viruses. As the results of the study we suggest that these viral agents should be considered for the calf diarrhoea.

O-29

THE PATHOLOGICAL EVALUATION OF THE NODULAR LESIONS OF DOGS SUBMITTED TO PATHOLOGY DEPARTMENT OF FACULTY OF VETERINARY MEDICINE, KYRGYZ-TURKISH "MANAS" UNIVERSITY

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The object of this study was to review the records of twenty-four dogs with nodular lesions based on macroscopy, cytology and histopathological examinations. This study was conducted in pathology department of the faculty of veterinary medicine, Kyrgyz Turkish "Manas" University, Bishkek, Kyrgyzstan from September 2015 until March 2017.

Surgical resections of the neoplasm, cytology or biopsy materials from 24 dogs were analyzed according to the age, sex, and breed, location of neoplasm, radiography, hematology and histopathology.

Most of the dogs were middle-aged to old and females were more predisposed than males. According to results the predominated tumor types were mammary adenoma or adenocarcinoma (n=8), Lymphoma (n=4), trichoepithelioma (n=3), Hemangioma (n=1), transmissible venereal tumor (n=2), chondrofibrosarcoma (n=1), cystic sebacious adenoma (n=1) and, lipoma (n=1), and myxoma (n=1). Two nodular changes (n=2) were described as non-tumoral lesion: dermoid and chronic ulserative dermatitis. At the radiographic examination of lungs, metastatic structures were commonly seen in mammary adenocarcinomas and lymphomas.

In conclusion, mammary tumors, lymphomas and trichoepitheliomas were mainly seen nodular lesions in the dogs submitted to pathology department of faculty of veterinary medicine, Kyrgyz Turkish "Manas" University, Bishkek, Kyrgyzstan from September 2015 until March 2017.

O-30

COMPARISON OF SOME HEMATOLOGICAL AND BIOCHEMICAL ANALYSIS, ANAE PROFILE AND NASAL EXFOLIATION BEFORE AND AFTER THE RACE INJUMPING HORSES IN BISHKEK REGION IN KYRGYZSTAN*

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As in the world, popularity of horse jumping races increase in Kyrgyzstan and important spending are made for performance and health checks. It is important to evaluate those hematological, biochemical and other factors of the animals before and after the race for good performance.

The study was conducted for the evaluation of some hematologic (WBC, RBC, HGB, HCT, MCV, MCH, RDW-CV, RDW-SD, PLT, MPV, PDW, PCT) biochemical (glucose, ALT, ALP, AST, LDH, urea, GGT, creatinine), ANAE profiles and nasal exfoliation before and after the race.

For hematology and biochemistry, blood samples were taken with EDTA and normal tubes before and after the competition and analyzed with hematologyanalyzer (Mindray BC-2300, China) and Semi-Auto Chemistry Analyzer (BA-88A Mindray, China) respectively. Peripheric blood slides and nasal exfoliation slides were stained with ANAE and Giemsa stains, respectively. All data were analysed in statistic.

At the end of the study HCT and MP from the hematological data were found statistically important. ANAE profiles have been affected by the race. In biochemistry except many of serum values (ALT, ALP, AST, LDH, urea, GGT, creatinine) glucose levels have been decreased after the race performance. Besides, there was no statistical difference in nasal exfoliation.

It is concluded that limited hematological and biochemical difference were shown in jumping horses before and after the race.

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O-31

INVESTIGATION OF ENTEROTOXIN GENES BY MULTIPLEX POLYMERASE CHAIN REACTION (mPCR) OF *STAHYLOCOCCUS AUREUS* ISOLATED FROM MEAT SAMPLES

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Staphylococcal food intoxication is one of the most common types of foodborne disease around the world. Staphylococcal food poisoning results from the ingestion of food containing preformed staphylococcal enterotoxins produced by the enterotoxigenic staphylococci mainly Staphylococcus aureus. The bacterium is most prevalent in protein rich foods of animal origin such as meat, poultry, fish and milk products. Enterotoxigenic strains of staphylococci have been extensively characterized based on genotypic and phenotypic characteristics. Staphylococcal Enterotoxins (SEs) have been divided into 5 major serological types (SEA, SEB, SEC, SED, SEE) on the basis of their antigenic properties. In recent years new types of SEs (SEG through SEV) have been also identified.

The aim of the present study was to provide information about the spread of isolates harbouring both classical and newly described enterotoxins genes by multiplex Polymerase Chain Reaction (mPCR) in S. aureus isolated from raw-meat, meat product, hand swap and surface samples. By PCR amplification, thirty nine isolates (39/126, 30.9%) were positive for toxic shock syndrome toxin-1 (tsst-1) gene. By mPCR amplification, eighty seven isolates (87/126, 69%) harbored one or more SE genes, and seg and sei were the most common patterns. None of the isolates harbored the genes encoding sec and see. The application of this mPCR assay could enable more samples to be rapidly characterized for enterotoxin production of S. aureus isolates from meat samples for epidemiological stıdies.

O-32

THE NEW ALTERNATIVE TEST METHOD COMPARED WITH THE ELIZA AND OTHERS ON DIAGNOSIS OF BRUCELLOSIS

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As a result of investigations of highly sensitive and available to the general practice methods of Diagnosis, researchers tested and proposed: indirect hemagglutination test (IGT), immunofluorescence assay (IFA), enzyme-linked immunosorbent assay (ELISA), Conglutinating Complement Adsorption test (CCAT), Coombs test (CT), Conglutinating Complex Fixation Test (CCFT). Among these methods CCFT was proved to be the most promising and according to the instruction for use called by the name of author – Saiduldin test (ST).

CCFT can replace complex of diagnostic test like: AT, CFT, LCFT, RBT and in terms of sensitivity is not inferior to IGT, IFA, CT, ELISA. Besides, it is the most economical and specific test. Same components and equipment are used in CCFT as in the classical CFT, except of replacing guinea pig complement with bovine blood serum containing Conglutinin and Complement. Last is actively reacts to the Complement, fixed-antigen-antibody Complex, so an Immune Complex interacts both with the Complement and Conglutinin. Since Complement and Conglutinin act as a single functional system, the serum, which is the Source of these factors called "conglutinating".

The high efficiency of CCFT is noted at the Serological Diagnosis of Bovine Tuberculosis. The method has also been proved valuable for the detection of Brucella antigen in the pathological material, not inferior to the sensitivity of the antibody neutralizing the reaction. In cases of positive indications of CCFT at negative results of AT, CFT, LCFT and RBT were conducted Bacteriological tests of aborted fetuses for Brucellosis. Thus diagnosis was confirmed in 57.6% of the animals. In another experiment, 46 cows with similar readings of Serological Tests with bioassay on guinea pigs, Brucellosis was set in 54.3% of cases. CCFT specificity compared with AT and RBT confirmed with diffusion Precipitation Reaction with OPs antigen. Production of conglutinating serum was established in order to implement the CCFT in veterinary practice.

O-33

TETRODOTOXIN IN VETERINARY PERSPECTIVE: FACTS AND FUTURE PERSPECTIVE

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Tetrodotoxin (TTX) is known as the most powerful marine toxin. It is a deadly neurotoxin that acts via inhibiting sodium channels and impulse transmission. Colourless and odourless TTX is heat resistant because it is not in protein structure so it is difficult to remove from foods.
This toxin has been identified in many sea creatures especially in the puffer fish. TTX is more commonly associated with a puffer fish because the puffer fish is being consumed in Japan and many related poisonings have been reported. Uncontrolled consumption of puffer fish leads to poisoning and it is seen as an important threat to public health because of the absence of a known antidote. TTX containing species have recently seen in the Mediterranean See and have attracted attention because it could be threat for Turkey.

The positive effects of TTX on human health are also being investigated. It is reported that TTX can be used as an antitumor agent, in treatment of drug dependence and in anaesthesia. There are some hypotheses about the origin of toxin but it is still unclear. It is foreseen that the continuity of research will be important in order to clarify many unknowns and to increase its usage areas.

In this presentation, the details of TTX in the veterinary perspective are discussed.

O-34

DETECTION OF PATHOGEN *CANDIDA SPP.* IN CIG KOFTE – A TURKISH TRADITIONAL MEATLESS RAW MEATBALL

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Cig köfte is a Turkish traditional ready to eat food and eaten without any cooking process. In order to maintain public health, cig köfte is produced without the addition of raw meat. Industrial production of cig köfte has become widespread in recent years. Cig kofte is a potential problem for food hygiene such as reasons; production and storage conditions, personel hygiene and uncooked consumption. The ability of Candida species to form biofilm poses a risk to the food industry. Candida species are important for pathogenic yeasts which have been able to infect humans with food in recent years. The genus is composed of a heterogeneous group of organisms and more than 17 different Candida species are known to be an etiological agents of human infection; however, more than 90% of invasive infections are caused by Candida albicans, Candida tropicalis and Candida krusei. Biofilm formation by fungi may play an important role in pathogenesis. In recent years, the pathogen Candida spp. has attracted attention as an important food pathogen. The ability of Candida species to form biofilm poses a risk to the food industry. This biofilm layer contributes to the development of antifungal resistance. Furthermore, recent studies indicate that C. albicans biofilms are resistant to killing by neutrophils.

In this study, we were evaluated 100 cig köfte samples collected from markets. Samples were transported to the laboratory under refrigeration and aseptic conditions. The samples were investigated microbiologically for the presence of Candida spp. Cig kofte (10 g) samples were diluted with 90 mL of 0.1% peptone water and homogenized for 2 minutes with a Labblender 400 stomacher (Seward Laboratory, London, UK) for the enumeration of Candida spp. Serial dilutions were prepared with 9 mL sterile peptone water. Each dilutions were 0.1 mL spread onto agars. Acidified potato dextrose agar (PDA) was incubated at 25°C for 5-7 days for enumeration of yeasts and moulds. CHROMagar Candida (CHROMagar Candida Company, Paris, France) was prepared according to the manufacturer's instructions. All plates were incubated at 30°C for 48 h aerobically, as recommended by the manufacturer. The appearance of colonies were analyzed including color, size, and textures on CHROMagar Candida,. The color of colonies on CHROMagar Candida was similar as given by the manufacturer, green colonies of C. albicans, metallic blue colonies of C. tropicalis and by purple colored colonies of C. krusei.

The goal of this study was to evaluate the incidence of pathogen Candida spp. in cig köfte – a Turkish traditional meatless raw meatball. Pathogen Candida spp. was found 10% of cig köfte samples. C. albicans was detected 10%, C. albicans and C. krusei were detected 2%, C.albicans, C. tropicalis and C. krusei were detected 2% in Candida spp. positive meatless cig köfte samples. Also, yeast and molds counts were detected min. 3.00 log cfu/g, max. 7.34 log cfu/g mean 4.934 ±0.093 log kob/g. in 100 cig köfte samples.

Although there are many studies on hygiene and presence of pathogenic microorganisms in cig kofte, it seems that there are a few study on the analysis of the pathogen Candida spp. Total number of yeats and molds counts is not refer to pathogenic Candida spp in microbiological analysis of foods. As a result, microbiological analysis of food samples should be made not just for the total number of yeasts and molds, the samples should also be tested for the presence of pathogenic yeast it would be beneficial for the public health. We suggest that to be aware of the presence of pathogen Candida spp. in food.

O-35

COMPARISON OF INSTALLED LIDOCAINE AND PROCAINE EFFECTS ON PAIN RELIEF IN DOGS UNDERGOING ELECTIVE OVARIOHYSTERECTOMY

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Ovariohysterectomy (OVH) is one of the most commonly performed surgeries in general practice and is considered to be a moderately painful procedure. Lidocaine is a mild local anesthetic and antiarrhythmic agent that has been used for years in canine clinical practice to provide loco-regional analgesia and to treat ventricular dysrhythmias. Procaine is a local anaesthetic of the ester type which is rapidly hydrolyzed in the plasma. The aim of the present study was to compare the analgesic efficacy of installed intraperitoneal lidocaine and procaine perioperative following elective OVH in dogs.

Twenty-four sexually intact female dogs (weiging between 5.5 and 18 kg, and from 7 months to 8 years in age) referred for the OVH procedure. The dogs were randomly allocated to one of three groups, with eight dogs in each group. Electrocardiogram, non-invasive blood pressure (BP), respiratory rate (RR), heart rate (HR), pulse oximetry, and rectal temperature were monitored continuously throughout the anesthesia. The L and P groups received intraperironeal instillation of 3.5 mg/kg of 0.2% lidocaine and procaine and the control group received 1.75 ml/kg of intraperitoneal saline in a similar fashion. The therapeutic agent was received over the area of ovaries, broad ligament, and uterine stump. Heparinized blood samples (4 ml) were collected through the indwelling sephalic vein catheter.

Mean (±SE) systolic, mean, and diastolic BP values increased 20% in the control group following the ligation procedure. The same investigator, who was not informed of the dogs' group assignment, evaluated the pain behaviors of all dogs using the short form of the Glascow Composite Measure Pain Scale (CMPS-SF). Groups L and P had significantly lower CMPS-SF scores than the control group, at the 0.5, 1, 2, 3, 8, and 24 hour postoperative periods ($P < 0.05$). The highest and lowest CMPS-SF values were determined at 2 h (6.00 ± 0.71) and 24 h after surgey (2.38±0.37) in group L. Likewise, the highest and lowest CMPS-SF values were determined at 0.5 h (group P, 5.75 ± 0.28; control group, 8.88 ± 0.54) and 24 h after surgey (group P, 3.88 ± 0.65; control group 6.88 ± 0.48) in the other groups. Glucose levels differed significantly at 3 and 8 h for groups L and P when measured against the control group ($P<0.05$).
In conclusion, administration of procaine could be used for pain management intraoperatively and after abdominal surgery procedures such as OVH in dogs.

O-36

MORPHOMETRIC ANALYSIS OF THE MANDIBLE IN TERMS OF GENDER OF RED FOX (*VULPES VULPES*) LOCATED IN KARS

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The objective of this study was to specify the differences on the mandibulae of Red fox. The red fox (Vulpes vulpes) is the largest of the true foxes and the most abundant wild member of the Carnivora, being present across the entire Northern Hemisphere from the Arctic Circle to North Africa, North America and Eurasia. It is listed as least concern by the International Union for Conservation of Nature morphometry is a survey technique in which the width, length or angle between two pre-designated points were statistically analyzed and numerical or graphical results then obtained. It has been conducted morphometric analyzes on adult male and female red fox located in Kars province. Eight mandibula (four of them were male and four female) obtained from the Wildlife Rescue and Rehabilitation Center of Kafkas University was used as material the mandibulae have been measured from 20 different measurement points with the help of an electronic compass. The data accumulated have been evaluated by SPSS (18.0) software. The mandibulae have been severed from the heads they were attached to and then skin and muscle have been scraped off, then macerated in hydrogen peroxide for 25-30 minutes.

As a result, the mean length of the mandible (distance between infradentale and gonion caudale) was 101,02 ± 7,22 mm for males and 105,36 ± 6,34 mm for females. The mean height value (distance between the gonion ventrale and the extreme end of the processus condyle) was 34,40 ± 3,87 mm in males and 35,58 ± 3,59 mm in females.

O-37

THE EFFECTS OF QUERCETIN ON ANTIOXIDANT SYSTEM AND SOME BLOOD PARAMETERS IN RATS EXPOSED TO ACUTE CADMIUM TOXICITY*

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The aim of this study was to determine the effects of quercetin on antioxidant system and some blood parameters in rats exposed to acute cadmium toxicity.

Adult male "Wistar-Albino" rats (n=30) were used and divided into four groups in this study; Control (C, n=6), Cadmium (Cd, n=8), Quercetin (Q, n=8) and Cadmium+Quercetin (Cd+Q, n=8). They were kept uniform feeding and managemental condition. Cadmium chloride (CdCl2, 4 mg/kg/day, subcutaneously) were administrated to Cd and Cd+Q groups and Quercetin (Q, 50 mg/kg/day, intraperitoneally) were given to Q and Cd+Q groups for 3 days, respectively. Control group was not recieved any treatment. Blood samples were collected from all animals at 4th days after treatment and the levels of serum SOD, MDA, GSH and plasma katalaz, ALT, AST, GGT, total protein and albumin were determined.

However serum MDA levels were found to be higher ($P < 0.05$) in Cd group than the other groups, it was similiar in both Q and C groups. Serum SOD, GSH and catalase levels were lower ($P<0.05$) in Cd group than the other groups. Albumine and total protein levels were lower ($P<0.05$) in Cd group. ALT, AST and GGT enzyme levels were higher in Cd group than C and Q groups ($P<0.05$). Thus, negative effects of acute cadmium toxicity on rats were ameliorated with quercetin treatment.

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O-38

THE EFFECT OF INTRAOCULAR PRESSURE (IOP), SERUM CALCIUM, MAGNESIUM AND INORGANIC PHOSPHORUS CONCENTRATIONS ON JUMPING PERFORMANCE OF HORSES[**]

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The aim of the study is to evaluate the relation of serum mineral levels (Ca, Mg, Pi) with intraocular pressure (IOP) and jumping performance of horses.
Twenty-four jumping horses, actively participated in the competition, were selected from a horse sport center in Bishkek. Intraocular pressures in both eyes of each horse were measured by using a tonometer and blood samples were collected for analyzing serum Ca, Pi and Mg levels by using Semi-Auto Chemistry Analyzer (BA-88A Mindray, China).
IOP, serum Ca, Mg and Pi values were measured in normal ranges in all jumping horses. Although Ca and P levels were found different in statistic ($p<0,05$) between the groups, IOP and serum mineral levels of Ca, Mg and P have not been found effective on race performance.

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O-39

INFLUENCE OF *YUCCA SCHIDIGERA* ADDITIONS TO THE LITTER ON BROILER PERFORMANCE

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Litter quality has an important effect on the health and performance of broilers. Because broilers are grown on the litter and they are exposing to the litter and its contents (microbes, ammonia etc.) from the first day. Litter quality deteriorates during production period. Supplements are used in poultry production for increasing the quality of the litter. Nevertheless, before this management practice is widespread, answers to questions about the environmental impacts of different chemical amendments and their safety cultivation on commercial farms should be sought. Yucca extract has been used as a feed supplement to reduce ammonia concentration in poultry barns safety. Therefore the aim of this study was to determine the effects of *Yucca schidigera* (Y.*schidigera*) additions to the different litter materials on broiler performance.

Five hundred seventy six 1-d-old male chicks (ROSS-308) were used. They randomly assigned to 48 pens. The trial design with 2 litter (wood shavings (WS) and rice hulls (RH) and 4 Y.schidigera treatments (control; 100 ml of 4%; 8% and 12%) with 6 replication pens (n=12) in a naturally ventilated broiler house. The body weight, body weight gain (BWG) and feed intake (FI) were measured weekly by pen and feed conversion ratio (FCR) was calculated as the feed-gain ratio. The trial was conducted 42 days.

In this study, Y.*schidigera* additions at 4, 8 and 12% doses to the litter didn't affect the BWG, FI and FCR. This showed that these levels of Y.*schidigera* may not be enough to improve the broiler performance. However this study indicated that litter material is an important factor for production parameters in certain production periods.

A significant interaction between litter materials and the highest BWG was achieved with the addition of 12% Y.*schidigera* to the WS. Total FI and total FCR in RH groups was lower than those of WS groups in first 21 days. Simple main effect analysis showed that FCR's of broilers grown on the 4 and 8% Y.*schidigera* additions on WS were significantly higher than RH from 1 to 21 days. However from 22 to 42 and from 1 to 42 days FCR of broilers grown on RH with 12% Y.*schidigera* additions were significantly higher than that of WS.

As a conclusion, the addition of Y.*schidigera* at 4, 8 and 12% doses to the litter didn't affect the performance. However, litter material and the level of Y.*schidigera* interaction should be taken into account for BWG and FCR.

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O-40

IMMUNOHISTOCHEMICAL EXPRESSION OF GLP 1 (GLUCAGON LIKE PEPTID 1) IN THE ILEUM TISSUE OF HEALTHY AND DIABETIC MICE

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Glucagon like peptide-1 (GLP 1) is a incretin hormone produced in L cell in the small intestine. Its main function is stimulating insulin secretion after intake oral glucose. In this study, we aimed to investigate immunohistochemical expression of GLP 1(Glucagon like peptid 1) in the ileum tissue of healthy and streptozotocin (STZ) diabetic mice.

In this study, 18 male mice (Balb c) were divided into 3 groups: control group was untreated, sham group was applied Na citrate buffer solution as i.p. injection, and diabetic group was applied streptozotocin (100 mg/kg) dissolved in 0.1 M Na citrate buffer solution as a single dose via i.p. injection. At the end of the 30 days, tissue samples were taken. Tissue samples were embedded in parafin. The avidin-biotin-peroxidase complex (ABC) technique was applied to determine immunohistochemical expression of GLP 1(Glucagon like peptid 1) in tissue sections. Crossman's modified triple stain was applied to the sections to examine the histological structure of tissues.

There were no differences between the groups in triple stain. It was observed that the wall of the ileum consisted of tunica mucosa, submucosa, tunica muscularis and tunica serosa layers in all groups. In the examination of immunohistochemical expression of GLP 1, it was observed that GLP 1 positive cells (L cells) were distributed mostly in the epithelium of intestinal crypts and then less in the epithelium of intestinal villi. GLP 1 immunreactive cells were observed as open-typed endocrine cells. Immunohistochemical reaction intensity of the GLP 1 were observed similar results in the all groups.

O-41

MORPHOMETRIC AND ULTRASONOGRAPHIC MEASUREMENTS OF CLINICALLY HEALTHY TESTICLES IN GEORGIAN AND ABKHAZIAN GOATS

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Georgian and Abkhazian goats are grown in the border city of Turkey. The numbers of Abkhazian goats is quite small and in recent years the numbers of the Georgian goats is decreasing. The reproductive characteristics of these breeds are not well known. Testis characteristics like testicular diameter, testicular length, scrotal length, scrotal circumference can be determined easily and at an early age. These are used as an indirect selection criteria for the genetic improvement of reproduction. Researches about this topic draws attention to the correlation between testicular size and sperm quality.

The aim of current study was to determine the morphometric and ultrasonographic dimensions of healthy testicles in Georgian and Abkhazian bucks.

In this study, 36-49 months old, healthy, 5 Georgian and 4 Abkhazian bucks were used. In all animals, the testes was measured using morphometric and ultrasonographic methods. After the bucks are weighed, testicular length, testicular diameter, scrotal length and the volume of the scrotum was measured. The testes were scanned in longitudinal and transverse planes with a portable ultrasound imaging machine and convex transducer with frequencies of 5.0-7.5 MHz for ultrasonographic measurements.

The average weight was 44.5 kg in Georgian and 75.5 kg in Abkhazian bucks. Morphometric measurements showed that the testes varied in longitudinal diameter between 11.29 - 11.69 cm, in transversal diameter between 5.13 - 5.24 cm in Georgian and in longitudinal diameter between 11.63 - 12.03 cm, in transversal diameter between 5.46 - 5.94 cm in Abkhazian bucks. The average testicular volume was 4.54 ml in Georgian and 5.61 ml in Abkhazian bucks.

In both breeds, the scrotum was observed in the form of a thick hyperechoic line in ultrasonographic examination. The testicular parenchyma appeared with homogeneous echotexture and the mediastinum testis was observed as a linear hyper-echoic structure in the center. Measurements of the ultrasound images determined that the testes varied in longitudinal diameter between 7.36 - 8.13 cm, in transversal diameter between 4.72 - 4.95 cm in Georgian and in longitudinal diameter between 7.20 - 7.97 cm, in transversal diameter between 4.37 - 4.46 cm in Abkhazian bucks.

In conclusion, the healthy testicles in Georgian and Abkhazian bucks were visualized and measured by ultrasound with this study for the first time. It is revealed by ultrasonographic measurement method was more precise values than morphometric measurement method. The findings established once again the objectivity of ultrasonography for determining real testicular dimensions.

O-42

OPERATIVE TREATMENT OF TUMOR DISEASES OF THE URINARY TRACT

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Among the numerous diseases of animals, pathology of the urinary system frequency and the number of deaths is one of the first places. In recent years, the interest to oncological diseases pathologies of the genitourinary system has increased. Very relevant, in this regard, looks to improve diagnostic, therapeutic and preventive measures. One of the options for the treatment of neoplastic diseases of the urogenital organs are reconstructive surgeries. The result of the surgical treatment of urinary tract tumors depends not only on the extent of the bladder and urethral damage, which is largely due to different stages of tumor development, but also directly from the choice of the surgical intervention and postoperative period. Conducting and evaluating the effectiveness of such operations in experimental conditions is necessary to develop practical recommendations in veterinary surgery.

The aim of the research. Conducting experimental reconstructive operations to restore the volume and functions of the bladder.

Materials and methods of research. The work was carried out in 2015-2016 on 10 experimental dogs. The following types of operations were carried out: 1. Ileovezicoplasty - an increase in the volume of the bladder, provided that the triangle Lieto, at the expense of the ileum. 2. Ureterosigmostomy - complete removal of the bladder and the distal ureteral section is inserted into the lumen of the cecum.. 3. The creation of an isolated bladder from the segment of the small intestine - this method is also recommended for complete bladder damage, and is carried out mainly in younger animals that can undergo a prolonged operation. 4. Sewing wall of the bladder to the ventral abdomen. Recommended only as a temporary treatment for relieving the symptoms of poisoning.

Results: During the operation to remove the ureters in the lumen of the intestine, we noted lesions of the intestine and a change in the stool consistency, and also observed inflammations of paranal glands. The surgery with suturing part of the bladder to the abdominal wall develops near wound dermatis. The creation an isolated bladder from the segment of the small intestine and ileovezicoplasty, the postoperative period is more difficult, the animals recover longer, but the above complications are not detected.

O-43

DISTRIBUTION OF LAMININ IN BLASTOCYST STAGE EMBRYOS

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At blastocyst stage, mouse embryo consist of two cell lineages, the outer layer of trophectoderm (TE), which generates the embryonic portion of the placenta and the pluripotent inner cell mass, which will forms the fetus. Trophoblast cells, which arise from TE, allow the embryo to implant into the uterine wall. It has been known that two basement membranes form, one exist between the PrE cells, appears on the superficial layer of the ICM lining the cavity, and the remaining interior ICM cells and the other one is accumulating on the TE. By the late stage blastocyst ICM cells adjecent to this basement membrane forms the pluripotent lineage epiblast (Epi).

Laminins are extracellular matrix proteins important for basement membrane assembly, adhesion, cell polarization and cell migration. In this study to present the distribution of laminin, we flushed morula stage embryos from the CD1 female oviduct and cultured them in medium until the late blastocyst stage. Embryos were fixed and immunostained with mouse anti-Cdx2, goat anti-Pou5f1 and rabbit anti laminin then images were assessed using a fluorescence microscope.

Our immunofluorescence analysis showed that laminin protein is expressed in the TE and ICM cells suggesting that laminin has roles on lineage differentation at the late blastocyst stage. Altogether, our findings are important for understanding the mechanisms of laminin during implantation of the mouse embryo.

O-44

WITHERS HEIGHT OF THE ARCHAEOLOGICAL HORSES: A NEW FORMULATION BY USING THE MEASUREMENTS OF METACARPALS *

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In this study, equine third metacarpal bones collected from modern day horses and archaeological excavation sites (Yenikapı Metro and Marmaray, Oluz Tumulus (Oluz Höyük), Kadıkalesi, Van Fortress Tumulus Excavations) were used. For this purpose, the third metacarpal bones (300 metacarpi in total, including left and right) from a total of 150 modern day horses (30 Arabian horses-15 male, 15 female; 30 Thoroughbred horses-15 male, 15 female; 30 German-Holstein horses-15 male, 15 female; 30 Haflinger horses-15 male, 15 female; 30 Hungarian Warmblood horses-15 male, 15 female) were assessed. A total of 768 archaeological third metacarpal bones from four different excavation sites were examined in this study. Metacarpal measurements were taken radiographically in modern day horses, and both radiographically and using the direct osteometric method in archaeological equine third metacarpal bones. The study consisted of two sections. The first section comprised modern day horses, while the second section included archaeological equine third metacarpal bones. In the first section of the study, before taking radiographs of modern day horses, age, gender, height of the withers and the external circumference of the metacarpus (cannon bone circumference) were recorded. Regression formulae were devised between morphometric measurements of the third metacarpus for use in then estimating then height of the withers. “Stepwise regression”, in particular, was preferred in this analysis. Thus, models possessing the highest coefficient of determination with the least factors were formed. Also, multipliers were obtained according to the height of the withers/GL and L1 model. These formulations and multipliers were models including joint space, muscle and skin, in relation to the formulation and multipliers reported in the very limited and debatable literary data. Therefore, the debatable points and shortcomings of old formulations obtained from montage skeletons were rectified. Using these formulae, in the second section of the study, osteometric measurements of archaeological equine third metacarpal bones were used to estimate the visual morphological characteristics (height of the withers) of the animals to which the bones belonged.

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O-45

TRACHEAL COLLAPSE AND ITS TREATMENT WITH INTRALUMINAL TRACHEAL STENT IN A YORKSHIRE TERRIER DOG

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Tracheal collapse is a respiratory condition that commonly affects small and toy breed dogs. With this condition, the integrity of the tracheal cartilage progressively weakens, there is laxity of the dorsal tracheal membrane that causes increased upper airway resistance, and this ultimately progresses to partial or complete airway obstruction.The material of the study consisted of a 5-year old male Yorkshire Terrier dog. The dog complaint of difficulty breathing, exercise intolerance and cough which is described as sounding like a goose honk . As a result of x-ray and endoscopy findings, tracheal collapse diagnosed. For treatment, intraluminal tracheal stenting performed to the patient. After the operation, the symptoms improved quickly. With this case, it was observed that intraluminal tracheal stenting is a successful treatment option for this kind of patients.

O-46

GYNECOLOGIC AND PATHOLOGIC STUDY ON THE GENITAL DISEASES OF DOGS IN BISHKEK

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In this study, it was aimed the gynecologic and pathologic investigation of genital problems of dogs in Bishkek. Total 150 female unsprayed and mixed breed healthy dogs were included the study. Genital organs were examined after ovariohysterectomy and histopathology process was done from the removed genital organs.

Although there were no gynecologic and pathologic lesion in one hundred and five dogs (70%, 105/150), total 62 pathologic changes were detected in 45 dogs (30%, 45/150). When pathologic lesions were evaluated according to organs, 19 of the lesions were in ovary (30.65%, 19/62) and 43 lesions were in uterus (69.35%, 43/62). Ovarian lesions were described as inactive ovary (2.67%), fibrosis (0.67%), and ovarian cysts (9.33%) in all animals. In the uterus, edema (0.67%), hemorrhage (0.67%), fibrosis (0.67%), pigmentation (0.67%), mucometra (4.67%), hydrometra (1.33%), hematometra (1.33%), pyometra (4.67%), endometrial hyperplasia (5.33%) and cystic endometrial hyperplasia (1.33%), catarrhal endometritis (4.67%), purulent endometritis (2%) and maceration (0.67%) were detected.

At the end of the study ovarian cysts and hyperplastic or inflammatory changes in the uterus were detected as main genital problems in dogs in Bishkek, Kyrgyzstan.

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O-47

A THREE-DIMENSIONAL RECONSTRUCTIVE STUDY OF PELVIC CAVITY IN THE RED FOX (VULPES VULPES)

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Three-dimensional (3D) reconstructive techniques are being used in many morphometric studies. The present study has been performed to reveal morphometric aspects and diameters of the pelvic cavity via the 3D reconstruction by using multidetector computed tomography (MDCT) images of red fox. A total of 10 adult red foxes, including 6 males and 4 females, were used in this study. Under anesthesia, the images obtained from MDCT were stacked and overlaid to reconstruct the 3D model of the pelvic cavity using the 3D modeling software (Mimics 13.1). Some measurements of pelvic diameters were taken from the reconstructive images of the pelvic cavity of red fox. Some morphometric differences were recorded in male and female pelvic cavities. In conclusion, the pelvic diameters revealed by 3D modeling techniques can be utilized in wild animals for both anatomical training and gynecological applications. The authors hope to assist in the diagnosis and treatment of the pelvic cavity-related orthopedic and gynecological disorders by synchronizing medical practices in the wild animals.

O-48

COAGULASE AND DNASE ACTIVITY AND METHICILLIN RESISTANCE CHARACTERISTICS OF STAPHYLOCOCCAL STRAINS ISOLATED FROM ICE CREAM SAMPLES

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Staphylococcus aureus is an important foodborne pathogen due to the ability of enterotoxigenic strains to produce staphylococcal enterotoxins in food. Staphylococcal foodborne poisoning is one of the most common foodborne diseases worldwide associated with consumption of contaminated milk, milk products, meat, meat products, salads and bakery products, etc. Staphylococcus spp. may produce some substances associated with pathogenic characteristics such as coagulase and deoxyribonuclease (DNase) enzymes. It is known that there is a high correlation between the production of coagulase activity and staphylococcal enterotoxin production. The detection of coagulase activity is an important tool in differentiating S. aureus associated with foodborne illness from other strains.

The aim of this study was to evaluate coagulase and DNase activity and methicillin resistance characteristics of staphylococcal strains isolated from ice cream samples collected from Istanbul. For that purpose total of 101 unpackaged ice cream samples were analyzed for isolation of staphylococcal strains by using Baird Parker Agar with egg yolk tellurit emulsion. Totally 94 of staphylococcal strains were tested for the coagulase, DNase activities and methicillin resistance properties.

Typical and non-typical S. aureus suspicious colonies were determined in 66 (65.3%) of total 101 samples using cultural method. S. aureus contamination rate of 35 (34.6%) out of 101 ice cream samples exceeded according to Microbiological Criteria Anouncement of Turkish Food Codex. Also it was found that 61 (64.8%) of the strains were coagulase positive, 21 of them (22.3%) were DNase positive and 18 of them (19.1%) had methicillin resistance.

The results of this study indicate that unpackaged ice cream sold at retail markets in different districts of Istanbul doesn't have adequate microbiologicial criteria. Also analyzed ice cream samples were found to have enterotoxin occurence potential and methicillin resistant S. aureus isolates. Ice cream which is commonly consumed especially in children, produced in inadequate microbiological conditions and contaminated may poses serious risks in terms of food safety and public health.

O-49

ARTIFICIAL INSEMINATION AND NONSTEROIDAL ANTI-INFLAMMATORY DRUGS

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Artificial insemination (AI) is considered as a crucial technique for farm animals which is commonly applied to cattle. However, high success rates are not always obtained in AI as a result of embryonic deaths. Namely, approximately 25% of embryos die within the first three weeks of pregnancy. Although there are many factors, the progesterone deficiency is the main reason of the embryonic death in cattle.

Maternal recognition of embryo occurs between 15th and 17th days of pregnancy and this period of time is accepted as the critical days, since embryo sends a signal, bovine trophoblast protein-1 (bTP-1), to prevent the production of prostaglandin F_2 alpha from endometrium during this period. On the other hand bTP-1 provides high progesterone concentrations during the critical period of pregnancy in cows. Hormone applications (GnRH and Chorionic gonadotropins) are done in this critical period to increase the pregnancy rate in AI and the embryo transfer. Recently, a new antiluteolitic strategy, which is an application of nonsteroidal anti-inflammatory drugs after AI, has been developed in order to increase the fertility. Firstly flunixin meglumine, meloxicam, carprofen and ibuprofen have been used to increase the pregnancy rate in cows and heifers. It has been reported that pregnancy rates increases in animals when applied flunixin meglumine and ibuprofen before embryo transfer. It is known that pregnancy rates increase in cows and heifers given flunixin meglumine on 13-16 days post insemination. On the other hand, it has been reported that meloxicam and carprofen decrease the pregnancy rates and may have negative effects on corpus luteum.

In conclusion, it is expected that to prevent the embryonic deaths, flunixin meglumine and other nonsteroidal anti-inflammatory drugs will be extensively used alone or with AI protocols with discussions of advantages and disadvantages, in the next years.

O-50

GEOMETRIC MORPHOMETRICS APPLIED TO THE STUDY OF HORSE SKULL

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Geometrical morphometric analyses of equine anatomy are rare, and studies comparing breeds are even more scarce. In this analysis, 42 skulls of 5 domestic equids from different countries (Kazkahstan n=7, Arauca n=4, Garrano n=22, Lusitano n=1, Greece n=7, and a donkey) were used. The skulls are currently housed in the collections of the Faculty of Technology and Bioresources, Kazakh National Agrarian University in Almaty (Kazakhstan), Universidad Cooperativa de Colombia in Arauca (Colombia), Faculty of Animal Science and Aquaculture, Agricultural University in Athens (Greece) and Associaçao de Criadores de Equinos de Raça Garrana in Vieira do Minho (Portugal). More information about the investigated specimens is available upon request to first author.

Each skull was photographed in dorsal view using a digital camera with a 50 mm scale. Seven landmarks were selected, corresponding to the neurocranium, viscerocraniun and total cranium lengths, and neurocranium and viscerocranium widths. These points show the relative extension and width of the skull. The x and y coordinates of each landmark were digitized using tpsDig v. 1.40. The resulting coordinates were subjected to a generalized Procrustes analysis, which removes all the information unrelated to shape, with MorhoJ v.1.06d, which also analyzed data.

Two first principal components explained a 76.34% of the observed variance. Mahalanobis distances among breeds ranged from 1.374 (Garrano-Kazakh breeds) to 3.907 (Greek breeds-donkey). p-values from permutation tests (10,000 permutation rounds) for Mahalanobis distances among groups were significative ($p<0.05$) for Greek and Kazakh breeds and Greek and Garrano. These results suggest several morphological skull types for equine breeds, mainly centered on rostral positon of zygomatic arches. It can be assumed that these disparities imply differences in genetical backgrounds and such differences would be reflected in skull differences.

This is one of the first transboundary study to explore the skull shape of domestic equids through geometric morphometric techniques. The research conducted here allows establishing that in some cases, breeds can be differentiated based on their cranial shape. It is to be hoped that a comparison that comprises more breeds may provide important information on their adaptative traits, sexual dimorphism and phylogeny. Additionally, this kind of data could be applied to wild horses and to paleoecological interpretations of past ecosystems.

O-51

AS A STRANGER, WHY ISTANBUL UNIVERSITY FOR PhD.

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As a stranger who has born in Greece and grown up there, who has graduated from the Veterinary Faculty in Bulgaria, why Istanbul University Veterinary Faculty is preferred for the PhD study.

For a Greek, to be in Istanbul is a special experience. Since, Istanbul has always been a special place for Greeks. This can be considered as one of the reasons of my preference.

During my studentship in Bulgaria, I have been to Istanbul for several times to attend to the International Student Congress, to participate the Erasmus Student Exchange Programme etc. The starting point of this adventure were those visits.

Istanbul is a tremendous city. She is a mega metropolis where a European or a stranger finds attractive at any corner or in any street.

The Istanbul University has several points also to be preferred. Firstly, it is in Istanbul. In addition, it is the biggest, oldest and most famous in Turkey and one of the oldests and successfuls in Europe. There are so many "Firsts" in the Istanbul University.

Istanbul is unique among the world's cities in connecting Europe to Asia. Yet, the Istanbul University also is unique in hosting so many strangers and make them feel home.

In this presentation, I will try to show you what is it to be a stranger in Turkey.

O-52

EVALUATION OF DIFFERENT MEDIA FOR ISOLATION OF SALMONELLA SPECIES FROM CALF FECES

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Salmonellosis, caused by the large number of Salmonella serotypes, is an infection that can occur in human and animal species. Salmonella is an important pathogen which is found in food and is known as one of the most commonly encountered etiological agents in food poisoning. The control of Salmonella in animal production is obviously required because of being the number of Salmonella serotypes over 2500 and diversity of host species.

This study was carried out to investigate the sensitivity of different culture methods for isolation of Salmonella species from calf diarrheal feces. For Salmonella spp. isolation, 685 diarrheal calf feces samples from newborns from farms in Konya, Kayseri, Düzce, Kahramanmaraş, Şanlıurfa, Amasya, Aksaray and Afyon which all inoculated into two different pre-enrichment mediums (LB Broth, Buffered Peptone Water), two different selective enrichment broths (Rappaport Vassiliadis Medium, Tetrathionate Broth) and six different plating agar mediumss (Rambach Agar, SS Agar, XLD Agar, XLT-4 Agar, Brillant Green Agar, MacConkey Agar) in the laboratory followed by determination of isolation rates. Comparisons were made after incubations under appropriate conditions. The identification of the isolates were performed by both biochemical and serological tests.

At the end of the study, 32 (4.67%) Salmonella spp. were isolated from 685 feces samples. When pre-selective enrichment, enrichment and plating results were evaluated together, the best isolation figure was obtained from combination of Buffered Peptone Water-Rappaport Vassiliadis Medium and XLT-4 Agar. Furthermore, when considered by isolation rate; Buffered Peptone Water-Rappaport Vassiliadis Medium-XLD Agar combination was given closer results suggesting that this combination would be an alternative media combination to the previous one for Salmonella spp. isolation.

This study is a part project supported by TUBİTAK-TOVAG (Project No 112O324)"

O-53

PCR IDENTIFICATION OF MYCOPLASMA CYNOS ISOLATED FROM DOGS

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Mycoplasma cynos (M. cynos) has been reported as a causative agent for respiratory infections in dogs by various researchers in the World so far. The aim of this study was to isolate, to identify and to type M. cynos. strains isolated from dogs with pneumonia by conventional methods and PCR.

In the present study, broncho alveolar lavage fluids (BALF) were collected from 100 dogs. Twenty four and seventy six of which were from Konya Municipality shelter, Turkey and the remaining (n=26) were pet dogs. The SET 1 and SET 2 primers were used to determine Mycoplasma spp. at genus level and to type M. cynos, respectively by PCR.

In total, it was determined that 36 (36%) of the isolates were Mycoplasma spp., 34 (44.73%) of which were originally from shelter dogs. Out of 36 Mycoplasma spp isolates only 2 (8.33%) were from pet dogs. Thirty four (94.4%) of the total isolates (n=36) were identified as M. cynos of which 33 (97.05%) were from shelter and 1 (50%) from pet dogs, respectively. No Mycoplasma isolation could be made from a number of 64 (64%) BALF samples.

By this study it is clearly demonstrated that M. cynos which is an outstanding species of the Mycoplasma is also present with a remarkable rate in dogs with respiratory infection in Turkey. To our best knowledge no other reports on M. cynos in the literature has been come accross in Turkey.

This study was supported by the Coordinatorship for Scientific Research Projects of Selcuk University [SUBAPK, Konya, Turkey].

O-54

ANTIOXIDANT AND IMMUNOSTIMULANT EFFECTS OF *ORIGANUM MINUTIFLORUM* O.SCHWARZ et. P.H. DAVIS ON RAINBOW TROUT

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The effects of Origanum minutiflorum O. Schwarz et P.H. Davis on non-specific immune system and in-vivo antioxidant defense are investigated in rainbow trout. Rainbow trout experiment groups are fed with feed containing plant powder form, lyophilized powder and essential oils obtained from plant at different concentrations for a period of eight weeks. In order to evaluate the effects on non-specific immune system, lysozyme activity, respiratory burst activity, phagocytic activity were analyzed and body weight were monitored in the end of the feeding period. For the determination of in-vivo antioxidant capacity, malondialdehyde levels, superoxide dismutase, glutathione peroxidase, glutathione S-transferase, catalase enzyme activities were examined from the liver samples. Non-specific immune system parameters like respiratory burst, lysozyme and phagocytic activity were found highest in the experiment groups fed with 1000 mg / kg essential oil containing feeds. In the group fed with feed containing 500 and 1000 mg / kg lyophilized extract, respiratory burst activity and phagocytic activity were increased significantly. Through antioxidant activity related parameters, the malondialdehyde levels were decreased significantly in the experiments groups fed with 1000 mg / kg feed lyophilized extract and 250, 500 and 1000 mg / kg feed essential oils. The superoxide dismutase activities in the liver were increased in 1000 mg / kg feed essential oil and 1000 mg / kg feed lyophilized extract group; glutathione peroxidase levels were increased in all essential oils and lyophilized extract groups; the catalase activities were increased 1000 mg / kg essential oil and lyophilized extract group.

Based on the data which are obtained from this study we can conclude that Origanum minutiflorum which is an endemic plant for our country could be used in feeds for the rainbow trout considering the plant extracts and especially essential oil of the plant have positive effects on non-specific immun system and antioxidant defenses of the rainbow trout.

O-55

THE THREE-DIMENSIONAL RECONSTRUCTION OF THE SHEEP HEART

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This research was carried out to improve inexpensively and undertandable way which is interactive three-dimensional education - teaching material for veterinary anatomy education as alternative to traditional methods teaching with cadavers obtained from live animals. The hearts of three adult sheep which is obtained from slaughter were used in this study. The hearts were cleaned from adjacent tissues using dissection techniques and were paid attention to retain their visual structure. In order to create a three-dimensional model of the hearts, the hearts were photographed using on a special table and were obtained images using in "Strata Foto 3D" computer application. To named by ticking anatomic regions which is created on the three-dimensional heart model used "Cl3ver" web application. Anatomical structures, including various training, which is created interactive three-dimensional model applications in cardiac model that can be shown directly or indirectly in primarily Nomine Anatomica Veterinaria were compared on the basis of the number of anatomical structures shown in the teaching resources.

O-56

INFLUENCE OF THE FEED ADDITIVE TO GAIN PERFORMANCE AND BLOOD CHARACTERISTICS OF THE AFRICAN OSTRICH IN THE SOUTH-EAST OF KAZAKHSTAN

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Three months of age 48 females of black African ostriches were formed into equal four groups at the ostrich farm. The first group birds were under control and they fed the accepted farm diet; ostriches of the second group additionally received a feed supplement at the rate of 5 g/kg of the diet, the third group – 10 g/kg and the fourth group – 15 g/kg of the diet. The experiment was conducted for 9 months. The highest increase of the gain was noted among birds of the fourth group; the average live weight of them was higher for 13.1 kg than in the control group. In the second and third experimental groups growth in live weight was higher for 6.1 kg and 8.2 kg respectively than in control birds. Throughout the observation period, birds of all groups grew and developed in accordance with physiological norms, had a healthy appearance, adequately reacted to external stimuli. Thus, compared with the control group the hemoglobin content of nine months ostriches was higher by 0.41, 0.81 and 1.010 g/l , and twelve months birds by 0.810, 1.010 and 1.21 g/l in the second, third and fourth groups of birds respectively. During the experiment, an increase in the number of erythrocytes was observed, and for 12 months of the experiment their content in the second, the third and fourth experienced groups was insignificant higher by 0.312, 0.4512 and 0.7612, respectively, compared with the control group. The parameters of leukocytes of the control and experimental groups during the experiment had the same values. The main biochemical blood indices in all groups of ostriches did not change significantly at the beginning and end of the experiment. The total protein, glucose content of blood at the twelfth month in experimental groups of ostriches increased slightly compared to the control group accordingly to amount of feed additive. The quantitative values of total bilirubin, cholesterol, uric acid, alkaline phosphatase, ALT, ACT, creatinine did not undergo significant changes in all poultry groups. The obtained data indicate that use of the proposed feed additive for ostrich production has a positive effect on a gain performance and haematological and biochemical blood indicators of ostriches.

O-57

THE INFLUENCE OF SELENIUM AND VITAMIN E DEFICIENCY ON MORPHOLOGICAL CHANGES IN THE MUSCLE OF CALVES

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Nutritional muscular dystrophy (NMD), also known as white muscle disease, affects mostly lambs, goat kids, foals, calves and poultry. The disease is caused by selenium and vitamin E deficiency. In calves, NMD symptoms usually appear at up to 6 months of age. Stilted growth and stiff and unsteady gait are observed in the first stage of NMD. As the disease progresses, animals become recumbent and unable to rise. In anatomopathological examinations of calves with symptoms of NMD, degenerative changes are observed mainly in limb muscles, in particular in the biceps femoris muscle, and less commonly in spine muscles. Pathologically changed white or gray muscle fragments resemble cooked fish meat, they are usually symmetrical and strongly contrast with healthy red-brown muscle tissue.

The aim of the study was to determine the severity of morphological changes in biceps femoris muscle of calves with symptoms of nutritional muscular dystrophy and the association of these changes with the degree of deficiency of vitamin E and selenium and glutathione peroxidase activity, which is important in explaining the pathogenesis of the disease and its prognosis. The study was conducted on 20 Holstein-Friesian calves divided into two groups: a control group of 10 healthy animals and an experimental group of 10 calves with symptoms of nutritional muscular dystrophy. Blood samples were collected from all animals to determine selenium and vitamin E concentrations, and the activity of glutathione peroxidase. Sections of the biceps femoris muscle were collected from all calves for histopathological analyses (staining with hematoxylin and eosin and hematoxylin-basic fuchsin-picric acid). Hyposelenemia ($p \leq 0.05$), acute vitamin E deficiency ($p \leq 0.05$) and a decrease in glutathione peroxidase activity ($p \leq 0.01$) were observed in the blood of calves with nutritional muscular dystrophy. Changes characteristic of Zenker's degeneration were observed in numerous muscle fibers in the analyzed sections of the biceps femoris muscle of calves with symptoms of nutritional muscular dystrophy.

O-58

ERADICATION OF PRRS VIRUS FROM AN INFECTED FARROW TO WEAN UNIT BY PARTIAL DEPOPULATION

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Porcine Reproductive and Respiratory Syndrome (PRRS) is a devastating disease for pig production all over the world. Different methods and strategy were applied to control and particularly to try to get rid the PRRS virus entirely from the farm. Amongst the different procedures eradication using partial depopulation seems to be quite useful and cost effective method. The objective of the presented paper is to eliminate PRRS virus from the farrow to wean farm using partial depopulation and to obtain progeny that is born without that virus.

A 250 farrow to wean sow unit was repopulated in November 2013 with negative breeding stock to PRRS, Mycoplasma hyopneumoniae and other major diseases. The farm of origin remains negative for PRRSV until now. The presented farm consists of one farrow to wean site. The purpose of the repopulation was to achieve the high health status and to have a source of PRRS virus negative gilts. Following repopulation the farm was infected with PRRS virus at the beginning of 2015. Evidence that farm had become infected was noticed while the blood testing performed in March, 2015 gave positive results for PRRS virus. The previous ones conducted 2 months earlier gave all negative results. The first and weak clinical symptoms appeared only in April. They included single abortions, pre-weaning mortality with increased delivery of weak and low viable piglets and decreasing farrowing rate. After introduction into the farm, the virus became endemic with little clinical and serologic evidence of continuous viral circulation.

The eradication protocol consisted of stopping replacements entries together with total depopulation of nursery sectors; stopping of farrowing for a period of 2 weeks; weaning off-site for a period of 8 weeks; a period of 10 days where farrowing rooms and nursery sectors were completely emptied out, washed and disinfected. Artificial insemination with semen from a PRRS negative AI stud was continued. No replacements or sentinels were added to the sow farm for a 8 months period of time. This process was started in August 2015 and was finalized on April 2016.

Twenty sero-negative sentinel pigs were introduced into the breeding sector of the farm, after 8 months, allowing them to have permanent contact nose to nose with the sows. The first serologic testing took place after 6 weeks post introduction of the sentinel animals and afterwards regularly performed every 2 weeks. All the sentinels as well as 5 pigs per week of production were bled and tested with the Idexx ELISA test. Monitoring of the sero-negative sentinels after introduction to the infected breeding farm continued as an on-going process. In general randomly selected pigs at the age of 12 weeks from every batch produced and weaned on-site since June 2016 and all sentinel animals were tested every two weeks. All groups of pigs weaned on-site and started to be tested in June, 2016 have remained seronegative for PRRSV. Until now none of the production groups have seroconverted, and no evidence of PRRS virus presence was detected. It has to be emphasized that no seroconversion was detected in the sentinels introduced into the breeding farm and exposured to the pigs in question for all the period they were present in the farm. This farm consistently produces PRRSV negative progeny, as evidenced by the lack of PRRSV seroconversion in the nursery pigs which are weaned continuously on-site. These results suggest that temporary closure of the farm with partial depopulation of the nursery sector may be considered as an option for PRRS eradication. This procedure particularly seems to be recommended in the relatively small farrow to wean units. However, as long as there remain seropositive sows in the herd, it cannot be classified as a PRRS virus negative herd. Although there is no evidence for shedding of the virus based on on-going blood testing of the new production groups of weaned piglets.

O-59

SURVEYS ON HAEMOSPORIDIAN INFECTIONS OF GEESE

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Leucocytozoon, Haemoproteus and Plasmodium infections are seen in avian circulatory system. These diseases which cause serious problems in avians such as yield losses and even death have a worldwide distrubition. Haemosporidian infections can be diagnosed by direct blood examination, serological and molecular methods.

Kars province and the surrounding area are one of the most common geese breeding place in Turkey. Geese breeding in this region is an important additional source of income for the locals, especially for the poor peasant woman. For healthy goose production, parasitic diseases are important.

Haemosporidian infections such as avian malaria, leucocytozooniosis and haemoprotiosis are considered to pose a risk for local domestic geese. There is no published data which is available about these diseases neither in geese nor in other avians species in Kars province. The aim of this study was, therefore, to determine the prevalence of Haemoproteus, Plasmodium and Leucocytozoon infections by microscopic examination and Nested PCR.

A total of 400 geese blood samples were studied for the presence of Haemoproteus/Plasmodium and Leucocytozoon spp infections by microscopic examination. Fifty-eight (58/400) samples were found positive for Haemoproteus spp., 48 samples were found positive for Plasmodium spp. and 94 samples were positive for Leucocytozoon spp. Mix infection with Haemoproteus and Plasmodium spp were detected in 9 smears, and also in 8 smears all of the species (Haemoproteus, Plasmodium and Leucocytozoon spp.) were detected. In 14 smears Plasmodium and Leucocytozoon spp were determined together and mix infection with Haemoproteus and Leucocytozoon spp. were determined in 23 smears.

A total of 400 geese blood samples were examined for the presence of Haemoproteus/Plasmodium and Leucocytozoon infections by Nested-PCR. One hundred and forty-five (145) samples were found positive for Haemoproteus/Plasmodium spp. and 148 samples were positive for Leucocytozoon spp. Sequence analysis of the PCR-products confirmed three samples as Leucocytozoon sp. Mix infection rate with Haemoproteus/Plasmodium and Leucocytozoon spp. was 21.5% (86/400).

O-60

EFFECT OF DIFFERENT EGGSHELL COLOR ON HATCHING CHICK WEIGHT IN PHEASANT (*PHASIANUS COLCHICUS*)

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Pheasant eggs can be different colours, including grey-white, blue, olive green, light brown and dark brown. Some researchers reported that the general tendency hatching weight of chick increase with increasing eggshell darkness in poultry species. Other some researchers reported that hatching weight of chick was not affect by eggshell darkness. However, research on the relationship between hatching weight of chick and the amount of pigments in the eggshells of pheasants is rather limited. The current study aimed to investigate the effects of amount of protoporfirin and biliverdin in eggshell on hatching weight of chick in pheasant.

This study was conducted to Samsun-Gelemen Pheasant Breeding Centre in Turkey. The stock pheasants were fed ad libitum with 14.70% crude protein and rations that contained 2665 kcal/kg ME. The eggs were collected from 48 week old pheasants. The eggs were divided into three different color groups (dark brown, light brown and green). The eggshell colours were visually determined. Hatching weights of chicks were determined with measuring the chicks of all groups one by one in electronic scales after hatching. Protoporphyrin and biliverdin amount in the eggshells were determined by high performance liquid chromatography (HPLC). Variance analysis was performed for the comparision of amounts of protoporphyrin and biliverdin in the different eggshell colour, and determination of the significance of differences between the groups was done with the Duncan test. Statistical analysis was done for 95% level of statistical significance.

In the eggshell colour groups, there was no significant difference between egg weights while difference between hatching weight of chick ($P<0.01$) was significantly. When based on the dark brown eggshell colour value, the difference between dark brown and light brown eggs and dark brown and green eggs were 3.27% and 1.70% for hatching weight of chick, respectively. This differences may be related to amount of the protoporphyrin and biliverdin in these eggs. Thus, hatching weight of chicks of quail and chukar partridge with dark colour eggshell and spotted eggshell were higher than that of eggs with light colour eggshell and unspotted eggs. It may be explained that biliverdin with antioxidant effect and protoporphyrin with photodynamic and anti-bacterial effects may be perform a defense layer with the photo-catalyze on surface of eggshell.

Based on these results, to achieve higher chick hatching weight, it may be beneficial to select eggs with dark brown eggshell colour.

The present study was supported by Scientific Research Fund of Ondokuz Mayis University (Project No: PYO.VET. 1901.12.012).

O-61

EFFECT OF PARENTERAL ADMINISTRATION OF VITAMIN B TO GOATS ON PERFORMANCE, LICE (*PHTHIRAPTERA*) INFESTATIONS AND CELLULAR IMMUNITY

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This study was carried out on 20 of 8-10 months old Anatolian black goats which were healthy or Linognathus africanus infested (n=10 each) in Prof. Dr. Hümeyra Özgen Research and Application Farm, Selcuk University Veterinary Faculty, Konya, Turkey. Each goat was housed individually all along the study. Five of ten louse-infested goats were administered vitamin B complex (Benefor enj) intramuscularly at a dose of 40mL/goat. Remaining goats (n=5) were not given vitamin B complex. The other goats that have not been infested with L. africanus were grouped exactly the same as above. All the animals (n=20) were first sensitized and then measured for hypersensitivity reaction in terms of cellular immune response. Infested goats given vitamin B complex were shown a decrease in L. africanus infestation. The other 5 number of infested goats that not given vitamin B complex were detected with an increase in the louse infestation. At the end of the trial, the higher live weight was recorded in healthy goats than those not administered vitamin B complex.

This study was supported by Selcuk University Scientific Research Project Coordination Unit (Project Number: 15401069)

O-62

KAZAKHSTAN'S EXPERIENCE OF PARTICIPATION AT THE WORLD ANIMAL HEALTH ORGANISATION'S (OIE) VETERINARY EDUCATION TWINNING PROGRAMME: REGIONAL IMPLEMENTING

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OIE Veterinary Education Twinning Programme is a mechanism for improving institutional capacity and expertise in developing and in-transition countries for harmonization of veterinary curricula at the global level. It facilitates the exchange of knowledge, staff, students, ideas and experience between Veterinary Education Establishments.

The twinning project between KazNAU– ENVT was signed in May 2014 for three academic years. It was agreed that a consortium of Kazakh universities would be established under the twinning project to increase the impact of the project. The consortium is being led by the KazNAUand included other five regional universities with veterinary faculties. Objectives of the project are: mapping the veterinary curriculum of the KazNAU so as to align it with the OIE recommendations and guidelines on veterinary education (Core Curriculum and Day 1 Competencies); identify the tools, technical means and resources needed to improve teaching in KazNAU and in other consortium members; develop a continuing education program in public health.

To date, organisation and content of two curricula under the veterinary sphere (Veterinary Medicine and Veterinary Sanitation) for KazNAU were analysed, in order to compare them with the OIE model core veterinary curriculum, and propose changes. Five Kazakh lecturers had an internship at ENVT and worked on updating or implementing content priority modules. There were identified the main gaps between curriculum at KazNAU and the OIE Day 1 Competencies and Core Curriculum and improving of them will be the main outcomes of the project. An enhanced understanding of the situation of the veterinary profession in both countries will help KazNAU to propose an improved cooperation between universities and veterinarians. Continuing education will probably be a major challenge to face: current epidemiological training could be the first step of continuing education. For implementing of the results of this twinning project the First International Meeting of Education and Agriculture Ministries' officials, deans of veterinary faculties, and veterinary practice workers from Central Asia and NIC-countries had been organized in KazNAU at October 2016.

O-63

CARCASS AND MEAT QALITY TRAITS OF SAANEN KIDS RAISED UNDER DIFFERENT REARING SYSTEMS

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In the study, 42 male Saanen goat kids were reared under two different rearing systems (natural and artificial) and were slaughtered at two different ages (80 and 120 days). The carcass quality characteristics and the meat quality characteristics in M. longissimus dorsi (LD) samples were investigated, comparatively. There were no significant differences for pre-slaughter weight, hot carcass weight, empty body weight, cold carcass weight, hot and cold commercial dressing percentage, LD muscle section area, carcass conformation and fatness scores between the groups that were reared with their dams and artificially reared ones. On the other hand, real hot and cold dressing percentages which were calculated by considering the empty body weight showed higher results in artificially reared goat kids (48.74% and 45.56%) compared to goat kids reared with their dams (47.38% and 43.89) ($P<0.05$). The effect of rearing type on the kidney-pelvic fat, subjective fatness score and subcutaneous fat ratio in hind limb was found insignificant, while the intermuscular fat and total fat ratio in hind limb were higher in the goat kids raised with their dams. In parallel with the increase of slaughter age, pre-slaughter weight, hot and cold carcass weights, empty body weight, subjective carcass conformation score, carcass compactness and hind limb compactness indices increased.

In the study, rearing type had no effect on pH_0, pH_{24}, drip loss, cooking loss and Warner-Bratzler (WB) shear force values ($P>0.05$). On the other hand, kids slaughtered at 120 days of age had higher pH_{24} and WB shear force values than those of kids slaughtered at 80 days of age. Furthermore, ultimate pH value was generally high in all groups and was detected between 5.94 and 6.10. Meat of natural reared kids had higher lightness and Hue values than that of artificial reared kids at 0 h, 1 h and 24 h after cutting. The panellists evaluated the meat of goat kids reared with their dams tender and juicy. In the study, panellists gave the highest scores in terms of meat tenderness, flavour quality and overall acceptability score to the meats obtained from goat kids which were slaughtered at 80 days of age.

When the findings of the study were evaluated, it was found that there were minor differences between the goat kids reared with their dams and artificially and they had similar results in terms of carcass and meat quality. Furthermore, it was found that the effect of slaughter age was more significant on the carcass and meat quality characteristics. When the carcass quality, instrumental meat quality analysis and panel results are taken into account, goat kids might be sent to slaughter at 80 days of age without causing any negativity on carcass and meat quality traits.

POSTER PRESENTATIONS

P-01

EFFICIENCY OF USING NATURAL MINERAL VERMICULITE AS FEED ADDITIVE FOR CHICKENS

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This article demonstrates the first comprehensive study of broiler chickens and laying hens fed with mineral feed additive from Kazakhstan. The object of the current study is effectiveness of vermiculite of domestic production "Avenue" LLP. Chemical formula of vermiculite is (Mg, Fe^{2+}, Fe^{3+}) $[(Si\ A1)_4, O_{10}]$ $[OH]_2 \times 4H_2O$. The basic deposits of vermiculite are concentrated in the USA, the South African republic, Russia and some other countries. There are also deposits of vermiculite in the Republic of Kazakhstan. Requirements of Kazakhstan for vermiculite can be estimated in ten thousand tons annually owing to a wide area of possible use.

Studies have shown that expanded vermiculite does not contain high concentrations of heavy metals. When this mineral have been used in the composition of the feed in concentrations 1, 3, 5 and 7% the lethality of mice in the experimental groups was not observed. The mineral had not toxicity effect to *Paramecium caudatum*. In laboratory conditions were prepared samples of fishmeal with vermiculite in different concentrations and without vermiculite. The results of experiment indicated that vermiculite improvement the quality and stabilized acidity of feed immediately after manufacture as well as during the storage. It is found that after adding vermiculite the storage of fishmeal efficiency increases by 20-30 %.

In “Sary Bulak” LPP were investigated the effects of basal diets supplemented with a feed additives based on vermiculite for birds. The control group (I) was fed by basal diet while diets of II and III experimental groups included 3%, 5% vermiculite and birds from IV and V groups were fed with 3% and 5% vermiculite plus fishmeal (V+FM). It was obtained that dietary treatment with feed additive with vermiculite significantly increased the hematological and biochemical blood parameters ($p<0.05$) of birds of experimental groups in comparison with control. The density of egg in the experimental group, which used 5% vermiculite, was 0.23 g/cm^3. The thickness of the shell is greater than 15%, which helped to reduce the egg breakdown. The chemical composition of the chicken meat where used 5% V+FM showed that protein and percent of SFA, PUFA was higher than in control group.

The research results indicated the absence of any negative impact of new feed additives on the physiological state of birds. Addition of the vermiculite in the diet contributes to the productivity of the birds and it can be used as feed additive in the feed production.

P-02

THE IMPACT OF ZEOLITE CLAYS ON BIOCHEMICAL PARAMETRES OF PIGLETS

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The aim of the study was to investigate the impact of dietary natural zeolites of the Chankanay Deposit on biochemical parameters of blood in pigs. 40 days aged Male White Breed piglets (n=60) were allocated to a four dietary groups: a control group with a basal diet (BD) without any supplementation and three groups receiving the zeolite with BD at levels of 2% 3% and 5 % for 60 days. The results were compared with the parameters determined in control pigs. Our previous studies showed that the supplementation of zeolites have positive effect on daily gain and productive performances as well as to health status. Each treatment was replicated three times with three pigs per replicate. The concentrations of ALT, AST, total lipids, and total proteins were found higher in the zeolite intake groups. Serum biochemical measures and serum mineral element concentrations also significantly increased at antioxidant properties. Results of this study suggest that dietary supplement of zeolite can be used as a feed additive for pigs and it can affect some parameters of biochemical indicators of pigs.

P-03

DETERMINATION OF METAL AND HEAVY METAL RESIDUES IN BUFFALO MILK BY ICP-MS *

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Buffalo milk has the highest value of fat ratio among milk used in food technology. It is accepted as valuable milk for the production of cream, butter, yoghurt, and cheese. Also, the cholesterol ratio is lower than cow milk. Today, a significant amount of heavy metal found in the soil due to many reasons such as exhaust fumes, wastewater irrigation, industrial and mining activities. Therefore, the health of animal and human is significantly affected. Milk and dairy products could be contaminated with heavy metals through water, feed, and air. Besides, contamination occurs during milking, process, storage, and transport of milk or milk products. The aim of this study was to determine the presence and contamination level of metals / heavy metals as Al, Cr, Mn, Fe, Co, Cu, Zn, As, Se, Mo, Ag, Cd, Hg, and Pb in 50 raw buffalo milk samples obtained from Afyonkarahisar by using ICP-MS instrument. Samples were prepared according to wet digestion method. The detection limit (LOD) of the employed method was 0.0001 ppb. Contamination level of milk samples with Al, Cr, Mn, Fe, Co, Cu, Zn, Se, and Mo was detected as 0.098, 0.001, 0.042, 0.331, 0.001, 0.076, 4.116, 0.011 and 0.022 ppb, respectively. In addition, contamination level of Pb, As, Ag, Cd, and Hg was determined under LOD. As a result, heavy metal as Pb, As, Ag, Cd, and Hg in milk samples were not detected and these results were compatible with limits given by Turkish Food Codex. This suggests that buffalo breeding and milk production are performed under suitable conditions regarding heavy metal contamination. It is also assessed that the quantities and differences in other metal levels detected in the analysis may depend on the feeding of the animals and environmental conditions.

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P-04

THE ISOLATION OF *DICHELOBACTER NODOSUS* AND IDENTIFICATION BY PCR FROM OVINE FOOTROT IN KARS DISTRICT, TURKEY

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Footrot is a specific contagious disease of sheep and goats, although it has been reported in cattle, horses, pigs, deer and mouflon. It is an infectious syndrome caused by synergistic action, where Dichelobacter nodosus is the main transmitting agent. In this study it was aimed to isolation and identification by PCR of specific agent from ovine footrot in Kars district and thus determination of prevalence of disease.

To this end, 8,970 sheep belong to 10 different flocks were examined clinically, and in 1532 of these (17.07%) were found lameness for various reasons. Out of 247 (2.75%) of these cases were evaluated to be footrot suspect clinically.

Bacteria were isolated in 205 (82.99%) of the 247 samples that were cultured in an anaerobic environment due to the suspicion of footrot. When Gram stains and microscopic investigation was carried out on these isolates, 195 of them (95.12%) were found to be Gram negative rod-type bacteria. These isolates were subjected by polymerase chain reaction (PCR) using D. nodosus specific primer and amplicons (440bp) of expected weight in 153 (78.46%) of isolates were found.

Considering of these findings, it was concluded that prevalence of disease is high in sheep in Kars district.

P-05

ESR1 GENE VARIATIONS IN CANINE MAMMARY TUMOURS

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The dog is a very suitable model for cancer studies due to the similarities in occurence of the disease in human. The limited genetic variation caused by artificial selection makes it easier to study genetic associations. Canine mammary tumours (CMTs) are the most common type of cancer in female dogs. Although CMTs are multifactorial, some breeds have higher susceptibility, which supports the genetic background of the disease. ESR1, which encodes eostrogen receptors, is a candidate gene associated with CMTs. The aim of this study was to determine the association between two single nucleotide polymorphisms (SNPs) in exon 4 of ESR1 gene and canine mammary tumours.

Mammary glands from case and control groups were surgically removed and histopathological diagnosis was evaluated on haemotoxylin and eosin (H&E) stained sections by the WHO's classification for canine mammary tumours, dysplasias and normal mammary glands. Genomic DNA samples were isolated from whole blood by using the standard salt-out method. Exon 4 of ESR1 gene was sequenced in order to detect genetic variations. Nucleotide sequences were aligned by using Clustal W program in the MEGA 4 software. The cases versus the controls were analyzed by Pearson's two-sided chi-square test in SPSS 13.0 program.

The locus containing a silent A/G polymorphism in exon 4 of ESR1 gene was found to be monomorphic in animals in this study. A missense A/G polymoprhism in the same exon, which causes an amino acid change from isoleucin to leucin, had a minor allele frequency of 0.256 in total. A allele had frequencies of 0.76 and 0.70 in case and control groups, respectively. The association observed between this SNP and CMTs analyzed in this study was found to be insignificant (P=0.694). Further studies on ESR1 gene variations in specific breeds should be conducted to get a better understanding of the ESR1 role in CMT development.

P-06

BENEFITS OF THE LUGOVSYNCH PROTOCOL

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Infections when reach the uterus, changes the environment which is necessary for normal reproduction by deteriorating the spermatozoa, by stopping the transport of gametes, and forming an unpleasant medium to embryos.

The most commonly observed problem affecting the reproductive efficiency of dairy cows is Puerperal metritis. Puerperal metritis increases the days to conception and inseminations per pregnancy and causes serious economic losses by reduced milk production, longer calving intervals and more expenses for inseminations.
The treatment of puerperal metritis has some goals such as, prevention of the general health of cows, prevention of the future fertility and prevention of time losses and be less money consuming.

Lugol's Solution is an iodine solution that have been used in metritis therapy for a long time.
In the present study, Lugol's Solution is used combined with the Ovsynch Protocol as a modified procedure programme. The programme gave satisfactory results by preventing time loss, being cheaper and achieving acceptable fertility.

The modified procedure is named as Lugovsynch.

P-07

SOCIO-ECONOMICAL PARAMETERS OF CAT AND DOG OWNERSHIP IN ISTANBUL

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The common life of pet animals have started with the domestication of the wolf and continued with the farm animals and today it has come to a point where animals called “exotics” like iguanas, snakes and spiders have become our new pets. The reason for this mutual relationship has been studied among different disciplines. Pet ownership is becoming a very common social phonemenon in Turkey. The variety and quantity of pet animals that are being breed and imported is a significant proof of this. But there is no solid data, referring to the numeric value of this population, or by whom and why they are kept as pet animals. The main goal of the study is to patialy fill this void.

There have been many studies conducted around the globe. These have been made with very different methodologies such as phone questionaires, localy and national, via postal services. The questionaire we have used has been designed to have 45 multiple choice questions and participants were asked to fill out the form.

Our results have shown that; cat and dog owners in Istanbul are mostly between 26-41 years old, earn more than 1000 $ per month and have no children. The main reason of owning a pet amongst our participants was found as companionship and friendship; purposes like hobby or working animal were minorities. Ratio of adopting stray animals among other resources was found above many european countries but still this ratio is found lover than expected thus confirming abroad studies. Pet owners are more likely to adopt crossbred animals rather than purebreds. The desexing ratios have been found close to foreign studies and birth before desexing values have been found higher than expected, thus showing a high owner perception of the issue. But especially the low rate in male dog desexing and in addition allowing for random mating with strays, has been shown as an important problem in controling the stray dog population.

P-08

DEVELOPMENT OF AuNPs-PROB NANODIAGNOSIS ASSAY FOR THE DETECTION OF *BRUCELLA MELITENSIS* DNA USING GOLD NANO PARTICLES

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Brucellosis cause infertility and abortion via install genitals of animals. Brucellosis is accepted the world's most widespread zoonotic disease by OIE, WHO and FAO. The aim of this study was to develop AuNPs-probe nanodiagnosis method for directly detection of Brucella (B.) melitensis DNA in clinical samples.

AuNPs 20 nm in diameter were conjugated with an oligonucleotide probe targeting 16S-23S rRNA gene of Brucella spp. Briefly, 20 µl of the sample DNA was diluted in 50 µl of 10 mM PBS. The mixture was heated to 95 °C for 5 min and cooled to 60 °C. Then, 10 µl of AuNPs-probe was added to mixture for hybridization. Ten minutes later the reaction was terminated with the addition of 20 µl of HCl. The test mixture remained at room temperature for 10-30 min. Red color in test tube was accepted as positive and purple color for negative.

The Brucella positive (B. melitensis 16M, ATCC 10094) and negative (Rhizobium tropici, CIAT 899) reference strains were correctly identified by the new method. B. melitensis DNA was detected in 6 of 25 aborted sheep samples by AuNPs-probe nanodiagnosis method. Also, 7 of 25 the samples were found positive for B. melitensis by PCR and culture methods. The minimum detection limit of new assay was defined to 93 ng for B. melitensis in clinical samples. Repeatability and reproducibility were 100%.

We have developed an AuNPs-probe nanodiagnosis assay prototype for direct detection of B. melitensis. The developed prototype is simple, rapid, reliable, highly sensitive and does not require DNA amplification.

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P-09

INVESTIGATION OF CHLAMYDOPHILA ABORTUS IN ABORTION OF CATTLE BY PCR

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Chlamydophila abortus (C. abortus) cause plasentitis and abortions in human and animals such as cattle, sheep and goats. The purpose of this study was to investigate Chlamydophila abortus in fetal abomasal contents of cattle from Aksaray and Konya provinces by Polymerase Chain Reaction (PCR).

A total of 65 fetal abomasal contents of cattle that were sent to Veterinary Diagnostic laboratories of Aksaray and Selçuk Üniversities from Aksaray and Konya provinces were used as sample. The occurrence of Chlamydophila abortus was investigated by PCR methods.

A total of 65 fetal abomasal contents of cattle were examined by PCR. Two (3%) fetal sample were found to be positive for C. abortus. In 63 (% 97) samples, DNA of C. abortus did not detected and were accepted to be negative.

In this study, abortion cases duo to C. abortus in cattle were showed in Aksaray-Konya region. In taken prevention measures for bovine abortion cases in this region should be aware of C. abortus aetiology.

This project was supported by The Aksaray University BAP Council (Project No 2015-046).

P-10

THE EFFECTS OF FEEDING WITH OMEGA-3 FATTY ACIDS DURING THE GESTATIONAL PERIOD OF GOATS ON THE DEVELOPMENT OF THEIR OFFSPRING'S PASSIVE IMMUNITY

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The aim of this study was to investigate the effects of omega-3 fatty acid supplementation, which has many positive effects on mother and offspring development during pregnancy, on the immune system cells in the offspring until 96 hours postpartum, which is the most critical period of the offspring's life and when the release of colostrum from the mother takes place. Omega-3 fatty acids in alpha-linolenic acid (ALA), eicosapentaenoic acid (EPA), decosahexaenoic acid (DHA) are essential fatty acids that cannot be synthesized in the body and must be taken from the diet. Ruminants mostly consume vegetative sources rich in linolenic acid. The conversion of linolenic acid to eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) may not be effective. For this reason, fish oil rich in EPA and DHA as an omega-3 fatty acid source is used as origin oil source in this study. Experimental phase of the current study was carried out at Çukurova University, Faculty of Agriculture Research and Application Farm. Sixty-nine Alpine X Anatolian Black Goats from the farm were used in the study. The pregnancy period was divided into two terms considering fetal development (mating to 75th day of gestation (1st term) and 76th day of gestation to (2nd term)). During the first term all pregnant goats were divided into two groups. The first group was fed with diet containing preserved fat (Group KK) while the second group was fed with fish oil (Group BB). In the second period of pregnancy both groups were divided into two subgroups. In Group KK, 17 goats continued to be fed with preserved fat (Group KK), while 17 were fed with fish oil (Group BK) until end of pregnancy. In Group BB, 16 goats continued to be fed with fish oil (Group BB) while 19 were fed with preserved fat (Group KB) until end of pregnancy. Blood samples were taken from kids (n=15) at 24, 36, 48, 72 and 96 hours after the birth of each of the 4 groups formed according to the dietary patterns and serum samples were obtained and stored at -20 °C until analize. The concentrations of immunoglobulin G (IgG), M (IgM) and A (IgA), which are accepted to be indicators of passive immune transfer, total protein, albumin and activity of the enzyme gamma glutamyle transferase (GGT) were analized.

P-11

HEAVY METAL RESISTANCE IN FOODBORNE *LISTERIA MONOCYTOGENES* STRAINS

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Chicken meat is among the most popular food products all over the world including Turkey and it is the 9th largest poultry producer country. Listeria monocytogenes is one of the important foodborne pathogens and it can survive in different environments with the ability to persist in biofilms, grow in the low temperatures and tolerate toxic chemicals such as heavy metals. In this study, L. monocytogenes strains were isolated from chicken meat samples in Turkey. The identified 11 foodborne L. monocytogenes strains and a type strain (L. monocytogenes ATCC 7644) were examined for heavy metal resistance including Cadmium Chloride ($CdCl_2$)(0.250-16 mM), Copper(II)Sulfate ($CuSO_4$)(0.250-16 mM), Cobalt(II)Chloride ($CoCl_2$)(0.625-40 mM) and Zinc Chloride ($ZnCl_2$)(4-256 mM) based on Broth Dilution method in Brain Heart Infusion broth (BHI). The tests were carried out in 96-well F-bottom plates and 20 µl McFarland 0.5 bacterial suspension in 0.9%(w/v) NaCl were added to 180 µl heavy metal solutions in BHI. The plates were incubated at 37°C for 24 h and then the absorbance of the plates were measured at 600 nm by SynergyH1M (Bio-Tek) to determine bacterial growth inhibition. The highest resistances to all heavy metals were found in L. monocytogenes 2A strain with 16 mM $CdCl_2$, 16 mM $CuSO_4$, 20 mM $CoCl_2$ and 64 mM $ZnCl_2$. In total, 5/12 strains showed 16 mM $CdCl_2$ MIC value, 3/12 strains showed 16 mM $CuSO_4$ MIC value and 6/12 strains showed 20 mM $CoCl_2$ MIC value. Additionally, one strain (2A) showed 64 mM $ZnCl_2$ MIC value and 2 strains showed 32 mM $ZnCl_2$ MIC values. These results indicated that foodborne L. monocytogenes strains isolated from chicken meat samples showed high resistance to heavy metals with different degrees.

P-12

CLINICAL AND PATHOLOGICAL INVESTIGATIONS OF ACCIDENTAL *CATHARANTHUS ROSEUS* TOXICITY IN SHEEP

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In this study, clinical signs, blood parameters, postmortem and histopathological findings in sheep that were accidentally poisoned with Catharanthus roseus (C. roseus) are described. Affected animals (40 sheep) showed acute clinical signs such as salivation, dyspnea, anorexia, bloody diarrhea and dehydration. Blood samples were collected from 5 sheep prior to death. Marked increase in Activated Partial Thromboplastin Time (APTT), D-DIMER, hemoglobin, urea and creatinine levels with the decrease in cholinesterase activity and calcium levels were observed in the blood parameters of affected sheep. Necropsy examination was performed in17 sheep and all organs were examined pathologically. According to blood parameters and pathologic findings, Disseminated Intravascular Coagulation (DIC) was observed in different organs supported by the increases in APTT, Prothrombin time (PT) and D-dimer levels in blood. Grossly, linear mucosal hemorrhages in the jejunum and ileum, auricular petechial hemorrhages in the heart were common findings. The livers were pale and friable. Microscopically, the fibrinous exudate consisting of fibrin networks were seen in the lumen of jejunum and ileum. In addition, clumps of fibrin in many small vessels were noted in the brain, lungs, liver, kidneys and intestines. Focal periacinar and mid-zonal necrosis with hemorrhages were observed in the liver. Marked tubular necrosis was seen in the kidneys. To the best knowledge of the authors no study of C. roseus poisoning in sheep in the veterinary medicine literature has been documented. This study demonstrates that C. roseus can cause toxicosis in sheep resulting in mortality probably due to DIC and circulatory disturbances related to diarrhea and dehydration.

P-13

A COMPARATIVE STUDY ON THE ANTIOXIDANT ACTIVITIES AND PHENOLIC CONTENTS OF DIFFERENT EXTRACTS OF *ACHILLEA NOBILIS* SUBSP. *SIPYLEA* AND *ALCEA APTEROCARPA (FENZL) BOISS,* ENDEMIC PLANTS IN TURKEY

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The present study was undertaken to compare the antioxidant activities and total phenolic contents of different extracts obtained from Achillea nobilis subsp. sipylea and Alcea apterocarpa (FENZL) BOISS, which are two endemic species for the flora of Turkey.

Plants were extracted with various solvents of different polarity using four extraction methods (Soxhlet extraction, maceration, infusion, decoction). Antioxidant activity was determined by 2,2-diphenyl-1-picrylhydrazyl (DPPH) radical scavenging assay and Folin Ciocalteu reagent was used to estimate total phenolic compounds in plant extracts.

The results indicated that, among all plant extracts, infusion and decoction of A. nobilis subsp. sipylea exhibited relatively strong antioxidant activity with IC_{50} values of 61.0 µg/ml and 83.1 µg/ml, respectively. Similarly, total phenolic contents of infusion (139±2.78 mg GAE/g) and decoction (137±6.09 mg GAE/g) of A. nobilis subsp. sipylea were found to be highest among all extracts. Although all extracts of A. apterocarpa possessed varying degrees of antioxidant activity and total phenolic content, they were found to be rather weak compared to A. nobilis subsp. sipylea extracts.

The present results demonstrate that, the extracts of A. nobilis subsp. sipylea and A. apterocarpa can be regarded as promising candidates for natural plant sources of antioxidants.

P-14

RETROSPECTIVE EVALUATION OF DOGS WITH EPILEPTIC SEIZURES BETWEEN 2013-2016 IN ISTANBUL UNIVERSITY ANIMAL HOSPITAL

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Epilepsy is a group of heterogeneous conditions that share a common feature—chronic, recurring seizures. Epileptic seizures is a chronic neurological disorder which seen quite often in dogs. It is estimated prevalence of 1–2 percent in a referral hospital population. Because there are many causes of chronic recurrent seizures, epilepsy is not a specific disease but rather a diverse category of disorders. It can be categorised as symptomatic, probable symptomatic or idiopathic. In the present study, 105 cases of dogs with seizures were analysed retrospectively. The aim was to examine the underlying aetiology and to compare primary or idiopathic epilepsy (IE) with symptomatic epilepsy (SE) concerning signalment, history, ictal pattern, clinical and neurological findings. The diagnosis of symptomatic epilepsy was based on confirmed pathological changes in haematology, serum biochemistry and morphological changes of the brain by computered tomography/magnetic resonance imaging. Seizure aetiologies were classified as idiopathic epilepsy (IE, n = 65) and symptomatic epilepsy (SE, n = 40). We revealed that the epileptic seizures has shown breed, age and sex predisposition like proved in other similar studies and we observed in EEG recordings that the epileptiform discharges on interictal phases in 76 % of the dogs.

P-15

VIRULENCE FACTORS OF *CLOSTRIDIUM PERFRINGENS*

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Clostridium perfringens is an anaerobic, gram-positive, spore-forming, rod shaped bacterium. This organism causes human gas gangrene and food poisoning and several enterotoxemic diseases of animals. The role of Clostridium perfringens in the causation of food poisoning in human was suspected as early as 1899. The pathogenicity of the organism is associated with several toxins which are used for toxin typing of the bacteria. The organism is classified into five types (A-E) according to the production of toxins alpha, beta, gamma, epsilon and iota. That are closely related to its virulence, even though they produce several minor extracellular toxins. Within these five types, all Cl. perfringens produce alpha (α) toxin. In addition, type B strains produce beta (β) and epsilon (ε) toxins, type C produces β toxin, type D produces ε toxin and type E produces iota (ι) toxin. Types A, C, and D are pathogenic to humans and types B, C, D, E, and probably types A are pathogenic to animals. Clostridium perfringens produces a variety of virulence factors, such as hydrolyze substances essential to the integrity of membranes or other body structure that α toxin, phospholipase C, kappa toxin, collagenase. Recent study show that the β, ε and ι toxins, effect on the vascular endothelium and causing increased capillary permeability, especially in the brain.

In addition to the major lethaltoxins, a minority of Cl. perfringens strains produce a Cl. perfringens enterotoxin (Cpe), which is responsible for the symptoms of common Cl. perfringens type A food poisoning. The enterotoxin gene can be chromosomal or plasmidal and extracellular toxin ones are located on large plasmids, inside the bacteria. Clostridium perfringens beta 2 (Cpb2) toxin are responsible for enteric diseases in wide range of animals and humans. The production of many of the extracellular toxins are regulated by the products of the virR and virS genes. These genes together comprise a two-component signal transduction system.

This study focus on virulence factors of Clostridium perfringens. It is aimed to explain the scientific knowledge base the pathogenicity of the organism.

P-16

THE CONTRIBUTION OF MIGRATORY BIRDS TO THE ORNITOLOGIC POTENTIAL OF VAN LAKE BASIN AND THE IMPORTANCE OF THE MIGRATORY BIRDS FOR THE BASIN

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As in the case of many living species, birds also, willingly or unwillingly, migrate from one place to the other in order to complete their life cycle. These migrations recur seasonal or annually all their life.

In Van Lake basin, located on one of the important West Palearctic migration routes, 232 bird species have been identified. Of them, 164 (71%) bird species are described as native, non-migratory (P> 0.5). Among the migratory birds, 117 species visit the basin for breeding while 47 species only for feeding. Fourteen species in the Basin are registered in the Red List of Threatened Species.

Observations have shown that with the coming of migratory birds in to the Basin in spring and winter seasons, the number of the species increases to a significant level. The birds which constitute the top feeding network have been determined to have contributed the biological diversity of Basin

P-17

THE EFFECTS OF EMBRYONIC STAGE ADMINISTRATION OF BORIC ACID ON THE TESTIS DEVELOPMENT AND SPERMATOGENESIS IN AVIAN

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Boron is a strategically important element for the world and especially for our country. Low concentrations of different forms of borates are widely present in soil, water and rocks. It has been reported that boric acid impairs spermatozoa and causes increase in abortion rate, decrease in birth weight and various birth defects. Besides there are some studies indicating that boric acid has no effect on reproductive system. Birds are one of the first animals which are seriously affected by environmental pollutants in nature. There are some reports claiming that boron also cause malformations and fertility defects in birds. But, in which testicular developmental stage the defects occurring are not disclosed in these studies. The results of this study will clarify the contradictory results in literature by revealing what kind of fertility defects are occurred and the effects on the development of testis from the beginning of the embryonic period caused by boron. As the result it will be a resource for the studies on the mechanisms of defects occurred in testis caused by boron.

In this study boric acid, dissolved in NaCl, injected in ovo at doses of 1000, 1500 and 2000 ppm at the third day of incubation. For the evaluation of effects of boric acid on embryonic testis development, at the third day after hatching 50 percent of male chick used for morphological and stereological investigations on testis tissue. For the evaluation of chronically effects of boric acid on spermatogenesis, 50 percent of the male chickens will be fed up until 27th week as they become adults. For semen analyses, abdominal massage will begin at 17th week to accustom the animals for abdominal massage and starting on the 27th week semen will be collected once a week with abdominal massage and spermatological analyses will be made. FSH, LH and testosterone hormone levels in the blood will be measured as these hormones are effective on testis development.

The treatments were not effected the weight and volume of the testis and, LH and FSH level at third day. At 27th week, the sperm parameters were not affected. Although the weight of animals and, weight and volume of testis were decreased, it was not significant. Only the comb of the animals received 1500 ppm boric acid were significantly shorter. The comb width was not showed significant differences between the groups. There were no significant differences for LH and testosterone levels but FSH level was significantly low between the treatment and control group.

Although the stereological investigation of the testis has been not completed yet, the current result indicates that the boric acid administration during embryonic development does not alter testis physiology at maturity.

P-18

THE ATYPICAL PRESENTATION OF *BACILLUS ANTHRACIS* IN COWS MILK

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Anthrax, caused by the bacterium Bacillus anthracis, is a disease of both animal and humans. While the spore form of the organism is more resistant to chemical biocides and conventional antibiotics it is unable to replicate, while the more susceptible vegetative form can actively grow in a variety of media including milk. The impact of B. anthracis contaminated milk is rare and infrequently reported and is therefore not generally used during diagnosis.

In this case, a six year old Simmental-Brown Swiss cross-bred cow was reported to have aborted a first trimester foetus 10 days prior to microbiological sampling. The cow was sampled twice with a three day interval between samples. The first sample was a milk sample and the second were a swab of the udder and milk samples from individual teats. Smear slides were prepared from milk samples and stained with azure staining method. Swabs were suspended in sterile phosphate-buffered saline (PBS) and 150 µl of the suspension plated directly on to 7% sheep blood agar (SBA). All samples were also enriched in sheep blood enriched-Brain Heart Infusion (BHI) broth and plated on SBA and polymyxin-lysozyme-ethylenediaminetetraacetic acid-thallous acetate (PLET) agar plates. Phenotypically confirmed isolates were subjected to PCR confirmation of the virulence plasmids. Confirmed isolates of B. anthracis were subjected to MLVA-8 and MLVA-25 typing.

B. anthracis at a concentration of approximately $6x10^2$ cfu/ml was isolated and phenotypically confirmed from the original milk sample by susceptibility to penicillin and Gamma phage. Further sampling revealed no culturable B. anthracis in samples. However, gram positive bacilli that displayed typical anthrax morphology could be observed in a single direct smear. Of six individual colonies of isolates exhibited an absence of the main virulence plasmids. All six isolates belonged to the different subtypes of the A3.a major cluster by MLVA-8 and 4 different subtypes (Type 1 to 4) from MLVA-25 typing. Isolates taken from the initial milk sample did not correspond to the known genotype of the Sterne vaccine strain given to the cattle (GK61; A3.b).

As a consequence:

- Though the outflowed microorganism is low, the risk of contamination of the surrounding environment or infection of individuals who come into close contact with animals may be a viable risk.
- The failure of pXO2-PCR may indicate this region is actually absent and thus it was interpreted as an avirulent strain is not able to kill its victim.
- The emerged genotypes of MLVA are coincide with that the circulating B. anthracis strains are in the A3.a cluster and not diverse from that being in countrywide.
- Milk sample isolates do not come up to vaccine strain used in Turkey which were already genotyped as GK61 (Sterne) and located within the A3.b cluster.
- An ascending way may followed by the bacterium instead of classical secretion as descending order.

P-19

LEVELS OF ACUTE PHASE PROTEIN AND SOME BIOCHEMICAL PARAMETER IN CATTLE INFECTED WITH *MYCOBACTERIUM BOVIS*

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Proteins that emerge in response to stimuli such as inflammation, tissue damage and infection leading to acute phase response (APR) and that are synthesized by the liver are referred to as acute phase proteins (APP). Although blood concentrations vary according to animal species, APPs that have some diagnostics importance in cattle and sheep are primarily haptoglobin and serum amyloid A (SAA).

In this study, it was aimed to determine the levels of APP and some biochemical parameters in cattle infected with Mycobacterium bovis. Twenty-five M. bovis infected and twenty-five antibody-negative healthy bovine sera were used according to ELISA test results to investigate the biochemical parameters. Blood samples obtained from Jugular veins of animals were collected into plain tubes. Haptoglobin, serum amyloid A (SAA), ceruloplasmin, aspartate aminotransferase (AST), alkaline phosphatase (ALP), gamma-glutamyl transferase (GGT), urea, creatinine and iron (Fe) levels were measured colorimetrically.

Compared with the control group, cattle with tuberculosis were found have statistically significant increased levels of APP such as serum haptoglobin, SAA and ceruloplasmin and levels of biochemical parameters such as AST, ALP, GGT, urea and creatinine while decreased levels of serum Fe.

It was determined that acute phase response occurred in cattle infected with M. bovis which led to increase APP and impairment in the normal functions of the liver.

P-20

DETERMINATION OF TEM, SHV, CTX-M AND OXA GENES IN TETRACYCLINE RESISTANT E. COLI STRAINS ISOLATED FROM SEA WATER

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The increase of antibiotic resistant bacteria and their interaction in the environment is an emerging global issue. Antibiotics particularly used in agriculture and livestock play a major role in the development of the resistance due to the lack of monitoring systems of the consumption statistics. However, it should be noted that development of resistance of microorganisms mostly depending on the selective pressure of antibiotics. It has been demonstrated by various studies that widespread and unregulated use of antibiotics for prophylaxis had a major impact on the development of resistance.

In the current study, it was aimed to reveal resistance profiles of the tetracycline resistant faecal bacteria that was recovered from aquatic ecosystem.

For this purpose, 86 aquatic E. coli strains which were collected from 9 different stations in Istanbul were examined by molecular methods. The gene cassettes that were responsible for resistance of Beta-lactam antibiotics temoneira (TEM), sulfhydryl variable (SHV), cefotaxim-Munich (CTX-M) and oxacillin-hydrolyzed (OXA) genes were investigated by polymerase chain reaction.

blaTEM gene was detected in 4 (4,65%) of the 86 aquatic E. coli. However, there was no positive results about the presence of bla CTX-M, bla SHV, and bla OXA resistance genes.

P-21

DETECTION OF DIACYLGLYCEROL ACYLTRANSFERASE 1 (DGAT1) GENE POLYMORPHISM IN IMROZ AND CHIOS SHEEP BREEDS IN TURKEY USING PCR-RFLP METHOD

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DGAT1 which catalyzes the last step of triacylglycerol synthesis has two alleles of the in animals ($DGAT1^A$ and $DGAT1^K$), the allele carrying the amino acid Lysine (K) is associated with milk with high fat content and low milk yield, whereas the allele carrying the amino acid Alanine (A) is the contrary. These alleles are known as candidate marker genes in choosing the animals for breeding. The aim of this study was to examine the genetic structures to the DGAT1 gene by PCR-RFLP method in Imroz (n=60) and Chios (n=52) sheep breeds. In this study, it was found that DGAT1 gene's allelic frequencies varied significantly between the two sheep breeds. The AA genotypic frequency was found the highest in Chios sheep breed (11.538%); the KK genotypic frequency was found the highest in Imroz sheep breed (68.333%) and the KA genotypic frequency was found the highest likewise in Imroz sheep breed (36.538%) in DGAT1 gene. In this study, the A allele frequency (0.702) was found higher than the K allele frequency in Imroz sheep breed. But, the K allele frequency (0.817) was found higher than the A allele in Chios sheep breed. It is believed that by increasing the DGAT1-like loci in order to ameliorate the milk yield capacity of native sheep breeds and merging the results obtained from these loci with the data and pedigree records of animals will prove especially useful to make better deductions and discoveries.

P-22

METASTASIS OF CANINE TRANSMISSIBLE VENEREAL TUMOR TO MEDIAN ILIAC LYMPH NODES AND EVALUATION OF TREATMENT WITH COMPUTED TOMOGRAPHY

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A 2-year-old, cross-breed and neutered bitch weighing 23 kg, was presented three weeks history of vaginal bleeding, anorexia and lethargy. Decreased number of keratinized superficial cells, red blood cells and ovoid cells containing intracytoplasmic vacuoles were revealed with vaginal cytology. A rigid, mandarin-sized mass was detected with palpation in the vaginal examination. Follicular areas where ovariums are normally localized and a mass of 4.24 cm around lumbar vertebras were detected in the ultrasonographic examination of the bitch. The bitch was diagnosed with canine transmissible venereal tumor (TVT) and ovarian remnant syndrome.

Laparotomy was performed with the aim of removing ovarian remnant tissues and the mass around the lumbar vertebras. The mass was localized above psoas minor muscle on both size of median line. The mass was surrounded with deep circumflex iliac and external iliac arteries. This vascular situation prevented the removal of the mass with operation. A fine needle aspiration was performed to the mass for the cytology. By means of the detection of ovoid cells containing intracytoplasmic vacuoles in cytologic preperation, the mass was associated with the metastasis of TVT. A chemotherapy protocol was scheduled for the bitch. Computed tomography was performed before and after the entire chemotherapy protocol with aim of evaluation the effect of treatment on the abdominal mass. The patient who was positioned in sternal posture under general anesthesia was scanned with Shimadzu Subrina CT Scanner (120kv, 100 mA, W130, C50) taking axial sections at 7 mm intervals. Two bilateral structures (4.29×2.65 cm left; 3.7×2.96 cm right) which were anatomically compatible with median iliac lymph node were detected starting from the cranial aspect of the sacrum and reaching the level of the 6th lumbal vertebra. It was detected that the expended median iliac lymph nodes changed the localization and position of vesica urineria and prevented the appearance of colon, aorta abdominalis and vena cava caudalis which are easily detectable at the level of 6th lumbal vertebra. Vicristine sulphate (0.025mg/kg) was administered intravenously to the bitch once a week for eight weeks. One week after the last chemotherapy computed tomography was repeated. Median iliac lymph nodes could not be detected. The localization and posture of vesica urineria, colon, aorta abdominalis and vena cava caudalis were normal. It was concluded that vincristine treatment is effective even in metastatic cases of TVT.

P-23

OCHRATOXIN A LEVEL IN BABY FOODS RETAILED IN ISTANBUL-TURKEY

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Ochratoxin A, is a well-known nephrotoxic, hepatotoxic and carcinogenic mycotoxin, produced by some species of mould genera such as Aspergillus spp. and Penicillium spp. under various environmental conditions such as moisture and temperature. The main source of Ochratoxin A intake in human is cereals and cereal derived products which if they are consumed in large quantities as in the case of breakfast cereals and cereal based baby foods principally consumed by babies. In this study, a total of 150 samples (50 infant formulas, 50 follow-on formulas and 50 cereal based supplementary foods for infants and children) were obtained randomly from various supermarkets and pharmacies in Istanbul and 52 out of 150 (34.7%) analysed samples contaminated with Ochratoxin A. None of the examined baby foods samples were above Turkish Food Codex maximum limit of Ochratoxin A in baby, infant and young children foods (0.5 µg kg^{-1}). These results reinforce the idea of strict and routine quality controls and good hygiene practices have to be performed in every step of production to minimize the potential risk of Ochratoxin A contamination.

P-24

INVESTIGATION OF THE EFFECT OF ALFA CASEIN GENE PROFILES ON MILK PROTEIN POLYMORPHISM AND MILK QUALITY PARAMETERS IN KIVIRCIK AND CHIOS SHEEP BREEDS

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In terms of nutritional contents it has within its composition, milk is considered as an ideal nutriment. Milk proteins carry high biological value as they contain exogenic aminoacids which are highly important for life. In this study where milk protein polymorphism of Kivircik and Chios sheep breeds which are among the more important local breeds in Turkey, was planned to be genetically studied, the main objective was to investigate the polymorphisms, milk fat content, milk acidity and milk density of the variants A and B belonging to αs1-CN and αs2-CN gene families. In this study, in Kivircik and Chios sheep breeds containing the αs1-CN gene, heterozygosity values were calculated as 0.403 and 0.395, HWE as 0.361 and 0.360, PIC as 0.277 and 0.322, effective allele count as 1.497 and 1.676, respectively. In the study, in Kivircik and Chios sheep breeds containing the αs2-CN gene, heterozygosity values were calculated as 0.300 and 0.242, HWE as 0.389 and 0.360, PIC as 0.327 and 0.322, effective allele count as 1.700 and 1.676, respectively. It can be seen that the higher expected heterozygosity values of Kivircik sheep breeds when compared to Chios breeds also increases the effective allele count in Kivircik sheep breeds. In Kivircik and Chios breeds, PIC values of 0.277 and 0.322 respectively, shows that there is a low allele variation within these breeds. While the average pH values of milks of sheep breeds with a high allele frequency are around 6.3, this value was found to be 5.79 in sheep with low allele frequency. As a result, it is thought that DNA typing methods can be an efficient way to identify the A and B alleles of αs1-CN and αs2-CN genes. Also, in this study, it was found that the milk yield and fat percentage parameters of sheep with high A allele frequency (such as Kivircik breeds) were statistically significantly higher when compared to sheep with low A allele frequency (such as Chios breeds). It is thought that, in selection studies that would be conducted in terms of milk yield, it would be favorable to use Kivircik breeds as they have more breeds that carry the allele A of the αs1-CN gene which corresponded to a higher milk yield in this study.

P-25

THE EFFECT OF CHOLESTEROL LOADED METHYL-β-CYCLODEXTRIN ON SHEEP OOCYTES DURING CHILLING AND VITRIFICATION

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The aim of this study was to evaluate the protective efficiency of cholesterol on sheep oocytes exposed to cold stress or vitrification. Cholesterol loaded methyl-ß-cyclodextrin (CLC) (2mg/mL) was added to the maturation media (TCM-199) of the treatment groups for 2, 4 or 24 hours. Following 24 hour maturation period, oocytes were exposed to 30 min. cold shock at +4°C. Oocytes (N= 1404) from all groups were evaluated for their viability, nuclear maturity and chromosomal dispersion by staining with Trypan Blue and Hoechst stains respectively. The results showed that no significant differences between all groups in regarding to oocyte viability or ooplasm integrity, but the oocytes exposed to cold stress without pre-incubation with CLC had a significant high chromatin dispersion and lower maturation rates when compared with other groups ($p < 0.05$). Oocytes incubated for 4h with CLC had a significant high maturation rates compared to the remain treatment groups ($p < 0.05$).

In vitrification experiment, oocytes (N= 759) were matured for 20 h and then incubated with 2mg/mL CLC for 2h. Oocytes were vitrified by 0.25 ml straws or open pulled straws (OPS). The final vitrification solution composed of 20% EG, 20% DMSO and 0.5 M sucrose. Two to 4 weeks vitrified oocytes were warmed and lift for another 2 hours in maturation medium to complete their maturation period up to 24 hours.

To evaluate the osmotic stress of vitrification media; a portion of oocytes (N= 465) were exposed to the same procedure of vitrification and warming but without immersing in liquid nitrogen. Results verify that there were no negative effects of vitrification media on oocytes viability and nuclear maturity.

Vitrified-warmed oocytes were stained and evaluated similarly as the first phase experiment. Results showed that oocytes matured in CLC supplemented medium had a significant ($p < 0.05$) higher viability rates than oocytes matured in CLC-free medium. Ooplasm integrity rates were increased significantly ($p < 0.05$) in oocytes vitrified by OPS. Oocyte maturity and chromosome integrity rates were also increased significantly ($p < 0.05$) in oocytes pre incubated with CLC and vitrified by both straw or OPS.

We conclude that CLC can indirectly improved nuclear maturation by reducing chromosome dispersion after cold stress or vitrification by its protective ability on oocyte plasma membrane, no significant differences between oocyte packaging devices in regard to post vitrification results; however, more studies are required to increase oocytes nuclear integrity by using cytoskeleton protecting particles beside CLC.

P-26

HYDROCEPHALUS: EVALUATIONS OF 62 CASES

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Hydrocephalus is a disorder in which cerebrospinal fluid accumulates within the cerebral ventricles and subarachnoid spaces. The medical treatment of hydrocephalus aims to decrease cerebrospinal fluid production, surgical management aims to provide a controlled flow of cerebrospinal fluid from the ventricles into a body cavity. Ventriculoperitoneal shunting is the most frequently used technique in the treatment. In this study, we analyzed 62 patients admitted to Surgery Clinic of Veterinary Faculty, Istanbul University with the diagnosis of hydrocephalus and were treated and/or followed up. Clinical features of all patients were identified with their species, breed, gender, types and grades of hydrocephalus, an additional pathology, ventriculoperitoneal shunt placement, presence of an infection in preoperation and postoperation period. 13 of patients underwent ventriculoperitoneal shunting.

P-27

EVALUATION OF PROXIMAL AND DISTAL MOTOR NERVE CONDUCTION USING THE ELECTRICAL ROOT STIMULATION TECHNIQUE IN THE FEMORAL AND OBTURATOR NERVES

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The obturator and femoral nerves originate from the L4–6 spinal cord segments and supplies the extensor muscles of the stifle join. Obturator and femoral nerves injuries are uncommanly observed in dogs. However there is no normative proximal nerve conduction velocity values to distinguish healthy and injured nerves. The purpose of this study to explore that practicality of the electrical root stimulation (ERS) technique and to acquire normative data from the obturator and femoral nerves in healthy dogs.

Electroneuromyography (ENMG) studies were performed on 40 healthy dogs (22 males and 18 females).The age of dogs varied from 8 to 72 (34.55 ± 20.30) months. After atropine sulphate, xylazine and ketamine combination was performed for the general anaestesia. ERS was applied via monopolar needle electrodes between the L6/L7 and L5/L6 interarcuate spaces to the obturator and femoral nerves, respectively. Data were analysed using the SPSS 19.0 (IBM) software.
This study shows that ERS is an applicable method to diagnose femoral obturator nerve injuries. The proximal motor nerve conduction velocity is 59.87 ± 4.83 m/s and 60.89 ± 3.93 m/s in the femoral and obturator nerves, respectively. It is thought that the nerve root latency and motor nerve conduction velocity values can be compared for both legs in diagnosing these unilaterally shaped diseases.

Note: This study is a part of the research numbered 111O404 that was supported by TUBITAK.

P-28

RELATIONSHIP BETWEEN DOMINANCE HIERARCHY AND BODY WEIGHT, BODY MEASUREMENTS AND TESTOSTERONE LEVEL IN HEMSIN, CHIOS AND KARAKUL RAMS

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There is a well-organized dominance hierarchy between livestock animals and individuals' rank of getting use of sources is determined by dominance and recessive relationships. In Turkey there are various local sheep breeds which have adapted to feeding facilities and climatic conditions where they live and they have significant differences in terms of body size and morphological traits. The principal aim of the present study was to determine the relationships of dominance hierarchy with body weight, certain body measurements, horn size and testosterone level in Hemsin, Chios and Karakul rams. To describe the dominance hierarchy, dominance index (DI) and social rank parameters were used.

The study was conducted in a fattening unit which belongs to Istanbul University Faculty of Veterinary Medicine in Avcılar campus. The boxes with 21 m^2 space were supplied for each of the Hemsin, Chios and Karakul breeds. 13 Hemsin, 12 Chios and 14 Karakul rams were established as the study material. To present the dominance and recessive status in each breed 'Food Competition Test' was applied and dominant rams were determined according to their ability to eliminate other ram's achievement to reach to feed trough for >1 minute and also to be able to consume feed in this process. DI of an animal was calculated by the ratio of the number of animals which w dominated by an individual in relation to all animals with which it has interacted. To describe the social rank in a breed, David's Score method was applied.

DI was significantly correlated with body weight ($r=0.778$; $P<0.01$), chest depth ($r=0.624$; $P<0.05$) and tail width ($r=0.699$; $P<0.01$) in Hemsin rams. Similarly, social rank of Hemsin rams has also significant correlation with body weight ($r=-0.737$; $P<0.01$), chest depth ($r=-0.714$; $P<0.01$), cannon circumference ($r=-0.609$; $P<0.05$) and tail width ($r=-0.651$; $P<0.01$).

While DI of Chios rams was significantly correlated with body weight ($r=0.634$; $P<0.05$) and linear horn length ($r=0.580$; $P<0.05$), social rank of rams from this breed was only correlated with body weight ($r=-0.711$; $P<0.01$).

DI and social rank were not significantly correlated with body weight in Karakul rams. Both DI and social rank in this breed has significant correlation with rump width ($r=0.613$; $P<0.01$ for DI; $r=-0.544$; $P<0.05$ for social rank) and linear horn length ($r=0.537$; $P<0.05$ for DI; $r=-0.623$; $P<0.05$ for social rank). Results obtained in the current study indicate that criteria, which determines social hierarchy, changes due to the breed of ram.

P-29

PRELIMINARY RESULTS ON FREQUENCY OF AGGRESSION IN SHEPHERD DOGS AND THE CHARACTERISTICS THAT SHEPHERD DOGS SHOULD HAVE

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The aim of the survey study was to determine the opinions of shepherd dog owners regarding the frequency of aggressive behaviours expressed by their dogs and the characteristics that shepherd dogs should have.

The survey was conducted with sheep breeders by face-to-face interview in Kirklareli province of Turkey. The survey consisted of three parts. Part one covered demographic variables of breeders including age, gender, educational status, number of owned dogs, and information about the dogs including breed/genotype, gender and age. In part two, dog owners were asked about aggression frequency of their dogs in 14 different situations using a 5-point likert scale (1: never; 2: rarely; 3: occasionally; 4: usually; 5: always). In order to calculate the percentage of dogs, which expressed aggression in each of the 14 situations, the likert scale was reduced to a 'never' (score 1), 'sometimes' (scores 2, 3 and 4) or 'always' (score 5) scoring system. The aggression frequencies of 151 dogs were evaluated in part two. In part three, 21 sheep breeders were asked to list the characteristics a shepherd dog should have. Chi-square test was used to determine the effects of dog's gender, breed and age on proportion of dogs, which expressed aggressive behaviours in different frequency groups.

As a result, the median values for the questions about aggressive behaviours of dogs; aggression if an unfamiliar dog approaches to the sheep in the rangeland / pastureland (Q1), aggression if an unfamiliar person approaches (Q2), aggression if an unfamiliar person approaches to the sheep in the sheepfold (Q3), aggression towards the other dogs in the farm (Q6), aggression towards the other dogs or people when the owner gives the order (Q7) and growling / barking when interfered during eating (Q12) were found 5 (always). The median values for the questions about aggressive behaviours of dogs; aggression if an unfamiliar person approaches to its owner at a long distance from the sheepfold (Q4), aggression towards farm workers and family members (Q8), aggression towards lamb / sheep (Q14), aggression when punished (Q9) and aggression when tied with a short rope (Q11) were found 1 (never).

Gender of dog had no significant influence on frequency of aggression in situations investigated in the study. On the other hand, age of dog had significant influence on "aggression towards the other dogs in the farm (Q6).

The owners stated that the dogs at the first year of age showed less aggression towards the other dogs in the farm than older dogs.

When the question of "which characteristics should a shepherd dog have?" was asked to the owners, the answers; "should not leave the flock" 76.2%, "should be strong, hard, stately and good looking" 71.4%, "should guard the flock against wolves and other dangers" %38.1 and "should watchguard the strayed sheep/lamb, wounded or newly lambed sheep" 38.1%, were given.

In this presentation, the preliminary results of a survey study aiming to investigate certain characteristics of the shepherd dogs which are among the irreplaceable parts of the sheep breeding practices in Turkey, were presented. Determination of the detailed behavioural characteristics of the shepherd dogs would be possible by wider ranged survey studies, which will be supported by behavioural observations.

P-30

INVESTIGATION OF THE PRESENCE OF *CAMPYLOBACTER JEJUNI, CAMPYLOBACTER COLI,* AND *CAMPYLOBACTER LARI* IN DIFFERENT SOURCES BY MULTIPLEX PCR

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In this study, it was aimed to determine the presence of Campylobacter jejuni, Campylobacter coli, and Campylobacter lari in different sources (raw cow milk, slaughterhouse wastewater) and to confirm the isolates by multiplex PCR method. In the scope of the study, a total of 124 samples (114 raw cow milk, 10 slaughterhouse wastewater) obtained from different farms and slaughterhouses in Hatay province were analysed. Isolation of Campylobacter species was determined by using cultural methods. Then, all of the isolates were verified in terms of Campylobacter spp., C. coli, C. lari, and C. jejuni by multiplex PCR method based on the 16S rRNA, ask, glyA, and cJ0414 gene sequences, respectively. C. jejuni was found in 6 (5.2%) of raw cow milk samples and C. coli was found in 2 (20%) of slaughterhouse wastewater samples. No C. lari was found in the study. As a result, it has been determined that the different sources analysed in the study are contaminated with Campylobacter at various levels.

A part of this study was supported by Mustafa Kemal University under the BAP project code 15170.

P-31

SOME MICROBIOLOGICAL CHARACTERISTICS OF LOCALLY USED CORN SILAGES

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Silage is an important roughage in ruminant rations. In the province of Hatay where this research is done, maize silage is mainly used for feeding dairy and beef cattle. In this study, silage samples were collected from farmers engaged in animal husbandry activities and involved in the use of silage in these activities in Hatay province Antakya. It is aimed to determine the presence of lactic acid bacteria, Enterobacteriaceae, Listeria spp, sulfite reducing anaerobes, yeast and mold in these silages. In seven different samples in silage, the number of lactic acid bacteria was below the detection limit ($<2.0x10^2$). The remaining 13 samples were found to be 2.3-5.78 cfu/g (mean 3.32 cfu/g). Enterobacteriaceae, Listeria spp, sulphite reducing anaerobes and yeast were not detected in the analyzes. In five samples, molds (mean 2.12 cfu/g) were detected.

Microbiological quality in silage is important for animal health. Every step from the production of the silage to its consumption must be given due care. In this respect, it was concluded that breeders who are engaged in animal husbandry activities should be informed.

P-32

DETECTION OF *NEOSPORA CANINUM* IN ABORTED BOVINE FETUSES AND DAM BLOOD SAMPLES BY ELISA, HISTOPATHOLOGY, IMMUNOHISTOCHEMISTRY AND PCR IN TRAKYA REGION, TURKEY

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Neospora caninum is one of the most major causal agent of abortion in cattle in many countries and it has a huge economic impact. In this study, it is aimed to detect the presence of N. caninum in the aborted bovine fetuses and dam blood samples by using diagnostic tools such as Enzyme-Linked ImmunoSorbent Assay (ELİSA), histopathology, immunohistochemistry (IHC) and Polymerase Chain Reaction (PCR) in Trakya Region, Turkey. The blood samples and the aborted fetuses of dairy cattle were collected and carried to the laboratuary with cold chain and after obtaining sera from the blood samples they were preserved at -20 C°**.** Following the necropsy of the fetuses, tissue sampleswere taken from the cerebrum, cerebellum, medulla spinalis, heart, liver, lung, kidney and umbilical cord and put into buffered formaldehyde solution for histological examination. In addition to this, 20 g of each organ was put into tubes of 1.5 ml for DNA extraction and PCR method and was preserved first at -80 C°and then at -20C°**.** Histopathological examinations revealed encephalitis in the brains of 9 fetuses (4.5%), myocarditisin the hearts of 12 fetuses (6%), pneumonia in the lungs of 26 fetuses (13%) and nephritis in the the kidneys of 4 fetuses (2%). PCR revealed positive results in the organs of 5 fetuses (2.5%). ELISA results supported PCR results however revealed higher positivity than PCR(4%). Immunohistochemistry detected infections in 5 fetuses only giving positive reactions in the brain and in the heart (2.5%).

Histopathological, serological, immunuhistochemical andPCR methods were found to be correlative and complementary.

P-33

POTENTIAL PROTECTIVE EFFECT OF BORON AGAINST GENTAMICIN INDUCED OXIDATIVE STRESS ON RAT TISSUES

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The aim of this study was to determine the protective effects of boron (B) on gentamicin induced oxidative stress in liver, heart, brain, lung, and testis of rat tissues. Rats were divided into 8 experimental groups containing 7 animals in each group. Experimental groups were as follows; control group (fed with feed that containing no B), gentamicin group (100 mg/kg, i.p.), B-5 group (5 mg/kg B, i.p.), B-10 group (10 mg/kg B, i.p.), B-20 group (20 mg/kg B, i.p.), B-5+ gentamicin group (5 mg/kg B and 100 mg/kg gentamicin, i.p.), B-10+ gentamicin group (10 mg/kg B and 100 mg/kg gentamicin, i.p.), and B-20+ gentamicin group (20 mg/kg B and 100 mg/kg gentamicin, i.p.). B was given to rats before four days. Gentamicin was given to rats on the fourth day and finished on the 12th day. Also, administration of B was completed the fourteenth day. Administration of gentamicin increased malondialdehyde levels whereas decreased glutathione levels in tissues. Superoxide dismutase and catalase activities were decreased by gentamicin. Besides, gentamicin induced alteration in the tissues was detected by histopathological examination. However, treatment of B resulted in reversal of gentamicin-induced lipid peroxidation, activities of antioxidant enzymes, and cell protective effect.

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P-34

DETERMINATION OF GH GENE POLYMORPHISM IN INDIGENOUS GOAT BREEDS IN TURKEY

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Goat (Capra hircus) is the second domesticated animal after dog and has provided major benefits for humans in the process of founding settled life civilizations by providing meat, milk and wool. There are currently more than 300 goat breeds worldwide with various morphological characteristics in a widespread geographical distribution from tropical climate and deserts of Africa to icy lands of Siberia. Anatolia, one of the main domestication regions in the world, is home to indigenous goat breeds like Anatolian Black, Kilis and Angora. Anatolian Black and Kilis are raised as combined breeds, while Angora goats are raised for wool. Like all mammals, physiological and metabolic processes that determine production efficiency traits of goats are controlled by genes. Previous studies provided solid evidence regarding the major roles of growth hormone (GH), prolactin (PRL) and PROP1 protein and their encoding genes on growth, reproduction, milk efficiency and composition in mammals.

DNA samples of 50 Anatolian Black, 50 Kilis and 50 Angora goat breeds were selected from DNA collections obtained during previous research projects. The GH polymorphism was determined by direct sequencing of the amplified 214 bp fragment. Sequencing was performed using an ABI-3100 sequencer (PE Biosystems, Weiterstadt, Germany) and the BigDyeTM terminator cycle sequencing kit, after the purification of the PCR products. Forward primer was used to sequence the PCR products. This study showed that all individuals of Anatolian Black, Kilis and Angora goats have BB genotype regarding GH gene A73C polymorphism. The underlying mechanism for lack of AA and AB genotypes may be a linkage with a lethal gene resulting in natural selection or a disability in animals which led to artificial selection by the farmers. In this respect, we consider further studies of evaluating relation of GH gene with various genes and animal characteristics.

P-35

GENETIC POLYMORPHISM OF MYOSTATIN GENE IN TURKISH INDIGENOUS SHEEP BREEDS

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Sheep is one of the most important livestock animals bred in Turkey. Growth and meat production traits are significant economic traits in sheep. In the past years many single nucleotide polymorphisms (SNPs) and in/del polymorphisms in livestock have been identified by genome-wide association studies in order to facilitate the potential utilization of genes involved in growth and meat production traits. But the number of quantitative trait loci (QTL) identified in sheep still remains limited. Myostatin (MSTN) is the major regulator of myogenesis in mammals and acts as a negative regulator of muscle growth. It is a member of the transforming growth factor-β superfamily and acts as a negative regulator of muscle growth. It directly affects muscular hypertrophy and carcass conformation Mutations in MSTN gene are associated with increased skeletal muscle mass in sheep. A significant association of TTTTA deletion in 5`UTR of MSTN gene with twining in goats was reported. The aim of this study was to determine allele frequencies of TTTTA in/del polymorphism in Turkish indigenous sheep breeds.

In this study animals from Chiose, İmroz, Kivircik, Zom and Morkaraman sheep breeds were investigated. Genomic DNA was isolated by standard salt-out method. Animals were genotyped by PCR-RFLP method. 497 bp fragment of MSTN gene was amplified by PCR and digested with DraI restriction enzyme. The digested DNA fragments were separated by electrophoresis in 2% agarose gel.

The digestion of 5'UTR of MSTN gene by DraI restriction enzyme results in two alleles, A (497 bp undigested fragment) and B (427 and 70 bp fragments). In this study only AA genotype was observed (Figure 1). The indigenous Turkish sheep breeds were found to be monomorphic for this locus MSTN gene can be useful for molecular evolutionary studies in sheep due to its conserved parts. Also further studies on association between TTTTA deletion of MSTN gene and performance traits should be conducted, in order to compare sheep and goat breeds.

P-36

SOMATIC CLONING IN CATS USING MI OR MII OOCYTES

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A total of 167 MI and 219 MII stage oocytes were used as the material of the study. The oocytes were enucleated by aspiration of the polar body and the MI or MII plates. Cycling granulosa cells were used for nuclear transfer. Cell fusion was induced with DC pulses of 2.0 kV/cm 60μs, 0.1s apart (2x) delivered by a BTX Electrocell Manipulator 200. Later, the embryos were activated by 1.0 kV/cm 20μs DC pulses 0.1s apart (2x) followed by 2 mM 6-DMAP incubation in culture medium for 4 h in a humidified atmosphere of at 38°C. The somatic cell transferred embryos were cultured for 8 days in mSOF medium supplemented with 0.4% BSA in a humidified 5% CO2, 5% O2, and 90% N_2 atmosphere at 38°C. Then, all embryos cell numbers were counted under ultraviolet light using a fluorescent microscope. The fusion (66.66 vs 21.55%) and cleavage rates (15.75 vs 11.11%) were significantly higher in MII stage oocytes than MI stage oocytes ($P<0.02$).

While SCNT embryos were developed to morula stage in MII group (14; 9.58%), all the cleaved embryos were arrested at the 2-4 cell stage in MI group. None of the embryos was developed to blastocyst stage in both groups.

P-37

ALTERNATIVE METHODS FOR VECTOR CONTROL

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Vector-borne diseases are still accepted as a major public health problems in many countries despite several control effort for centuries. Vector control programs are usually based almost entirely on chemicals until the last century. Despite the successful use of the chemical substances in the control of the vectors, up-to-date ecological and environmental protection rules and laws do not allow such strategies because of the adverse effects of non-target species, ecotoxicity, environmental pollution and resistance development. Therefore, there is an urge to develop alternatives to conventional treatment methods.
In this study, the studies on vector control methods with little or no adverse effects of non-target species, non-ecotoxic properties and non-causing environmental pollution were compiled and reviewed. Control strategies based on genetic modification and existing legislation on the subject were compared and proposals made for the future.

Organic compounds and the control strategies based on genetic modification for fighting with vectors are widely used. No problem has been observed, except that the use of organic compounds is limited due to the narrow spectrum of effects. However, the absence of legal regulations related to vector control based on genetic modification has been considered a major challenge.

Establishing legislation on genetic modification based vector control, conducting risk analyzes and consulting public opinion, all of which must be assessed at once. These new systems can be innovatively combined with integrated pest control (IPM) management, since they are not everywhere a major drug to control all of the vector-borne diseases. Following this approach and using comprehensive pest control methods, the use of chemical substances is minimized. Also, it has come to the conclusion that many treatments of physicians, both domestic and between countries, are different. The harmonious functioning of physicians in the treatment of such vector-borne infections from different professional backgrounds is necessary for a successful struggle.

P-38

THE EFFECTS OF CLIMATE CHANGE ON CONCENTRATIONS OF PERSISTENT ORGANIC POLLUTANTS IN ENVIRONMENT

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The effects of climate change on the concentration of persistent organic pollutants (POPs) in the environment is one of the most important concerns. It is estimated that the air temperature will rise to 1.8-4.0°C by the end of the 21st century under possible greenhouse gas emission scenarios. The Mediterranean region is a vulnerable region, where the frequency of extreme climatic events increases with higher sea levels, including intense storms, heavy rainfall events and droughts. Changes in ambient conditions such as increased ambient temperature or UV-B radiation, can affect the fate and behavior of POPs and ultimately affect people.

In this study, the studies done up to the present day were compiled and the effects of climate change on the environmental concentrations of POPs and their risks to environmental health were reviewed. In addition, research deficiencies were identified and further research topics were proposed.

Relation between climate change and POPs are a global concern; where scientific bodies should cooperate with governmental and legal authorities together. Many studies reported in the scientific literature have focused primarily on legacy POPs, including polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/Fs), polychlorinated biphenyls (PCBs) and pesticides. However, although the polycyclic aromatic hydrocarbons (PAH) and photodegradation by-products cause adverse health effects, the number of studies on the environmental levels of PAHs in climate change is scarce. In addition, data on newly emerging POPs in the scientific literature are also quite inadequate.

In conclusion, an intensification of studies to identify and mitigate the indirect effects of the climate change on POP fate is needed to minimize the human health impact. Furthermore, due to the global nature of this problem, the interactions between climate change and POPs should be addressed from an international perspective.

P-39

MACROANATOMIC, LIGHT AND ELECTRON MICROSCOPY EXAMINATION OF PECTEN OCULI IN LARUS CANUS

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The present study was conducted to determine macroanatomic nature as well as light and electron microscopic examination (SEM) of pecten oculi and totally 20 bulbus oculi belonging to 10 seagulls (Larus canus) were used. Pecten oculi formations consisted of 18 to 21 pleats and their shape looked like a snail. Apical length of the pleats forming pecten oculi were averagely measured as 5.77±0.56 mm, retina-dependent base length was 9.01±1.35 mm and height was measured as 6.4±0.62 mm. In pecten oculi formations which extend up to 1/3 of the bulbus oculi, 2 different vascular formations were determined according to thickness of the vessel diameter. Among these, vessels with larger diameters which are less than the others in count were classified as afferent and efferent vessels, smaller vessels which are greater in size were classified as capillaries. Furthermore, the granules which were observed intensely in apical side of the pleats of pecten oculi were observed to distribute randomly along the plica.

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P-40

MORPHOMETRY OF THE MANDIBLE IN RATS (WISTAR ALBINO)*

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This study was conducted to compare intersexual similarities and to determine the anatomical differences in rat mandible as a result of being in rodents group. Total 20 female and 20 male Wistar Albino rats of 20 weeks age were used. Rats were sacrified under ether anaesthesia and macerated. Mandible were recovered, length and height measurements were determined and evaluated statistically. Measurements of the total length of mandible 2 (TML2) and the length of the mandibular incissiv corona (MICL) had differences between sexes and the difference was statistically significant ($p<0.05$).

* This poster is the presentation of the article published in the Journal of Veterinary Faculty of Istanbul University, 36 (1), 51-56 in 2010

P-41

IDENTIFICATION THE POOR POSTERITY OF BEEF CATTLE (ANGUS) WITH A FUNCTIONAL FOR PARENT VERIFICATION BASED ON INNOVATIVE SNP (SINGLE NUCLEOTIDE POLYMORPHISNS) METHOD

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Meat production is one of the difficult and labor-consuming directions in livestock production not only in Kazakhstan, but also around the world. Kazakhstan considering experience of the advanced countries develops meat cattle breeding on the basis of the modern highly effective technology in keeping of animals and fishes, the organization of pasturable economy and pools for cultivation of fishes, integration by the principle "from a field to a plate", and also uses of the best world resources. Now in domestic and world practice of cattle breeding new technologies, the genetic markers of DNA based on application which has a row of advantages from which main thing - high performance, the close to 100% are applied.

The purpose is confirmation paternity and rejection of the father which to spoil descendants, within the project "Creation of genotyping database for purebred beef cattle (Angus. Hereford. Auliekol. Kazakh whitehead) with a functional for parent verification based on the innovative SNP (Single Nucleotide Polymorphisms) method".

Angus is feature of breed small weight of calves in case of the birth, but further quickly gains a weight. The difference in development of calves was noted. For research: 23 bulls of vendors and 10 calves of breed Angus were received.

Five of calves at numbers 4551, 4533, 4531, 4555, 4529 are large, remaining calves at numbers 4520, 4535, 4558, 4559, 4553 small-sized. In case of the birth at all 10 calves identical weight from 48 kg – 64 kg was watched, in three months the difference in weight turned out big from 90 – 197 kg.

On the basis of the NAO the Kazakh National Agrarian University in the Kazakhstan-Japan innovation center laboratory Green biotechnology and cellular engineering in which genotyping of DNA on the basis of the innovative SNP method (Single Nucleotide Polymorphism) is carried out. Genotyping of all samples of bulls' vendors and their calves on 240 SNP (gene) was carried out.

The conducted researches showed that at the calves who are lagging behind in development the general father. This bull was heterozygote on a gene (Muscle growth genes: cholinergic receptor nicotinic epsilon (CHRNE). which is responsible for process of a set of muscle weight. Rejection of this bull was made.

Research is supported by the project № 236-16-ГК " Production of organic food products from fish (Tilapia, Clarias gariepinusand, etc.) grown on the basis of local environmentally friendly feed in accordance with international standards".

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ABDOMINAL MASSIVE FAT NECROSIS IN TWO MALE DWARF CAIMANS (*PALEOSUCHUS PALPEBROSUS*)

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Steatitis or pansteatitis and fat necrosis may occur in crocodiles due to vitamin E deficiency which is a result of fish feeding especially rancid fish feeding for long periods. The purpose of this study was to present the postmortem, histopathological and bacteriological findings of abdominal fat necrosis diagnosed in two dwarf caimans kept in a private aquarium in Istanbul.

Two male dwarf caimans were referred to the department of pathology for necropsy with one month apart. The caretaker reported that they were being fed on fish that were cold stored for a long time. Systemic necropsy revealed subcutaneous and abdominal wall hemorrhage and brownish yellow coloring. There were yellow-orange and sporadic brown colorings on the abdominal and visceral fat tissue suggestive of fat necrosis. Abdominal muscles were seemed to be necrotic, as well. Abdominal cavity was filled with hemorrhagic and purulent fluid in one animal and there was approximately 1 Lt of modified transudate like fluid accumulation in the other animal's abdominal cavity. Moreover, adhesions were observed on the surface of thoracic and abdominal organs due to fibrin deposits. Histopathologically, diffuse fat necrosis was detected on the abdominal wall, mesenterium, bowel serosa and peripancreatic fat tissue. Steatosis and bilirubin deposits were noted in the liver (icterus). The heart was hyperemic and edematous and mild collateral hyperemia was observed in the lungs. The kidneys were congested, renal tubules were necrotic and there was diffuse accumulation of hyaline-like amorphous proteinaceous material in the tubules and also mild membranous glomerulonephritis was present. Chronic pancreatitis was noted as well. Aeromonas hdyrophilia was isolated from the lungs and the kidneys in both caimans and Morgonella morganii was isolated from the liver and the kidneys of one animal.

Feeding with frozen fish for extended periods gives rise to vitamin E deficiency which as a consequence leads to massive fat necrosis in caimans. In the present study, massive fat necrosis in two male dwarf caimans was considered to be associated with vitamin E deficiency due to rancid fish feeding. Vitamin E plays a role in the prevention of oxidative damage and fat necrosis, White Muscle Disease and Zenker necrosis occur in its deficiency. Hyperemic inflammatory areas due to steatitis develop on the abdominal wall, fat tissue, mesenterium, bowel serosa and peripancreatic tissue. Along with these inflammatory reactions, opportunistic Gram (-) terminal bacteria (Aeromonas hdyrophilia ve Morgonella morganii) grow and cause septicemia. Muscle degredation is induced due to vitamin E deficiency, which might be associated with myoglobinuric nephrosis that is manifested by the presence of hyaline cylinders in the renal tubules. In conclusion, on the basis of the findings, the cause of death of two male dwarf caimans was determined as massive abdominal fat necrosis, kidney failure and Gram (-) septicemia.

EFFECTS OF STOCKING DENSITY ON BROILER PERFORMANCE

P-43

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Chicken breeding requires a short time period and results with a high production yield. Therefor chicken products have a big role in animal product market. This study was carried out to determine the effects of stocking density on the broiler performance (Ross 308). The broilers in the study were separated in three groups according to their stocking density, named A (10 broilers/m^2), B (13 broilers/m^2) and C (16 broilers/m^2). Five hundred chicks were numbered for each group. A common care and feeding program was applied to all groups. The body weight gain was recorded weekly while the feed consumption and dead chicks were recorded daily. According to growth performance of the broilers, the comparison of stocking density of the groups were performed with one way variance analyses and least square means methods. The comparison of survival rates of groups in several periods was performed with X^2-test. In this study, the average body weight on the 42nd day of the broilers in three (A, B, C) groups were determined as 2473.69 g, 2462.60 g, 2454.05 g respectively. The effect of stocking density on body weight was determined insignificant ($P>0.05$). Total feed consumption on the 42nd day was as 4407.75 g, 4433.89 g, and 4430.09 g respectively. The feed conversion ratios on the 42nd day were 1.80, 1.82 and 1.83 in the A, B, and C groups respectively. As a result of this study, it can be concluded that the increase in stocking density in this research did not cause serious problems, since the appropriate conditions were provided for broilers.

This study was summarized from the first author's PhD thesis.

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THE EFFECT OF SOMATIC CELL COUNT ON COMPOSITION OF RAW MILK, OBTAINED FROM DAIRY COMPANIES

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Somatic cell count (SCC) is an indicator of the quality of milk. There is general agreement on the values of less than 100.000 cells/ml for uninfected cows. A threshold SCC of 200.000 would determine whether a cow is infected with mastitis. Cows with a result of greater than 200.000 are highly likely to be infected on at least one quarter and those greater than 300.000 are infected with significant pathogens.

Milk from mastitic cows may have off-flavors and may undergo deterioration of the milk fat and protein more quickly than milk from healthy cows. The aim of this study was to evaluate the relationships between SCC and some raw milk parameters (total dry matter, fat, protein, lactose and urea nitrogen).

Raw milk samples were collected from Brown Swiss cattle (n=30) in two different dairy companies, in Bandirma District of Balikesir Province of Turkey, in the period between December 2015 to November 2016. Totally 360 (180 in Farm-1 and 180 in Farm-2) raw milk samples divided into two groups, according to the mean levels of SCC in farms (Group-1: low SCC ≤ 107.000 cells/ml and Group-2: high SCC > 107.000 cells/ml in Farm-1, and, Group-1: low SCC ≤ 172.512 cells/ml and Group-2: high SCC > 172.512 cells/ml in Farm-2. All the analysis were performed by Bentley FTS 400 Combi used FTIR technology. Statistical analysis was performed by Excel-2010.

The mean levels of SCC were determined as 41.944 ± 28.184 cells/ml for the first group and 211.358 ± 205.279 cells/ml for the second group in the Farm-1**,** respectively. In the first group, mean levels of dry matter, fat, protein, lactose and urea nitrogen were determined as 11.89 ± 0.96%, 3.28 ± 0.83%, 2.96 ± 0.29%, 4.81 ± 0.23% and 14.05 ± 5.31%, respectively. In the second group, same parameters were calculated as 11.99 ± 0.97%, 3.3 ± 0.63%, 3.01 ± 0.43%, 4.75 ± 0.39% and 14.86 ± 5.14%, respectively. The mean levels of SCC were determined as 55.117 ± 38.229 cells/ml for the first group and 507.929 ± 429.385 cells/ml for the second group in the Farm-2**,** respectively. In the first group, mean levels of dry matter, fat, protein, lactose and urea nitrogen were determined as 11.93 ± 1.38%, 3.39 ± 1.21%, 3.02 ± 0.36%, 4.67 ± 0.33% and 10.11 ± 4.05%, respectively. In the second group, same parameters were calculated as 11.97 ± 1.45%, 3.53 ± 1.17%, 3.1 ± 0.49%, 4.58 ± 0.32% and 12.71 ± 5.08%, respectively.

It was concluded that, by the increase of SCC, milk dry matter, milk fat and urea nitrogen contents were determined to be affected, significantly ($p < 0.05$) in Farm-1, while milk lactose, and urea nitrogen contents were determined to be affected, significantly ($p < 0.05$) in Farm-2.

P-45

DETERMINATION OF CHANGES IN MICROBIAL FLORA IN SHEEP CARCASSES DURING SLAUGHTERING PROCESS

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This research was conducted to determine the changes in microbial flora, pH and internal temperature of sheep carcasses during slaughtering process. For this purpose, swab samples were taken from five regions of the carcass, including two arms, two buttocks and briskets at the stages of skinning, evisceration, washing and after storage of the same carcass for 24 hours for microbiological analyzes. In the study a total of 240 samples were collected from 12 sheep carcasses and analyzes were carried out. As the microbiological analysis, ocurrence of Salmonella spp., and counting of Enterobacteriaceae and total mesophilic aerobic microorganism populations were performed.

In the study, changes in pH and temperature were also determined in the limbs and buttocks of sheep carcasses after skinning, evisceration, washing and storage. Significant differences were found in the total number of aerobic microorganisms detected in the arms, brisket and buttocks of the carcass at different stages of sheep slaughtering operations ($p < 0.05$). It was observed that all carcass regions were reached the highest level after storage.
Significant differences were found in the number of microorganisms of Enterobacteriaceae group ($p < 0.05$) but no difference was found in the buttocks ($p > 0.05$) at the different stages of sheep slaughtering processes.
It was determined that pH and temperature values were decreased periodically in all carcass regions as the slauhtering stages progressed ($p < 0.05$).
Salmonella spp was not detected of the 240 sheep samples analyzed in the study. As a result, it was observed that the microbial flora of the arm and brisket of the sheep carcasses increased during the slaughtering process and reached to the highest level after 24 hours storage. Therefore, effective application of slaughtering hygiene in slaughterhouses is of great importance especially in terms of carcass shelf life, public health and economic value.

PRESENCE OF *SALMONELLA* SPP. IN RAW BUFFALO MILK

P-46

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Buffalo milk has a rich nutritional content which has higher levels of total protein, medium chain fatty acids, conjugated linoleic acid, and tocopherols comparing with cow milk. It has very suitable content for food technology. Therefore, interest in buffaloes and buffalo milk is growing globally as well as Europe and Turkey.

Salmonella is a foodborne pathogen that causes typhoid fever, gastroenteritis, and deaths every year throughout the world. Salmonella remains the second most common zoonosis in humans. Foodborne outbreaks caused by Salmonella have been linked to contamination of water, raw milk, cheese, egg, egg products, meat, meat products, fresh fruits and vegetables. Salmonella is the confirmed causative agent of numerous foodborne outbreaks throughout the world.

The present study aimed to determine the presence of Salmonella spp. in 100 raw buffalo milk samples, collected from Afyonkarahisar. Milk samples were collected in sterile containers and taken to the laboratory under cold chain conditions. Then, milk samples were evaluated regarding the presence of Salmonella spp. Detection of these bacteria was performed according to the method of ISO 6579. 100 raw buffalo milk samples were analysed and 2 of 100 samples were found to be Salmonella spp. positive. This study indicates that Salmonella species are not broadly existing in raw buffalo milk collected from Afyonkarahisar. Nevertheless, periodic field studies are advised due to the extensive prevalence of Salmonella species in nature. Especially, it is recommended to obey hygiene and sanitation rules and inform the stuff in milk and milk product plant.

P-47

THE EFFECTS OF FLUID RESUSCITATION ON THE HEMODYNAMIC PARAMETERS OF EXPERIMENTAL INDUCED ENDOTOXEMIA IN THE NEONATAL CALVES

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Endototoxin is known to be an important mediator of gram negative bacterial sepsis. Endotoxemia is associated with high mortality rates in neonatal calves. Therefore, a safe and effective treatment for endotoxemia in calves is needed in order to address this common and potentially fatal condition. The primary aim of the project is to determine the effects of NaCl on the hematologic and hemodynamic parameters of calves. For this reason twelve healthy calves, aged between 5 to 15 days included into the study. Calves which included into the study randomly divided into LPS and Control groups: 1.Group (LPS): LPS administration (0,1µg/kg, IV, 50ml 0.9% NaCl/30min),then 1 hour after begin to 0.9 % NaCl IV administration. 2. Group (Control): 0.9 % NaCl administration (IV, 50ml/30min). Blood samples for hemodynamic parameters were taken from vena Jugularis before LPS infusion at 0h (base line) and after LPS infusion at 1, 2, 4, 6, 8, 12, 18, 24, 36, 48, 72, and 96 hours. Following the LPS administration, increase in lactate levels and heart rate as well as decrease in systolic and mean arterial pressures were indicated the failure in circulatory system. However, administration of 0.9% NaCl was improved this parameters near the base line at within 8. and 12. hours of study period.

In conclusion, it was concluded that shortening to 6 to 8 hours of hematological and clinical disorders related to endotoxemia by LPS administration, the use of 0.9% NaCl in treatment of the mild endotoxemia would be useful in neonatal calves.

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P-48

A RARE ENTITY: ANAL SAC GLAND CARCINOMA IN A CAT

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Perianal tumors are rare in cats unlike their canine counterparts and anal sac gland carcinoma is a rarely encountered neoplastic entity in this species. The purpose of this study was to introduce a case of anal sac gland carcinoma in a 10-year-old female spayed Persian-Siamese cross breed cat with its clinical and histopathological features.

The cat was referred to the Department of Surgery with one-month-long complaint of hematochezia and a swelling in the right ventrolateral perianal region. She received antibiotics for 15 days at a private clinic before her admission to our animal hospital but did not respond to the therapy. Clinical inspection revealed a tumoral mass in the right side of the anus and a fistula was detected opening very close to the external anal sphincter. When pressure was applied on to the fistula, yellowish white casseous content was found to be leaking out of the opening of the fistula. The cat was prescribed medical therapy including metronidazole and amoxicillin-clavulanic acid with the initial diagnosis of proctitis. The cat was admitted again after two weeks and injected methylprednisolone sodium acetate on the day of control examination. However it was not possible to facilitate complete drainage of the lesion by means of rectal touché and palpation. Then, then the mass was decided to be surgically removed. The excised mass with a diameter of 1.5 cm was submitted for histopathological examination. The specimen was fixed in 10 % buffered formalin, routinely processed, embedded in paraffin and cut at about 3-5 µm thickness and then stained with Hematoxylin&Eosin Stain to be evaluated by light microscopy. Histopathology revealed a poorly demarcated, unencapsulated multilobulated neoplastic lesion with proliferation of large round to polyhedral cells with prominent or multi nucleoli arranged in irregular acinar structures separated by thin fibrous stroma. Scattered bizarre cells were noted as well. In some areas the neoplastic cells formed solid pattern. There were moderate to marked anisokaryosis and large areas of necrosis and the mitotic rate was approximately 5 per high powered field. The adjacent muscle tissue was invaded by foci of neoplastic cells and the surface epithelial lining of the neoplasm was ulcerated. Therefore, on the basis of histopathological findings, diagnosis of anal sac gland carcinoma was rendered.

Although anal sac gland carcinoma or in other words adenocarcinoma of the apocrine glands of the anal sac is not well recognized in cats and can be grossly mixed up with inflammation or abscesses of anal sacs we consider that this case proved that the entity should take place in the differential diagnosis of the tumoral lesions of perianal region in cats.

P-49

MACROANATOMIC AND SCANNING ELECTRON MICROSCOPIC INVESTIGATION OF TONGUE IN THE MONGOOSE (*HERPESTES ICHNEUMON*)

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The mongoose (Herpestes ichneumon) is a species belonging to the suborder Feliformia of the Carnivora. Despite living in Africa, they have spread to a wide geographical area. The mongoose fed with animals such as poisonous snakes, scorpions, spiders and fruits. This study was carried out with the idea that eating poisonous animals caused by differences in the organs in the mouth cavity was not harmful. In this study, it was aimed to investigate macroscopic and scanning electron microscopic (SEM) studies of the tongue in the mongoose. The materials were taken from the traffic accidance, two mongoose (1 female and 1 male) from Ceyhan Veterinary Faculty Anatomy Department were used. After dissection, the morphometric measurements of tongue were taken with digital calipers. The tongues were then fixed in 10% buffered formalin solution. For microscopic examination, scanning electron microscopy (SEM) procedure was applied to the wells. The length between the apex linguae and the radix linguae was measured 61.97 mm in male and 58.78 mm in female. The measurement taken from the widest part of the corpus linguae was 15.85 for male and 14.22 mm for female. Papillae filiformes were found in rigid and spinus form on apex linguae as in the cats. It was observed that the papillae fungiformes were distributed intensely between papillae filiformes. It has been determined that the papillae foliatae are located laterally of radix linguae. There were 4 papillae vallatae in male and 3 papillae vallatae in female mongoose tongue Papillae like a conic in structure were determined in dorsal surface of radix linguae. This study is important because it is the first study about mongoose tongue.

P-50

EXPRESSIONS OF GLIAL FIBRILLARY ACIDIC PROTEIN AND N-METHYL-D-ASPARTATE RECEPTOR-1 IN LISTERIOSIS DISEASE OF SHEEP

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Listeria monocytogenes (L. monocytegenes) can cause a serious infection. Listeriosis is a severe disease that can cause abortion, encephalitis, septicemia, conjunctivitis, and mastitis in ruminants. The aim of this study was to investigate the glial fibrillary acidic protein (GFAP), and N-methyl-D-aspartate receptor-1 (NMDA-R1) in central nervous system. We performed macroscopic, microscopic, and immunohistochemical examinations in 15 sheep brain with listeriosis and 5 healthy control brains. Hyperemia and opacification of the meninges were common necropsy findings. Lesions were generally localized in the caudal part of the brain, including the pons, medulla oblongata, thalamus, and cerebellum. Microabscesses were usually seen in the caudal brain and cerebellum, while perivascular infiltrates were most often noted in other parts of the brain. Listeria monocytogenes agents were immunohistochemically detected in the medulla oblongata, pons, thalamus, and cerebellum. Prominent positive reactions for glial fibrillary acidic protein (GFAP), and N-methyl-D-aspartate receptor-1 (NMDA-R1) were detected in the caudal brain, indicating that these proteins may be involved in the pathogenesis of encephalitic listeriosis.

P-51

ACADEMICIANS' VIEWS ABOUT NATURE OF SCIENCE IN VETERINARY MEDICINE FACULTIES

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The aim of the study is to presents research findings regarding the Academicians' views about nature of science (NOS) in veterinary medicine faculties.
The Nature of Science as Argument Questionnaire (NSAAQ) was administered to academicians during the sessions of two international scientific research congresses, which were organised in Sarajevo, Bosnia and Herzegovina, and Struga, Macedonia. Data gathered from 90 researches from several veterinary medicine faculties, particularly from Istanbul, Sarajevo and Skopje.

The NSAAQ consists of 26 items divided into four subscales. Questionnaire were designed to test individual's views regarding: the nature of scientific knowledge, the methods used to generate scientific knowledge, how scientific knowledge should be evaluated and whether or not science is a social and cultural practice. Participants' responses to the items were recorded on a five-point Likert-type scale. In scoring, each item response is allocated 1, 2, 3, 4, or 5 points for each of the response categories. Items aligned with a traditional view are scored in reverse and, during statistical analysis, are adjusted accordingly.

The results were analysed using statistical methods in SPSS, such as frequencies, percentages, t-test and one-way ANOVA. Mean scores of each students' responses to the scale was calculated by dividing the total scale score by the number of respondents and the number of scale items. Thus, the scale mean scores range between 1 and 5. A higher score indicates more reformist view of the NOS and a lower score represents view that is more traditional. Additionally, analysis of variance for differences among years of experience, and academic degree were also included.
The overall analysis of the participants' responses to the items in the questionnaire reveal that the mean value was 3.27 and this score indicates that the group presented a "not sure" position with regard to the nature of science (3.18, 3.37, 3.15 and 3.38 mean scores for subscales respectively).

For example, detailed analysis of the items in questionnaire showed that significant part of the participants (%73.3) thought that "scientific knowledge is subjective". Oppositely, %81.1 of participants stated that "scientific knowledge usually changes over time as the result of new research and perspectives". This uncertain position was also identified on behalf of aforementioned factors and analysis of variance did not reveal any significant differences between them ($p>.05$). These results point out that NOS notion is neglected or at least not fully emphasized in the veterinary science programs, and integration of this notion to the graduate programs either explicit or implicit, is essential.

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CULTURAL VALUE: "KULAZIK"

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The economy of Kyrgyzstan depends on the agriculture and livestock. In the country where nomadic culture is widespread the consumption and production of food products show unique properties due to culture. This cultural structure makes products to be prepared easily with high nutritional and caloric features and to be preferably kept for a long time. It has been observed, that the Central Asia has the ability to produce unique foodstuffs in very different numbers and qualities depending on the general culture. One of the significant representative's products is a meat product called "Külazık or Gülazık"
Külazık is a cooked meat, dried after removing from bone, sliced to tiny pieces and dried pieces of meat are powdered by handmills which were made of stone. By this way the prepared Külazık, was used in nomadic life, haunting, travelling which was easily transported in trips and keeps nourishing and for a long time preservation didn't spoiled quickly, maintain main meat qualities. Külazık preparation varies from region to region. For instance, in order to prepare it such meat as a deer, mutton, beef, and horse are preferred. Also, when prepared to eat külazık, poured with hot water and it can be consumed by adding flour, oil, cereals, kurut, wild onion-garlic and walnut.

If generally evaluate, pre-representative of today's first instant soup Külazık which were prepared last centuries in Kyrgyzstan in the Central Asia and in Asian geographies.

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FERMENTED MILK DRINKS PRODUCED IN KYRGYZSTAN

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Kyrgyzstan is a agricultural country which is located in Central Asia and many fermented milk products are traditionally and culturally made. Fermented milk drinks are prefered because of there are known to contain nutrients for a long time without spoiling, also easy to transport and helps quench thirst. Because of the Kyrgyz people's nomads heritage, fermented milk products are widespread in the country. According to literature reviews and interviews fermented milk drinks of Kyrgyzstan kefir, chalap (gassed ayran), koumiss, and shubat are fermented milk drinks produced in Kyrgyzstan.

In generally, kefir is made from traditional kefir grains in domestic conditions. Chalap (gassed ayran) is obtained from the kurut. The production of kefir and chalap are generally made by some milk factories due to incresing of demands to this drink. Production of shubat, which is made from camel's milk is decreasing due to the decreased camel population in the country. It is observed that the koumiss is generally made between May and September. It is traditionally made from mare's milk and even used to treat some diseases in sanatoriums. But there is no large-scale production of koumiss at the industrial level. It has been found that fermented milk drinks have useful properties that benefit to public health. For these reasons, the process for producing, fermented milk drinks should be examined and standardized.

P-54

PHATOMORPHOLOGY OF BOVINE KETOSIS

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Metabolic diseases including ketosis of dairy cows occupy a special place in the intensive livestock industry. This pathology causes significant economic damage to livestock farms due to a reduction of useful life of the most valuable animals, decrease of their productivity to 30-50%, loss of live weight, forced culling, as well as the increase in the number of infertile cows after the disease and negative effects on offspring. The research was conducted at the “Bayserke agro” LLP, Talgar region, Almaty oblast. The monitoring object was 12 forcibly killed black-motley cows of Holstein-Friesian breed. Samples of muscle tissue and parenchymal organs were collected at autopsy for further histological investigations. Histological sections were stained by Haematoxylin and Eosin according to Van Gieson method and glycogen was determined by the Schiff (PAS) reaction. Clinical and laboratory studies showed that ketosis is widespread among dairy cows of "Baiserke agro" LLP. In sick animals were observed strongly reaction to external stimuli, attacks to people, frightened behavior, frequent licking themselves, empty chewing, teeth-grinding, muscle shaking, mooing, heavy salivation, uncoordinated movements. Visible mucous membranes were yellow. The fatness of all forcibly killed animals was average except of 3 cows in which the fatness was above the average with a significant fat deposits. In all cases, the skeletal muscles were of a mild consistency, pale-colored, with abundant fat deposition in the intermuscular tissue. The most pronounced dystrophic and hemodynamic changes were detected in parenchymal organs, especially in the liver, kidneys and heart. The liver was enlarged in a volume with flabby consistency and yellowish-brown color. The cut surface was always greasy leaving a greasy coating on a knife. The gallbladder was stretched, the bile was thick and viscous. Kidneys were often enlarged, the boundary between the layers was not clear, the cortical layer had a yellowish tinge. Also, fatty deposits were observed along the coronary arteries below the epicardium at the base of the heart. Cortical layer in adrenal gland is more developed and colored in a grayish-yellowish color, the parenchyma of the organ is flabby. Microscopic damage: Diffused large-droplet fatty degeneration with carbohydrate and granular dystrophy was observed in hepatic cells. Proliferation of cells of reticuloendothelial and mononuclear-macrophagal systems with the assembly or nodules of the reticular and lymphoid cells should be a principal sign of damage. Dystrophic and necrobiotic changes in epithelial cells of direct tubules were a typical sign of the damage. Most epithelial cells of direct tubules were predominantly in the state of protein and small droplet fatty degeneration. Histochemical studies revealed a sharp decrease and even a disappearance of glycogen and small-droplet lipid infiltration of hepatocytes.

Thus, pathomorphological conducted studies showed that the deep pathological processes in the organs and tissues of cows with ketosis appear on the basis of disturbance of carbohydrate, protein, fat metabolisms.

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NONISCHEMIC PRIAPISM AND MEDICAL TREATMENT INTERVENTIONS IN A GERMAN SHEPHERD DOG

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Priapism is a persistent penile erection lasting longer than 4 hours, without sexual stimulation. Priapism in people is categorized as either nonischemic (arterial, high flow) or ischemic (veno-occlusive, low flow). Nonischemic priapism, caused by increased arterial inflow through the corpus cavernosa, is often caused by trauma, but may also be the result of vasoactive drugs and neurological conditions. Ischemic priapism, caused by venous congestion to the penis and enhanced blood viscosity, is often associated with sickle cell disease, hematological dyscrasias, hemodialysis, parenteral nutrition, heparin therapy, vasoactive drugs, neoplasia, and neurological conditions such as spinal cord injury and anesthesia.

A 10-month-old intact male German Shepherd dog was presented our clinics with the complaints of swelling in bulbus glandis, penile hyperemia and penile protrusion of 6 months' duration. After the physical and neurologic examination, laboratory examination (complete blood count, serum biochemistry, cytological evaluation of venous blood, blood gas examination which was taken from corpus cavernosum penis), doppler ultrasonography and spinal MRI examination were performed. According to the findings, the patient was evaluated as non-ischemic priapism case and medical treatment was started in the light of literature. No significant improvement was observed in the patient after medical treatment. After all diagnostic procedures and medical therapy interventions, we concluded that previous publications suggesting that non-ischemic priapism can be succesfully treated with medical therapy in dogs must be evaluated in suspicion.

P-56

THE MOST EFFICIENT DIAGNOSTICS OF CATTLE TUBERCULLOSIS BY CFT MODIFICATION

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The indicator system (offered by us) consisting of equal volumes of 2% standardized suspension of red blood cells and working solution haemolysin (in triple titer) is universal for setting complement fixation test (CFT), Long Complement Fixation Test (LCF) and Conglutination Complex Fixation Test (CCFT). Using this indicator system increases the sensitivity of the complement fixation test for the Diagnosis of Cattle Tuberculosis.

Our proposed research raises the output of active substance in donors, provides a standard titer in its industrial manufacturing and in the application of CFT and LCFT. Standardization of limiting components simplifies setting methodology of reactions, significantly reduces the cost and time for mass studies blood serum, eliminates problems of self delay and increases the sensitivity of CFT and LCFT by 10-15% compared with the classical analogues of Cattle Tuberculosis, as well as being the standard improvement of diagnosis of other contagious animal diseases. The results will be used in Veterinary, Research Laboratories, Biological Industry.

Indicator system, consisting of equal volumes of a 2% suspension of erythrocytes and hemolysin working solution (tripling in titer) is universal for productions LCFT and CFT with the serological diagnosis of the Cattle Tuberculosis.

P-57

INFLUENCE OF CHITOSAN ON THE POSTOPERATIVE PERITONEAL ADHESION IN RAT

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The most common gastroenterologic lesion after ovariohysterectomy (OVH) is seen as a result of adhesion to the intestine of remaining parts of the ovary or uterus, incarceration in the circulation of the intestine, adhesion to bladder and abdominal wall. The aim of this study was to investigate the effect on peritoneal adhesion formation of intraperitoneal chitosan use after OVH operation.

A total of 15 female Wistar-albino rats weighing 250-350 gr were used for this study. Rats were housed in the room temperature (22±2 °C) and humidity, 12 h light-dark cycles. For the rats housed in single cages were fed with standard laboratory food and water. Rats were anesthetized with intramuscularly injections of ketamine (50 mg/kg, Ketalar, Pfizer, Turkey) and Xylazine HCl (10 mg / kg, Rompun, Bayer, Turkey). Ovarium and uterus were removed according to the procedure standard procedures used in routines and than rats were randomly divided into 2 groups. To rats in Grup I (n=8) were injected intraperitoneally as a single dose mixing 2.5 ml of physiological saline solution with at a dose of 50 mg/kg of chitosan (GlycoBio Co. Ltd., China) immediately after OVH operation. Rats in Group II (n=7), which were evaluated as control group, were given only 2.5 ml of saline intraperitoneally different from the first group. Animals were euthanized after 21 days from the operation. Evaluation of adhesions in the corpus uterus and ligament of ovarian was performed (0: no change, 1: mild, 2: moderate, 3: severe).

In Group I, the rate of adhesion between intestine and ovarian stump (50%) was lower than the control group (71.43%). It was found that the intraperitoneal administered of chitosan significantly reduced the rate of adhesion between bladder, intestine, and colon with cervical stump ($p<0.01$). In the chitosan-administered group, the number of rats with an adhesion score of 3 was found to be less.

As a result, it was determined that intraperitoneal administration of chitosan at the end of OVH had a role in decreasing the intensity and severity of adhesions.

P-58

A MACROANATOMICAL AND SUBGROSS STUDY ON CORONARY ARTERIES OF NATIVE DUCK (*Anas platyrhynchos*)

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The aim of this study is to uncover the course, distribution and anastomoses of coronary arteries in native duck (Anas platyrhynchos) raised at high altitudes and cold climate conditions in Kars Region and its neighborhoods. 20 native duck hearts (10 female and 10 male), gathered from the farm slaughterhouse of Kafkas University Veterinary Faculty in different days and they were averagely in 2268 gr weight and in their four months, were used as material. It was found that the arterial nutrition of the heart was provided by a. coronaria dextra and a. coronaria sinistra in native duck. Both coronary arteries were divided into two principal branches as the superficial ramus and the profund ramus. It was identified that r. interatrialis, originating from left coronary, r. profundus and r. superficialis of the left coronary with r. profundus of the right coronary artery nourished septum interventriculare. The superficialis ramus of the a. coronaria sinistra was found as the most potent and thickest branch in native duck. Numerous anastomoses were observed between profund ramus of the right coronary artery and superficial ramus of the left coronary artery. Homo coronary anastomoses were intensively found on ventriculus sinister, while intercoronary anastomoses were intensively found on septum interventriculare, apex cordis and atrial surface of hearth. Consequently, macroanatomical features of native duck were revealed by using two different techniques.

P-59

GENERAL STRUCTURE OF DOG BREEDING IN ARDAHAN, TURKEY

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This survey was carried out in order to determine the general structure of dog breeding based on the questionnaire responses obtained at the breeder level in Ardahan, Turkey.

The material of this study was survey data applied to a total of 261 dwelling house in 15 villages of the central district of Ardahan province, Turkey. The questionnaire consisted of questions about the number of dogs raised, genotypes, breeding purposes, housing types and information on health practices for the owned dogs.

According to the survey results, a total of 418 dogs, of which 368 were males and 50 were females, were raised in totally 261 dwelling house. The average number of owned dogs per household was 1.60 head/house. It was determined that 70.10% of the dogs were native and mixed genotypes, 16.27% of the dogs were Kangal breed and 13.63% of the dogs were Zagar type mixed genotyped dogs. It was also determined that 86.13% of the keepers main purpose were house guard, 11.72% of the keepers were herd protection, and 2.15% of the keepers were dog breeding for both house and herd protection.
93.06% of owned dogs raised in these familial establishments were adult dogs over 2 years old. While 66.03% of the owned dogs were tethered, 33.97% of the owned dogs were kept without a tie. While 92.75% of tethered dogs were housed outdoor without shelter, only 7.25% of tethered dogs were housed outdoor in a shelter. Only 7.18% of the dogs were been vaccinated by their owners, whereas 92.82% of the dogs were not vaccinated. It was determined that 80.00% of the vaccinated dogs were vaccinated both with rabies and canine distemper, 16.67% of the vaccinated dogs were only vaccinated against rabies disease and 3.33% of the vaccinated dogs were only vaccinated against distemper. According to the survey questionnaire, breeders generally prefer strong and intelligent dogs for keeping, and 73.17% of breeders reported that they would like to raise Kangal breed Turkish Shepherd Dog, known for their strength and courage.

In conclusion, it has been determined that a significant majority of households have at least 1 dog raised for house protection, and the vast majority of breeders preferred male and adult dogs, and majority of breeders were lacking in knowledge about dog health.

P-60

REPRODUCTION TRAITS OF MORKARAMAN, AKKARAMAN AND BAFRA (SAKIZ X KARAYAKA CROSSBREDS TO SAKIZ B1) EWES REARED IN KAZIM KARABEKIR AGRICULTURAL STATE FARM, TURKEY

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This study was carried out to determine reproduction characteristics in Morkaraman, Akkaraman and Bafra (Sakız X Karayaka crossbreds to Sakız B1) breed ewes reared under the conditions of Kazım Karabekir Agricultural State Farm, Turkey. The material of the study were 6600 reproduction records of 3450 ewes in 2011 and 2012 years.

The average birth rate, single birth rate, twin birth rate and litter size in generally were 87.29%, 94.71%, 5.29% and 0.92 for Morkaraman, 80.80%, 74.75%, 25.25% and 1.25 for the Akkaraman and 78.75%, 59.37%, 40.63% and 1.41% for Bafra breed, respectively. The survival rates of the lamb groups were calculated as 93.26%, 94.47% and 91.21% in Morkaraman, Akkaraman and Bafra breed lambs respectively in 2011 year, and the differences among the groups were not significant ($P>0.05$). The highest birth rate among genotypes was determined in Morkaraman breed and lowest in Bafra breed. There was no statistical difference among the groups in terms of birth rate. Despite this situation, average twin birth rate was highest in Bafra breed and the lowest in Morkaraman breed ($P<0.05$).

As a result, it can be said that Bafra breed ewes which is improved in terms of reproduction can be successfully raised in controlled environmental conditions and sheep breeding enterprises can increase lamb production in this way.

P-61

THE EFFECT OF INTRAOCULAR PRESSURE (IOP), SERUM CALCIUM, MAGNESIUM AND INORGANIC PHOSPHORUS CONCENTRATIONS ON JUMPING PERFORMANCE OF HORSES

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The aim of the study is to evaluate the relation of serum mineral levels (Ca, Mg, Pi) with intraocular pressure (IOP) and jumping performance of horses.

Twenty-four jumping horses, actively participated in the competition, were selected from a horse sport center in Bishkek. Intraocular pressures in both eyes of each horse were measured by using a tonometer and blood samples were collected for analyzing serum Ca, Pi and Mg levels by using Semi-Auto Chemistry Analyzer (BA-88A Mindray, China).

IOP, serum Ca, Mg and Pi values were measured in normal ranges in all jumping horses. Although Ca and P levels were found different in statistic ($p<0,05$) between the groups, IOP and serum mineral levels of Ca, Mg and P have not been found effective on race performance.

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P-62

TREATMENT OF OPHIDISM-INDUCED BILATERAL CANINE CATARACT BY EXTRACAPSULAR LENS EXTRACTION AND INTRAOCULAR LENS IMPLANTATION

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Snake bite is a medical emergency. Systemic mani-festations of snake envenomation are varied. Ophthalmic manifestations of snakebite are rarely reported in literature. Ptosis, ophthalmoplegia, optic neuritis including uveitis have been described in human medicine. The aim of this study was to report a new cause of cataract, namely snake bite induced cataract in a dog.

A 3-year-old male mongrel dog was referred to our clinic for the assessment of cataract in both eyes. The owner observed that the dog had no visual acuity with an opaque lens in both eyes for 1 month. The dog was bitten by a snake nearly 4 months ago. Pharmacological mydriasis was achieved with 1% cyclopentolate hydrochloride, and direct ophthalmoscopy revealed mature cataract in both eyes. Fixation sutures were placed to keep the globe centred and to prevent any ocular movement during the surgery, using 5/0 non-capillary silk. A 2 mm step-shaped corneal incision was made using a 3-mm keratome adjacent to the limbus. Anterior capsulotomy was performed with an irrigating cystotome and an Utrata forceps. The lens cortex and nucleus were removed with a lens loop. A 40 dioptre acrylic lens with 13 mm haptics was implanted into the lens capsule. The corneal incision was sutured with 10/0 mono-filament nylon using 3 interrupted sutures, and the viscoelastic material was removed from the eye. The right eye was operated on 4 weeks after the surgery on the left eye. The intraocular lens implant was centred and there was only slight posterior capsular opacity and no vitreous degeneration. In the left eye, posterior synechia was detected in the temporal part of the iris, but decentration of the intraocular lens was not observed.

To the best of our knowledge, this is the first report of bilateral cataract caused by ophidism and treated by surgical intervention in a dog.

P-63

MILK PRODUCTIVITY OF HOLSTEIN CATTLE FROM DIFFERENT ORIGIN

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In this study, it was aimed to compare the first lactation milk yield of Holstein dairy cows that were housed in same enterprise and supplied from different countries. For this purpose data were recorded daily by dairy management software and data set consisted of approximately 952.000 daily milk yield belong to 2000 cows were used in this study. The study was conducted in a private dairy enterprise in Thrace province. Heifers were exported at 3-5 months old from America (100 head), Italy (100 head) and Germany (300 head). Data below 290 days in milk were excluded from the study and missing days were determined by applying interpolation. In order to determine the origin effect on daily milk yield One-way Anova was applied by SPSS programme which is followed by Duncan Multiple Range Test. As a result of the study dairy cows that were exported from Italy had highest first lactation milk yield which is followed by dairy cows that were exported from Germany and America.

P-64

HISTOLOGICAL AND HISTOMETRIC STRUCTURE OF GOOSE (*ANSER ANSER*) CEREBELLUM

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The aim of this study is histological and histometric examination of geese cerebellum (Anser anser).

Six female geese (aging between 10-12 months) were used in this study. After fixation in %10 formol solution and routine histological process, the cerebellar tissues taken from geese were embedded in paraffin blocks. The sections (5 µm in thickness) were taken from these blocks for histological examination. The Kluver-Barrera stain technique was applied in the sections to examine structure of cells in cerebellum. Afterward, slides were examined histologically. Then, ocular micrometer was used for histometric measurements of folia length, diameter of purkinje cells and thicknesses of stratum granulosum and stratum moleculare. SPPS 16.0 was used for calculating meaning of values.

It was observed that folia and sulci cerebelli were in outermost layer of the cerebellum, by histological examination. It was seen that geese cerebellum had two main layers which are known as substantia grisea and substantia alba. It was histologically observed that subtantia grisea was the outer layer and substantia alba was the inner layer in cerebellum. It was seen that grisea layer had sublayers from outer to inner; stratum moleculare layer which was made by the small cells, stratum gangliosum layer which was made by purkinje cells and stratum granulosum layer which was made by granular cells. As a result of Kluver-Barrera staining, the nerve cells in all layers were appeared purple and myelin fibers were appeared blue. It was found that the average length of folia was 3397 µm, the average thickness of molecular layer was 349 µm, the average thickness of granular layer was 185 µm and the average of diameter of purkinje cells was 24 µm by the histometric evaluation.

P-65

EFFECTS OF STREPTOZOTOCIN-INDUCED DIABETES ON THE PINEAL GLAND IN DOMESTIC PIG

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There is growing evidence for interplay between the pineal gland and the pancreatic islets. It has been demonstrated that diabetes and high glucose level significantly reduced melatonin secretion in the rat pineal gland. The aim of present study was to determine the effects of streptozotocin-induced diabetes on the pineal activity in the domestic pig, the species widely used in various biomedical research as a model.

The study was performed on 8 crossbred female pigs with initial body weight of around 25 kg. Gilts were randomly divided into 2 equal groups: control and diabetic one. Diabetes was induced by the intravenous administration of streptozotocin at a dose 150 mg/kg of body weight. The blood glucose levels were measured every week and the mean values for the control and diabetic groups were 7.3 and 17.4 mmol/L, respectively. After 30 days, the animals were euthanized between 10.00 and 12.00 a.m. by overdose of sodium pentobarbital. The pineal glands were immediately removed and divided in the sagittal plane into two equal parts: the left half was used for superfusion culture and the right half was frozen at -75^{o}C for biochemical analyses. After 4 hours of incubation in the superfusion culture, the pineal explants from the control and diabetic pigs were stimulated with norepinephrine (NE) for 60 min., then treated with insulin (10 mg/L) for 120 min. and again stimulated with NE in the presence of insulin. The medium samples were collected every 5 or 10 min. The contents of melatonin-synthesis related indoles as well as catecholamines, their precursors and metabolites in the pineal tissue were measured using HPLC with fluorescence and electrochemical detection, respectively. The MLT level in culture medium was determined by a direct RIA.

The contents of serotonin, 5-hydroxyindole acetic acid and 5-hydroxytryptophol in the pineal gland were significantly lower in the diabetic pigs than in the control pigs (by 48%, 30% and 27 %, respectively). Similarly, the levels of direct 5-metoxy derivatives of these compounds (5-methoxytryptamine, 5-methoxyindole acetic acid, and 5-methoxyindole acetic acid) were also markedly lower in the streptozotocin-treated animals. In contrast, the content of N-acetylserotonin was significantly higher in the diabetic pig than in the control ones. No significant differences were found in the contents of tryptophan, 5-hydroxytryptophan and melatonin. The levels of norepinephrine, DOPA, dopamine and DOPAC were significantly lower in the diabetic animals than in the control ones. The level of vanillylmandelic acid was higher in the diabetic pigs. No differences were observed in the level of basal and NE-stimulated melatonin secretion between the pineal explants taken from the control and experimental animals. The treatment with insulin did not change the level of melatonin secretion in both groups of explants.

Summing up, the streptozotocin-induced diabetes affects both the indole metabolism and the adrenergic neurotransmission in the pineal gland of the domestic pig. The effects of hyperglycemia on melatonin secretion are different in the rat and in the pig, that is probably related to the large distinctions in the pineal physiology in these species.

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P-66

INDOLE METABOLISM IN THE AVIAN PINEAL ORGAN – SPECIES HETEROGENITY

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Indole metabolism starts in the pineal organ with the uptake of tryptophan (TRP) into parenchymal cells. The amino acid is hydroxylated by tryptophan hydroxylase to 5-hydroxytryptophan (5-HTRP), which is decarboxylated by aromatic amino acid decarboxylase to serotonin (5-HT). This amine is a starting point for three metabolic pathways. The first one is the transformation of 5-HT into melatonin (MLT). The process includes two steps: acetylation by arylalkylamine N-acetyltransferase (AA-NAT) to N-acetylserotonin (NAS) and methylation by N-acetylserotonin O-methyltransferase (ASMT) to MLT. The second metabolic pathway includes oxidative deamination of 5-HT leading to the formation of 5-hydroxyindole acetic acid (5-HIAA) and 5-hydroxytryptophol (5-HTOL). Methylation of 5-HIAA and 5-HTOL results in the formation of 5-methoxyindole acetic acid (5-MIAA) and 5-methoxytryptophol (5-MTOL), respectively. The third pathway is the direct methylation of 5-HT by ASMT to 5-methoxytryptamine (5-MTAM). Although, the schema of the pineal indole metabolism is universal for all vertebrates, our previous studies showed prominent interspecies differences in the content of indoles and quantitative proportions between them. The aim of present work was to compare the day-time and night-time profiles of 10 indoles in four domestic birds: the goose, duck, chicken and turkey.

The birds were reared under a cycle of 12 h photophase and 12 h scotophase, starting from the first day of postembryonic life. At the age of 4 weeks, the animals were killed in the middle of photophase and a scotophase. The pineal organs were immediately removed and frozen at -75 ^{o}C. The contents of indoles were measured using HPLC method based on gradient separation and fluorescence detection, with time-programmable detector sensitivity switching.

The most prominent interspecies differences concern 5-HT and the products of its oxidative deamination. The highest level of 5-HT was found the goose pineal organ and it extended more than 20-folds the content of this amine in the chicken pineal, where it was the lowest among the investigated avian species. In contrast, the levels of products of 5-HT oxidative deamination, 5-HIAA and 5-HTOL, were very high in the chicken and markedly lower in the goose. 5-MTAM was easily detectable in the goose and undetectable in the chicken. The indole profile in the duck partially resembled those in the goose, and in the turkey – those in the chicken. The interspecies differences were also noted in the day-night changes of NAS and MLT contents, which were much higher in the chicken and the turkey than in the goose and the duck. Also, the ratio MLT/NAS varied between the investigated species.

The obtained data demonstrated that the profiles of MLT synthesis-related indoles show huge interspecies differences among the domestic birds. The profiling of indoles is a highly effective tool for studies on pineal biology, which facilitates the detection of several interactions between biochemical processes and unknown regulatory mechanisms.

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THE STUDY OF ANTIMICROBIAL ACTIVITY OF *PRUNUS LAUROCERASUS* LEAF, BERRY AND SEED

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Prunus laurocerasus (Cherry laurel) is an evergreen shrub or small tree which cultivated throughout northern Turkey for its fruits,and is a popular landscape architecture plant in temperate regions worldwide (Sulusoglu, 2011). In Turkish traditional medicine, cherry laurel leaves are used for its analgesic, antispasmodic, narcotic, and sedative effects, as well as for asthma, coughs, and dyspepsia treatment, while its water and ethanolic extracts showed antifungal, antinociceptive and anti-inflammatory activity without inducing any gastric lesions. Upward trend in antibiotic resistance in the last decade has led to the search of new antimicrobial agents, especially to discover novel chemical structures mainly based on plant extracts. For this purpose, in the current study the antibacterial and antifungal properties of Prunus laurocerasus were investigated.

The extract of Prunus laurocerasus leaves (PLL), Prunus laurocerasus seeds (PLS) and Prunus laurocerasus fruits (PLF) was obtained by the ethanol extraction method. The minimal inhibitory concentration (MIC) values were determined by agar dilution method for antibacterial activity and broth dilution method for antifungal activity (CLSI, 2006). The microorganisms used in the study were; B. cereus, B. subtilis, S. aureus, S. epidermidis, E. coli, K. pneumonia, P. aeruginosa, E. Faecalis, S. enteritidis, C. albicans, C. parapsilosis, C. krusei, M. pachydermatis, M. canis and T. mentagrophytes. Ethanol was used as negative control and Gentamycin (10µg) as positive control.

As the results, it was found that the PLL extract showed antibacterial activity at varying degrees in all bacteria except P. aeruginosa. Also, it was determined that the effect of the extract on gram positive bacteria was stronger than gram negative ones. The highest antibacterial activity among the tested bacteria was observed against B. cereus (0,773 mg/ml). When the results of the seed extract evaluated; antibacterial activity of the extract was determined at different degrees in all tested bacteria except S. aureus. The potent antibacterial effect was determined against B. subtilis (6,19 mg/ml) and P. aeruginosa (6,19 mg/ml). However, PLF extract did not show any antibacterial activity except B. cereus (9,075 mg/ml) and P. aeruginosa (9,075 mg/ml).

When the antifungal efficacy evaluated, it was determined that the PLL extract was effective against all isolates with the same concentration (31,45 mg/ml). However, PLF extract did not show any antifungal activity except M.canis (62,9 mg/ml) and M.gypseum (62,9 mg/ml). Unfortunately, PLS extract was no antifungal activity against any tested yeast and fungus.

P-68

EXPRESSION OF INTEGRIN α6 SUBUNIT IN LATE BLASTOCYST STAGE EMBRYOS

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In mammalian development, the first extraembryonic tissue to generate is the trophectoderm (TE) which is outer polarized epithelial layer of the blastocysts, and it differentaiate from a pluripotent inside cells, the inner cell mass (ICM), which gives rise to the fetus and additional extra-embryonic tissues. Trophoblast cells, which arise from TE, differentiates to form the invasive trophoblasts that allow the embryo to implant into the uterine wall at the late blastocyst stage. Trophoblast interactions with the extracellular matrix (ECM) are mediated by integrins. The changes in trophoblast adhesive and migratory behavior may be caused by the changes in expression or distribution of integrin receptors. Integrins are the primary mediators of adhesion on the apical poles of the TE cells. And it has been known that integrins are expressed throughout the preimplantation embryo development in mouse.
In this study to present the distribution of integrin α6, we flushed morula stage embryos from the CD1 female mouse oviduct and cultured them in medium until the late blastocyst stage. Embryos were fixed and immunostained with anti-Pou5f1 and anti integrin α6 then images were assessed using a fluorescence microscope.

Our immunofluorescence analysis showed that integrin α6 subunit is expressed both by the TE and ICM cells. These results suggesting that integrin α6 is important for trophoblast adhesion and initial trophoblast invasion into the endometrial stroma.

P-69

PREVALENCE OF CAMPYLOBACTER SPP. ISOLATES OF DIFFERENT RETAIL MEAT IN KAZAKHSTAN

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Campylobacter species are the most common worldwide cause of human bacterial gastroenteritis. The main transmission route of them is generally via undercooked meat and meat products. The goal of this study was to determine the prevalence, seasonality of Campylobacter spp. isolates of different retail meat in Almaty, Kazakhstan. From January 2015 through December 2016, 150 beef, 150 lamb and 250 broiler meat samples from markets and malls were investigated in Almaty, Kazakhstan. Identification of a presumptive Campylobacter species was performed using the routine cultural methods and a polymerase chain reaction (PCR) assay. It was found that only broiler meet was positive for Campylobacter (overall, 50.0% of samples). The most prevalent among isolated Campylobacter species was Campylobacter jejuni (80.0%). The highest isolation rate was also in summer (60.0%). The results of this study showed that only broiler meat could be a source of Campylobacter spp. and it has a relatively high prevalence contamination in Kazakhstan.

P-70

THE IN VITRO EFFECT OF RED HOT PEPPERS (*CAPSICUM ANNUUM*) EXTRACTS ON SOME ARCOBACTER AND CAMPYLOBACTER SPECIES

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In recent years, the frequency and misuse of antibiotics have resulted in resistance of pathogenic bacteria to them. This has encouraged scientists to search for new antimicrobial compounds. Plants are one of the rich sources from which new antimicrobial chemotherapeutic substances can be obtained.

In this study, ether and methanol extracts of the red hot pepper (Capsicum annuum) were used as antimicrobial compounds. Their botanical identities were determined and authenticated by Department of Biology, Faculty of Science and Letters of the Kafkas University. The pepper was shredded into small particles using a sterile scalpel and dried in a dark environment at room temperature. Dried peppers were grinded and 150 g of powder was separately thawed in 150 ml of ether and 150 ml of methanol. Samples were left for 24 hours for maceration. Samples were filtered through the Whatman No.1 filter paper. The liquid portion was evaporated to 1 ml thick with vacuum evaporator to obtain stock of extracts. The microdilution method was used to determine the antimicrobial activities of the extracts. The stock and serially diluted (2 folds) plant extracts were tested on Arcobacter cryaerophilus, Arcobacter skirrowii, Arcobacter butzleri and Campylobacter jejuni, which were prepared as standardized inoculum (1-2x10^6 cfu/ml). The results were measured spectrophotometrically at 405 nm wavelength.

As the results, 1/2 subdilution of ether extract showed inhibitory effect on A. butzleri, A. cryerophilus and Campylobacter while this effect was observed at stock solution on A. skirrowii. The methanol extract had no effect on the A. butzleri. However, it was recorded that stock solution on A. skirrowii, 1/2 subdilution on A. cryaerophilus and 1/16 subdilution on C. jejuni were also effective.

The in vitro activity of red hot pepper extracts was determined at different concentrations on the bacteria tested. It has been concluded that this data may constitute grounds for in vivo work to be performed.

P-71

GROWTH AND SURVIVAL PARAMETERS OF CALVES BORNED IN THE FIRST PRODUCTION YEAR FROM BROWN SWISS AND SIMMENTAL BREEDS IMPORTED FROM AUSTRIA

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This study aimed at determining the growth and survival parameters of calves born in the first production year from Brown Swiss and Simmental breeds imported from Austria to a newly-established dairy cattle enterprise in west side of the Turkey.
The study material consisted of 62 Brown Swiss and 266 Simmental calves. The calvings were completed between the months of June and December in the farm. The calves were separated from their mothers after birth and put into individual sections and subjected to colostrum feeding. At the end of 3 days, calf grower feed was given ad libitum. Calf grower feed was a pre-mix consisting of minimum 2600 kcal/kg metabolic energy enriched with vitamins A, D, E and various minerals. The calves were weaned around 60-days of age unless there was an abnormality with their development. After 60 days, young animal ration was prepared for the calves which were introduced to coarse fodder. The ration was given two times a day and included 8% fodder, 12% clover, 30% corn silage, 26% vetch, 6% regional pulp and 18% young animal feed.

For determining the growth parameters of calves, it was focused on the birth weight, weaning weight corrected for the 65th day, which was the average weaning day of calves in the enterprise and the daily live weight gain of the calves between birth and 60th day. Birth and weaning weights were measured on scales with 100 gram precision. It was examined the impact of breed, sex and birth genre on growth performance and the impact of breed, sex, birth type and birth genre on survival rate.

The birth weight of calves, weaning weight on the 65th day, and daily live weight gain were 40.31 kg and 41.76 kg, 77.16 kg and 83.9 kg, 0.56 kg and 0.64 kg for Brown Swiss and Simmental breeds respectively. Simmental calves were born heavier and had more live weight gain until weaning. It was determined that breed and sex affected the growth of calves while the birth genre only affected birth weight. Calves with high birth weights caused difficulty birth, but this effect disappeared after birth towards weaning.

The survival rates of calves until weaning were 98.39% for Brown Swiss and 95.49% for Simmental. The survival and mortality rates of Brown Swiss and Simmental calves at weaning were found at normal levels, while the calves with difficulty birth had losses around 10%.

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HISTOPATHOLOGICAL DIAGNOSIS AND MANAGEMENT OPTIONS IN FELINE LYMPHOMA: 2 CASES

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Lymphoma is the most common neoplasm of the hematopoietic system of cats and reportedly the cats have the highest incidence for lymphoma of any species. The material of the study consisted of two cats. First one is a 2-year old female Persian cat and second one is a 4-year old male Scottish Fold cat. Both 2 cats complaint of difficulty breathing. As a result of x-ray and computed tomography findings, masses in thoracic cavity were found. Biopsy samples taken with an operation in Persian cat and with fine needle aspiration in Scottish Fold cat. Samples were sent to pathology department for histopathological examination and lymphoma was diagnosed. For Scottish Fold cat, chemotherapy was applied. Persian cat's owner didn't consent chemotherapy because cat was in bad condition and with the owner's request euthanasia was performed. With this poster presentation, different chemotherapy options, situations where euthanasia is indicated , and the approach to the histopathologically lymphoma diagnosed cats was tried to be summarized.

P-73

EVALUATION OF MICROBIOLOGICAL QUALITY OF COMMERCIAL KEFIR SAMPLES

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Kefir is a fermented dairy product that is produced by a mixture of lactic acid bacteria and yeast strains. The microbial flora of kefir grains depends primarily on their source. It has been reported that kefir grains contain lactobacilli, lactococci ratio of species to each other are important factors for microbial quality of kefir.

The aim of this study was to evaluate the microbiological quality of commercial kefir samples and yeast, and sometimes acetic acid bacteria depending on the source or country of origin. The number of microorganisms and the

. For that purpose total of 100 kefir samples purchased from supermarkets in Istanbul between March and June 2015 including 45 plain, 35 flavored and 20 light kefir samples were analyzed for microbiological properties. It was determined the lactococci, lactobacilli, yeast counts of kefir samples. Also coliform bacteria, E. coli and mold contaminations of the samples were detected.

According to these study findings, mean lactococci, lactobacilli and yeast counts were determined as 8.33±0.47 log cfu/mL, 7.29±0.66 log cfu/mL and 3.48±1.78 log cfu/mL, respectively. As a result of microbiological analysis, all and also 24% of kefir samples were found as suitable to the Turkish Food Codex for lactococci, lactobacilli and yeast counts, respectively. Kefir samples were also analyzed for hygiene index microorganisms and the results showed that 26%, 18% and 2% of kefir samples contaminated with mold, coliform bacteria and E. coli, respectively.

As a conclusion, the analyze results showed that kefir samples had different qualities and some kefir samples contaminated with hygiene indicator microorganisms. For this reason, it was suggested that during kefir production, packing and storing hygienic conditions must be applied and kefir should be stored in appropriate conditions.

P-74

EFFECTS OF MILKING AND AD LIBITUM SUCKING DURING THE EARLY LACTATION PERIOD ON METABOLIC PROFILE OF EWES DELIVERED SINGLE OR MULTIPLE LAMBS

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The objective of the study was to investigate the effects of milking or sucking by a single lamb instead of multiple offspring within the first 24 h after birth.

The lambs of seven ewes (Group I) that delivered single offspring were separated from their mothers after birth. Another group of seven ewes (Group II) that delivered single lambs were allowed to stay with their offspring. Group III was composed of ewes that delivered twins or triplets but allowed to stay with only one offspring. Results indicated that plasma protein and globulin concentrations at 18 h and total lipids and cholesterol concentrations at 6 h were significantly ($P<0.05$) higher in the Group III ewes compared to ewes in Group I.

As conclusion, controlled milking or sucking may not cause any differences in metabolic profiles of ewes, whereas noticeable changes occur in energy metabolism and immune status of ewes that delivered multiple offspring.

P-75

GENOTYPE DISTRIBUTION OF PRNP GENE AT CODONS 142, 143, 154, 171, 211, 222 AND 240 IN ANGORA GOAT BREED

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Anatolia is accepted as a primary center of animal domestication. Because of that, genetic structure of Anatolian livestock is key to understand genetic data of livestock. The aim of this project was to determine PRNP gene genotypes associated with scrapie disease susceptibility in Angora goat breed. The blood samples from 75 Angora goats were collected from Nallihan district of Ankara province. DNAs were isolated from the blood samples by standard salt-out method. In order to detect PRNP gene polymorphisms, polymerase chain reaction (PCR) was carried out. The positive PCR products were analyzed by direct sequencing. Each chromatogram of individuals were visualized by using MEGA 4 software program. And later, genotypes at 142 (I/M), 143 (H/R), 154 (R/H), 171(Q/R), 211 (R/Q), 222 (Q/K) and 240 (S/P) codons were detected in each sequencing data. I genotype at codon 142, H genotype at codon 143, R genotype at codon 154, Q genotype at codon 171, R genotype at codon 211 and Q genotype at codon 222 were found remarkably higher than the another genotype. $I_{142}H_{143}N_{146}R_{154}Q_{171}R_{211}Q_{222}S_{240}$ wild type hoplotype was found very dominantly. Wild type hoplotype is accepted as resistant for scrapie disease. As a conclusion, we may suggest that Angora goats have low susceptibility risk of scrapie disease, because of the high wild type genotype frequencies.

P-76

MATHEMATICAL FUNCTIONS APPLIED TO THE STUDY OF EGG SHAPE

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The quantification of shape variation by means of linear measurements summarizes very poorly morphological aspects due to the vast amount of contour information that is lost in the process. With Elliptic Fourier (EF), there is a low loss of outline information, thus allowing the analysis of complex or highly variable closed shapes.

As it is difficult to quantify the egg shape, here I propose the use of EF functions to characterize and compare egg form in some domestic hens.

For this purpose, 145 eggs from two Catalan hen breeds ("Empordanesa" n=107, shape index=0.74, and "Penedesenca n=38, shape index=0.72) and some different color varieties (3 for the former and 2 for the latter) were photographed in the same standard method. All animals were lodged in the same selection farm. Then outline of each egg was captured using the SHAPE® software, which generated an EF description, based on the coefficients a_n, b_n, c_n and d_n descriptors for initial 20 harmonics. Multivariate analysis was done using the PAST® software. More information about the investigated specimens is available upon request.

The first 8 components accounted for 93.4% of shape variances; more harmonics diluted the variance increasing to eight the number of components needed to explain most of the variation. A one-way Non Parametric Multivariate Anova test, applying Euclidean distances and Bonferroni-corrected p values, showed a clear separation between some breeds and varieties ($p<0.05$). So quantification of egg shape must be viewed as a trait for the differentiation not only of hens breeds, although eggs are normal (standard) in form (according to respective shape index), but also of their varieties.

The proposed Fourier technique, despite its mathematical complexity, allows to compare easily egg shape between domestic hen breeds and varieties (lineal measurements is weak to assess continuous variation). Moreovoer, this digital image analysis: (i) errors made (typing/writing errors) can be overcome; (ii) measurements are totally independent of the expert; (iii) new parameters can be measured to shape, as projected area and perimeter; (iv) all data are available on a continuous scale; (v) many samples can be analyzed in a short amount of time; (vi) it allows cooperative but methodologically identical researches between centers; and (vii) it can be applied to other biological forms, such as mandibles, feathers, etc. rendering this technique as an very powerful tool for many kinds of zootechnical studies.

P-77

MACRO-ANATOMIC STUDY ON LARYNX AND TRACHEA IN SEA GULLS *

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To observe the anatomic characteristics of larynx and trachea of sea gulls and to compare such characteristics with other bird species were aimed in this study. Four sea gulls (Larus spp) were used in study. Sea gulls were to be kept in 10% formaldehyde solution at least 48 hours for fixation. Thoracal cavity was opened. After observing macroscobic characteristics, trachea was cut out including with larynx. A special staining technique was used to observe the cartilago of trachea. Transversal papilla row called papillae pharyngis caudoventrales was noticed in the caudal part of mons laryngealis. A sagittal papilla row (lateral-medial) were observed in two orders around the sulcus laryngeus. The protuberance named crista ventralis locate in the inner surface of cartilago cricoidea, was clearly observed. It was observed that the few cartilago rings of trachea connected to cartilago cricoidea and the last 4-5 cartilago rings prior to tympanium were except formed a notch on the dorsal and ventral surfaces and got into each other.

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P-78

OSTEOMETRIC EVALUATION OF BYZANTINE CATTLE METACARPAL UNEARTHED FROM THE THEODOSISUS HARBOUR AREA IN ISTANBUL

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In this study, cattle metacarpus belonging to Byzantine period revealed during the archaeological excavations of Yenikapı Metro and Marmaray (Theodosius Harbour area) were investigated osteometrically. Osteometric measurements were taken from a total of 186 metacarpus and the asymmetry between right and left metacarpus, withers height estimation and CV changes of these measurements were evaluated. As a result of this examination, it was observed that the values of d (mid-shaft width of diaphysis), WCL (medio-lateral width of the lateral condyle) and SD/GL (slenderness index) was significant in terms of ($P<0.05$) level on the difference between right and left bones. Estimation of the withers height using GL measurement is calculated as 121.97 cm on average. In the correlation analysis, it was determined that there was a relationship varying between $P<0.05$ and $P<0.01$ levels among all measurements. SD/GL*100 (slenderness index) values were found to have the highest change among metapodial osteometric measurements variation changes (CV-coefficient of variation). These evaluations attempted to reveal the morphological characteristics of Byzantine cattle.

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P-79

COMPARISON OF INTRAMAMMARY OZONE ADMINISTRATION DOSES IN DAIRY COWS WITH CLINICAL MASTITIS

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Mastitis is an economically important disease leading cost associated problems. Ozone (O_3) is an unstable polymerized oxygen created by the passage of air or oxygen over high energy electrodes within an ozone generator system or by ultraviolet light. The aim of this study was to compare the treatment efficacy of different O_3 insufflation protocols in dairy cows with clinical mastitis.

A total of 79 infected mammary quarters (of 32 lactating cows) with clinical signs of mastitis were used for the study. Mastitis was diagnosed by typical clinical symptoms of the mammary gland and general clinical symptoms of systemic infection. California mastitis test (CMT) was performed to all quarters and recorded before the treatment. Somatic cell count (SCC) and microbiological examination of each milk sample of the infected quarters was conducted and recorded before the treatment. O_3 insufflation was applied daily in different doses (30, 60 and 70 µg/mL) intramammary alone via latex free 100 mL syringe for one week; only antibiotic (AB) was administered intramuscularly for 5 days; and high dose O_3 insufflation (70 µg/mL) + AB combination was applied to mammary quarters. On day 8; CMT and SCC were repeated to evaluate the efficacy of the treatments. The statistical analysis of CMT and SCC values between groups was conducted according to Paired Sample t-test and $P < 0.05$ was considered significant.

CMT scores were found to best decreased in 70 µg/mL O_3+AB combination group in post-treatment (1.63 ± 0.10) scores when compared to pre-treatment (1.21 ± 0.08) scores ($P < 0.01$). SCC results are tended to be decreased after one week therapy. The most isolated bacteria was detected as E. coli and Staphylococcus aureus (n=12 for each) which were followed by S. aureus (n = 7).

In conclusion, high doses O_3 (60-70%) and high dose O_3 (70%) in combination with antibiotic can be effectively used to treat clinical mastitis cases in dairy cattle.

P-80

EFFECTS OF FEEDING ON DIFFERENT PASTURE CROPS ON INTESTINAL AEROBIC FLORA IN FREE RANGE BROILERS

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A trial was conducted on 4 decares of Clover, Bromegrass and Clover + Bromegrass planted field by designing eight numbers of mobile pens. 480 number of one day old male Hubbard Isa Red-JA broiler chicks were divided to 4 groups. All the birds were kept inside and fed a standard diet until day 28, then three groups except the control were fed on pasture from 29th day on. The control group was fed ad libitum and kept in the mobil pens throughout the study. The second and third groups were fed concentrated ration along with that the former was additionally ranged freely in Clover field while the latter was fed on Bromegrass pasture in the same manner. The fourth group was also freely fed in areas both from Clover and Bromegrass planted fields. All the pasture plantations were initially seeded and grown. All the borders among the subgroup areas were planted by Thyme. Chicks in the 1st group were sent to slaughter at 42nd day while those from all other groups were slaughtered at day 84th day. At the 42nd day of experiment, yeast and mold numbers in the trial groups were lower than the control ($p<0.05$). At the end of trial, the highest mortality rate among the groups was % 2.50. Counts for total aerobic mesophilic bacteria (TAC) and total yeast and mold (TYMC) of Clover/Bromegrass groups were significantly higher than those of other groups ($p<0.05$).

In conclusion, a mobile type of free range broiler production is recommended by this trial on the fields having limited sources of vegetation.

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P-81

DETERMINATION OF MICROBIAL LOAD OF AIR SAMPLES FROM PRODUCTION AND FOOD-STORAGE IN MEAT FACTORIES AND MOLD IDENTIFICATION

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In this study, it was aimed to determine the contamination levels of total aerobic mesophilic bacteria and mold-yeast counts of air samples taken from production and storage areas of meat factories (n = 3) and to identify isolated molds. Air samples were taken with two different techniques. In the first technique, petri dishes were opened at different areas. The other technique was used an air sampling device (Mas 100 Eco Air Sampler). Samples were taken from twenty-five areas. It was determined that the total aerobic mesophilic bacteria in the obtained by the first technique is in the range of 1-180 CFU/petri (mean 48.49 CFU/petri) and by the air sampling device was 8-385 CFU/m^3 (mean 112.77 CFU/m^3). It was determined that the number of molds and yeasts were in the range of 1-105 CFU/petri (mean 19.85 CFU/petri) in the first technique and by the air sampling device was 2-320 CFU /m^3 (mean 57.45 CFU /m^3). A total of 63 molds were isolated. 63 isolates were found to be the most common Mucor spp. (24; 38.7%), Rhizopus spp.(16, 25.8%) and Penicillium spp.(15; 24.2%). Mucor racemosus with 14 isolates and Rhizopus oryzae with 20 isolates were identified as the most common species. In addition, Aspergillus (3; 4.8%), Geotrichum spp. (3; 4.8%), Syncephalostrum spp.(1; 1.6%) and Wallemia spp. (1; 1.6%) were detected.

P-82

AN EXAMPLE OF ANDROID APPLICATIONS IN THE TRAINING PROCESS IN VETERINARY FACULTIES

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The purpose of this study is the development of the android application "Vet-Dictionary" composed of veterinary terminology in five languages for widespread used by students of veterinary faculties in the process of education and then questioning and analysis of students' opinions. In the process of study, researchers from all departments of the Veterinary Faculty of the Kyrgyz-Turkish University "Manas" were involved, was written terminological vocabulary dictionary having 3132 terms. The dictionary has been translated from Latin language into Turkish, Kyrgyz, Russian and English languages. On the basis of the compiled terminological dictionary, an electronic database was created for used to develop the android application "Vet-Dictionary". As well as the terminology dictionary, the development of the android application was performed by the scientific worker of the faculty. For the purpose of initial testing of operability and convenience, the android application was set up in closed access to all students phones of the veterinary faculty. At the end of two months of testing, an anonymous user survey was conducted. Following the results of the survey, it was revealed that the application was particularly useful and convenient when studying foreign scientific and educational literatures, as well as educational literature in which Latin terms were often used. The fact that the faculty uses the Kyrgyz, Turkish and partly Russian and English languages during the learning process had a positive impact on the frequent use of the application. The results of the work have miscalculated that in the process of higher education with the use of many linguistic academic programs and specific terminology, mobile applications of this type positively influence the understanding of subjects and the progress of students.

P-83

SOME IMPORTANT THERMAL PROCESSING CONTAMINANTS IN FOODS

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Thermal processing of food products has been used in the food industry for many years. This process is based on heating of foods for a certain length of time at a certain temperature. The main purposes of heat treatments are to improve the safety, sensory and nutritional qualities of foods. Besides these, heat is used to advance food preservation by eliminating some enzymatic activities. The reactions occur during the heat treatment are of great importance for the production of aroma, taste and color. This kind of changes are desirable, because they produce the specific sensory and texture features of foods, such as bread, cereals, chocolate, coffee, nuts, malt and cooked meat. However, studies showed that heat treatment may be accompanied by the formation of toxic compounds.

One of the most important reaction for the formation of undesirable compounds is Maillard Reaction, generally known as non-enzymatic browning. The negative side of this reactions is the possible formation of potentially carcinogenic compounds such as heterocyclic amines. Heterocyclic amines have attracted a growing interest during the past two decades and there are many studies about them. But beside heterocyclic amines, scientific knowledge about some other processing contaminants such as furan, advanced glycation end products, acrylamide and chloropropanols in food has grown considerably in recent years.

Epidemiological studies showed that different disease conditions, such as cancer, endocrine disruption and diabetes can be coupled to the presence of chemical contaminants in food. However, the detailed formation mechanisms of heat-induced contaminants in foods are poorly understood. Also, reduction of this kind of compounds in foods is challenging due to the large number of precursors in many foods and the requirement of heat process in food industry. Advances in technology allowed optimization of thermal processing for minimum deterioration of food quality and harmful effects. But, the fact that thermally generated compounds occurring simultaneously and give rise to many reactive intermediates, making their interpretation and control difficult. More studies needed at international level to better understand the formation, potential control, and health risks of this contaminants.

In this review, information about the presence, formation and potential risks to public health of some important processing contaminants will be provided.

P-84

SELECTION OF UNIFIED CULTURES OF MICROORGANISMS FOR DETERMINATION OF ANTIBIOTICS IN BROILER CHICKEN MEAT

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The use of antibiotics to treat diseases and as growth stimulants in poultry is associated with the risk of the emergence and spread of resistant microorganisms. This risk is higher in countries with weak or inadequate national policies and regulations, as well as imperfect surveillance and monitoring systems for the use of antibiotics, resistance to antibiotics and their content in food.

Experimental studies were conducted on broiler chickens of "Smena-7" cross incubator poultry farm "Allel-Agro" in the conditions of the vivarium of the Kazakh National Agrarian University with cellular content. Determination the sensitivity of strains to antibiotics was carried out in the laboratory of microbiological safety in the Kazakhstan-Japan Innovation Center in 2015-2016.

The purpose of our work was to select sensitive test cultures of microorganisms for the three antibiotics in the meat of chickens. For this, one-day-old chickens were randomly divided into four equal groups with 10 individuals in each group (n=40). All groups of chickens fed with commercial basal diet; the first group considered as control, fed only with basal ration; the feed of the second, third and fourth groups of chicken were supplemented with amoxystin, tetracycline and chloramphenicol, respectively. Antibiotics were given daily, individually, in sub-therapeutic concentrations: amoxystin at the dosage 10 mg/kg -1, tetracycline and chloramphenicol – 20 mg/kg -1 of the chicken's weight for 41 days.

The index of sensitivity of microorganisms to the antibiotics was the diameter of the microbial growth delay zone around the paper disk. Testing the sensitivity of our five strains to three antibiotics (content of active substance was 0.1 μg/ml) made it possible to identify the most sensitive strains from them.

Gram-positive B.subtilis strain was highly sensitive to amoxystin and tetracycline (diameter of the zone 17-19 mm), and was moderately sensitive to chloramphenicol (14 mm). B.cereus strain was highly sensitive to tetracycline and chloramphenicol (22 mm), but the strain was moderately sensitive to amoxystin (17 mm). B.mycoides and M.flavus strains were moderately sensitive to all used antibiotics (13-15 mm). The most sensitive strain was M.luteus ATCC 9341 (19-24 mm).

According to the results, strains with stable high sensitivity to antibiotics can be used for further studies. To determine the presence of amoxystin, tetracycline and chloramphenicol in the substrate, the strain M.luteus ATCC 9341 can be used as the most sensitive strain. In the remaining studied microorganisms, the interval of antibiotic susceptibility and the degree of sensitivity are lower than required.

P-85

CLONING AND PRODUCTION OF RECOMBINANT S1 AND N PROTEINS OF INFECTIOUS BRONCHITIS VIRUS (IBV) BY USING BACULOVIRUS EXPRESSION SYSTEM

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The avian coronavirus infectious bronchitis virus (AvCoV-IBV) is recognized as an important global pathogen because new variants are a continuous threat to the poultry industry worldwide. Hence, the European Union has started a prevention and control action (COST FA-1207). In line with this action, this project (Number: 113O411) was supported by TUBITAK. One of the aim of this project was to produce recombinant S1 and N protein by using the baculovirus expression system.

The partial S1 and whole N 1 gene of the IBV were cloned and recombinant proteins were produced using the baculovirus expression system. Studies were performed to characterize and evaluate the immunoreaction of recombinant proteins expressed in Baculovirus. Results indicated that both recombinant IBV-S1 and IBV-N reacted with Anti-His (C-Terminal) monoclonal antibody giving the bands at the molecular weights of 23 and 52-54 kDa, respectively.

In conclusion, a serological test like ELISA is required to measure the immune response in chicken to circulating IBV strains in field. Results of this study have shown that the recombinant IBV-N protein produced in this study can be used in ELISA and therefore, kit development will be performed in future studies.

P-86

SEROLOGICAL EVIDENCE OF EXPOSURE TO RIFT VALLEY FEVER VIRUS IN CHILDREN, CATTLE AND SHEEP IN TURKEY

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Rift Valley fever virus is a zoonotic pathogen that causes severe disease in humans and livestock. The virus has great potential for transboundary spread given the presence of competent vectors in traditionally non-endemic areas. Given the historic outbreak of RVFV in neighboring Saudi Arabia and Yemen in the Middle East, we investigated the potential risk of RVFV infection in Turkey. Using indirect IgG ELISA, western blot and quantitative RT-PCR, we tested sera obtained from a cohort of children (n = 75) with a history of arthritis, cattle (n = 65) and sheep (n = 20) to assess potential exposure to RVFV. While results of RT-PCR assay were negative, antibodies to RVFV were detected in all three study populations: humans (5.3%), cattle (12.3%) and sheep (5%). These results suggest the occurrence of low level circulation and transmission of RVFV in humans and livestock in Turkey during interepidemic periods; and we therefore recommend further comprehensive and systematic studies to elucidate the true prevalence, risk and impact of RVFV infection in the country.

P-87

ANTI-MULLERIAN HORMONE AS A DIAGNOSTIC TOOL FOR OVARIAN REMNANT SYNDROME IN BITCHES

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Ovariohysterectomy is a surgical procedure performed for sterilization. If part or all of an ovary remains after the surgical procedure, ovarian remnant syndrome (ORS) inevitably occurs. After revascularization of the remaining ovarian tissue, the sexual cycle of bitches and queens continues. Revascularization of the remaining ovarian tissue causes signs of proestrus and estrus in bitches and queens, such as bloody vaginal discharge, vulvar swelling, and behavioral changes (attractiveness to male dogs, allowance of mating). Anamnesis, clinical findings, vaginal cytology findings, hormone stimulation test results, the luteinizing hormone level, ultrasonography findings, and exploratory laparotomy are currently used for the diagnosis of ORS in bitches and queens. However, some of those methods may be unreliable, expensive, technically demanding, and time-consuming. Consequently, a simple and reliable method is needed for the diagnosis of ORS. The aim of this study was to investigate the usefulness of serum anti-Müllerian hormone (AMH) measurement for the diagnosis of ORS in bitches.

Forty-six female dogs were divided into four groups: the prepubertal, unspayed, spayed, and ORS groups. The serum AMH, progesterone, and estradiol concentrations of the bitches in all groups were measured by enzyme-linked immunosorbent assay. The stage in the sexual cycle of each bitch was determined based on vaginal cytology findings and serum estradiol and progesterone levels.

The mean serum AMH concentration of the unspayed bitches (4.26 ± 0.82 ng/ml) was similar to that of the bitches with ORS (4.40 ± 1.09 ng/ml). However, the difference between the mean serum AMH level of the bitches with ORS and the spayed bitches (0.28 ± 0.09 ng/ml) was significant. The serum AMH concentrations in the bitches of the OVH (+) group were significantly lower than those in the bitches of the other groups. The correlation analysis revealed that regardless of the group differences, no correlations were detected among the serum AMH, estradiol, and progesterone concentrations in each bitch. Age was added as a covariate to the general linear model; because the effect of age was found to be insignificant, the final model did not include the age factor.

In conclusion, the present study has demonstrated that the serum AMH level is substantially lower in spayed than in both intact bitches and bitches with ORS. According to this result, measurement of the serum AMH level is a useful tool for diagnosis of ORS in bitches.

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VETERINARY AND SANITARY EXAMINATION AND QUALITY OF TILAPIA AND AFRICAN KLARIYEVY SOM FISH MEAT

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Tilapia and the catfish cultivation one of the most aged forms of fish breeding in the warm countries of Asia and Africa. Body height of consumption of a tilapia can reduce growth rates of average per capita body weight (the modern larger problem in the world which began to arise also in Kazakhstan), caused by the improper and exuberantly high-calorie delivery. The aim of the research was to study of quality indicators of Tilapia and catfish meat.

There were analyzed results of organoleptic indexes (appearance and of scales and mucilage condition, scraper color, eyes condition, muscular tissue consistence and smell), veterinary and sanitary expertize of commodity fish of the Tilapia and African catfish what were grown up in the conditions of the fish-breeding enterprise TENGRYFISH LLP. The work was carried out at laboratories of "Food ecological safety" of the Kazakhstan-Japan Innovation Center of the Kazakh National Agrarian University. There were investigated 20 tilapias, 20- catfish caught in natural reservoirs of TENGRYFISH LLP. The organoleptic assessment was carried out according to GOST 7631-85 "By fish, marine mammals, sea invertebrates and products of their processing. Acceptance rules, organoleptic methods of evaluation test, sample drawing methods for bench tests". Appearance was determined by fish fatness, condition of her external covers, by mucilage, gills and a paunch. Color of gills was from intensive-red to light pink. Muscular tissue after thawing without nonspecifically smell. Veterinary and sanitary assessment showed that the fish was fresh without existence of any defects and it was a subject to the free realization. Conducted research shown the absence of helminthes. Cutting was carried out variously, depending on breed and processing of fish. Existence of doubtful organoleptic indexes were had satisfactory results to laboratory analysis.

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PRELIMINARY EVALUATION OF THE CYTOTOXIC AND GENOTOXIC POTENTIAL OF POLYMERIC NANOPARTICLES LOADED WITH AMOXICILLIN

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The discovery of new molecules for the treatment of various diseases in human and veterinary medicine, as well as the development of new formulations over available products, are the priority issues within Research and Development activities of pharmaceutical companies. Within this context, nanoparticulate drug delivery systems have been developed that increase therapeutic efficacy as well as reducing toxicity and side effects depending on the release in target structures. Amoxicillin is a broad spectrum, pharmacologically active beta-lactam antibiotic effective aginst Gram-positive and gram-negative bacteria. However, its oral bioavailability is not high. In our laboratory, a new amoxicillin formulation has been developed that can be transported by nanoparticles prepared using natural polymers, which are thought to allow safe and effective use of amoxicillin in poultry in comparison to its conventional form and the efficacy of this formulation has been evaluated by in vitro and in vivo test systems. However, its safety has not been evaluated yet, this study therefore aims to examine the cytotoxic and genotoxic potential of the new amoxicillin formulation.

MTT test was used to assess cytotoxicity in which confluent monolayer of Swiss 3T3 mouse fibroblast cells were incubated in the presence of increasing concentrations (0-250 µg/ml) of new amoxicillin formulation (NaAlg/amoxycillin complex) and conventional amoxicillin. Genotoxicity was evaluated by comet assay (Single Cell Gel Electrophoresis), established based on cytotoxic assay results.

The results of the MTT assay showed that NaAlg/amoxycillin complex did not show cytotoxic effects on Swiss 3T3 mouse fibroblast cells at the tested concentrations when compared with conventional amoxicillin formulation. Also, the comet assay results as measured by percentage of DNA in comet tails indicated that NaAlg/amoxicillin complex did not cause genotoxicity at 50-200 µg/ml when compared with conventional amoxicillin exposed cells.

In this study, it was shown that NaAlg/amoxycillin complex, a new developed amoxicillin formulation has no cytotoxic and genotoxic effects at the tested concentrations in cultured fibroblast cells. The present study provides important findings on toxicity and safety of the formulation as well as preliminary data for in vivo toxicity tests of the compound.

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PERFORMANCE AND MICROBIAL COMMUNITY VARIATIONS IN THERMOPHILIC ANAEROBIC DIGESTERS TREATING OTC MEDICATED COW MANURE UNDER DIFFERENT OPERATIONAL CONDITIONS

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Veterinary antibiotics are widely used in farms for therapeutic and sub-therapeutic treatments and as feed additives for promoting the growth of animals. The presence of antibiotic and/or their metabolites in manure have been reported to affect biogas production efficiency when dealing with animal manure during anaerobic digestion.This study aimed to determine the fate and effect of oxytetracycline (OTC) and its metabolites during thermophilic anaerobic digestion of cow manure.

OTC-medicated and non-medicated digesters were operated at 55 °C with different volatile solids (VS) concentrations (4% and 6%) and mixing rates (90 and 120 rpm). OTC and its metabolites were measured by HPLC and LC/MS/MS, respectively. Microbial community dynamics were monitored by denaturing gradient gel electrophoresis (DGGE) and real-time PCR (qPCR).

Approximately 2 mg/L initial OTC concentration caused 10–30% inhibition on biogas production and higher inhibition was observed as mixing rate increased. DGGE results indicated that OTC caused a shift in bacterial community structure and several species became dominant with time. Archaeal community decreased throughout the digestion period. RNA based qPCR analyses showed that gene copy numbers of bacteria and Methanomicrobiales declined in all digesters whereas gene copy numbers of Methanobacteriales and Methanosarcinales increased in high mixing rate digesters.

In conclusion, the importance of elimination of antibiotics from animal wastes prior their usage in biogas plants should be underscored.

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PRESENCE OF *CRONOBACTER* SPP. AND IDENTIFICATION BY MOLECULAR TECHNIQUES IN VARIOUS FOODSTUFFS

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Cronobacter spp. involves a group of opportunistic pathogens that cause necrotizing enterocolitis, bacteriemie and meningitis particularly in newborns and immunosuppressed individuals with a mortality rate of 50-80%. Seven species like Cronobacter sakazakii, Cronobacter malonaticus, Cronobacter muytjensii, Cronobacter turicensis, Cronobacter dublinensis, Cronobacter universalis and Cronobacter condimenti are included in this genus.

The objective of this study was to assert the presence of Cronobacter spp. in miscellaneous food stuffs offered for sale in Istanbul and its vicinity and to present the overall microbial quality of these products. A total of 219 prepared foodstuffs including a variety of confectionary (n:11), fruits-vegetables (n:50), dairy products (n:52), meat and meat products (n:50) and ready-to-eat foods (n:56) were purchased from different sales points and the presence of Cronobacter spp. were investigated in these samples. Cronobacter suspected isolates which were obtained by microbiologic analyses were confirmed by polymerase chain reaction (PCR) targeted to gyrB gene and were then identified by multiplex PCR.

Prevalence of Cronobacter spp was estimated to be 5.4%. Out of 12 Cronobacter spp isolates obtained, 8 (66.6%), 3 (25%), 1 (8.3%) belonged to C. sakazakii, C. muytjensii and C. malonaticus species, respectively. Cronobacter spp. positive samples are one confectionary (pestil with walnut), one dairy products (braided cheese), ten ready-to-eat foods (raw cereal balls and salad)

Consequently, the presence of the bacteria in widely consumed food stuff revealed that Cronobacter spp. is subject to strictly monitoring due to its opportunistic nature in terms of public health concern.

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EFFECTS OF SLAUGHTER WEIGHT AND GENDER ON MEAT QUALITY OF LIGHT LAMBS

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Forty eight lambs were used to investigate the effects of slaughter weight (low=17-19 kg, medium=21-23 kg, high=25-27 kg) and gender (male or female) on meat quality characteristics of Kivircik lambs. Lambs were taken to pasture in the day-time with their dams after they were 57-d old until slaughter. At night, lambs and their dams were kept in different pens and lambs were fed ad-libitum with good quality alfalfa hay and concentrate feed. Lambs were weighed at weekly basis during the finishing period. Lambs, which reached the target finish weight at weekly weightings, were taken to the experimental slaughterhouse of Istanbul University Veterinary Faculty. Longissimus dorsi muscle from the right side of carcasses were used in order to assess meat quality characteristics.

Lambs from high weight group had lower ultimate pH value than those of other groups ($P<0.001$). Meat of low weight group had higher cooking loss ($P<0.01$) and Warner Bratzler shear force value than those of other groups. Meat of lambs from high weight group were darker in colour with lower lightness (L*) value at immediately after cutting ($P<0.001$), 1 h ($P<0.001$) and 24 h ($P<0.05$) after cutting. Meat of low weight group had lower proportion of total saturated fatty acids (∑SFA), and higher proportion of total unsaturated fatty acids (∑UFA) and ∑UFA /∑SFA ratio than medium weight group. Meat of medium weight group had higher thrombogenic index than that of low weight group.

Female lambs had lower ultimate pH value than that of male ones ($P<0.01$). Meat of female lambs were also more tender than male lambs regarding the results of Warner Bratzler shear force analyses. Gender had no significant influence on meat lightness value. However, meat of male lambs had lower redness value at immediately after cutting and 24 h after cutting ($P<0.05$). Meat of female lambs had higher proportions of C18:3 n-3 and C20:1 than male lambs. On the contrary, meat of male lambs had higher proportions of C20:5 n-3 and C22:0.

In conclusion, in the conditions of the current study, lambs slaughtered in high group had lower meat lightness value than other weight groups, however, meat colour values in all slaughter weight groups might be considered as acceptable at consumer level. Slaughtering the lambs in low weight yielded tougher meat. Female lambs produced higher quality meat than male lambs in terms of ultimate meat pH, shear force value, meat redness, proportions of C18:3 n-3, and C20:1.

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ANIMAL ABUSE AND VETERINARY FORENSIC TOXICOLOGY

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Animal abuse is inflected by humans in both intentional or unintentional means; threating the welfare of the animal leading pain, suffering, distress and even death. This human behavioral problem leads serious concern among society due to increased awareness of how modern society concepts are twisted; where animals are handled as objects of pleasure. Animal abuse is directly related to the veterinary forensic medicine, where as a subfield in veterinary forensic toxicology (VFT); the science of toxicology was applied for the purpose of law for veterinary cases.

Among veterinary toxicology cases, less than 1% is assumed to be intentional. This includes the malpractice of the veterinarian; where the veterinarian is unaware of the toxic risks of the drugs applied; or other intentional manners where domestic or wild animals are affected. Eventhough the cases for animals of food origin and wild animals are few, number of affected animals are much more compared to individual poisonings. Anamnesis evaluation of clinical signs with pathological and analytical tests are important for a proper diagnosis. Careful evaluation of the environment with field trips (especially for agriculture and large scale environments) and detailed investigation for exposure evaluation are also important components. In order to complement the onset of signs, toxicokinetic properties of the suspected chemical should also be considered along with postmortem redistribution. A common case in the veterinary clinics for defining the relation between animal abuse and VFT is related to the intentional and unintentional exposure of pets on illicit and abused substances commonly. Usually, the animal owner provides inaccurate, imcomplete or misleading history for anemnesis. In these cases, the veterinarians should be aware of the symptoms in both the owner and the animal for a correct diagnosis. Incase of positive results for these substances (such as sedative/hypnotics, opioids, ketamine, marijuana, synthetic cannabinoids, cocaine, heroin, MDMA, LSD, mushroom), veterinarians are mandated to report the legal authorities. Another important topic is Munchausen by Proxy syndrome; where the motive for the owners are usually drugs of abuse.

There are different behaviors on display in various aspects of animal crime leading different types of animal harm and abuse. Veterinarians should be well aware, to get a proper history from the owners for both individual and mass toxicosis. In the suspected cases for toxicosis, a proper collection, handling and transport of evidence materials and analytical results with necropsy findings have a great importance affecting the prosecutions.

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FISH CELL LINES AND PRIMARY CULTURES FOR THEIR POTENTIAL USE IN ECOTOXICOLOGY

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Low dose and mixture toxicity is considered as a difficult aprect for environmental risk assessment of chemicals. Concerns of emerging contaminants and their potential endocrine disrupting effects lead the authorities for screening the potential of these chemicals on their environmental effects. Various types of model organisms for aquatic ecotoxicology testing is introduced; meanwhile interest for in vitro toxicology is increasing due to economic and ethical issues.

Primary cultures and cell lines are often discussed for their potential to reflect the in vivo conditions in fish invitro toxicology. Eventhough, cell lines are homologenous in a controlled environment providing sustainable culture conditions, primary cells provide much sensitive and reliable results since they are able to express the enzymes responsible for xenobiotic metabolism and able to preserve the normal cellular morphology, function, growth characteristics, signal transduction mechanisms and genetic integrity.

We have previously tested in our laboratory for the response of selected xenobioics in primary cultures from liver, gonad and gill tissues of Cyprinus carpio and fish cell lines (RTG2- Rainbow trout gonadal cell line, Poeciliopsis lucida hepatocellular carcinoma). The results indicate that for both gonadal and liver cells, primary cultures were found to be much sensitive with lower IC50 values. Eventhough new cell lines are emerged to the market for their increased sensitivity, primary cells remain still the golden standard.

Oxidative stress and metabolism are often considered for biomarkers besides general toxicity. As the major biomarker for ecotoxicology CYP1A is commonly used for the endocrine disrupting potential of chemicals since it is responsible for the metabolism of persistent organic pollutants (such as PAHs, dioxins and PCBs) which is related to the induction of AhR. This activity is measured through EROD by the deethylation of 7-ethoxyresorufin. Similar to general toxicity reults, we found that EROD results were much sensitive in the primary cultures compared to the tested cell lines.

Importance of choosing relevent cell culturing conditions for toxicity assays and finding a potential correlation between them would lead the researchers in this area for more accurate testing of chemicals. In our laboratories we aim to check the cells for their xenobiotic metabolism ability through mRNA expression when the activity is induced and coculturing model systems.

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EPIDEMIOLOGICAL INDICATORS FOR MONITORING ZOONOTIC HELMINTHIASIS AND ZONING OF THE TERRITORY OF KAZAKHSTAN

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In complex studies of animals of the Western region on zoonotic helminthiasis established the scope of the following helminths: tapeworm (preferential loss), opisthorchis and lentecami (isolated cases). In cattle echinococcosis have registered 8.26%. The highest extensity of invasion was noted in West Kazakhstan region - 17,95%. In second place on extensiveness is Aktobe region - 10.96%. In the other two areas of the Western region indicators of extensiveness of invasion was approximately equal, in particular, Atyrau region made up 3.68%, and in Mangistau region - 3.48%. The infection of sheep sweat region made up of 7.36%. The highest extensity of invasion equal to 82,76% was observed in the Aktobe region, then in the Western-Kazakhstan region – of 46.94% and in Atyrau region - of 13.63% and the lowest rates were observed in Mangistau region - of 2.27%. In the study of pig carcasses intensity lesions their zoonotic helminths amounted to a total of 10,29%. The highest extensity of invasion noted in West Kazakhstan region – 14,3%. The extensity of infection by echinococcosis of cattle in the region amounted to (17,9±4,3%), with variations across the districts from 9.4 to 25.8%; sheep 22,74±3,68%.

In the analysis of morbidity of the population found that only for the 1st quarter of 2016 in the Republic among the population was 485 cases of diseases of parasitic etiology, including among children under 14 years 233 cases (48,04%), adolescents 15 cases (of 3.09%). Among the adult population was 237 cases or 48,87%.

Throughout the Western region, there has been 26 cases of echinococcosis (5,36%), including among children under 14 years – 19 cases (8,15%), among adolescents of TB cases is not observed in adults in the mentioned 7 cases. The highest incidence rate in the Republic was observed in children up to 14 years and equal to 4.94 per 100 thousand populations. The children of the Western region this figure is made up 4.59 per 100 thousand populations. The most affected parasitism Mangystau region: the overall rate is 3.08 per 100 thousand populations; among children under 14 years of 7.34 per 100 thousand Populations.

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FIRST PARASITOLOGICAL DETECTION OF TRICHODECTES MELIS (PHTHIRAPTERA, TRICHODECTIDAE) ON THE EUROPEAN BADGER *MELES MELES* (CARNIVORA, MUSTELIDAE) IN TURKEY.

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The European badger (*Meles meles*) is in Carnivora-Mustelidae family. The geographical range of the European badger includes the whole of Europe, apart from Northern Scandinavia, and a large part of Asia. This is the first report about Trichodectes melis on European badger (*Meles meles*) in Turkey. The study was performed in Kars province of Turkey. Research material was obtained from one female European badger brought to the Kafkas University, Wildlife Conservation, Recovery, Rehabilitation Research and Application Center (Kars, Turkey) on 29 March 2016. On the clinical examination, left hip dislocation was detected radiologically. Clinically no other abnormalities have been identified. The badger was examined for the presence of ectoparasites. In the present study, it was aimed to describe the infestation with Trichodectes melis on the European badger *Meles meles* (Carnivora, Mustelidae) diagnosed by microscobic examination. The lice specimens collected on the fur were preserved in a vial containing 70% ethanol, cleared in lactophenol for a few days, mounted on slides in the Canada Balsam medium and examined under a stereomicroscope. The parasites were measured in millimeters and recorded. Seven specimens of Trichodectes melis were found on the skin of badger. Three of them were males and 4 of them were females. The lice were collected around thorax and tail of badger and no pathogenic changes were observed on the surface of the skin or in the fur. Trichodectes melis has been determined parasitologically for the first time in Turkey.

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OCCURRENCE OF PATHOGEN CANDIDA SPP. ISOLATED FROM BUTTER

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Butter is one of the first milk products that have been traded back in 14th century. Development of the mechanical separator in 1877 made large-scale manufacture of butter possible. Consumption of butter and butterfat products calculated 5,250,000 tons in the world in 2009. Yeasts are very important microorganisms for the food industry that affects food quality and safety, yet yeasts may also lead to spoil of the foods. *Candida* species are important for hospital infections which have been able to infect to humans via food in recent years. *Candida* species are important for pathogenic yeasts, which have been able to infect humans with food in recent years. The genus is composed of a heterogeneous group of organisms, and more than 17 different *Candida* species are known to be aetiological agents of human infection. However, more than 90% of invasive infections are caused by *Candida albicans, Candida tropicalis*, and *Candida krusei.*

The goal of this study is to evaluate the incidence of pathogen *Candida* spp. in butter. In this study we analyzed 100 butter samples. Samples were transported to the laboratory under refrigeration and aseptic conditions. Samples were investigated microbiologically for the presence of *Candida* spp. Acidified potato dextrose agar (PDA) was incubated at 25°C for 5-7 days for enumeration of yeasts and molds. CHROMagar *Candida* was prepared according to the instructions of manufacturer. All plates were incubated at 30°C for 48 h aerobically, as recommended by the manufacturer. The appearance of colonies, including color, size, and textures on CHROMagar *Candida*, was analyzed. The color of colonies on CHROMagar *Candida* was similar as given by the manufacturer, green colonies of *C. albicans*, metallic blue colonies of *C. tropicalis* and by purple colored colonies of *C. krusei*.

Candida spp. was detected 10 % of butter samples. *C. albicans, C. albicans* and *C. krusei, C. tropicalis, C. krusei* were isolated 4%, 3%, 2%, 1% from *Candida* spp. positive butter samples, respectively.

Finally it could be said, microbiological analysis of food samples should be made not just for determining the total number of yeasts and molds, but the samples should also be tested for detecting the presence of pathogenic yeast, which would be very beneficial for the public health. We suggest that to be aware of the presence of pathogenic *Candida* spp. in foods, relevant legislation should be regulated to decrease the possible risk of pathogenic *Candida* spp.

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