100 ANNIVERSARY

HIGHER VETERINARY MEDICAL EDUCATION IN BULGARIA

UNIVERSITY OF FORESTRY

FACULTY OF VETERINARY MEDICINE

BOOK OF ABSTRACTS

INTERNATIONAL SCIENTIFIC CONFERENCE

"TRADITION AND MODERNITY IN VETERINARY MEDICINE"

SOFIA FACULTY OF VETERINARY MEDICINE

2023

BULGARIA

BOOK OF ABSTRACTS

INTERNATIONAL SCIENTIFIC CONFERENCE:

"TRADITION AND MODERNITY
IN VETERINARY MEDICINE"

DEDICATED TO THE 100 ANNIVERSARYS OF HIGHER VETERINARY MEDICAL EDUCATION IN BULGARIA

2023

Sofia Bulgaria

FACULTY OF VETERINARY MEDICINE, UNIVERSITY OF FORESTRY, SOFIA, BULGARIA

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OFFICIAL PROGRAM OF THE CONFERENCE

Петък / Friday (28.04.2023)	
	ОТПЪТУВАНЕ НА АВТОБУС ОТ ЛТУ ЗА ЮНДОЛА / DEPARTURE BY BUS FROM UNIVERSITY OF FORESTRY CAMPUS TO YUNDOLA
	НАСТАНЯВАНЕ И РЕГИСТРАЦИЯ / REGISTRATION OF PARTICIPANTS
18:00 – 18:20	**ОТКРИВАНЕ НА КОНФЕРЕНЦИЯТА / OPEN CEREMONY OF THE CONFERENCE** ОТКРИВАНЕ НА КОНФЕРЕНЦИЯТА ОТ ЗАМ-ДЕКАНА ПО НИД НА ФВМ ПРИ ЛТУ И ПРИВЕТСТВИЕ КЪМ УЧАСТНИЦИТЕ ОТ РЕКТОРА НА ЛТУ И ДЕКАНА НА ФВМ, КАКТО И ОТ ИНСТИТУЦИИ И ОРГАНИЗАЦИИ УЧАСТВАЩИ В КОНФЕРЕНЦИЯТА / OPENING OF THE CONFERENCE BY THE VICE-DEAN FOR RESEARCH OF FVM AT UF AND WELCOME TO THE PARTICIPANTS FROM THE RECTOR OF UF AND DEAN OF FVM, AS WELL AS FROM INSTITUTIONS AND ORGANIZATIONS TAKING PART OF THE CONFERENCE
18:20 – 19:50	**ПЛЕНАРЕН ДОКЛАД / PLENARY REPORT** INTEGRATING GIS APPLICATIONS IN ANIMAL DISEASE EPIDEMIOLOGY AND CONTROL – Yanko Ivanov & Koycho Koev
20:00	**ВЕЧЕРЯ/DINNER**

Събота / Saturday (29.04.2023)	
8:00 – 9:00	**ЗАКУСКА/BREAKFAST**
SESSION ***MORPHOLOGY, ECOLOGY AND LIVESTOCK BREEDING*** ***Hall №1*** ***Chairman:*** Chief Assist. Prof. Lyubomir Ivanov Hristakiev, PhD Chief Assist. Prof. Iliana Ruzhanova-Gospodinova, PhD ***Secretary***: Assist. Prof. I. Georgiev Assist. Prof. P. Hristova	
ORAL PRESENTATIONS	
09:00 – 09:15	***O1MELB1*** SADOVO AGRICULTURAL SCHOOL - THE FIRST STATE VOCATIONAL EDUCATIONAL INSTITUTION IN BULGARIA – Andrey Kurtenkov
09:15 – 09:30	***O1MELB2*** CHANGES IN OUR IDEAS ABOUT THE NATURE AND STRUCTURE OF THE BREED IN THIS CENTURY – Andrey Kurtenkov
09:30 – 09:45	***O1MELB3*** MOLECULAR DETECTION OF DEFORMED WINGS VIRUS AND SACBROOD VIRUS IN POLLEN PROBES – Nedyalka Atsenova et al.
09:45 – 10:00	***O1MELB4*** PALEOPATHOLOGICAL DEGENERATIONS OF THE VERTEBRAL COLUMN OF A HELLENISTIC AGE HORSE SKELETON – Nadezhda Karastoyanova et al.
10:00 – 10:15	***O1MELB5*** INDICATORS OF MICROCLIMATE AND THEIR RELATIONSHIP WITH INDICES OF COMFORT IN DAIRY COWS – Dimo Dimov et al.

10:15 – 10:30	***O1MELB6*** DOPPLER ULTRASONOGRAPHIC STUDY OF THE SPLEEN IN THE DOG – Iliyan Georgiev et al.
10:30 – 11:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
POSTER SESSION	
11:00 – 11:05	***P1MELB1*** FIRST RECORD OF *TOXASCARIS LEONINA* AND *EUCOLEUS AEROPHILUS* IN POPULATION OF BROUN BEARS (*URSUS ARCTOS*) IN BULGARIA – Vladimir Todorov et al.
11:05 – 11:10	***P1MELB2*** PRESENS OF *CRYPTOSPORIDIUM* SPP. IN FECES OF BROWN BEARS (*URSUS ARCTOS*) IN BULGARIA – Vladimir Todorov et al.
11:10 – 11:15	***P1MELB3*** ASSOCIATIONS BETWEEN SUBACUTE RUMINAL ACIDOSIS AND RUMINAL PH WITH MILK YIELD AND MILK COMPOSITION OF HOLSTEIN COWS IN DIFFERENT STAGES OF LACTATION – G. Kitkas et al.
11:15 – 11:20	***P1MELB4*** ASSESSMENT OF AIR POLLUTION IN STARA ZAGORA REGION, BULGARIA, BASED ON PM_{10} AND $PM_{2.5}$. CONCENTRATIONS AND CONTENT OF Mn, Cu, Pb, Fe, Zn, Ni, Cd INTO PM_{10} – Svetla Stoykova et al.
11:20 – 11:25	***P1MELB5*** TOXIC METALS AND ESSENTIAL MICROELEMENTS LEVELS IN BROWN SHRIMP (*CRANGON CRANGON, LINNAEUS, 1758)* FROM BULGARIAN BLACK SEA COAST AS A BIOMONITOR – Veselin Kirov et al.
11:25 – 11:30	***P1MELB6*** DETERMINATION OF HEAVY METAL CONTENT (CD AND PB) IN CITRUS FEED RAW MATERIAL – Hristina Neshovska
11:30 – 11:35	***P1MELB7*** AMPLITUDE AND FREQUENCY CHARACTERISTICS OF THE SOUNDS PRODUCED BY THE REPRESENTATIVES OF THE FAMILY CANIDAE, GENUS CANIS – Pavlina Hristova & Violeta Alexandrova
11:35 – 11:40	***P1MELB8*** HUMAN HEALTH RISK ASSESSMENT OF TRACE ELEMENTS BIOACCUMULATION IN BLACK MUSSELS (*MYTILUS GALLOPROVINCIALIS*) - Iliyan Manev et al.
11:40 – 11:45	***P1MELB9*** CHANGES IN THE MAIN SPERM PARAMETERS AFTER CRYOPRESERVATION OF EJACULATES WITH DIFFERENT DEGREES OF DILUTION - Hristina Blagova & Rossen Stefanov
13:00 – 14:00	***ОБЯД/LUNCH***
15:30 – 16:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
SESSION ***NON-INFECTIOUS PATHOLOGY*** ***Hall №2*** ***Chairman:*** Chief Assist. Prof. Iliyan Manev, PhD Chief Assist. Prof. Konstantin Aminkov, PhD ***Secretary***: Assist. Prof. S. Mustafa Assist. Prof. A. Stoimenov Assist. Prof. Ts. Georgieva	

ORAL PRESENTATIONS	
09:00 – 09:15	***O2NIP1*** DYNAMICS OF THE NEUTROPHIL/LYMPHOCYTE RATIO DURING A THIRTY-DAY PERIOD OF FEEDING DOGS WITH REBEL+ GRANULATED FOOD CONTAINING *CANNABIS SATIVA* L. – Atanas Pankov
09:15 – 09:30	***O2NIP2*** DYNAMICS OF PROGESTERONE LEVELS IN BITCHES BY SOME PHYSIOLOGICAL AND PATHOLOGICAL REPRODUCTIVE CONDITIONS – Plamen Georgiev et al.
09:30 – 09:45	***O2NIP3*** ANTIOXIDANT CAPACITY OF EXTRACTS FROM BULGARIAN MEDICINAL PLANTS – Tsveta Georgieva et al.
09:45 – 10:00	***O2NIP4*** HOMEOPATHIC THERAPY IN A DOG WITH CHRONIC URINARY TRACT INFECTION – CASE REPORT – Tsanko Hristov
10:00 – 10:15	***O2NIP5*** SURGICAL TREATMENT OF A THYROID TUMOR IN A DOG – A CLINICAL CASE – Georgi Marinov & Nadya Zlateva-Panayotova
10:15 – 10:30	***O2NIP6***USE OF CONTRAST-ENHANCED ULTRASONOGRAPHY FOR PRECISE DETECTION OF LIVER LESIONS IN DOGS – Nadya Zlateva-Panayotova
10:30 – 11:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
11:00 – 11:15	***O2NIP7*** BEHAVIOR IN A CASE OF FELINE ACQUIRED BLINDNESS **–** Victoria Marincheva
11:15 – 11:30	***O2NIP8*** A BALANCED ANESTHESIA WITH A COMBINATION OF DEXMEDETOMIDINE, KETAMINE, BUTORPHANOL AND PROPOFOL FOR EXPERIMENTAL COMPRESSION ANASTOMOSIS IN SWINE – Konstantin Aminkov
11:30 – 11:45	***O2NIP9*** COMPARATIVE MEASUREMENTS OF SURFACE BODY TEMPERATURE OF HORSES USING INFRARED THERMOGRAPHY – Petar Stamberov et al.
11:45 – 12:00	***O2NIP10*** AS-OCT – AN INNOVATIVE METHOD FOR DIAGNOSING ANTERIOR EYE SEGMENT DISEASES IN VETERINARY MEDICINE – Seven Mustafa & Nadya Zlateva-Panayotova
12:00 – 12:15	***O2NIP11*** RESECTION AND ANASTOMOSIS OF THE COLON IN CORN SNAKE – A CASE REPORT – Seven Mustafa et al.
12:15 – 12:30	***O2NIP12*** CAUSATIVE AGENTS OF SUBCLINICAL MASTITIS IN SHEEP IN BULGARIA – Aleksandar Stoimenov et al.
12:30 – 12:45	***O2NIP13*** ASIT - ALLERGEN-SPECIFIC IMMUNOTHERAPY AS AN INNOVATIVE METHOD AND ALTERNATIVE TO LONG-TERM SYSTEMIC GLUCOCORTICOIDS IN THE COMBINED APPROACH IN THE THERAPY OF ATOPIC DERMATITIS – Ivelina Vacheva et al.
12:45 – 13:00	***O2NIP14*** SENSITIVITY OF MONONUCLEAR CELLS OF DIFFERENT ORIGIN TO FUMONISIN B1 – Krasimira Genova et al.
13:00 – 14:00	***ОБЯД/LUNCH***
14:00 – 14:15	***O2NIP15*** LAVENDER ESSENTIAL OIL – PROPERTIES AND USES – Anelia Mladenova
14:15 – 14:30	***O2NIP16*** EFFECT OF COMBINED LOCAL APPLICATION OF PPR, PPP, DEXPANTHENOL AND SODIUM HYALURONATE IN THE TREAT-MENT OF CORNEAL ULCERATION IN A DOG - A CLINICAL CASE – Georgi Marinov et al.

POSTER SESSION	
14:30 – 14:35	***P2NIP1*** BOVINE LEUKOCYTE ADHESION DEFICIENCY SYNDROME (BLAD): A REVIEW – Victoria Marincheva & Iliyan Manev
14:35 - 14:40	***P2NIP2*** PYOMETRA WITH TRANSIENT DIABETES MELLITUS IN A BITCH – A CASE REPORT – Manol Karadaev & Tsanko Hristov
14:40 - 14:45	***P2NIP3*** *IN VIVO* EFFECTS OF *PHLOMIS TUBEROSA* EXTRACT ON CARBON TETRACHLORIDE-INDUCED HEPATOTOXICITY IN RATS – Ilina Krasteva et al.
14:45 - 14:50	***P2NIP4*** TUMORS AND TUMOR-LIKE LESIONS OF THE ORAL CAVITY IN DOGS AND CATS: A RETROSPECTIVE STUDY IN 206 CASES (2018 – 2022) – Georgi Popov & Vasil Manov
14:50 – 14:55	***P2NIP5*** COMPARATIVE STUDIES OF DIFFERENT METHODS FOR EARLY DIAGNOSIS OF PREGNANCY IN BUFFALOES OF THE BULGARIAN MURRA BREED – Radena Nenova
15:30 – 16:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
SESSION ***INFECTIOUS PATHOLOGY*** ***Hall №3*** ***Chairman:*** Chief Assist. Prof. Georgi Stoimenov, PhD Chief Assist. Prof. Ralitsa Bankova, PhD ***Secretary***: Assist. Prof. Ts. Georgieva Assist. Prof. V. Marincheva	
ORAL PRESENTATIONS	
09:00 - 09:15	***O3IP1*** MULTIPLE ORGAN MYCOSIS AND NEOPLASIA IN AN INDIAN ELEPHANT (*ELEPHAS MAXIMUS INDICUS*) – Georgi Popov et al.
09:15 – 09:30	***O3IP2*** EXPERIENCE IN TREATMENT OF CAPTIVE LIONS, COUGARS AND BEARS WITH ASCARID INFECTIONS – Mariana Panayotova-Pencheva
09:30 – 09:45	***O3IP3*** *IN VITRO* ANTIMICROBIAL ACTIVITY OF LAVENDER ESSENTIAL OIL – Anelia Mladenova et al.
09:45 – 10:00	***O3IP4*** YERSINIA AND YERSINIOSES - NEW TRENDS AND CHALLENGES – Maya Zaharieva et al.
10:00 – 10:15	***O3IP5*** SEROPREVALENCE AGAINST MYXOMA VIRUS IN *LEPUS EUROPAEUS* FROM BULGARIA – Iliyan Manev & Krasimira Genova
10:15 – 10:30	***O3IP6*** PHYSICO-CHEMICAL PARAMETERS OF MEAT FROM DUCKS WATERED WITH CATHOLYTE – Stanislav Radanski & Svetlin Ivanov
10:30 – 11:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
11:00 – 11:15	***O3IP7*** RISK ASSESSMENT AND RISK ANALYSIS OF MAINTAINING THE AFRICAN SWINE FEVER VIRUS IN THE WILD BOAR POPULATION IN BULGARIA – Yanko Ivanov & Chavdar Filipov
11:15 – 11:30	***O3IP8*** REPLACEMENT OF CANINE PARVOVIRUS TYPES IN THE CANINE POPULATION OF BULGARIA (2020-2023) – Chavdar Filipov et al.
POSTER SESSION	
11:30 – 11:35	***P3IP1*** BEE DISEASES AND THEIR CONTROL IN BULGARIA AND ESTONIA – Delka Salkova et al.
11:35 – 11:40	***P3IP2*** RADIOGRAPHIC MEASUREMENT OF VERTEBRAL HEART SIZE, SPHERICITY INDEX AND NUMBER OF INTERCOSTAL SPACES IN CATS WITH VARIOUS LUNGWORM INFECTIONS – Anton Tonev & Tzvetan Chaprazov

11:40 – 11:45	***P3IP3*** *IN VITRO* LARVICIDAL EFFICACY OF SOME DISINFECTANTS AGAINST *AELUROSTRONGYLUS ABSTRUSUS LARVAE* – Anton Tonev et al.
11:45 – 11:50	***P3IP4*** EPIDEMIOLOGICAL ANALYSIS OF AVIAN INFLUENZA IN BULGARIA AND EUROPE FROM THE BEGINNING OF THE 2022-2023 SEASON – Nadejda Lukanova
11:50 – 11:55	***P3IP5*** DISTRIBUTION OF Q FEVER IN BULGARIA AND RISK ASSESSMENT FOR ANIMAL HEALTH AND PUBLIC HEALTH IN 2023 – Madlen Vasileva
11:55 – 12:00	***P3IP6*** ANALYSIS OF ZOONOSES AND ZOONOTIC AGENTS, LEVELS OF ANTIMICROBIAL RESISTANCE IN BULGARIA ACCORDING TO THE "ONE HEALTH" APPROACH – Krasimira Zaharieva
13:00 – 14:00	***ОБЯД/LUNCH***
15:30 – 16:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
SESSION ***STUDENT RESEARCH*** ***Yundola Hall*** ***Chairman:*** Chief Assist. Prof. Petar Stamberov, PhD Chief Assist. Prof. Atanas Pankov, PhD ***Secretary***: Assist. Prof. N. Nikolova Assist. Prof. A. Mladenova	
ORAL PRESENTATIONS	
09:00 - 09:15	***O4S1*** A MODERN VIEW OF THE PROBLEM OF ATOPIC DERMATITIS IN DOGS – Lidia Ficherova et al.
09:15 - 09:30	***O4S2*** SECOND-DEGREE THERMAL BURN IN A BURMESE PYTHON (*PYTHON BIVITTATUS*) – A CASE REPORT – Silvi Vladova et al.
09:30 - 09:45	***O4S3*** HEPATITIS E VIRUS IN PIGS AND HUMANS IN GREECE – Efthymia Stylianidou & Ilia Tsachev
09:45 - 10:00	***O4S4*** MICROFLORA OF GARDENS FOR PETS IN THE CITY OF SOFIA – Vanya Parvanova et al.
10:00 – 10.15	***O4S5*** MOTH INFLUENCE IN VETERINARY MEDICINE - Lyuboslava Vasileva &Vanya Parvanova
10:15 – 10:30	***O4S6*** THE EFFECT OF PIMOBENDAN AND ENALAPRIL USE ON BLOOD SERUM TRACE ELEMENT LEVELS IN DOGS WITH MYXOMATOUS MITRAL VALVE DISEASE – Bengü Bilgiça et al.
10:30 – 11:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
11:00 – 11:15	***O4S7*** POLYDACTYLY IN HORSES – Iva Popova & Ekaterina Nenova
11:15 – 11:30	***O4S8*** DNA CONTENT AND KINEMATIC PARAMETERS OF X- AND Y-BEARING RAM SPERM SEPARATED WITH LIGAND R848 – Dea Koleva et al.
11:30 – 11:45	***O4S9*** ONCOGENIC POTENTIAL OF PARASITES IN DOMESTIC ANIMALS – Theodosia Voziki et al.
11:45 – 12:00	***O4S10*** CHEMOTHERAPY IN TRANSMISSIBLE CANINE VENEREAL TUMOUR – A CLINICAL CASE – Ivan Panayotov et al.
12:00 – 12:15	***O4S11*** APPLICATION OF ELECTROACTIVATED AQUEOUS SOLUTIONS IN THE FOOD INDUSTRY – Stanislav Radanski et al.
12:15 – 12:30	***O4S12*** SYNTHETIC DYE TOXICITY IN A CAT – A CLINICAL CASE - Nikol Nikolova & Efstathia Domna Pataridou

12:30 – 13:00	***O4S13*** COGNITIVE DYSFUNCTIONS AND APPROACH TO COGNITIVE PATIENTS – Georgi Harizanov
13:00 – 14:00	***ОБЯД/LUNCH***
14:00 – 14:15	***O4S14*** FERRETS – THE UNUSUAL PETS, REPRODUCTIVE CHARACTERISTICS, SEXUAL CYCLE, PREGNANCY AND CHEMICAL PREVENTION – Tea Petkova & Tsveta Georgieva
14:15 – 14:30	***O4S15*** OSTEOLOGICAL EXAMINATION OF AN ELEPHANT SKULL – Stefaniya Ivanova et al**.**
14:30 – 14:45	***O4S16*** BEHAVIORAL CHANGES IN ANIMALS WITH NEUROLOGICAL DISORDERS – Mira Ivanova
14:45 – 15:00	***O4S17*** PROBIOTICS: PAST, PRESENT AND THEIR FUTURE - Mira Naydenova & Borislava Nikolova
15:00 – 15:15	***O4S18*** RESEARCH OF THE MICROFLORA OF A WATER BASIN IN THE CITY OF SOFIA WITH REGARD TO ASSESSMENT OF ITS ENVIRONMENTAL SAFETY - Dorothea Iosifova et al.
POSTER SESSION	
15:15 - 15:20	***P4S1*** MORPHOMETRIC DESCRIPTION OF THE REPRODUCTIVE SYSTEM DESCRIPTION OF THE GRAY WOLF (*CANIS LUPUS*) - Boris Tochevski & Desislava Abadjieva
15:20 - 15:25	***P4S2*** DENTAL PATHOLOGIES IN THRACIAN IRON AGE DOGS (IV-VI century BCE) – Stella Nikolova & Petar Stamberov
15:30 – 16:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
16:30 – 17:00	**ЗАКЛЮЧИТЕЛНО ЗАСЕДАНИЕ НА ПРОГРАМНИЯ КОМИТЕТ/CONCLUSION PROCEEDING OF PROGRAM COMMITTEE**
20:00	**ГАЛА ВЕЧЕРЯ И ЦЕРЕМОНИЯ ПО НАГРАЖДАВАНЕ НА УЧАСТНИЦИТЕ / GALA DINNER AND PARTICIPANTS AWARDING CEREMONY**

Неделя / Sunday (30.04.2023)	
8:30 – 9:30	**ЗАКУСКА/BREAKFAST**
09:30 – 11:00	СОЦИАЛНА ПРОГРАМА С ПОСЕЩЕНИЕ НА ПАРКА ЗА МЕЧКИ В ГРАД БЕЛИЦА / SOCIAL PROGRAM - VISIT OF BEAR PARK IN BELICA TOWN ОТПЪТУВАНЕ НА АВТОБУСА ЗА СОФИЯ / DEPARTURE BY BUS TO SOFIA

PLENARY REPORT

INTEGRATING GIS APPLICATIONS IN ANIMAL DISEASE EPIDEMIOLOGY AND CONTROL

Yanko Ivanov[1], Koycho Koev[2]*

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ABSTRACT

The patterns of occurrence and course of animal diseases are changing and in continuous dynamics, due to changing climatic conditions, environmental factors, population density, variability and plasticity of infectious agents and many others. In this regard, there is a tendency for emerging and recurrent known infections to occur. Precisely because of this, relevant and corresponding new and modern tools for monitoring these diseases are needed.

Geographic Information System (GIS) provides easy access, functionality and interpretation of geospatial information for epidemiological purposes. The advantage of GIS is the mapping of many different livestock sites and features of the terrain, which allows good monitoring, predictability, traceability and possible prognostic and expected epidemic outbreaks. In the presence of infectious diseases, GIS helps to determine and topograph and determine the sanitary and buffer zones and the objects included in them, supports the specific contingency plan. The collected data can be useful in relation to the evaluation of different epidemiological scenarios and strategies and their possible corrections.

Keywords: infectious disease, geographic Information System (GIS), monitoring.

SESSION
MORPHOLOGY, ECOLOGY AND LIVESTOCK BREEDING

O1MELB1

SADOVO AGRICULTURAL SCHOOL – THE FIRST STATE VOCATIONAL EDUCATIONAL INSTITUTION IN BULGARIA

Andrey Kurtenkov

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ABSTRACT

In the year in which we celebrate the 100th anniversary of higher veterinary education in Bulgaria, we should recall that it did not appear in an empty place, but decades before that, agricultural education arose and developed as a natural process, the result of certain socio-economic and cultural and educational needs in Bulgarian society. The creation of the first Bulgarian state vocational school in Sadovo in 1883, apart from its great importance for the development of agriculture, also has a certain national-political and moral-patriotic essence. His contribution to the development of animal husbandry in our country is multifaceted and indisputable, symbolically expressed in the name of the Red Sadovo cattle breed, and the study discipline "Veterinary service" is practically the only one that has been preserved in all curricula from the school's establishment to the current collapse in our animal husbandry.

Keywords: Revival, Eastern Rumelia, Sadovo, educational process.

O1MELB2

CHANGES IN OUR IDEAS ABOUT THE NATURE AND STRUCTURE OF THE BREED IN THIS CENTURY

Andrey Kurtenkov

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ABSTRACT

The scientific study of animal selection and breeding in Bulgaria was born and developed under the complete dominance of Russian/Soviet scientific terminology. Compared to other biological sciences, the Russian-language influence in this field of study was so strong that it remained until the moment when, in the course of the process of European integration, Bulgarians came to accept the terms imposed in the English-speaking world. As a result, Bulgarian scholars were forced to abandon a number of terms both commonly accepted and widely reflected in the Bulgarian-language educational and scientific literature (e.g., breeding group, offspring, family, etc.) or to adopt new content (as with the concepts of line and hybrid). On the other hand, the content of the concept of "breed" also evolved, and in two directions - firstly, under the influence of new legislation, and, secondly, due to the spontaneous dissemination of controversial and insufficiently substantiated views through associations of citizens, mainly dealing with companion animals.

Keywords: breed, selection, taxonomy, line, hybrid, legislation.

O1MELB3

MOLECULAR DETECTION OF DEFORMED WINGS VIRUS AND SACBROOD VIRUS IN POLLEN PROBES

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ABSTRACT

Bee viral diseases are one of the reasons for the high mortality of the bee colonies. In the research it was tested a new, non-invasive technology for a molecular detection of the most disseminated bee diseases in bee products. RT-PCR reaction was used to detect six bee viruses (DWV, SBV, KBV, ACBV, CBV, BQBV) in pollen samples of commercial origin provided by different producers and perga (bee bread). The obtained results show the presence of only two viruses Deformed wings virus (DWV) and Sacbrood virus (SBV). A phylogenetic analysis was performed to present the positioning of the two viruses relative to other isolates worldwide. The results of our research show that pollen is a suitable source for the detection of bee viral diseases. As a result of this research, we found that with this methodology we can monitor viral diseases in bee colonies at the regional, national and global level.

Key words: viruses, diseases, pollen, phylogeny, monitoring, detection.

O1MELB4

PALEOPATHOLOGICAL DEGENERATIONS OF THE VERTEBRAL COLUMN OF A HELLENISTIC AGE HORSE SKELETON

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ABSTRACT

The study of pathological alterations in archaeological specimens is becoming more popular in recent years. This is a case study of pathological degeneration of the thoracolumbar region of a horse from the Hellenistic period (IV-III century BCE), excavated in an archaeological site near Chirpan, a part of the historical region of Thrace, Bulgaria. The individual is mature, according to the wear of the premolars and molars, suggesting an older age. The vertebral column is severely altered with deformations. According to the digital radiographic imaging and 3D models of the pathology, the eventual causes of the condition are examined, as we argue that it is a result of a working-related trauma. This approach is used to determine if an animal received a work-related pathology, caused by carrying cargo or ridding.

Keywords: paleopathology, degeneration, horse, thoracolumbar, Hellenistic period.

O1MELB5

INDICATORS OF MICROCLIMATE AND THEIR RELATIONSHIP WITH INDICES OF COMFORT IN DAIRY COWS

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ABSTRACT

The research was conducted on a farm located in southern Bulgaria of black-and-white cows, Holstein Friesian type. The farm has a capacity of 600 dairy cows. Average daytime temperatures in the farm area are around 30 ºC, with the variation during the daylight part of the day being from 27.1 to 35.5 ºC. The reported values for the temperature humidity index (THI) are also high - 77.04, reaching maximum values of 82.7, with low values for air movement speed -1.10 m/s. For the summer season, high values of the air temperature in the building as a whole are recorded, the average values for the day are 26.92 ºC to 26.97 ºC (for the three service areas), with the maximum reaching 31.4 ºC. The same applies to THI values. The average values for the three service areas are 74.86, with a maximum value of 79.68. A significant effect was found only for the reporting season for all three indices ($P<0.05$ and $P<0.001$), but not for the reporting hour. THI was found to have a significant effect on the box use index ($P<0.01$) and the box standing index ($P<0.001$). Air velocity has no significant effect on any of these indices.

Keywords: dairy cows, free stall housing, comfort indices.

O1MELB6

DOPPLER ULTRASONOGRAPHIC STUDY OF THE CANINE SPLEEN

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ABSTRACT

An ultrasonographic examination of the spleen of 6 non-anesthetized female dogs, mixed breed, aged 1 to 3 years and weighing 6 - 15 kg, was performed. Observed the arterial and venous part of the circulatory system of the spleen, and established *a.* and *v. trabeculares*, *sinus venulares* (*lienalis*, *venosus*) *v. pulpae rubrae*, arterial and venous *rr. lienales*, as *a.* and *v. lienalis*. During this study, we used unanesthetized dogs that were placed and fixed in a supine position. The examination was conducted using an ultrasound machine, Mindray Z5" veterinary ultrasound scanner and a frequency of 7.5 MHz. The scan mode was Pulsed Wave (PW) Doppler color Doppler. The method of examination was percutaneous, transabdominal in the above-mentioned areas used in conventional and contrast ultrasonography. Ultrasound gel Eco Gel 200 was used for better contact between the skin and the transducer. Red and blue graduations are used to determine the direction of blood flow to the transducer.

Keywords: dog, Doppler, ultrasonography, spleen, venular sinuses.

P1MELB1

FIRST RECORD OF *TOXASCARIS LEONINA* AND *EUCOLEUS AEROPHILUS* IN POPULATION OF BROUN BEARS (*URSUS ARCTOS*) IN BULGARIA

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ABSTRACT

The aim of this study is to reveal the presence and prevalence of gastrointestinal and pulmonary nematodes in population of bears (*Ursus arctos*) in Bulgaria, considering the importance of the conservation of large carnivores in Europe. Eighty three samples of feces were collected opportunistically from all bear-inhabited areas in the country including: Western Rodopi mts, Central Balkan; Rila; Pirin National Parks and Vitosha Nature Park. The samples were investigated by the saline flotation method. In addition to eggs belonging to known nematode species parasitizing brown bears such as *Baylisascaris transfuga, Ancylostoma spp., Spiruridae spp.*, eggs of *Eucoleus aerophilus* (c. *Capillaria aerophila*; Nematoda, Trichurida) and T*oxascaris leonina* (Nematoda, Ascaridida) also were found, those species have never been reported before as parasites of bears in Bulgaria.

The established species have zooanthroponous potential, and the brown bear in Bulgaria participates in the development cycle of their populations, as a host.

Keywords: *Toxascaris leonina*, *Eucoleus aerophilus*, brown bears, parasites, Bulgaria.

P1MELB2

PRESENS OF CRYPTOSPORIDIUM SPP. IN FECES OF BROWN BEARS (URSUS ARCTOS) IN BULGARIA

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ABSTRACT

Cryptosporidium spp. (*Apicomplexa; Conoidasida*) are intracellular but extraplasmic parasites with relatively simple life cycle that involves a single host. The aim of this study was to reveal the presence and prevalence of Cryptosporidium parvum in population of brown bears (Ursus arctos) in Bulgaria. Ten samples of brown bear faeces were collected randomly from all the main bear's habitats in Bulgaria, including the territories of the Western Rhodopes, national parks - "Rila", "Pirin" and "Central Balkan" and "Vitosha" nature park. For the research were used Proflow ® Cripto-Giardia Combi test kit for in Vitro Diagnostic use (Pro-Lab DIAGNOSTICS, UK). Samples were processed according to the manufacturer's instructions.

Positive results were recorded in 20% (2) of the tested samples collected in the Rhodopes. *C. parvum* is a relatively common parasite that is not species specific. The involvement of the brown bear in the developmental cycle of C. parvum expands its epizootic potential

Keywords: *Cryptosporidium spp*., brown bears, parasites, Bulgaria.

P1MELB3

ASSOCIATIONS BETWEEN SUBACUTE RUMINAL ACIDOSIS AND RUMINAL PH WITH MILK YIELD AND MILK COMPOSITION OF HOLSTEIN COWS IN DIFFERENT STAGES OF LACTATION

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ABSTRACT

Subacute ruminal acidosis (SARA) is considered one of the most important metabolic diseases of dairy cows. SARA occurs when rumen pH is below the threshold of 5.5 (up to 5). The notion is that SARA results in reduced milk yield that has also lower fat content. The present study aimed to assess possible associations between SARA and ruminal pH with milk yield and milk composition, in different stages of lactation. A total of 83 Holstein cows from a commercial farm were used. Rumen fluid samples were collected via rumenocentesis from all cows on 30, 90 and 150 days in milk (DIM) to measure pH immediately after collection. The farm had an automated milking recording unit and, at the days of rumenocentesis, milk samples were collected from individual cows to assess its chemical composition: fat (%), protein (%), lactose (%) and total solids (%). Data were analyzed using a series of mixed linear models. In total, 131 SARA cases were recorded (40 cows on 30th, 42 on 90th and 49 on 150th day in milk). SARA was associated with milk fat content reduction by 0.22% ($P<0.05$). A one-unit increase of ruminal pH was associated with 0.28% increase of milk fat ($P<0.05$). Daily milk yield was not associated with SARA or ruminal pH.

SARA and the reduction of ruminal pH are associated with decreased milk fat content of Holstein cows, in different stages of lactation.

Keywords: Subacute ruminal acidosis, ruminal pH, milk fat depression.

P1MELB4

ASSESSMENT OF AIR POLLUTION IN STARA ZAGORA REGION, BULGARIA, BASED ON PM_{10} AND $PM_{2.5}$. CONCENTRATIONS AND CONTENT OF Mn, Cu, Pb, Fe, Zn, Ni, Cd INTO PM_{10}

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ABSTRACT

The content of PM_{10} and $PM_{2.5}$ was studied in the atmospheric air and also the content of Mn, Cu, Pb, Fe, Zn, Ni and Cd in PM_{10}, in five points (out of the system of National Air Monitoring) in Stara Zagora regoin (codes and location of the points: 101-Equestrian Base at Trakia University, Stara Zagora; 102-Sulitsa village, Municipality Stara Zagora; 103-Chirpan; 104-Kazanlak and 105-Gurkovo). It was found that the levels of PM_{10} and $PM_{2.5}$ in most of the period of study were over the regulated norms. The air was most polluted with PM_{10} and $PM_{2.5}$ was air in points 101 and 102, followed by points 105, 103 and 104. Main sources of air pollution with particulate matter were

vehicle traffic, industrial combustion plants and homes, as well as streets kept in bad sanitary condition. Concentrations of all investigated elements into PM_{10} varied widely, both for the same point, and between different points. The content of Zn in all points reached the highest level, followed by that of Fe, Pb, Mn, Cu, Ni and Cd. Nothing was found to reach excessive concentrations of Ni, Cd and Pb in ambient air, whose elements are regulated by the norms. The Ni content was over 5.4 times lower than the norm, of Cd - more than 2.2 times, respectively and Pb - over 2.6 times. The factors causing air pollution with heavy metals and metalloids in the areas around the investigated points were similar, as sources of emissions and as impact on air quality.

Keywords: air pollution, PM_{10}, $PM_{2.5}$, heavy metals, assessment.

P1MELB5

TOXIC METALS AND ESSENTIAL MICROELEMENTS LEVELS IN BROWN SHRIMP (*CRANGON CRANGON, LINNAEUS, 1758)* FROM BULGARIAN BLACK SEA COAST AS A BIOMONITOR

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ABSTRACT

In the current study the concentration of trace elements (Zn, Mn) and toxic metals (As, Pb, Cd, Hg, Al) in the tissues of the brown shrimp *Crangon crangon* (Linnaeus, 1758) were determined. The samples were collected during the summer and autumn season from the Bulgarian Black Sea (Varna and Burgas areas) in 2020 and 2021. Variations in chemical elements concentrations with seasons and region were compared. In all samples Cd and Hg levels were under the legal limit for human consumption indicated by European Regulation. The concentration of Pb exceeded the permissible limit in the tissues of shrimps caught from the Southern Black Sea (summer season 2021). Higher values of Zn and lower values of Mn were observed from the North. The Black Sea shrimp could be used as a biomonitor species to assess seasonal changes in marine chemical pollution.

Keywords: trace elements, brown shrimp, *Crangon crangon*, marine pollution, Black Sea.

P1MELB6

DETERMINATION OF HEAVY METAL CONTENT (CD AND PB) IN CITRUS FEED RAW MATERIAL

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ABSTRACT

Heavy metal contamination of the food chain is a severe environmental problem that poses potential risks to human and animal health. In this regard, the safety of feed and feed materials is essential. In the present study, the levels of cadmium (Cd) and lead (Pb) in an innovative feed raw material - citrus waste (citrus pulp) by orange (*Citrus sinensis*), lemon (*Citrus limon*), red grapefruit (*Citrus paradisi*), mandarin (*Citrus reticulata*), lime (*Citrus aurantifolia*) and pomelo (*Citrus maxima*) were determined. The analysis was done by Atomic Absorption Spectrophotometer.The obtained results were compared with other literature data and with the requirements laid down in European and national legislation. Our results showed at the concentrations of cadmium and lead do not exceed the maximum permissible limits, which makes this citrus pulp safe for use as feed material in terms of Cd and Pb contamination.

Keywords: heavy metals, cadmium, lead, citrus waste/citrus pulp, feed.

P1MELB7

AMPLITUDE AND FREQUENCY CHARACTERISTICS OF THE SOUNDS PRODUCED BY THE REPRESENTATIVES OF THE FAMILY CANIDAE, GENUS CANIS

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ABSTRACT

The present study aims to present and compare the sounds produced by the representatives of the family Canidae, in particular the genus Canis, in terms of their amplitude and frequency characteristics. A total of 120 sounds from 6 representatives of Canis lupus familiaris (domestic dog), 3 of Canis lupus (gray wolf) and 3 of Canis aureus (golden jackal) were processed. The mean values of the amplitude and frequency characteristics of sounds from domestic dog, jackal and wolf show an interesting dependence in the parameters of the sound waves used in the intraspecific communication of these species. Thanks to its acoustic structure, the wolf's howl propagates unchanged over long distances, and therefore the information content remains reliably preserved. Jackals, given their smaller body size, produce sounds with a higher frequency and lower amplitude than wolves. Dogs occupy an intermediate place in this group of the three representatives of the genus Canis, distributed throughout the latitudes of the Republic of Bulgaria.

Keywords: animal sounds, sound communication, soundgrams, *Canis aureus, Canis lupus, Canis lupus familiaris*.

P1MELB8

HUMAN HEALTH RISK ASSESSMENT OF TRACE ELEMENTS BIOACCUMULATION IN BLACK MUSSELS (*MYTILUS GALLOPROVINCIALIS)*

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ABSTRACT

Black mussels (*Mytilus galloprovincialis)* represent a significant biomonitor aquatic species which can also pose a potentially harmful health risk impact to the consumers. The current study estimated the level of some trace elements including heavy metals and essential microelements in the muscle tissue of wild black mussel samples collected in 2020 and 2021 from the Southern and Northern Bulgarian Black sea coast. Data for bioaccumulation of the studied elements in the tested samples were compared to the maximum allowed concentrations stated by the Commission Regulation (EC) and Bulgarian legislation. An assessment of the human risk by calculation of the target hazard quotients (THQ), hazard index (HI) and target risk (TR) was performed.

Keywords: black mussel, Mytilus galloprovincialis, trace elements, health risk.

P1MELB9

CHANGES IN THE MAIN SPERM PARAMETERS AFTER CRYOPRESERVATION OF EJACULATES WITH DIFFERENT DEGREES OF DILUTION

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ABSTRACT

The aim of the study is to establish the relationship between the degree of dilution of the ejaculates and the stability of the main parameters of the spermatozoa as a result of the effect of low temperatures.14 ejaculates from 7 clinically healthy rams in good reproductive condition were used. After collection, the ejaculates were diluted in a dilution of 1:3; 1:6; 1:9; 1:12 and 1:24 with freezing medium 6AG and examined for motility and velocity parameters using CASA system (Sperm Class Analyzer [SCA] 5.0. Microptic, Barcelona, Spain). The ejaculates were frozen using the Nagase-Niwa method. After one month, the ejaculates were thawed and examined for the same sperm parameters (motility and velocity parameters). Both motility and velocity parameters it was observed that in ejaculates before freezing, the results of the studied parameters decrease with increasing dilution. After thawing, the examined sperm indicators in ejaculates diluted 1:1 to 1:9 highly decrease, while ejaculates diluted 1:9 to 1:24 after thawing do not show significant changes in terms of motility and velocity parameters. Regardless of the fact that the ejaculates with a higher degree of dilution had worse results before cryopreservation, after thawing, a significant preservation of the studied indicators was observed. In contrast, in ejaculates with a lower degree of dilution, a significant deterioration of sperm quality was observed after freeze-thaw. Although the fact that the ejaculates with a higher degree of dilution had worse results before cryopreservation, after thawing, a significant preservation of the studied indicators was observed.

ACKNOWLEDGEMENT This work was supported by the Bulgarian Ministry of Education and Science under the National Research Programme "Young scientists and postdoctoral students -2" approved by DCM 206 / 07.04.2022

Keywords: sperm parameters, dilution, cryopreservation.

SESSION
NON-INFECTIOUS PATHOLOGY

O2NIP1

DYNAMICS OF THE NEUTROPHIL/LYMPHOCYTE RATIO DURING A THIRTY-DAY PERIOD OF FEEDING DOGS WITH REBEL+ GRANULATED FOOD CONTAINING CANNABIS SATIVA L.

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ABSTRACT

We obtained a reliable differential difference for the neutrophil leukocyte/lymphocyte ratio for 30 days of feeding dogs with Rebel+ granulated food containing Cannabis sativa L. Although this granulated food does not claim to be a veterinary diet food, we found that after 30 days of feeding the dogs with it, it had a beneficial effect on the number and ratio of white blood cells in the peripheral blood of the examined dogs.

Keywords: neutrophil/lymphocyte ratio, *Cannabis sativa* L., granulated dog food.

O2NIP2

DYNAMICS OF PROGESTERONE LEVELS IN BITCHES BY SOME PHYSIOLOGICAL AND PATHOLOGICAL REPRODUCTIVE CONDITIONS

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ABSTRACT

The aim of this work was to determine the dynamics of progesterone (P_4) by different reproductive states of the dog. A total of 114 females from 23 breeds were included in the experiment. During estrus all animals were inseminated. Depending on the further development, they were divided into four groups - group I bitches with physiological pregnancy, group II - pathological pregnancy, group III non-pregnant healthy and group IV non-pregnant with uterine inflammation. Clinical examinations were carried out at separate periods in which blood samples were obtained to measure the serum concentration of P_4. In the majority of cases, the animals of the first group had the highest mean P_4 values, reaching a peak of 46.1±24.7 ng/ml (Mean±SD) on day 22-25 of gestation. In the second group for the same time the measured levels 28,4±10.8 ng/ml were significantly ($p<0.05$) lower. In the third group in 26% of animals anovulatory cycles and luteal hypofunction were found. Our results showed that reproductive disorders in the bitch can be accompanied by reduced functional activity of the corpus luteum, best expressed during both periods: 22-25 and 58-63 days after ovulation.

Keywords: bitch, progesterone, reproductive disorders.

O2NIP3

ANTIOXIDANT CAPACITY OF EXTRACTS FROM BULGARIAN MEDICINAL PLANTS

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ABSTRACT

One of the main purpose of artificial insemination in farm animals is to inseminate a large number of female animals with the ejaculate of a single breeding male with very good biological characteristics of the ejaculate. In order to obtain the required volume of sperm, which will subsequently be distributed in doses for artificial insemination, the seminal fluid must be diluted with a sperm extender. The use of completely synthetic medicines, antibiotics and antimycotics, artificial immunostimulants and chemical growth supplements, synthetic supplements to sperm extenders is further and further behind. The aim of this research is to establish the redox-modulating capacity of extracts from 5 traditional Bulgarian medicinal plants: Geranium sanguineum, Artemisia annua, Tribulus terrestris, Cichorium intybus and Cotinus coggygria, comparing their antioxidant capacity at the same concentrations subsequently adding them to the composition of a sperm extender for rams. The methods used include ABTS•+ free radical reduction ability, DPPH• radical reduction, ferric iron reduction by the FRAP method, as well as reduction of cupric ions (Cu2+) to cupric ions (Cu1+) by the CUPRAC method. As a result, all tested extracts had a high potential for neutralizing free radicals. In conclusion, we can hypothesize that their use also as protective agents in ram sperm diluents will protect gametes from oxidative stress that lowers sperm quality and fertilizing potential.

Keywords: artificial insemination, sperm extender, ram, medicinal plant extract, chemical analysis, antioxidant activity.

O2NIP4

HOMEOPATHIC THERAPY IN A DOG WITH CHRONIC URINARY TRACT INFECTION – CASE REPORT

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ABSTRACT

The present study reports a case of a 6-year-old female spayed Mini Pinscher with a history of intermittent episodes of abdominal pain, vomiting, mucous diarrhea, lethargy, and weight loss. Numerous attempts at treatment have been made without success. The diagnosis Pyelonephritis bilateralis chronica was established after clinical examination, laboratory investigation of urine and abdominal ulthrasound. Therapy with the homeopathic monopreparations Hepar sulfuris 15CH, Arsenicum album 9CH and Cantharis vesicatoria 15CH was performed. One week later, the dog showed improvement in general condition, increased appetite, and sustained improvement in urine laboratory parameters. After two months, we added Tuberculinum 9CH to the treatment. Eight months after starting homeopathic therapy the dog is in great condition, active and with no health issues.
In conclusion, the presented clinical case demonstrated that homeopathy can be an appropriate alternative for complicated patients. To the authors' knowledge, this is the first report of homeopathic treatment of a dog with a chronic urinary tract infection.

Keywords: homeopathy, urinary infection, dog.

O2NIP5

SURGICAL TREATMENT OF A THYROID TUMOR IN A DOG – A CLINICAL CASE

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ABSTRACT

Thyroid tumors are found rarely in dogs. The affected breeds are Boxer, Beagle and Labrador mostly. Over production of thyroid hormones is typical for benign adenomas. The affected animals show typical signs of hyperthyroidism. In contrast, carcinomas of the thyroid gland are not characterized by changes in hormonal status. Large solid masses in the ventral cervical region compress the esophagus and/or trachea. Nonspecific clinical signs are difficult swallowing, labored breathing, and coughing. Surgical treatment, especially in malignant tumors, is difficult due to high tumor vascularization, invasion of the blood vessels and the other adjacent tissues.

Operative treatment of a thyroid tumor was performed in an 11-year-old male English bulldog who was presented in the clinic with difficulties in breathing and swallowing. After a thorough physical, hematological, serological and imaging diagnostic examinations, the thyroid gland tumor was removed. Histopathological analysis showed a poorly differentiated spindle cell thyroid carcinoma.

Keywords: Thyroid tumor, dog, operative treatment.

O2NIP6

USE OF CONTRAST-ENHANCED ULTRASONOGRAPHY FOR PRECISE DETECTION OF LIVER LESIONS IN DOGS

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ABSTRACT

Contrast-enhanced ultrasound (CEUS) is a non-invasive method of ultrasound examination of the organs of the abdominal cavity. The venous application of a contrast ultrasound agent, consisting of dissolved microbubbles, allows the enhancement of contrast between tissues with same or similar acoustic impedance. The study was performed in 17 dogs, 6 to 11 years old from both sexes. SonoVue contrast agent was injected intravenously as a bolus dose in v. cephalica, followed by flushing with 5 ml NaCl 0.9%. The evaluation of the liver parenchyma was made based on the changes in the contrast between different areas, time of wash-in and wash-out phases and the visualization of atypical ultrasound images in the liver.

Contrast-enhanced ultrasound examination (CEUS) of liver lesions is an easy and useful method for early diagnosis of pathological changes in the liver parenchyma.

Keywords: Contrast-enhanced ultrasound (CEUS), liver, dog.

O2NIP7

BEHAVIOR IN A CASE OF FELINE ACQUIRED BLINDNESS

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ABSTRACT

The article deals with behavior changes that can be observed in early acquired blindness from the point of a case study. It uses available scientific data to analyze the development of certain modalities in a visually deprived stray cat situated in a home environment. Review of literature offers intriguing explanation to observed adaptive reactions.

Keywords: **blindness**, **behavior**, **feline**, **case study**.

O2NIP8

A BALANCED ANESTHESIA WITH A COMBINATION OF DEXMEDETOMIDINE, KETAMINE, BUTORPHANOL AND PROPOFOL FOR EXPERIMENTAL COMPRESSION ANASTOMOSIS IN SWINE

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ABSTRACT

Swine are increasingly used for experimental studies. This necessitates the development of effective anesthetic protocols adapted to this animal species and surgical intervention. The aim of this study was to investigate the effectiveness of balanced anesthesia with dexmedetomidine, ketamine and butarphanol premedication and propofol induction and ketamine and propofol maintenance. Hematological parameters, respiratory and heart rates, SpO2 and internal body temperature during compression anastomosis of the rectum were investigated.

The proposed method of balanced anesthesia provides effective analgesia for performing compression anastomosis in swine.

Keywords: swine, balanced anesthesia, compression anastomosis, propofol, ketamine.

O2NIP9

COMPARATIVE MEASUREMENTS OF SURFACE BODY TEMPERATURE OF HORSES USING INFRARED THERMOGRAPHY

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ABSTRACT

Infrared thermography is a painless, non-invasive method that can be used to improve the physiological assessment and health of the horse and as an alternative or in combination with other imaging methods and diagnostic procedures. The main advantage of thermography is the detection of subclinical signs of inflammation before the onset of clinical signs of pathology. The aim of this study was to determine the surface body temperature of six clinically healthy horses in indoor conditions. The horses` bodies were laterally scanned on the left and right sides and were divided into the following regions: neck, shoulder, thoracic limb, back, thigh and pelvic limb. The abdominal region of the horses was scanned individually in ventral projection. The average temperature of each region

was calculated. An approximately equal thermal symmetry was observed between both sides of the horse's body.

Keywords: horse**,** infrared thermography**, non-invasive,** surface temperature**.**

O2NIP10

AS-OCT – AN INNOVATIVE METHOD FOR DIAGNOSING ANTERIOR EYE SEGMENT DISEASES IN VETERINARY MEDICINE

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ABSTRACT

Anterior segment optical coherence tomography (AS-OCT) is a non-invasive diagnostic imaging technique that has recently gained attention in the field of veterinary medicine as an innovative method for diagnosing ocular diseases. It provides high-resolution, cross-sectional images of the anterior segment of the eye, including the cornea, iris, lens, and anterior chamber. AS-OCT can aid in the diagnosis of various eye diseases in small and experimental animals, including corneal diseases such as ulcers, dystrophies, and edema. It can also provide detailed information on corneal thickness, epithelial and stromal changes, and the presence of corneal neovascularization. In addition, AS-OCT is used to assess the anterior chamber angle, which is important in the diagnosis and management of glaucoma.

Overall, AS-OCT is a valuable method attracting increasing interest in veterinary ophthalmology. Its non-invasive nature and ability to provide high-resolution images make it a good alternative to other imaging techniques, such as ultrasound and computed tomography.

Keywords: AS-OCT, optical coherence tomography, veterinary ophthalmology.

O2NIP11

RESECTION AND ANASTOMOSIS OF THE COLON IN CORN SNAKE – A CASE REPORT

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ABSTRACT

A surgical case is presented of a 3-year-old home-grown female Corn snake (*Pantherhophis guttatus*) with a history of food refusal, anxiety, bloody cloacal discharge, and precloacal swelling. On clinical examination, two palpable solid masses were identified 10 cm cranial to the cloaca. Native and contrast radiographs (irrigography) were performed, with suspicion of an obstructing intraluminal mass, and a diagnostic caudal celiotomy of the snake was undertaken. The surgery was performed under combined anesthesia with butorphanol, medetomidine and ketamine, maintained by a constant inhalation flow of isoflurane.

The data of the clinical examination, the anesthetic protocol and the surgical procedure performed on a Corn snake with a dense mass in the caudal segment of the large intestine are presented.

Keywords: irrigography, celiotomy, enteroanastomosis, snake.

O2NIP12

CAUSATIVE AGENTS OF SUBCLINICAL MASTITIS IN SHEEP IN BULGARIA

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ABSTRACT

Subclinical mastitis is a disease with a high prevalence in lactating ewes that causes significant economic losses. This type of mastitis leads to a decrease in milk production and the quality of the milk, an increased risk of spreading the disease in healthy animals and sometimes to irreversible changes in the parenchyma of the gland. The aim of this study was to determine the actual causative agents of subclinical mastitis in lactating sheep. The results showed that the most frequently isolated microorganism was *Staphylococcus xylosus* followed by *S. aureus ssp. aureus* and *Staphylococcus epidermidis*. We came to the conclusion that the main causative agents are representatives of *coagulase-negative staphylococci*, from which we isolated 10 species.

Keywords: sheep, subclical, masitits, microorganisms.

O2NIP13

ASIT - ALLERGEN-SPECIFIC IMMUNOTHERAPY AS AN INNOVATIVE METHOD AND ALTERNATIVE TO LONG-TERM SYSTEMIC GLUCOCORTICOIDS IN THE COMBINED APPROACH IN THE THERAPY OF ATOPIC DERMATITIS

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ABSTRACT

Atopic dermatitis is a complex, multifactorial disease, and treatment lasts a lifetime and is a real challenge. Usually, in the management of such a condition, many methods of therapy are used, with different main agents involved in reactive therapy, which aims to deal with the acute condition, and others involved in proactive therapy - which keeps the patient in a maximally comfortable state with relapse as far away as possible in the time. The purpose of the present study is to follow how the main hematological and biochemical indicators change in patients who are administered subcutaneous allergen-specific immunotherapy. The combined therapy approach including ASIT, its success rate and the absence of negative changes in complete blood count and biochemical parameters is an indication that it can be an alternative to depot injectable and oral corticosteroids in the treatment of atopic dermatitis, as was the practice in Veterinary Medicine 7-10 years ago.

Allergen-specific immunotherapy (ASIT) is considered to be the only treatment that can affect the course of the disease and not just suppress the symptoms.

Keywords: Atopic dermatitis, ASIT - allergen-specific immunotherapy, hematology, biochemistry.

O2NIP14

SENSITIVITY OF MONONUCLEAR CELLS OF DIFFERENT ORIGIN TO FUMONISIN B1

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ABSTRACT

If in the years of the last century the consumption of fruits and vegetables was considered a prerequisite for longevity, today this thesis is being questioned. And the reason is primarily natural pollutants, to which mycotoxins belong. High humidity and elevated average annual temperatures, improper conditions during transport and storage, are a favorable prerequisite for fungal contamination and an increase in the levels of synthesized mycotoxins. According to data from the International Agency for Research on Cancer, fusariotoxins, together with aflatoxins, belong to the group of carcinogenic substances of particular importance to farm animals and humans. The aim of the present communication is to follow the cytotoxic activity of fumonisin B1 on mononuclear cells of different origins (human lymphocytes from different blood groups, lymphocytes derived from large ruminants and from pigs). In order to establish the cytotoxic effect of the mycotoxin fumonisin B1 on mononuclear cells, we used different concentrations (15, 40 and 100 μg/ml) and different durations of incubation - 12, 24 and 48 hours. Studies have shown cytotoxic activity of fumonisin B1 towards mononuclear cells, which is dose and time dependent. The highest stability was demonstrated in bovine lymphocytes and in human blood group zero. The results supported the hypothesis that mycotoxins are a serious health problem for humans and animals and a factor in immunosuppression.

Keywords: fumonisin B1, cytotoxic effect, human lymphocytes, bovine lymphocytes, porcine lymphocytes.

O2NIP15

LAVENDER ESSENTIAL OIL – PROPERTIES AND USES

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ABSTRACT

Lavender oil is a potential natural source of raw material for the pharmaceutical industry. It has many beneficial effects on the body - antioxidant, antimicrobial, antitumor, antimycotic, soothing, anti-inflammatory, insecticidal and others. Its application is promising in the future, in view of the development of resistance of most pathogens to conventional drugs.

Keywords: lavender oil, applications, effects, pathogens.

O2NIP16

EFFECT OF COMBINED LOCAL APPLICATION OF PPR, PPP, DEXPANTHENOL AND SODIUM HYALURONATE IN THE TREATMENT OF CORNEAL ULCERATION IN A DOG – A CLINICAL CASE

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ABSTRACT

Corneal ulcers represent a real challenge for companion animals to treat. In recent years, there has been an increased interest in autologous cell derivatives, characterized by high local regenerative potential, applied alone or in combination with other drugs. The aim of the present study was to determine the effect of combined topical therapy - autologous platelet-rich plasma (PRP), autologous platelet-poor plasma (PPP) and drops containing sodium hyaluronate and dexpanthenol in an English bulldog with a traumatic corneal ulcer. PRP releases multiple growth factors and bioactive proteins that stimulate regenerative activity in the application area. PPP moistens the cornea, and the autologous nature of both cell derivatives minimizes the possibility of side effects. Sodium hyaluronate plays an important role in additional moisturizing of the cornea, and dexpanthenol supports the regeneration of corneal and conjunctival cells.

Keywords: cornea, ulcer, PRP, sodium hyaluronate, dexpanthenol, English bulldog.

P2NIP1

BOVINE LEUKOCYTE ADHESION DEFICIENCY SYNDROME (BLAD): A REVIEW

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ABSTRACT

Bovine leukocyte adhesion deficiency syndrome (BLAD) is an autosomal recessive disease in Holstein-Friesian cattle. The extensive use of artificial insemination led to the rapid spread of the disease during the 1990s worldwide. Irrespective of the introduction of genetic testing programs there are still carriers found among breeding animals. Therefore the problem needs to be popularized as rare but economically relevant that should be distinguished from other common causes for calfhood diseases.

Keywords: Bovine leukocyte adhesion deficiency, BLAD, Holstein-Friesian cattle, hereditary recessive disorder.

P2NIP2

PYOMETRA WITH TRANSIENT DIABETES MELLITUS IN A BITCH – A CASE REPORT

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ABSTRACT

The aim of this report is to present a clinical case of pyometra with complication of diabetes mellitus in a 10-year-old English Cocker Spaniel. The patient was admitted to the University Veterinary Hospital of the Faculty of Veterinary Medicine at Trakia University on the occasion of

recurrent and profuse purulent vaginal discharge and severely deteriorated general condition. Ultrasound examination of the abdominal cavity showed uterine sections filled with anechogenic fluid. Laboratory blood analysis reported leukocytosis with neutrophilia, lymphocytopenia, erythropenia and anemia. ASAT, ALT and creatinine values were slightly elevated. Blood glucose levels were measured and showed hyperglycemia - 32.7 mmol/l. Blood-glucose profile was performed and insulin therapy was prescribed. Preoperatively, blood glucose levels were lowered to 8.06 mmol/l. The opreration proceeded with median laparatomy with and ovarihysterectomy using standard surgical procedure. Ovarian inspection revealed the presence of multiple corpora lutea. During the postoperative period, daily blood glucose tests were performed, which showed a decrease in blood glucose levels and remission of diabetes mellitus without the use of exogenous insulin.

In conclusion, the presented clinical case demonstrates the importance of blood glucose management for the successful treatment of pyometra in the bitch and also the danger of developing diabetes mellitus due to pyometra.

Keywords: pyometra, diabetes mellitus, bitch.

P2NIP3

IN VIVO EFFECTS OF *PHLOMIS TUBEROSA* EXTRACT ON CARBON TETRACHLORIDE-INDUCED HEPATOTOXICITY IN RATS

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ABSTRACT

Phlomis tuberosa L. (Lamiaceae) is widely used in Bulgarian folk medicine for the treatment of gastrointestinal disorders such as gastritis, colitis, ulcer, hepatitis, cirrhosis as well as kidney diseases. The species accumulates mainly flavonoids, iridoids, essential oil, phenylethylalcohol glycosides, etc. The aim of this study was *in vivo* evaluation the effects of purified extract (EPh), obtained from the aerial parts of *Phlomis tuberosa*, on carbon tetrachloride (CCl_4)-induced hepatotoxicity in rats. It was found that administered alone, EPh did not revealed statistically significant hepatotoxic effect. It did not change the serum levels of ALAT and ASAT, as well as the MDA production and GSH level. Administered alone, CCl_4 revealed statistically significant hepatotoxic effect by increasing the serum levels of ALAT and ASAT, as well as MDA production and decreasing the GSH level in liver homogenate. In combination with CCl_4, the extract showed statistically significant hepatoprotective effect on the examined biochemical parameters by decreasing the serum levels of ALAT and ASAT, preserving the GSH level and decreasing the MDA level. The effects of EPh on these biochemical parameters were stronger than the effects of Silymarin.

The hepatoprotective effects of the extract were proved histopathologically. In the group of animals, treated with CCl_4 and EPh, unaltered histoarchitecture of the liver lobules was detected. In some hepatocytes, granular appearance of the cytoplasm and single vacuolar structures were found. Around some of the portal tracts, moderate accumulations of mononuclear cells were detected. The effects of the extract were similar to those of Silymarin.

Keywords: *Phlomis tuberosa* extract, *in vivo* study, rats, hepatoprotection, histopathology.

P2NIP4

TUMORS AND TUMOR-LIKE LESIONS OF THE ORAL CAVITY IN DOGS AND CATS: A RETROSPECTIVE STUDY IN 206 CASES (2018 – 2022)

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ABSTRACT

Neoplastic and neoplastic-like lesions in the oral cavity of dogs and cats are common in veterinary clinical practice. Because of their similar gross appearance, the diagnosis requires pathomorphological examination. The aim of the current study was to retrospectively analyze tumors and tumor-like lesions of the oral cavity in dogs and cats, and to assess their prevalence. A total of 206 studies of oral cavity lesions (126 dogs; 80 cats) diagnosed routinely between 2018 and 2022 were included. For dogs, malignant tumors predominated - 47.62% (60/126), in which mainly melanomas and fibrosarcomas. For cats, the lesions in the oral cavity were mainly tumor-like formations - 55% (44/80), in which lymphoplasmacytic gingivitis predominated.

Keywords: retrospective analysis, tumors, tumor-like lesion, dog, cat.

P2NIP5

COMPARATIVE STUDIES OF DIFFERENT METHODS FOR EARLY DIAGNOSIS OF PREGNANCY IN BUFFALOES OF THE BULGARIAN MURRA BREED

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ABSTRACT

The aim of the present study was to perform a comparative evaluation of the methods for early diagnosis of pregnancy in buffalo cows of the Bulgarian Murrah breed by determining the concentrations of progesterone in serum, the P4 Rapid test in milk and the proteins associated with pregnancy in serum and milk. Blood samples were obtained from 57 buffalo cows and 27 cattle, as well as 55 milk samples on the 23rd (progesterone determination in serum and milk) and 28th day (PAG determination in serum and milk) after artificial insemination. We interpreted the results of the rapid P4 test according to the manufacturer's instructions. Determination of serum concentrations of progesterone was performed with an ELISA analyzer Huma Reader (HUMAN, Germany), with a Progesterone EIA 96 TEST kit (Linear Chemicals, Spain). Pregnancy-specific glycoproteins were determined by the ELISA method using the Alertys Bovine Pregnancy kit for blood and milk. A transrectal ultrasound examination for pregnancy was performed on day 35 after insemination. The obtained results for the parameters characterizing the effectiveness of the methods used were processed by a computer statistical program (Statistica 7, Microsoft Corp. 1984-2000 Inc.) by a non-parametric method of percentage comparison. The highest sensitivity was recorded in the method for determining progesterone in serum, and the lowest in determining PAG in milk. For PAG ELISA tests, 100% specificity was found, while the other two tests had low values of 71.1% and 72.5%). The accuracy of individual methods for early diagnosis of pregnancy is in the range of 80.0% - 98.2%. Rapid P4 tests and serum progesterone distribution can be used to identify non-pregnant animals after insemination. PAG ELISA tests have high efficiency and are preferable to other methods for diagnosing early pregnancy in buffalo cows.

Keywords: pregnancy, P4 Rapid test, Progesterone, Pregnancy-associated glycoproteins, buffalo.

SESSION
INFECTIOUS PATHOLOGY

O3IP1

MULTIPLE ORGAN MYCOSIS AND NEOPLASIA IN AN INDIAN ELEPHANT (*ELEPHAS MAXIMUS INDICUS*)

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ABSTRACT

A 58-year-old female Indian elephant (*Elephas maximus indicus*), owned by the Zoological Garden in Sofia, was examined postmortem. The pathomorphological, imaging and microbiological studies revealed lobular exudative pneumonia and zonal interstitial fibrosis with supramiliary calcifications and single extensive ossified areas. The uterine musculature was neoplastically transformed, and the endometrium with catarrhal-purulent inflammation. The results of the performed microbiological tests show the probable development of mycosis in the lungs and uterus of the animal, with the causative agent *Penicillium oxalicum*.

The obtained results are not described in the available worldwide literature, for the wild and circus and zoo-bred representatives of the elephant family.

Keywords: Indian elephant, mycosis, *Penicillium oxalicum*, pneumonia, calcification, endometritis, myoma.

O3IP2

EXPERIENCE IN TREATMENT OF CAPTIVE LIONS, COUGARS AND BEARS WITH ASCARID INFECTIONS

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ABSTRACT

Parasite control in captive animals is often difficult and have a row of specificities. Ascarid infections are among the most common parasitoses in animals, especially for captive ones. The aim of this study was to review the experience in treatment of ascaridoses in lions, cougars and bears. Drugs, dosages and schemes of treatment are presented. Bibliographic reference showed that over the years piperazine, pyrantel pamoate, benzimidazoles and ivermectin were the most used medicines to treat *Toxascaris leonina* in lions and cougars and *Baylissascariasis* spp. infections in bears. Based on the summarized data fenbendazole applying in extended schedules or a dosage of 15 mg/kg body weight could be recommended for treatment of ascarid infections in bears, and ivermectin at a dose of 0.2 - 0.3 mg/kg body weight twice in four weeks interval could be recommended for treatment of ascarid infections in lions. Combined preparations of drugs from different pharmaceutical groups have also shown high efficiency and can be successfully used in such cases.

Keywords: anthelmintics, ascaridosis, bear, cougar, lion.

O3IP3

IN VITRO ANTIMICROBIAL ACTIVITY OF LAVENDER ESSENTIAL OIL

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ABSTRACT

In vitro studies of the antimicrobial effect of lavender (*Lavandula angustifolia*) essential oil against *E. coli, S. enterica, S. aureus* and *C. albicans* were performed. A high antimicrobial effect with MBC below 0,5% was established.

Keywords: lavender essential oil, antimicrobial effect, microorganisms, MBC.

O3IP4

YERSINIA AND YERSINIOSES – NEW TRENDS AND CHALLENGES

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ABSTRACT

Yersiniosis is the third most frequently foodborne zoonosis reported by EFSA and ECDC. The infection is caused by human pathogenic bio/serotypes of *Yersinia enterocolitica* or *Yersinia pseudotuberculosis*. Meat, milk and their products contaminated with these pathogens are a significant risk to the health of the consumer. The disease occurs most often with gastrointestinal symptoms and is considered one of the most widespread after campylobacteriosis and salmonellosis in Europe.

This report reviews the epidemiology of infections, microbiological features, pathogenesis, clinical manifestations and diagnosis of yersiniosis. To overcome the shortcomings of conventional microbiological methods, we have developed new fast and reliable molecular techniques (PFGE, qPCR, ddPCR, LAMP, etc.). Further application of modern approaches to the identification and subtyping of different *Yersinia* isolates (clinical, food or environmental) and their comparison with other representatives of the genus will contribute not only to a better understanding of the determinants of virulence of pathogenic bio/serotypes, but also to detection of new *Yersinia* species.

ACKNOWLEDGMENTS: The authors express their gratitude for the financial support of NFNI contract КП-06-Н36/7 (13.12.2019).

Keywords: Yersinia, foodborne zoonoses, epidemiology, molecular methods.

O3IP5

SEROPREVALENCE AGAINST MYXOMA VIRUS IN *LEPUS EUROPAEUS* FROM BULGARIA

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ABSTRACT

Myxoma virus (MYXV) is a poxvirus which causes a systemic infection in wild and farm rabbits (Oryctolagus cuniculus) with high morbidity and mortality, called myxomatosis. European hare (Lepus europaeus) was considered to be resistant to the virus. However in the recent years a cross-

species jump of MYXV in hare species from different parts of Europe was recognized. The aim of the present survey was to determine the antibody prevalence against myxoma virus in brown hare populations from different parts of Bulgaria with the emphasis to establish the possible circulation of myxomatosis in these communities. From all tested sera (via cELISA) 7.14% (6/84) were positive for specific antibodies against MYXV. All of them were sampled from Kameno, Burgas region (South Bulgaria). The positive cohort represented 10.0% (6/60). No positive cases from the other sampled area were determined. Based on this we could conclude that the studied brown hare populations were severely resistant to myxomatosis and no evidence for significant MYXV circulation was determined. However, the lack of specific antibodies cannot exclude emphatically myxomatosis morbidity in brown hare.

Keywords: ***Lepus europaeus*****, myxomatosis, seroprevalence, ELISA.**

O3IP6

PHYSICO-CHEMICAL PARAMETERS OF MEAT FROM DUCKS WATERED WITH CATHOLYTE

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ABSTRACT

Electroactivated (dissociated) water (EAW) has been growing in popularity in recent years in many countries. It is applied in the form of anolyte and catholyte. Catolyte has a beneficial effect on productivity and some physiological parameters, and is a cheap, safe, non-toxic and effective option for improving the overall production parameters in mammals and birds. In the present study, the effect of catholyte on some physico-chemical parameters of meat from White Pekin duck was examined. Five parameters (pH, protein, fat, water and ash content) of breast and leg meat were measured.

The results show a higher content of fat, water and ash in the breast and leg meat of the experimental group of ducks watered with catholyte compared to the control - watered with tap water. Lower pH values were observed in both types of meat, again in favor of the experimental group. A lower protein content in the meat of the experimental group of ducks compared to the control group was demonstrated.

Keywords: Electroactivated (dissociated) water, catholyte, physico-chemical parameters, meat, ducks.

O3IP7

RISK ASSESSMENT AND RISK ANALYSIS OF MAINTAINING THE AFRICAN SWINE FEVER VIRUS IN THE WILD BOAR POPULATION IN BULGARIA

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ABSTRACT

A risk assessment and risk analysis are presented about the maintenance of the African swine fever (ASF) virus in the wild boar population in Bulgaria, taking into account the factors favoring the spread of the virus, the density of wild boar populations and their proximity to domestic pig populations, the biological characteristics and ethology of wild boars, hunting practices and disease control measures.

The results of the analysis show, that in Bulgaria ASF can be maintained in wild boar populations, thus representing a constant reservoir and source of virus and a huge challenge in disease management. Hunters are the main participants in the surveillance and control of ASF in wild boar. Their

behavior and the biosecurity standards, applied in infected or at-risk hunting areas, have a huge impact on the dynamics and management of the disease. It should not be forgotten, however, that hunting is practiced as a hobby, only in certain seasons and areas with purposes, other than disease surveillance. Nevertheless, the participation of hunters is crucial.

Keywords: African swine fever (ASF), wild boar population, risk assessment and risk analysis, Bulgaria.

O3IP8

REPLACEMENT OF CANINE PARVOVIRUS TYPES IN THE CANINE POPULATION OF BULGARIA (2020-2023)

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ABSTRACT

Canine parvovirus (CPV-2) continues to be one of the most dangerous infectious agents causing high mortality rates in dogs worldwide. A molecular study was conducted on 46 samples from dogs with clinical signs of CPV-2 infection, obtained from veterinary clinics from 6 towns in Bulgaria during the period August 2020-February 2023. All tested samples were positive for CPV-2 in real-time polymerase chain reaction (qPCR). The subsequent virus identification by minor groove binder (MGB) probe assays showed predominance of canine parvovirus type 2c (CPV-2c, 69.57%) over CPV-2b (28.26%) and CPV-2a (2.17%). These results differ from those of a previous study, which reported CPV-2a and CPV-2b as predominant strains circulating in Bulgaria, while CPV-2c was identified in only 2.31% of 216 samples that tested positive for CPV-2.

The obtained results suggest a replacement of circulating CPV types in Bulgaria, thus posing some concerns about the vaccine schedules currently used in dogs.

Keywords: dogs, canine parvovirus types, Bulgaria, molecular analysis, real-time polymerase chain reaction, minor groove binder probe assays (MGB assays).

P3IP1

BEE DISEASES AND THEIR CONTROL IN BULGARIA AND ESTONIA

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ABSTRACT

The Western honey bee (*Apis mellifera*) is a species of crucial economic, agricultural and environmental importance. Honey bee colonies suffer from numerous pathogens. These include various bacteria, viruses, fungi and parasites. The aim of the present work is to review and compare information on the most important bee diseases and their control in Bulgaria and Estonia. Based on the data about honeybee diseases from available research and those supplied by the National Reference Laboratories of Bulgaria and Estonia it can be said that in both countries the main problem for beekeeping are the diseases varroosis, nosemosis, American foulbrood, and European foulbrood. Estonia seems to be one of the few countries in the world where *N. apis* (43%) is still individually prevalent, while in Bulgaria nosemosis caused by *N. ceranae* (98%) predominates. Cases of other

diseases such as Chalkbrood (*Ascosphaera apis*) and some bee viruses (Deformed wing virus, Sacbrood virus, Chronic bee paralysis virus, Acute bee paralysis virus, Black queen cell virus) are detected and reported less frequently. Principles of prevention and treatment of bee diseases are similar in both countries and comply with European recommendations.

ACKNOWLEDGMENTS: Financial support from the Bulgarian Academy of Sciences (Bilateral agreement between BAS and Estonian University of Life Sciences) is gratefully acknowledged. (Project: "Field and experimental studies of actual diseases of honey bees (*Apis mellifera* L.) from Bulgaria and Estonia." P.43/14.12.2021).

Keywords: *Apis mellifera*, bee diseases, Bulgaria, Estonia, control.

P3IP2

RADIOGRAPHIC MEASUREMENT OF VERTEBRAL HEART SIZE, SPHERICITY INDEX AND NUMBER OF INTERCOSTAL SPACES IN CATS WITH VARIOUS LUNGWORM INFECTIONS

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ABSTRACT

Invasion with respiratory nematodes in cats leads to functional disturbances in the activity of the cardiovascular system, such as pulmonary hypertension, finding expression in clinical and radiographic changes. The purpose of this study is to determine absolute and relative heart size in cats infected with *Aelurostrongylus abstrusus* (Strongylida: Angiostrongylidae), *Troglostrongylus brevior* (Strongylida: Crenosomatidae), *Eucoleus aerophilus (syn. Capillaria aerophila;* Enoplida, Capillaridae) or mixed invasion by correlating heart size and selected skeletal structures. Forty cats with conformed pulmonary parasites infestation (22 with *A. abstrusus*, 6 with *T. brevior*, 5 with *E. aerophilus*, 7 with mixed invasion). Measurements of the long and short axes of the heart, midthoracic vertebrae, and other structures were made on obtained lateral and ventrodorsal radiographs. The following cardiac indices were reported: vertebral heart score (VHS), the ratio between the length and the width of the heart (sphericity index, SI) and the number of intercostal spaces occupied by the heart shadow (IS), were determined and compared. Mean +/- SD vertebral heart score of all groups calculated on radiographs are between 7.14±0.22 and 8.1±0.89 vertebrae, SI is from 0.64±0.02 to 0.76±0.05. Heart shade occupy from 2.08±0.15 to 2.46±0.21 intercostal spaces.

No significant statistical differences were found among the cats invaded by lungworms and unaffected ones in control group, also no signs of cardiomegaly were noted in all groups of cats infested with lung parasites. The results of the three methods show a strong similarity.

Keywords: cardiac indices, VHS, Aelurostrongylus abstrusus, Troglostrongylus brevior, Eucoleus aerophilus.

P3IP3

IN VITRO LARVICIDAL EFFICACY OF SOME DISINFECTANTS AGAINST *AELUROSTRONGYLUS ABSTRUSUS LARVAE*

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ABSTRACT

The current study was performed to assess the efficiency of some commonly used disinfectants against Aelurostrongylus abstrusus larvae first stage (L1). A naturally infected cat was used as a donor of L1. The larvae were collected from the cat feces by simplified Baermann's technique. A total of 12 disinfectants were tested, including acids, alkalies, aldehydes, quaternary ammonium compounds (QAC), phenols, chlorhexidine, chlorine-, iodine- and oxygen-releasing disinfectants. Activity of each disinfectant on L1 was tested by suspension method at 30 and 60 min exposure time. Key criteria in assessing the harmful effects of disifectants on the larvae were changes in motility and the larval morphology such as vesicular inclusions, fading and/or destruction of intestinal cells, wrinkling or folding.

The results revealed that sodium hydroxide, iodine- and oxygen-releasing disinfectants had the best efficacy and caused rapid 100% inactivation of L1 in exposure of only 30 min. High efficiency at 30 min exposure was also observed in phenols (97.89%), aldehydes (96.84%) and the combination of QAC and chlorhexidine (96.84%). The efficacy of the other substances was between 39 and 90.53%.

The results obtained allow the selection of an appropriate chemical agent for disinfection of premises and disposal of faeces from animals infected with A. abstrusus or those at high risk - in shelters, foster homes, veterinary clinics and castration centers, in order to eliminate the risk of spreading the parasites.

Keywords: *Aelurostrongylus abstrusus*, cat, lungworm, disinfectants, larvae.

P3IP4

EPIDEMIOLOGICAL ANALYSIS OF AVIAN INFLUENZA IN BULGARIA AND EUROPE FROM THE BEGINNING OF THE 2022-2023 SEASON

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ABSTRACT

Highly pathogenic avian influenza (HPAI) is an infectious viral disease in birds that causes serious problems in the poultry sector in the affected countries. As of 31 March 2023, the HPAI virus has been confirmed in Europe (28 countries), Africa (3 countries), the Americas (15 countries), and Asia (10 countries). Poultry and wild birds are affected by different subtypes of HPAI virus with the most common being H5N1. With the onset of the new epidemiological season, in early October 2022, there was a change in the pattern of infected birds, with the number of cases in wild birds being higher than the number of outbreaks in poultry or captive birds. A high number of virus detection cases have been observed in seabirds (black-headed gulls).

Since the beginning of the 2022-2023 season 2 outbreaks of HPAI in poultry have been detected in Bulgaria (backyard holding and industrial farm for quails).

Keywords: Highly pathogenic avian influenza A, bird flu, poultry, wild birds.

P3IP5

DISTRIBUTION OF Q FEVER IN BULGARIA AND RISK ASSESSMENT FOR ANIMAL HEALTH AND PUBLIC HEALTH IN 2023

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ABSTRACT

Q fever (caused by the intracellular bacterium Coxiella burnetii) is a naturally occurring zooanthroponosis and affects mammals, birds, reptiles, arthropods and humans. During the period 2017 - 2021, 264 sporadic cases of sick people were registered in 22 regions of Bulgaria (permanently in 10), with an incidence between 0.42 and 1.54 per 100,000 population. There were no deaths. For the same period, there were 624 positive animals (247 cattle, 189 sheep, 188 goats, 0 buffalo). Human cases are always associated with antecedent or current disease in animals. Ruminant livestock remains a major reservoir and risk factor with unclear etiologic status and a very high probability of shedding C. burnetii. It is important to carry out a national serological survey in ruminants and in people from risk groups, from target regions of Bulgaria (mapping), in order to better assess risk factors, reveal the sources of infection and spread, in order to reduce human exposure to this zoonosis.

Keywords: Q fever, *Coxiella burnetii*, zooanthroponosis, zoonosis, large and small ruminants.

P3IP6

ANALYSIS OF ZOONOSES AND ZOONOTIC AGENTS, LEVELS OF ANTIMICROBIAL RESISTANCE IN BULGARIA ACCORDING TO THE "ONE HEALTH" APPROACH

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ABSTRACT

The most commonly reported zoonoses are campylobacteriosis and salmonellosis. Human campylobacteriosis and salmonellosis increased in 2021. Bulgaria has achieved a reduction in prevalence of Salmonella and Campylobacter in food-producing animals. Yersiniosis was the third most commonly reported zoonosis, followed by E. coli (STEC) and L. monocytogenes infections. Infections caused by L. monocytogenes and WNV are the most severe zoonotic diseases. In 2021, there was an increase in food borne outbreaks caused mainly by Salmonella, Norovirus and Campylobacter. Resistance in Campylobacter and Salmonella is high, mainly to ciprofloxacin. Resistance in Salmonella, Campylobacter and E. coli to critical antimicrobials is low. For the period 2017-2021, many samples tested have not been reported by Bulgaria and there are often no positive results for some particularly significant zoonotic agents. Monitoring programs need to be updated, further studies on the resistance of zoonotic agents should be carried out and a more thorough study of the genes coding resistance is necessary in order to take reasoned and timely decisions and measures to prevent their spread.

Keywords: zoonoses, zoonotic agents, antimicrobial resistance, food-producing animals, food born outbreaks.

SESSION
STUDENT RESEARCH

O4S1

A MODERN VIEW OF THE PROBLEM OF ATOPIC DERMATITIS IN DOGS

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ABSTRACT

Canine atopic dermatitis (AD) in dogs is an inherited chronic and incurable syndrome. It represents a complex of clinical symptoms, manifesting differently in individual individuals. AD is a multifactorial and complex inflammatory process resulting from the complex interaction of genetics and environmental factors shaping the immune response. The epidermis plays a key role in this disease. Lesions of various types and sizes are observed on different parts of the body, and microscopically, structural changes are also found in unaffected areas. The disease proceeds with phases of exacerbation and attenuation (chronification), and the focus of its study is mainly on the second. Numerous studies have been done on the factors that cause atopy. AD therapy includes both local and systemic treatment. It seeks to affect mediators of itch and the pathway of itch that are not directly related to inflammation. Local anesthetics, glucocorticoids, inhibitors and suppressors of various cytokine signals are used - oclacitinib, lokivetmab and etc.

Keywords: atopic dermatitis, causal factors, treatment.

O4S2

SECOND-DEGREE THERMAL BURN IN A BURMESE PYTHON (*PYTHON BIVITTATUS*) – A CASE REPORT

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ABSTRACT

This report describes a clinical case of a 3-year-old female albino Burmese python (*Python bivittatus*) with a second-degree thermal burn due to a malfunction of the heating mat. The burn occurred shortly after the patient shed its skin. Erythematous and necrotic areas were observed on the ventral caudal half of the snake´s body. The treatment included iodine baths, bandages with skin stay sutures, application of various topical creams, and systemic antibiotics and vitamins.

Keywords: Burmese python, second-degree burn, thermal burn, treatment.

O4S3

HEPATITIS E VIRUS IN PIGS AND HUMANS IN GREECE

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ABSTRACT

Current etiological and epidemiological characteristics of hepatitis E virus infection are presented. It is focused on seroprevalence in pigs and humans in Greece. Important diagnostic approaches and prevention measures are indicated. Recommendations are made based on modern achievements in science and practice.

Keywords: hepatitis E virus, seroprevalence, pigs, humans, Greece.

O4S4

MICROFLORA OF GARDENS FOR PETS IN THE CITY OF SOFIA

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ABSTRACT

Microbiological studies on soil samples from gardens for walking people and pets in two large neighborhoods of the city of Sofia were carried out. The quantities of microorganisms from main groups, including pathogenic species, were determined with a view to evaluating the epizootological safety of these areas. Especially high were the values of the isolated Gram-negative bacteria (4.33x104±1.88 and 2.70x105±2.54), of Pseudomonas aeruginosa (1.75x104±3.03 and 3.00x104±4.58), of staphylococci, including pathogenic mannitol-positive species (3.48x106 ±2.99 and 4.95 x106±3.96), as well as of the fungi. Oval fungi (5.50 x104±3.77 and 1.55 x105±1.12) and the causative agents of dermatomycosis tinea or ringworm (2.75 x104±1.92 and 7.60 x104±3.72) were present in significant quantities. However, the important sanitary indicative bacteria E. coli and C. perfringens were below the detectable minimum. It was found that in the area with greater movement of people and animals, the amounts of microorganisms from all the studied groups were higher. The results obtained show that urban areas with high traffic from pets and their owners can be a source of infection for animals and humans.

Keywords: pathogenic microorganisms, environment, pets.

O4S5

MOTH INFLUENCE IN VETERINARY MEDICINE

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ABSTRACT

More than 100 species of moths worldwide have caterpillars (larvae) with stinging hairs or spines that can cause dermatitis (urticaria) when they come in contact with the skin of the animal. Adult moths can also cause issues by irritating tissues with open wounds on them, and in some cases piercing the skin to feed on blood. Ingestion of certain types of caterpillars inhabiting pastures and breeding areas has resulted in abortion in mares and amnionitis (Equine Amnionitis and Fetal Loss Syndrome).

Keywords: moths, abortion, dermatitis, caterpillars.

O4S6

THE EFFECT OF PIMOBENDAN AND ENALAPRIL USE ON BLOOD SERUM TRACE ELEMENT LEVELS IN DOGS WITH MYXOMATOUS MITRAL VALVE DISEASE

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ABSTRACT

Myxamatous mitral valve disease (MMVD) is a common acquired heart disease in dogs that can lead to progressive and long-term congestive heart failure (CHF). Pimobendan and angiotensin converting enzyme inhibitors (ACEI) are commonly used in MMVD treatment. Trace elements are essential for maintaining the cardiovascular functions. Synergistic or antagonistic interactions between some trace elements and substances are widely known. In the study, it was aimed to evaluate the effects of treatment duration, age, weight and gender on serum trace element levels in dogs with MMVD using pimobendan and enalapril as monotherapy. Total number of 13 dogs with MMVD were treated with pimobendan (0,25-0,3 mg/kg, q12h, PO Vetmedin®) and 21 dogs with MMVD were treated with enalapril (0,25-0,5 mg/kg, q12h, PO Enapril®) for at least 30 days. In all patients serum trace element levels (Cu, Zn, Fe, Co, Mg, Mn, Se, Cr) were measured with Inductively coupled plasma-Optical emission spectroscopy device. Relevances were evaluated related to treatment duration, age, weight and gender in each treatment groups. In patients using enalapril, in terms of serum selenium levels, a negative interaction with the treatment duration and weight, while a positive correlation with age was observed. Other elements in Enalapril group and all elements in Pimobendan group did not statistically explain the variation among individuals.

In dogs using Enapril, the effects of treatment duration, age and weight were found to be significant only in terms of Se level. In Enalapril group, Se levels were positively orrelated with age and negatively correlated with weight and treatment duration.

Keywords: Myxamatous mitral valve disease (MMVD), Pimobendan, Enapril, Trace elements, dogs.

O4S7

POLYDACTYLY IN HORSES

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ABSTRACT

The report analyses the anatomic aspect of polydactyly in horses in different age groups. The focus falls on the differences between the structure of a normal limb and one of a horse with polydactyly, as well as the types of polydactyly and the removal of the anomaly. The first part of the report presents the anatomic structure of the forelimb and the hindlimb of the horse. It focuses on the carpal, metacarpal and digital part of the limb, which bones they consist of and the present ligaments. The second part focuses on the characteristics of polydactyly in horses, different clinical forms of the anomaly, which structures are involved, as well as radiographic images of the disorder. The analysis concludes with an overview of a clinical report that presents the removal of the anomaly.

Keywords: polydactyly, anomaly, anatomy, horses.

O4S8

DNA CONTENT AND KINEMATIC PARAMETERS OF X- AND Y- BEARING RAM SPERM SEPARATED WITH LIGAND R848

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ABSTRACT

During spermatogenesis in mammals, meiosis is expected to produce a 50:50 ratio of X- and Y-sperm, so the sex ratio would be 1:1. The aim of this study was to investigate some differences between X- and Y-bearing ram sperm, separated with ligand R848. The results of the analysis showed that the percentage of progressive motility (53 to 44) and fast spermatozoa (48 to 39) were higher in the fractions with Y-chromosome compared to the X-. Ligand activation of Toll-like receptors 7/8, selectively encoded by the X chromosome, significantly suppresses the motility of X-bearing spermatozoa without altering their fertility. On the other hand, we found 2.8% higher DNA content in X- than Y-bearing spermatozoa. In conclusion, some differences are found between the ram spermatozoa depending on the bearing chromosomes, however, the validity of the sperm sexing method needs further proof.

ACKNOWLEDGMENT on NSP "INTEJIVO" (grant agreement № Д01-62/18.03.2021) funded by Ministry of education and science of Bulgaria

Keywords: spermatogenesis, kinematic parameters, X- and Y-bearing spermatozoa, ram sperm.

O4S9

ONCOGENIC POTENTIAL OF PARASITES IN DOMESTIC ANIMALS

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ABSTRACT

A review of the world references on the oncogenic potential of various helminths and parasitic protozoa occurring in domestic animals and human was performed. A list of the types of parasites that provoke oncogenesis and those that suppress it is systematized. The pathogenetic mechanisms of different types of parasites predisposing or depressing cancer formation are presented. Recommendations for veterinary practice and prognosis for the oncogenic potential of parasites in our pet and farm animals patients are given.

Keywords: oncogenesis, parasites, domestic animals.

O4S10

CHEMOTHERAPY IN TRANSMISSIBLE CANINE VENEREAL TUMOUR – A CLINICAL CASE

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ABSTRACT

Transmissible tumors are a special group of tumors that are capable to be transferred from one organism to another by direct transfer of tumor cells. After successful transferring in the host, the tumor cells form colonies, clinically manifested with tumor lesions. Our patient was a male dog, 6 years old, boxer breed. After confirmation by the histological analysis, the transmissible venereal tumor was treated with Vincristine and corticosteroids for six weeks. During this period, we observed regression of the tumor. One week after the last treatment the tumor was disappeared. Chemotherapy with Vincristine in combination with corticosteroids results in complete tumor regression.

Keywords: Transmissible tumor, dog, Vincristine, dexamethasone.

O4S11

APPLICATION OF ELECTROACTIVATED AQUEOUS SOLUTIONS IN THE FOOD INDUSTRY

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ABSTRACT

The electroactivation of aqueous solutions is based on electrolysis, which occurs in a device composed of a pair of electrodes immersed in an electrolyte, the anode and cathode sections being separated by a membrane. Electroactivated water (EAW) is increasingly used in the food industry as a disinfectant for the treatment of drinking water and in the pre-packaging of fruit, fresh-cut vegetables, eggs, seafood, chicken and other products without altering their taste. It has a positive influence on the organoleptic and microbiological characteristics of vacuum-packed products during storage. EAW treatment significantly reduces the total bacterial count of milk, meat and poultry carcasses during storage, and has been shown to effectively reduce the number of pathogenic bacteria on the

surface of fruits and vegetables. EAW has an inhibitory effect on the growth and production of aflatoxin, reduces the live spore population of some mold species, and has the ability to reduce viral load.

Bread prepared with EAW has better quality indicators. EAW is also used as a substitute for the addition of SO_2 in the stabilization of wine, and in the production of cognac, it shows a reduction in the days required for aging to reach maximum taste qualities.

Keywords: electroactivated water, application, food industry.

O4S12

SYNTHETIC DYE TOXICITY IN A CAT – A CLINICAL CASE

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ABSTRACT

The clinical case describes acute intoxication in a cat that ate a tree fern - Asparagus virgatus, which is considered to be mildly toxic and leading to gastrointestinal disturbances. The plant is treated with dark green synthetic dye. Clinical examination and paraclinical studies revealed restlessness, rapid breathing, cyanosis of mucous membranes, and methemoglobinemia. The diagnosis was made as an acute intoxication with synthetic dye.

Keywords: toxicity, synthetic dye, cat, intoxication.

O4S13

COGNITIVE DYSFUNCTIONS AND APPROACH TO COGNITIVE PATIENTS

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ABSTRACT

Cognitive dysfunctions are a disease similar to Alzheimer's disease in humans. It covers about 14% to 35% of the total canine population. In animals over 8 years of age, this percentage is much higher. The disease is of particular importance, apart from its wide distribution and its rapid progression once it has begun. In the presentation you will find out how the brain ages, what the disease is, how it can be diagnosed and how to slow down its progression.

Keyword: cognitive dysfunctions, Alzheimer's disease, adult dogs.

O4S14

FERRETS – THE UNUSUAL PETS REPRODUCTIVE CHARACTERISTICS, SEXUAL CYCLE, PREGNANCY AND CHEMICAL PREVENTION

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ABSTRACT

Ferrets are a seasonally polyoestrous species. Female ferrets reach sexual maturity, at the age of 8-12 months. Ovulation is induced by pressure on the cervix associated with copulation. These mechanical stimulations lead to an increased release of LH that stimulates maturation of follicles and an average of 12 oocytes are ovulated 30–40 h after copulation. The oocytes are most capable of being fertilized up to 12 hours after ovulation. Embryos enter the uterus over a period of several days

starting on day 5 after mating. Between days 12 and 13 after mating, the embryos have become implanted in the endometrium. Pregnancy length is 41 days. Ferret gives birth to an average of 8 kits, which weigh 6–12 g.

Chemical pregnancy prevention is associated with the application of Suprelorin, an implant offering an alternative for reversible control of ovarian activity. Suprelorin is a slow-release GnRH-agonist which is used as implants containing 4.7mg or 9.4mg of deslorelin acetate. The implant is inserted subcutaneously between the scapulae. Ovarian activity is suppressed for 18 to 24 months using the 4.7mg implant and the duration can be longer when using the 9.4mg implant.

Keywords: ferret, sexual cycle, pregnancy, chemical prevention.

O4S15

OSTEOLOGICAL EXAMINATION OF AN ELEPHANT SKULL

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ABSTRACT

An osteological examination of an elephant skull, which was found in a meadow near the city of Sofia, was carried out. By comparing and photo-documenting the features of the bones of the splanchno- and neurocranium with the images available in the literature, the species and sex of the elephant was determined. Some basic bony processes, crests and foramen shape were observed, in which the present skull is differentiated from that of the African elephant. Based on more pronounced bone structures and the shape of the openings, the sex of the elephant was determined. By the eruption, disappearance, and attrition of teeth from the upper and lower dental arch of the respective jaw, the approximate age of the elephant was determined. The present identification is in confirmation of what is known in the literature and may serve for future osteological and paleo-osteological examinations of skulls of the order Proboscidea.

Keywords: elephant, Elaphus maximus, skull, teeth, osteological examination.

O4S16

BEHAVIORAL CHANGES IN ANIMALS WITH NEUROLOGICAL DISORDERS

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ABSTRACT

Neurological disorders are all conditions affecting the nervous system as a whole – the brain, spinal cord and/or other nerves. Brain damage occurs when there is damage to brain cells, and its severity may differ. Various conditions affecting the central nervous system (CNS) - traumatic brain injury (TBI) and tumors in separate parts of the brain - are considered. It should be taken into account that the manifested symptoms depend on the affected area of the brain and are not specific to the tumor itself: any disease affecting this area of the brain can lead to similar signs. Attention is paid to some of the common neurological disorders in companion animals - meningoencephalitis, epilepsy, disc herniations, etc. The most common clinical signs in animals with such brain damage are shown through video materials.

Keywords: neurological disorder, brain damage, traumatic brain injury, tumor, meningoencephalitis, epilepsy, companion animals.

O4S17

PROBIOTICS: PAST, PRESENT AND THEIR FUTURE

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ABSTRACT

Nowadays, there is an increasing concern for the public health about the consequences from the long and increased use of antibiotics in livestock production. The use of antibiotics in animal feed as growth promoters has been completely banned by the European Union since 2007, based on their possible negative effects on human and animal health. The removal of growth promoters has led to animal performance problems and a rise in the incidence of certain animal diseases. Thus, there is an urgent need to find alternatives to antibiotics, especially in EU. Probiotics, prebiotics, organic acids, phytogenic compounds and zeolites are used as alternatives to in-feed antibiotics.

The purpose of our work is to examine the need for probiotics in a historical aspect, their impact on the body and to answer the question of whether they have a future in the "One Health" strategy.

Keywords: probiotics, "One Health" strategy, growth promoters, antibiotics, livestock.

O4S18

RESEARCH OF THE MICROFLORA OF A WATER BASIN IN THE CITY OF SOFIA WITH REGARD TO ASSESSMENT OF ITS ENVIRONMENTAL SAFETY

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ABSTRACT

Microbiological studies were carried out on samples from a water body in a metropolitan district. The amounts of microorganisms from the main groups that include pathogenic species, were determined in order to assess the epizootological safety of the reservoir. The Gram-negative aerobic and facultative-anaerobic bacteria ($5.50x10^2$±6.43 - $5.74x10^2$±8.87 CFU/ml), as well as staphylococci ($0.42x10^2$±0.84 - $5.62x10^2$±1.07 CFU/ml), which were all mannitol-positive species, were isolated in the largest quantities. The sanitary indicative species Escherichia coli was abundant, especially in the surface layers of the water ($2.92x10^2$±5.54 CFU/ml). Pseudomonas species were less ($0.30x10^2$±0.51 CFU/ml) and were found only in the surface water layer. Clostridia were isolated from 40% of surface water samples and 80% of bottom samples, but the sanitary indicator species *C. perfringens* was not detected. The isolated microorganisms were in greater quantities in the surface layer of the water, but the differences were statistically significant only for staphylococci. Fungi and clostridia were established in greater quantity at the bottom of the lake.

Keywords: pathogenic microorganisms, lake, epizootological safety.

P4S1

MORPHOMETRIC DESCRIPTION OF THE REPRODUCTIVE SYSTEM DESCRIPTION OF THE GRAY WOLF (*CANIS LUPUS*)

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ABSTRACT

The aim of the present study was to morphometrically study on the reproductive system of an adult female wolf. The measurements showed that the uterus is characterized by a Y-shape. The distance from the cervix to the bifurcation of the uterine horns was 14 cm, the length of each horn - 20 cm. The size of the ovaries was 9 × 18 mm and the weight 0.844 and 0.752 gr for the left and right ovary, respectively. There were two large follicles over 4 mm in diameter on the surface of the left ovary, the right had a smooth surface. Cumulusocyte complexes had dark cytoplasm. The average diameter of the oocytes was average of 78,58 μm. Histological examination of the ovaries showed that the follicles were scattered in the cortex, the medulla was rich in blood vessels.

The present study is fundamental and characterizes the reproductive system in Canis lupus.

ACKNOWLEDGMENTS for the material provided to dr. T. Vargov and Kr. Manushov from UOSG – Yundola.

Keywords: wolf (*Canis lupus*), reproductive system, morphology.

P4S2

DENTAL PATHOLOGIES IN THRACIAN IRON AGE DOGS (IV-VI century BCE)

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ABSTRACT

Three dog skeletons were excavated within the archaeological settlement near Chirpan in the historical region of Ancient Thrace, Bulgaria. All animals are of adult age, being two females and one male and with present dental pathologies. According to the osteometry the dogs are of medium height of a mesocephalic type. Tooth decay affects, mainly, the carnassial teeth (both lower and upper) on one side of the jaw. The slight wear of the incisors seems to indicate the teeth grinding possibly contributing to the development of infections. The possible causes of the condition could be the choice of food and an underlying health condition. These cases contribute to the study of past animal health regarding the relationship between man and dogs.

Keywords: tooth decay, archaeology, dogs, paleopathology.

CONTENT