BOOK OF ABSTRACTS

XX-th INTERNATIONAL SCIENTIFIC CONFERENCE:

“TRADITION AND MODERNITY IN VETERINARY MEDICINE”

FACULTY OF VETERINARY MEDICINE

UNIVERSITY OF FORESTRY

2025

Sofia Bulgaria

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"TRADITION AND MODERNITY IN VETERINARY MEDICINE", 2025

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OFFICIAL PROGRAM OF THE CONFERENCE

Петък / Friday (25.04.2025)	
11:00 – 11:30	**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
11:30 – 12:30	**ПЛЕНАРНИ ДОКЛАДИ / PLENARY REPORTS** ANTIMICROBIAL RESISTANCE AS A GLOBAL THREAT IN THE NEW CENTURY **Hristo Naydensky** *The Stephan Angeloff Institute of Microbiology, Bulgarian Academy of Sciences* NOVEL ESHERICHIA COLI RESISTANCE PROFILES THREATENING GLOBAL HEALTH **Ali Aydin** *Faculty of Veterinary Medicine, Istanbul University-Cerrahpasa, Istanbul, Türkiye*
13:30	ОТПЪТУВАНЕ НА АВТОБУС ОТ ЛТУ ЗА ЮНДОЛА / DEPARTURE BY BUS FROM UNIVERSITY OF FORESTRY CAMPUS TO YUNDOLA
16:30 – 18:30	НАСТАНЯВАНЕ И РЕГИСТРАЦИЯ / REGISTRATION OF PARTICIPANTS
20:00	ВЕЧЕРЯ/DINNER

Събота / Saturday (26.04.2025)	
8:00 – 9:00	НАСТАНЯВАНЕ И РЕГИСТРАЦИЯ / REGISTRATION OF PARTICIPANTS
8:00 – 9:00	ЗАКУСКА/BREAKFAST
SESSION ***NON-INFECTIOUS PATHOLOGY*** ***MORPHOLOGY, ECOLOGY AND LIVESTOCK BREEDING*** ***Hall №1*** ***Chairman:*** Prof. Hasan Alpak, PhD; Assoc. Prof. Konstantin Aminkov, PhD ***Secretary***: Chief. Assist. Prof. I. Ruzhanova, PhD	
ORAL PRESENTATIONS	
9:00	***KRKA BULGARIA*** PRODUCT PRESENTATION
09:00 – 09:15	***O1NIPMELB1*** THE ANTI-IL-31 ANTIBODY LOKIVETMAB AS A NEW ADDITIONAL OPTION FOR CANINE ATOPIC DERMATITIS MANAGEMENT - Ivelina Vacheva
09:15 – 09:30	***O1NIPMELB2*** BIOCHEMICAL AND PHYSIOLOGICAL RESPONSES IN DAIRY COWS AFTER TRANSRECTAL EXAMINATION - Tsveta Georgieva et al.
09:30 – 09:45	***O1NIPMELB3*** ECHOCARDIOGRAPHIC FINDINGS OF VALVULAR HEART DISEASE IN BROWN BEARS - Bogdan Aminkov et al.
09:45 – 10:00	***O1NIPMELB4*** BASIC PROCEDURES FOLLOWED IN CASES OF ANIMAL ABUSE - Reneta Petrova
10:00 – 10:15	***O1NIPMELB5*** CASES OF ABUSE IN SMALL ANIMALS (DOGS) IN THE CITY OF SOFIA FOR THE PERIOD 2020-2024 - Reneta Petrova & Petar Slavev
10:15 – 10:30	***SAMBS BULGARIA*** LOWER URINARY TRACT PROBLEMS IN DOGS AND CATS Dr. Tsvetomir Levchev /Yundola Hall/
10:30 – 11:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
11:00 – 11:15	***NESTLE PURINA BULGARIA*** INTESTINAL BARRIER AND ITS ROLE IN THE DEVELOPMENT OF CHRONIC DISEASES Dr. Georgi Harizanov
11:15 – 11:30	***O1NIPMELB6*** DIAGNOSIS OF BOVINE SUBCLINICAL MASTITIS - Aleksandar Stoimenov et al.
11:30 – 11:45	***O1NIPMELB7*** GOOD VETERINARY PRACTICES IN MONITORING, PREVENTION AND TREATMENT OF HYPOCALCEMIA IN DAIRY COWS - Elena Stancheva et al.
11:45 – 12:00	***O1NIPMELB8*** SQUAMOUS CELL CARCINOMA IN DOGS AND CATS – A RETROSPECTIVE STUDY OF 100 CASES (2020 – 2024) - Yoana Kirilova et al.

12:00 – 12:15	***O1NIPMELB9*** PATHOHISTOLOGICAL CHARACTERISTICS OF SPONTANEOUS MAMMARY TUMORS IN THE BITCH IN BULGARIA – Ivelina Grozeva
12:15 – 12:30	***O1NIPMELB10*** SECONDARY ECTOPIC PREGNANCY IN A DOG – A CASE REVIEW – Georgi Marinov
12:30 – 12:45	***O1NIPMELB11*** PRACTICAL DIAGNOSTICS OF MYXOMATOUS MITRAL VALVE DISEASE IN THE DOG: A PRELIMINARY ANALYSIS OF RADIOGRAPHIC AND LABORATORY TOOLS AND FINDINGS - Ivyana Ivanova & Anton Rusenov
12:45 – 13:00	***SAMBS BULGARIA*** SEMINTRA - A SOLUTION FOR CHRONIC RENAL FAILURE AND HIGH BLOOD PRESSURE IN CATS - Dr. Ivaylo Donchev /Yundola Hall/
13:00 – 14:00	***ОБЯД/LUNCH***
14:00	***KRKA BULGARIA*** PRODUCT PRESENTATION
14:00 – 14:15	***O1NIPMELB12*** COMPARATIVE HISTOLOGICAL ANALYSIS OF THE SPLEEN IN BACTRIAN CAMEL (CAMELUS BACTRIANUS) AND ALPACA (VICUGNA PACOS) - Iliyan Georgiev et al.
14:15 – 14:30	***O1NIPMELB13*** DISCREPANCY BETWEEN OWNER-REPORTED AND CLINICALLY CONFIRMED PAIN IN DOGS WITH OSTEOARTHRITIS: A CROSS-SECTIONAL STUDY USING VALIDATED TOOLS AND GAIT ANALYSIS - Jane Vlahov et al.
14:30 – 14:45	***O1NIPMELB14*** CHALLENGES AND APPROACHES TO HUMERUS FRACTURE IN A RED TEGU (*SALVATOR RUFESCENS*) – A CASE REPORT - Seven Mustafa et al.
14:45 – 15:00	***O1NIPMELB15*** SUSCEPTIBILITY TO ANTIMICROBIAL AGENTS OF BACTERIA ISOLATED FROM HORSE URINE - Mariyana Nikolova & Sasho Sabev
15:00 – 15:15	***O1NIPMELB16*** TESTING THE IMMUNOSTIMULATORY EFFECT OF LAVENDER ESSENTIAL OIL IN BROILER CHICKENS - Anelia Mladenova et al.
15:15 – 15:30	***INFINITA BULGARIA*** HOW ARE THE MODERN TECHNOLOGIES PROVIDED BY INFINITY TRANSFORMING VETERINARY CARE? Dr. Aleksandar Grozdev /Yundola Hall/
15:30 – 16:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
16:00 – 16:15	***VKASIS LTD*** BRAVECTO INJECTABLE: 12-MONTH PROTECTION AND INNOVATION IN PARASITE CONTROL Dr. Vanya Stefchova /Yundola Hall/

16:15 – 16:30	***O1NIPMELB17*** CLINICAL STUDIES ON EXERCISE INDUCED PULMONARY HEMORRHAGE IN HORSES - Sasho Sabev & Mariyana Nikolova
16:30 – 16:45	***O1NIPMELB18*** EVALUATION OF PHYSIOLOGICAL PARAMETERS IN ENDURANCE HORSES DURING LIMITED DISTANCE TRAINING - Mina-Maria Marinova et al.
16:45 – 17:00	***O1NIPMELB19*** METHODS FOR CORRECTING CANNIBALISM IN GAME BIRDS AND POULTRY - Slavko Nikolov
17:00 – 17:15	***O1NIPMELB20*** STRUCTURAL CHANGES IN THE CONNECTIVE TISSUE OF THE SKIN IN SHEEP WITH PATHOLOGY - Sklyarova Mariya Dmitrievna et al.
POSTER SESSION	
17:15 – 17:20	***P1NIPMELB1*** SEXING OF SPERM: HISTORY AND FUTURE - Krasimir Kotzev et al.
17:20 – 17:25	***P1NIPMELB2*** TEMPORAL DYNAMICS OF HYPERACTIVATION OF RAM SPERMATOZOA AS A RESULT OF CHANGE ON THE KINEMATIC PARAMETERS - Krasimir Kotzev et al.
17:25 – 17:30	***P1NIPMELB3*** LACK OF DIVERSITY IN LEPTIN GENE IN RAMS FROM TWO BULGARIAN SHEEP BREEDS - Ivona Dimitrova et al.
17:30 – 17:35	***P1NIPMELB4*** STUDY OF THE G1 MUTATION POINT OF THE GDF9 GENE AND ITS RELATIONSHIP WITH FECUNDITY IN AWASI SHEEP - Ivona Dimitrova et al.
17:35 – 17:40	***P1NIPMELB5*** STUDYING THE RELATIONSHIP BETWEEN HEAT LOAD INDEX, TEMPERATURE-HUMIDITY INDEX AND COMFORT IN DAIRY COWS - Dimo Dimov et al.
17:40 – 17:45	***P1NIPMELB6*** CLINICAL SIGNIFICANCE OF ANTIOXIDANT ENZYME ACTIVITY AND BLOOD PROFILE ALTERATIONS IN DOGS WITH MAMMARY TUMORS - Krasimira Genova et al.
17:45 – 17:50	***P1NIPMELB7*** MICROMORPHOLOGICAL ALTERATIONS IN THE PANCREAS OF RATS FED DIFFERENT HIGH-CALORIE DIETS AND EFFECTS OF REPLACING SUCROSE WITH STEVIOL GLYCOSIDES - Krastina Trifonova et al.
17:50 – 17:55	***P1NIPMELB8*** SQUAMOUS CELL CARCINOMA OF THE CORNEA IN FRENCH BULLDOG – CASE REPORT - Vladi Nedev & Ismet Kalkanov
17:55 – 18:00	***P1NIPMELB9*** COMPARATIVE MORPHOMETRIC ANALYSIS OF ŠARPLANINAC AND KARAMAN SHEPHERD DOGS USING 3D COMPUTER TOMOGRAPHY: IMPLICATIONS FOR BREED DIFFERENTIATION AND CONSERVATION - Dimitar Bozinovski et al.
18:00 – 18:05	***P1NIPMELB10*** THE SKULL OF THE BROWN BEAR: A REFLECTION OF THE HUMAN IMPACT ON WILDLIFE - Vayana Koleva et al.
18:05 – 18:10	***P1NIPMELB11*** ALPHA-GAL SYNDROME – A MYSTERY OR THE AMERICAS' NEW PANDEMIC – A REVIEW - Mira Ivanova & Barash Murad
18:10 – 18:15	***P1NIPMELB12*** EFFECT OF A SOLAR-POWERED HEATING SYSTEM ON GROWTH PERFORMANCE IN WEANED RABBITS DURING WINTER REARING - Denis Viryanski & Milena Bozhilova-Sakova

SESSION ***INFECTIOUS PATHOLOGY*** ***Hall №2*** ***Chairman:*** Prof. Ali Aydın, PhD; Assoc. Prof. Georgi Stoimenov, PhD ***Secretary***: Chief Assist. Prof. R. Rafailov	
ORAL PRESENTATIONS	
9:00	***KRKA BULGARIA*** PRODUCT PRESENTATION
09:00 – 09:15	***O2IP1*** EFFICACY OF *SALMONELLA* VACCINATION AGAINST *SALMONELLA* ENTERITIDIS AND *S.* TYPHIMURIUM SEROVARS IN COMMERCIAL BROILER FARMS AND ANTIMICROBIAL RESISTANCE OF *SALMONELLA* ISOLATES - Krasen Penchev & Hristo Daskalov
09:15 – 09:30	***O2IP2*** ANTIMICROBIAL RESISTANCE OF *ESCHERICHIA* COLI AND *ENTEROCOCCUS* FAECALIS ISOLATES FROM BROILERS VACCINATED WITH LIVE *SALMONELLA* VACCINE - Krasen Penchev et al.
09:30 – 09:45	***O2IP3*** VACCINE IMMUNE RESPONSE IN THE DOG: CHALLENGES - Velislav Grishev & Kristin Kaneva
09:45 – 10:00	***O2IP4*** DISTRIBUTION OF HEPATITIS E VIRUS IN DOMESTIC RUMINANTS: A REVIEW - Kristin Kaneva &Velislav Grishev
10:00 – 10:15	***O2IP5*** STUDY ON THE SPREAD OF ANTHRAX IN ANIMALS, DURING THE PERIOD 2016 – 2018 IN BULGARIA - Yosko Petkov
10:15 – 10:30	***SAMBS BULGARIA*** LOWER URINARY TRACT PROBLEMS IN DOGS AND CATS Dr. Tsvetomir Levchev /Yundola Hall/
10:30 – 11:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
11:00 – 11:15	***NESTLE PURINA BULGARIA*** INTESTINAL BARRIER AND ITS ROLE IN THE DEVELOPMENT OF CHRONIC DISEASES Dr. Georgi Harizanov
11:15 – 11:30	***O2IP6*** CLINICAL STUDIES AND DIAGNOSTIC TESTS IN ENZOOTIC ANTHRAX OUTBREAKS IN BULGARIA, DURING THE PERIOD 2016 – 2018 - Yosko Petkov
11:30 – 11:45	***O2IP7*** DETERMINATION OF THE EFFECTS OF EUTHANASIA METHODS (ICE ASPHYXIATION AND ASPHYXIATION) ON MEAT QUALITY IN NILE TILAPIA (*OREOCHROMIS NILOTICUS*) - Ece Cetin et al.
11:45 – 12:00	***O2IP8*** CONTROL OF *VARROA DESTRUCTOR* WITH DIFFERENT COMBINATIONS OF ESSENTIAL OILS - Delka Salkova et al.
12:00 – 12:15	***O2IP9*** SURVEY OF INTESTINAL NEMATODE INFECTIONS AFFECTING SHELTER DOGS IN NORTH MACEDONIA - Bojana Chapkunovska et al.

12:15 – 12:30	***O2IP10*** KOI HERPESVIRUS AND SPRING VIREMIA OF CARP – LABORATORY DIFFERENTIAL DIAGNOSTIC MODEL - Ekaterina Mileva
12:30 – 12:45	***O2IP11*** HYGIENE INDICATORS OF BEEF MEAT TREATED WITH ELECTROACTIVATED WATER - Stanislav Radanski et al.
12:45 – 13:00	***SAMBS BULGARIA*** SEMINTRA - A SOLUTION FOR CHRONIC RENAL FAILURE AND HIGH BLOOD PRESSURE IN CATS - Dr. Ivaylo Donchev /Yundola Hall/
13:00 – 14:00	***ОБЯД/LUNCH***
14:00	***KRKA BULGARIA*** PRODUCT PRESENTATION
14:00 – 14:15	***O2IP12*** PROBIOTICS AS SELECTIVE INHIBITORS OF PATHOGENS AND EFFECTIVE ALTERNATIVE TO ANTIBIOTICS FOR AVIAN HEALTH - Tandzu Mehmedov & Eva Gyurova
14:15 – 14:30	***O2IP13*** PODODERMATITIS IN ZOO ELEPHANTS – MICROBIOLOGICAL STUDIES - Teodora P. Popova & Andreas Antoniou
14:30 – 14:45	***O2IP14*** SEVERE AELUROSTRONGYLOSIS IN A STRAY KITTEN FROM THE AREA OF SOFIA, BULGARIA - Mariana Panayotova-Pencheva
14:45 – 15:00	***O2IP15*** THE STATUS OF THE EAST BALKAN PIG POPULATION IN THE CONTEXT OF INFECTIOUS DISEASES AND CLIMATE CHANGE - Angel Mavrovski & Radka Malinova
POSTER SESSION	
15:00 – 15:05	***P2IP1*** PREVALENCE AND PHYLOGENETIC GROUPS OF *ESCHERICHIA COLI* IN RAW FROZEN CHICKEN MEAT FROM ISTANBUL - Ali Anil Suleymanoglu & Ali Aydin
15:05 – 15:10	***P2IP2*** THE IMPORTANCE OF THE PRESENCE OF *ESCHERICHIA COLI* IN CHICKEN EGGS FOR VETERINARY PUBLIC HEALTH - Aynur Sencal & Ali Aydin
15:10 – 15:15	***P2IP3*** SEROPREVALENCE OF WEST NILE VIRUS AMONG EQUIDS IN BULGARIA - Nikolina Rusenova et al.
15:15 – 15:30	***INFINITA BULGARIA*** HOW ARE THE MODERN TECHNOLOGIES PROVIDED BY INFINITY TRANSFORMING VETERINARY CARE? Dr. Aleksandar Grozdev /Yundola Hall/
15:30 – 16:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
16:00 – 16:15	***VKASIS LTD*** BRAVECTO INJECTABLE: 12-MONTH PROTECTION AND INNOVATION IN PARASITE CONTROL - Dr. Vanya Stefchova /Yundola Hall/

16:15 – 16:20	***P2IP4*** THE RELATIONSHIP BETWEEN HAEMATOLOGY AND SERUM BIOCHEMISTRY PARAMETER IN CANINE LEISHMANIOSIS - Petar Dodovski et al.
16:20 – 16:25	***P2IP5*** ORGAN DISTRIBUTION AND PATHOLOGICAL EFFECTS OF *TOXOCARA CANIS* LARVAE IN CHICKENS - Petar Iliev & Kristin Kaneva
16:25 – 16:30	***P2IP6*** INVESTIGATION OF THE EFFICACY OF DORAMECTIN (DECTOMAX™) AGAINST BOVICOLA CAPRAE GURLT, 1843, IN NATURALLY INFESTED DOMESTIC GOATS - Nikola Nizamov
16:30 – 16:35	***P2IP7*** ANALYSIS OF RAW COW MILK QUALITY INDICATORS RELATED TO THE SAMPLING FREQUENCY OF OFFICIAL CONTROL AND SELF-CONTROL - Pravda Yordanova & Veselin Kirov
SESSION ***STUDENT RESEARCH*** ***Yundola Hall*** ***Chairman:*** Prof. Nikoleta Chocirlie, PhD Assoc. Prof. Petar Stamberov, PhD ***Secretary***: Chief Assist. Prof. S. Mustafa, PhD	
ORAL PRESENTATIONS	
9:00	***KRKA BULGARIA*** PRODUCT PRESENTATION
09:00 – 09:15	***O4S1*** ANTI-TICK VACCINES – NEW PROSPECTS IN PREVENTION OF TICK-BORNE DISEASES IN CANINES AND BOVINES - Antoaneta Makarieva et al.
09:15 – 09:30	***O4S2*** COMPARATIVE MORPHOLOGICAL STUDY OF THE BLOOD VESSELS OF THE ZEUGOPODIUM AND AUTOPODIUM IN THE TWO-HUMPED CAMEL (*Camelus bactrianus, L. 1758)* - Mariya Meteva et al.
09:30 – 09:45	***O4S3*** ULTRASOUND PREGNANCY EXAMINATION IN SMALL RUMINANTS: PRINCIPLES, TECHNIQUES, AND APPLICATIONS - Panagiotis Kotsiopoulos et al.
09:45 – 10:00	***O4S4*** CHEMICAL CASTRATION IN DOGS AND CATS - Ioanna Flessa et al.
10:00 – 10:15	***O4S5*** PERSPECTIVES ON SMALL BOWEL TRANSPLANTATION FOR MALABSORPTION AND ENTEROPATHIES IN DOGS - A REVIEW - Siyana Stefanova et al.
10:15 – 10:30	***SAMBS BULGARIA*** LOWER URINARY TRACT PROBLEMS IN DOGS AND CATS Dr. Tsvetomir Levchev /Yundola Hall/
10:30 – 11:00	**КАФЕ ПАУЗА (COFFEE BREAK)**
11:00 – 11:15	***NESTLE PURINA BULGARIA*** INTESTINAL BARRIER AND ITS ROLE IN THE DEVELOPMENT OF CHRONIC DISEASES Dr. Georgi Harizanov

11:15 – 11:30	***O4S6*** JAW TENSION AND IMMUNE INTENTION: A CLINICAL CASE OF EOSINOPHILIC MASTICATORY MYOSITIS IN A GSD - Ivan Panayotov et al.
11:30 – 11:45	***O4S7*** COMPARATIVE MORPHOLOGICAL STUDY OF THE MOTOR APPARATUS OF THE FORE- AND HIND LIMB IN THE TWO-HUMPED CAMEL - Martina Pencheva et al.
11:45 – 12:00	***O4S8*** OVERVIEW OF COMMON FOOD-RELATED TOXICOSES IN DOGS - Cvetana Levonova & Toni Todorov
12:00 – 12:15	***O4S9*** DYSECDYSIS IN LEOPARD GECKOS (*EUBLEPHARIS MACULARIUS*) - RETAINED SHED AND SOLUTIONS - Mariya Braykova et al.
12:15 – 12:30	***O4S10*** STANDARDIZED EJACULATE ASSESSMENT IN BOAR - Mira Naydenova et al.
12:30 – 12:45	***O4S11*** INFRARED THERMOGRAPHY IN PANTHERS (*PANTHERA ONCA, PANTHERA LEO, PANTHERA TIGRIS*) - Konstantina Ivanova et al.
12:45 – 13:00	***SAMBS BULGARIA*** SEMINTRA - A SOLUTION FOR CHRONIC RENAL FAILURE AND HIGH BLOOD PRESSURE IN CATS - Dr. Ivaylo Donchev /Yundola Hall/
13:00 – 14:00	***ОБЯД/LUNCH***
14:00	***KRKA BULGARIA*** PRODUCT PRESENTATION
14:00 – 14:15	***O4S12*** INTRALUMINAL STENT APPLICATION FOR TREATMENT OF TRACHEAL COLLAPSE IN DOGS - Piotr Stefanek et al.
14:15 – 14:30	***O4S13*** EXPLORING ECG DYNAMICS UPON NOCICEPTION STIMULI IN CATS DURING ROUTINE OVARIOHYSTERECTOMY - Silvi Vladova et al.
14:30 – 14:45	***O4S14*** PARASITIC FAUNA OF DOGS LIVING IN SHELTERS FROM SOFIA AND SOFIA-DISTRICT TERRITORY - Ekaterina Nenova et al.
14:45 – 15:00	***O4S15*** ENDOPARASITIC STATUS OF REPTILES FROM DIFFERENT REGIONS OF BULGARIA - Evmorfia Ivanova et al.
15:00 – 15:15	***O4S16*** CANINE HYPOTHYROIDISM WITH CLINICAL SIGNS OF ALOPECIA WITHOUT PRURITUS - A CASE REPORT - Yoanna Chonova et al.
15:15 – 15:30	***INFINITA BULGARIA*** HOW ARE THE MODERN TECHNOLOGIES PROVIDED BY INFINITY TRANSFORMING VETERINARY CARE? Dr. Aleksandar Grozdev /Yundola Hall/
15:30 – 16:00	**КАФЕ ПАУЗА (COFFEE BREAK)**

16:00 – 16:15	***VKASIS LTD*** BRAVECTO INJECTABLE: 12-MONTH PROTECTION AND INNOVATION IN PARASITE CONTROL Dr. Vanya Stefchova /Yundola Hall/
16:15 – 16:30	***O4S17*** APPLICATION OF ELECTROACTIVATED AQUEOUS SOLUTIONS IN THE SEAFOOD INDUSTRY - Stanislav Radanski et al.
POSTER SESSION	
16:30 – 16:35	***P4S1*** VETERINARY MEDICINAL PRODUCTS USE AND ANTIMICROBIAL RESISTANCE CONTROL - Anna P. Peneva et al.
16:35 – 16:40	***P4S2*** STATUS AND CONVERSATION MEASURES OF BROWN BEARS (URSUS ARCTOS L.) ON THE BALKANS – COMPARATIVE ANALYSYS BETWEEN THE COUNTRIES OF THE REGION - Stefan Hristov et al.
16:40 – 16:45	***P4S3*** LEGISLATION ANALYSIS AND VETERINARY HYGIENE PARAMETERS RELATED TO CAMEL BREEDING IN BULGARIA - Valeria Andreou et al.
16:45 – 16:50	***P4S4*** LION'S MANE MUSHROOM: A NATURAL APPROACH TO PREVENTING NEUROLOGICAL DISEASES IN DOGS – A REVIEW - Daniel Stoyanov & Mira Ivanova
16:50 – 16:55	***P4S5*** VIRTUAL REALITY AND ARTIFICIAL INTELLIGENCE IN VETERINARY MEDICINE – A REVIEW - Panagiotis Kotsiopoulos et al.
16:55 – 17:00	***P4S6*** OFFICIAL CONTROL OF REMOTE TRADE IN FOODSTUFFS - Marina Marionava & Gergana N. Balieva
17:05 – 17:10	***P4S7*** ANTIMICROBIAL RESISTANCE – STRATEGIES AND OPPORTUNITIES - Petya Boykova & Gergana N. Balieva
17:10 – 17:15	***P4S8*** LATE GESTATION-ASSOCIATED BIOCHEMICAL AND PHYSIOLOGICAL SHIFTS IN DAIRY COWS - Silvi Vladova et al.
17:15 – 17:20	***P4S9*** HEPATIC NODULAR HYPERPLASIA IN A 10-YEAR-OLD BULGARIAN SHEPHERD DOG – A CASE REPORT - Miroslav Karatanchev & Georgi Popov
18:30 – 19:00	**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 (27.04.2025)	
8:00 – 9:00	**ЗАКУСКА/BREAKFAST**
9:00 – 9:30	**ЗАКРИВАНЕ НА КОНФЕРЕНЦИЯТА/ CLOSING CEREMONY OF THE CONFERENCE**
09:30 – 11:00	СОЦИАЛНА ПРОГРАМА С ПОСЕЩЕНИЕ НА ЦАРИ МАЛИ ГРАД И ОТПЪТУВАНЕ НА АВТОБУСА ЗА СОФИЯ /SOCIAL PROGRAM - VISIT OF TSARI MALI GRAD AND DEPARTURE BY BUS TO SOFIA

SESSION
PLENARY REPORTS

PLENARY REPORT

ANTIMICROBIAL RESISTANCE AS A GLOBAL THREAT IN THE NEW CENTURY

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ABSTRACT

Antimicrobial resistance (AMR) is one of the Global Health challenges of the 21st century. Available knowledge about AMR has mostly come from the high-income countries and is scattered in studies across various fields, focused on infectious diseases, transmission pathways, pathogen reservoirs, the extent of the problem at a population level (public health), etc. That is why there is a huge need to reframe AMR in the current public health and the global health in the context of One Health concept. The differences and similarities between individual stakeholder goals and the gaps and challenges in combating AMR at different levels require a comprehensive analysis of host and microbial heterogeneities, the role of surrounding ecosystems and the challenges they pose to surveillance, antimicrobial stewardship and infection control which are the traditional cornerstones of controlling AMR in human and animal health. Rapidly growing worldwide AMR to clinically administered antibiotics and chemotherapeutics necessitates the search for alternative sources of antimicrobial agents and approaches for the prevention and treatment of infectious diseases in human and veterinary medicine, for the preservation of food products in the food industry, disinfection of surfaces, etc. In this aspect, intensive research is conducted in several directions, namely: search for new substances of natural origin with low-toxic antimicrobial action, testing of new drug delivery systems, incl. nanoparticles and others complex systems, research of various combinations of biologically active substances and antibiotics in order to increase their activity and reduce their application dose. These modern approaches are the subject of the studies presented here.

Keywords: antimicrobial resistance, infectious diseases, antibiotics, One Health concept, new antimicrobial agents.

PLENARY REPORT

NOVEL ESHERICHIA COLI RESISTANCE PROFILES THREATENING GLOBAL HEALTH

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ABSTRACT

Esherichia coli (E. coli) is a significant bacterial species with both commensal and pathogenic variants. The pathogenic E. coli strains pose a serious threat to public health,

causing epidemics and emerging in new strains on a regular basis. Both pathogenic and commensal types are increasingly becoming prominent due to their development of antibiotic resistance mechanisms. Notably, the transmission of resistance genes, particularly through mobilized genetic materials, is of particular concern. Currently, E. coli strains that produce extended-spectrum beta-lactamase and are resistant to carbapenems and colistin are major concerns. The rise of resistance in E. coli, particularly against last-resort antibiotics, poses a threat to public health and complicates the treatment of uropathogenic E. coli infections. The prevalence of multi-antibiotic resistance in E. coli complicates treatment and increases dependence on vital antibiotics. Identifying the sources of resistance in E. coli strains is crucial for combating this bacterium, but it presents a complex challenge. Its ubiquitous presence in various environments, along with its ability to spread globally through food, complicates efforts to track and contain it. Enterohemorrhagic E. coli, found in food animals and transmitted through contaminated food, poses a significant public health threat. Cross-contamination plays a crucial role in the transmission of foodborne illnesses, underscoring the importance of food safety in this context. Human and veterinary doctors should collaborate to combat antibiotic resistance and E. coli through preventive medicine, following the One Health concept.

Keywords: *Esherichia coli*, antibiotic resistance, One Health concept.

SESSION
NON-INFECTIOUS PATHOLOGY
MORPHOLOGY, ECOLOGY AND LIVESTOCK BREEDING

O1NIPMELB1

THE ANTI-IL-31 ANTIBODY LOKIVETMAB AS A NEW ADDITIONAL OPTION FOR CANINE ATOPIC DERMATITIS MANAGEMENT

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ABSTRACT

The therapy and long term management of atopic dermatitis in dogs is a complex multicomponent process that may include various therapeutic modalities and approaches based on the various factors involved in this disease. There is no universal therapeutic plan for every patient with atopy. The multimodal approach may include local and systemic corticosteroids, cyslosporin, oclacitinib, medical bathing, local ceramides and Lokivetmab. Lokivetmab is the anti- IL-31 antibody, which is novel biomarker and target for therapy of atopy. IL-31 is a cytokine that induces itch when injected to dogs. Lokivetmab binds to dog IL-31 before it binds to its receptor preventing in this way the main pruritogenic effect of IL-31. The unique design of anti-IL-31 antibody determines its high safety - it will work in all cases where clinical signs are caused by IL-31.

Keywords: Atopy therapy, anti-IL-31 antibody.

O1NIPMELB2

BIOCHEMICAL AND PHYSIOLOGICAL RESPONSES IN DAIRY COWS AFTER TRANSRECTAL EXAMINATION

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ABSTRACT

The evaluation of physiological stress indicators provides valuable insights into the stress responses of dairy cows subjected to routine handling procedures such as transrectal examination. This study investigated changes in cortisol levels, heart rate, and rectal temperature in dairy cows with different behavioral profiles following transrectal examination. All measured indicators showed significant increases after the procedure, except the temperature, indicating a clear physiological stress response. The average cortisol level is 2.30±0.26 U/ml, and after the rectal examination it is 2.45±0.34 U/ml. The level of white blood cells increases by 0.7%, the levels of ALAT increase by 7.33* U/ml, the levels of ASAT by 15.67* U/ml, the levels of glucose increase by 0.63U/ml. From the physical indicators - the systole increases by 12.5*mm/Hg, the diastole - 3.33*mm/Hg, the pulse increases by an average of 10.84 beats/min. The average temperature before the rectal examination is 37.7°C, after the rectal examination it drops to 36.93°C. The results can contribute to refining handling practices to improve animal welfare.

Keywords: Cortisol, pulse, temperature, transrectal examination, cows, stress.

O1NIPMELB3

ECHOCARDIOGRAPHIC FINDINGS OF VALVULAR HEART DISEASE IN BROWN BEARS

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ABSTRACT

This study aimed to evaluate the cardiac functions of Eurasian brown bears (Ursus arctos arctos) living in a seminatural area. Cardiologic examinations were performed using echocardiography. The study was conducted in the "Bear Sanctuary", Belitsa, Bulgaria. The echocardiographic study was conducted on 5 brown bears. They were anesthetized with zoletil, medetomidine and butorphanol. All the studied bears found varying degrees of mitral and pulmonary valve insufficiency. In one of them, we found pericardial effusion.

Keywords: echocardiography, mitral, pulmonary, valve, brown bear.

O1NIPMELB4

BASIC PROCEDURES FOLLOWED IN CASES OF ANIMAL ABUSE

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ABSTRACT

Animal abuse continues to be an actual problem in nowadays. In cases of abuse and to assist the Court, procedures have been established and implemented in a specific sequence. Forensic veterinary medicine is the medical science that is applied to clarify various forms of animal abuse. This science studies, develops and clarifies veterinary medical issues arising in the work of the administration of justice. In cases of animal abuse, the investigating authorities (Ministry of Internal Affairs), the Prosecutor's Office or the Court are involved. Forensic medical examination protocols in veterinary medicine introduces standardization that promotes objectivity and thoroughness. The use of a standard operative protocol means that each case follows a precisely defined order, which, if followed, leads to reliable documentation. In the course of the investigation, the authorities can appoint a forensic veterinary medical expertise. Forensic medical expertise helps the Court in revealing the material truth of the case under consideration. In this way, forensic medical examination actively contributes to the observance and strengthening of the rule of law.

Keywords: abuse, animal, forensic veterinary medicine, expertise.

O1NIPMELB5

CASES OF ABUSE IN SMALL ANIMALS (DOGS) IN THE CITY OF SOFIA FOR THE PERIOD 2020-2024

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ABSTRACT

Animal abuse continues to be a current problem today. Four main types of animal abuse are distinguished: physical, sexual and emotional abuse and neglect. In some cases, more than one type of abuse may exist. This classification is applied to companion animals, but it can be used in appropriate cases for all other groups of animals. All presented cases of abuse are within the framework of preliminary proceedengs conducted by Ministry of Internal affairs, investigations by the Prosecutor's Office and Court. Forensic veterinary medical experts have been appointed to clarify the circumstances and assist the judicial authorities. This study examines cases of abuse of companion animals - dogs from the Sofia region. Cases of physical abuse and neglect in the keeping of companion animals predominate. Single cases of emotional abuse followed by physical abuse have been revealed during the clarification of circumstances in the initiated pre-trial proceedings.

Keywords: abuse, dogs, forensic veterinary medical expertise.

O1NIPMELB6

DIAGNOSIS OF BOVINE SUBCLINICAL MASTITIS

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ABSTRACT

Bovine subclinical mastitis is a non-symptomatic form of intramammary inflammation with a normal appearing mammary gland and milk. This form of the disease is highly prevalent and causes significant economic losses, which requires accurate detection of the affected animals. The aim of this study is to explore different methods, such as somatic cell count, microbiological examination, physicochemical examination and electrical conductivity of milk, mammary gland ultrasonography and the presence of biomarkers in milk and their role in diagnosis of the disease.

Keywords: bovine, subclinical, mastitis, diagnosis.

O1NIPMELB7

GOOD VETERINARY PRACTICES IN MONITORING, PREVENTION AND TREATMENT OF HYPOCALCEMIA IN DAIRY COWS

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ABSTRACT

This study reviews good veterinary practices related to the monitoring, prevention and treatment of hypocalcemia in dairy cows. Subclinical hypocalcemia (HC) usually occurs 1-2 days after calving when blood calcium levels are ≤ 2.0 to 2.2 mmol/L. Good practice for monitoring subclinical hypocalcemia (HC) is to take regular blood samples from animals at risk of hypocalcemia – cows of 3 or more parities, cows with high milk yield – over 30 kg/day, Jersey cows and their crosses. An established good veterinary practice is the treatment with vitamin D about 8 days before calving during the dry period. A good veterinary practice for prevention is treatment with an oral calcium bolus immediately after calving and a 2nd bolus 12 hours later. Clinical cases of hypocalcemia (HC) in cows are treated intravenously with calcium chloride or calcium propionate because of their better absorption capacity.

Keywords: hypocalcemia, good veterinary practices, monitoring, prevention and treatment.

O1NIPMELB8

SQUAMOUS CELL CARCINOMA IN DOGS AND CATS – A RETROSPECTIVE STUDY OF 100 CASES (2020 – 2024)

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ABSTRACT

Squamous cell carcinoma (SCC) is one of the most common malignant epithelial neoplasms that originate from the skin or some mucous surfaces. The tumor can be observed in young animals but the incidence increases with the age. There is no sex predisposition. Variety breeds of dogs and cats are known that are under danger of formation of such a tumor. The sides and gross appearance vary, thus the pathomorphological examination is always necessary for the diagnosis. The aim of the current study was to determinate the incidence of SCC in dogs and cats over a certain period of time, as well as to investigate breed, sex and age predispositions. Variety of the morphological presentation, including keratin accumulations, necrotic and degenerative changes, type and significance of inflammatory response were also examined. A total of 100 cases of SCC (62 dogs; 38 cats), diagnosed by cytopathological and histopathological examination, in the period of 2020 and 2024 were included. The feline cutaneous and mucosal SCC incidence was equal, in contrast of dogs where the cutaneous ones was predominated. The tumor was observed mostly in mixed breed dogs, but the pick of incidence in purebreds was detected in Labrador and Golden Retriever. The average age of the diagnosed dogs was about 9 years old (range 3 – 16 years). The male dogs were twice more affected comparing to the female ones. Most of feline cases were in mix breeds. The number of the affected queens and tom-cats was equal, the average age was 10 years old (range 4 – 16 years).

Keywords: squamous cell carcinoma, retrospective study, dog, cat, histopathology.

O1NIPMELB9

PATHOHISTOLOGICAL CHARACTERISTICS OF SPONTANEOUS MAMMARY TUMORS IN THE BITCH IN BULGARIA

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ABSTRACT

The pathohistological characteristics of 256 spontaneous mammary tumors in the bitch were examined and analyzed at the Department of General and Clinical Pathology, Faculty of Veterinary Medicine, Trakia University - Stara Zagora. The neoplastic formations were fixed in a 10% solution of neutral buffered formalin and processed according to the classical histological technique. We classified the tumors according to the histological classification for canine mammary tumors published by Goldschmidt et al., (2011). 5 types of benign and 11 types of malignant tumors were diagnosed. Mixed mammary gland tumors (14.39 %) and fibroadenomas (8.71 %) predominated among the benign ones, and tubulopapillary carcinoma

(22.73 %) and solid carcinoma (11.74 %) prevailed among the malignant ones. Based on the conducted research, we can conclude that mammary gland tumors are an important problem in the pathology of dogs. We believe that tracking their pathohistological characteristics will contribute to modern diagnostics and therapy.

Keywords: mammary gland tumors in the bitch, pathohistological studies.

O1NIPMELB10

SECONDARY ECTOPIC PREGNANCY IN A DOG – A CASE REVIEW

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ABSTRACT

Ectopic pregnancy in canines is a rare reproductive abnormality characterized by extrauterine development of the fetus. The condition can be classified as either primary - resulting from the direct implantation of a fertilized ovum onto peritoneal or omental surfaces - or secondary, caused by uterine rupture with subsequent fetal displacement into the abdominal cavity. In secondary ectopic pregnancies, the expelled fetus may adhere to various intra-abdominal organs, such as the omentum, liver, spleen, or stomach. This case report describes a secondary ectopic pregnancy in a 4-year-old mixed-breed female dog, diagnosed incidentally during a routine clinical examination. The patient exhibited no clinical signs indicative of reproductive or any other pathology, highlighting the importance of considering ectopic pregnancy even in asymptomatic individuals.

Keywords: ectopic pregnancy, canine reproduction, uterine rupture, asymptomatic pathology.

O1NIPMELB11

PRACTICAL DIAGNOSTICS OF MYXOMATOUS MITRAL VALVE DISEASE IN THE DOG: A PRELIMINARY ANALYSIS OF RADIOGRAPHIC AND LABORATORY TOOLS AND FINDINGS

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ABSTRACT

As the most frequent cardiac disease in the dog, myxomatous mitral valve disease (MMVD) is one of the major challenges in veterinary clinical practice. Whether they live in an apartment in a bustling city or in a village backyard, it is believed that most of the canine population under 20 kilograms will develop this primary degenerative disease at some point in their lives. Because of this, veterinarians should be acquainted with and have at their disposal a variety of tools, which they may use based on their present conditions. In response to this necessity, we have looked into several easily performed laboratory parameters, including NT-proBNP and cTnI, and five radiographic methods (VHS, VLAS, M-VLAS, RLAD and LAWIDTH), which, together with the physiological examination, can be applied successfully

in daily practice to both diagnose and determine the stage of the disease and, from there, the need for treatment as well.

Keywords: canine, myxomatous, mitral, MMVD, radiography, laboratory.

O1NIPMELB12

COMPARATIVE HISTOLOGICAL ANALYSIS OF THE SPLEEN IN BACTRIAN CAMEL (*CAMELUS BACTRIANUS*) AND ALPACA (*VICUGNA PACOS*)

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ABSTRACT

The spleen plays a crucial role in immune function and blood filtration, with species-specific histological adaptations reflecting ecological and physiological differences. This study presents a comparative histological analysis of the spleen in the Bactrian camel (*Camelus bactrianus*) and the alpaca (*Vicugna pacos*). Tissue samples were collected from one camel and one alpaca, and histological slides were prepared using the hematoxylin-eosin staining method. The structural organization of the spleen parenchyma and blood vessels was examined to identify species-specific differences. Variations in the architecture of the white and red pulp, trabecular thickness and vascularization patterns were investigated. The observed findings contribute to a better understanding of comparative splenic morphology and its implications for veterinary medicine and evolutionary biology.

Keywords: spleen, histology, Bactrian camel, alpaca, hematoxylin-eosin, comparative anatomy.

O1NIPMELB13

DISCREPANCY BETWEEN OWNER-REPORTED AND CLINICALLY CONFIRMED PAIN IN DOGS WITH OSTEOARTHRITIS: A CROSS-SECTIONAL STUDY USING VALIDATED TOOLS AND GAIT ANALYSIS

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ABSTRACT

The early identification of osteoarthritis (OA) in the canine population is critical for the implementation of optimal treatment protocols. This study assessed the discrepancies between owner-reported pain levels and clinical indicators of OA, utilizing three validated assessment instruments: Canine Brief Pain Inventory (CBPI), Helsinki Chronic Pain Index (HCPI), and the Liverpool OsteoArthritis in Dogs (LOAD) scale, in conjunction with gait analysis. A total of 259 dog owners participated in a survey, allowing for a comparative analysis of pain scores against owners' perceptions of their dogs' conditions. Most of the

owners 71.4% (185/259) reported their dogs experienced no pain, yet 44.3% (82/185) of these dogs demonstrated moderate to severe pain as indicated by clinical assessment tools. In total, 21.6% (56/259) of dogs exhibited lameness, however only 7.1% (4/56) had owners who failed to recognize pain. These findings underscore a significant underrecognition of OA symptoms among dog owners. To address this gap, enhancing owner education and integrating objective diagnostic methodologies into routine veterinary examinations may facilitate earlier intervention and improve overall outcomes.

Keywords: dog, osteoarthritis, pain level assessment, gait analysis.

O1NIPMELB14

CHALLENGES AND APPROACHES TO HUMERUS FRACTURE IN A RED TEGU (*SALVATOR RUFESCENS*) – A CASE REPORT

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ABSTRACT

A clinical case of a red tegu (*Salvator rufescens*) from the Teiidae family with a diaphyseal fracture of the humerus is presented. Intramedullary osteosynthesis was performed under general anesthesia using medetomidine hydrochloride and ketamine hydrochloride, in combination with inhalation anesthesia with isoflurane. Hematological studies were performed with monitoring of serum calcium and phosphorus levels – indicators of key importance in orthopedic cases in reptiles. The main challenges in surgical interventions in reptile veterinary medicine are reviewed, emphasizing the specifics of this species, including the physiological state of brumation. Imaging-diagnostic and paraclinical methods for monitoring postoperative recovery are presented, as well as the application of regenerative therapy with autologous platelet-rich plasma – a method used for the first time in Bulgaria in a lizard.

Keywords: fracture, humerus, osteosynthesis, tegu, lizard.

O1NIPMELB15

SUSCEPTIBILITY TO ANTIMICROBIAL AGENTS OF BACTERIA ISOLATED FROM HORSE URINE

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ABSTRACT

The aim of the present study was to perform a microbiological examination of urine from horses, to isolate and identify bacterial agents and to determine their sensitivity to antimicrobial agents. Samples were taken from 29 horses, divided into three groups – Group one - with clinical signs of the urinary system (5 horses), Group two - defined as risky due to diseases of other organs and systems (16 horses) and Group three - control (8 horses).

Bacterial microflora was isolated from 14 samples (5 samples from Group one and 9 samples from Group two). Fourteen strains were identified, of which 7 strains (50%) *Pseudomonas spp*, 5 strains (35.7%) *Klebsiella spp*. and 2 strains (14.3%) *Streptococcus spp*. Gram-negative bacteria showed preserved sensitivity to gentamicin, ceftazidime and fluorinated quinolones and resistance to tetracycline and trimethoprim/sulfamethoxazole combination, and streptococci exhibited sensitivity to amoxicillin, Augmentin (amoxicillin/clavulanic acid) and ceftazidime and variable resistance to gentamicin, tetracycline and the combination trimethoprim/sulfamethoxazole.

Keywords: horses, urinary system, bacteria, antibiotics, resistance.

O1NIPMELB16

TESTING THE IMMUNOSTIMULATORY EFFECT OF LAVENDER ESSENTIAL OIL IN BROILER CHICKENS

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ABSTRACT

Studies were conducted to determine the effect of Bulgarian lavender essential oil - *Lavandula angustifolia Mill.,* varieties Sevtopolis, Hemus and Yubileyna, on the antibody titers of chickens against Newcastle Disease virus (NDV). 40 twenty-day-old broiler chickens of both sexes, Ross 308 hybrids, were used. They were vaccinated against NDV at one day of age with B1 vaccine. The experimental chickens (20 pcs.) received lavender essential oil daily with their food from 25 days of age in a final concentration of 0.01% or an average of 5 mg per chicken twice a day for 30 days. The control chickens (20 pcs.) were fed in the same way, but without the addition of essential oil. It was found that the experimental birds retained high levels of antiviral antibodies (1:2048), with a twofold decrease in their titer compared to that at the beginning of the experiment (1:4096). In the control birds, the titer of specific antibodies decreased significantly and reached 1:256 on the 55th day, with the decrease being eight times greater than in the experimental chickens. The results show a positive effect of lavender essential oil on the immune response.

Keywords: lavender essential oil, broiler chickens, immunity.

O1NIPMELB17

CLINICAL STUDIES ON EXERCISE INDUCED PULMONARY HEMORRHAGE IN HORSES

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ABSTRACT

Exercise Induced Pulmonary Hemorrhage (EIPH) is a very common respiratory pathology in horses subjected to extremely intense physical exertion. For this reason, it is

most often diagnosed in horses competing in the disciplines of flat racing and harness racing. The present study was conducted in 2024 and included 18 Thoroughbred horses demonstrating signs of pulmonary hemorrhage (EIPH). The results of the endoscopic examination confirmed the presence of blood in the upper respiratory tract (nasal cavity, larynx and trachea) in all horses. Depending on its amount, the severity of lung damage was determined, and for this purpose, a 4-point scale was applied. Most severely affected (grade 4) were six horses (33.3%), severely affected (grade 3) – 8 horses (44.4%), milder (grade 2) – 2 horses (11.1%) and mildest (grade 1) – two horses (11.1%). In 5 cases there was apparent bleeding from the nostrils. No significant abnormalities in the main clinical parameters were noted. Microbiological examination of tracheal aspirate showed the presence of secondary infection (*Klebsiella* spp., *Streptococcus equi subsp. zooepidemicus*) in two horses.

Keywords: horses, lung, hemorrhage, endoscopy.

O1NIPMELB18

EVALUATION OF PHYSIOLOGICAL PARAMETERS IN ENDURANCE HORSES DURING LIMITED DISTANCE TRAINING

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ABSTRACT

Monitoring physiological and specific blood markers provides valuable insight into a horse's ability to cope with physical stress during endurance training, especially in the early stages of seasonal exercise. In this study, endurance Arabian horses were tested and divided into two groups, each undergoing limited distance training sessions. The horses underwent physical evaluations and infrared thermography scans before and after training sessions. Blood samples were collected for routine haematological and biochemical tests, including serum amyloid A measurement. This study demonstrated that endurance training could affect several physiological parameters and blood markers of muscle metabolism, energy balance and inflammatory response in horses.

Keywords: horses, endurance training, physiological, infrared thermography, serum amyloid A.

O1NIPMELB19

METHODS FOR CORRECTING CANNIBALISM IN GAME BIRDS AND POULTRY

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ABSTRACT

The fight to control cannibalism in routine practice in game birds and domestic breeds is divided into two basic groups of methods. The first group are - direct methods for stopping damaging behavior, through individual manipulations on the birds, without correcting the

predisposing factors. These include beak manipulations (beak trimming, wearing spectacles and rings) and administering medications to stop the cannibalism. Also differentiation and separation of birds with serious injuries and their individual treatment. The second group are - indirect methods, by correcting predisposing factors. They take time to take effect, and do not immediately stop the cannibalism. The implementation of these methods is essential to counteract injurious pecking. They include adjustments in nutrition, lighting and changes in the spatial parameters of breeding, as well as environmental enrichment. In domestic poultry breeds, the most innovative are genetic and molecular approaches, through the development of individual or group selection programs.

Keywords: injurious pecking, feather pecking, cannibalism, game birds, pheasants, domestic birds.

O1NIPMELB20

STRUCTURAL CHANGES IN THE CONNECTIVE TISSUE OF THE SKIN IN SHEEP WITH PATHOLOGY

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ABSTRACT

Melophagosis is a parasitic disease caused by the presence of a wingless fly of the genus Melophagus on the skin. These parasites are widespread all over the world, they cause various diseases in farm animals, as well as losses due to a decrease in the quality of wool. Melophagosis can lead to various changes in sheep's skin, including inflammatory processes, changes in its structure and functions. Studies show that this sheep entomosis can have a negative impact on the structural and functional state of fibroblasts, mast cells, their differentiation and ability to regenerate and skin pathology. At the site of injuries, they degranulate, releasing a large number of inflammatory mediators: histamine, heparin, serotonin, which initiate an inflammatory response and pain syndrome. Understanding these processes is important for developing effective methods of treatment and prevention of this disease.

Keywords: sheep, melophagosis, inflammatory process, mast cells, degranulation, fibroblasts.

P1NIPMELB1

SEXING OF SPERM: HISTORY AND FUTURE

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ABSTRACT

The technology for sorting spermatozoa by their DNA content dates back to the 70s, distinguishing spermatozoa with X and Y chromosomes. The purpose of this article is to trace

the history, present and future of sex-determination technology, with a special emphasis on the reproductive biology of various animal species. The difference in the content of DNA seed fractions carrying different chromosomes is defined as a species trait. Sexing sperm has been successfully applied to cattle and horses, and offspring have been achieved, however, the technology needs to be improved, in terms of increasing the percentage of purity of the sorted samples. The biotechnology of application of sexed semen is of great importance, for example, in pigs, deep intrauterine insemination of sexed semen leads to higher efficiency. The accumulated experimental data on the administration of sexed semen in sheep show low levels of pregnancy due to imperfections in the protocol for semen sampling. Research in cats and dogs is ongoing, with some development in in vitro fertilization, although the practical application is limited. The future of the technology will aim to reduce mechanical stress and improve sperm viability and fertility for a widely applicable and cost-effective process in practice.

Keywords: sexing, sperm, chromosome, DNA.

P1NIPMELB2

TEMPORAL DYNAMICS OF HYPERACTIVATION OF RAM SPERMATOZOA AS A RESULT OF CHANGE ON THE KINEMATIC PARAMETERS

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ABSTRACT

The aim of this study was to follow the dynamics of hyperactivation of ram' spermatozoa after incubation in bovine serum albumin (BSA), containing medium for 4 h on the basis of their kinematic parameters. The experiment was performed with five sexually mature rams. Ejaculates (n = 15) were collected by artificial vagina. The sperm samples were diluted with extender 6A, then incubated (37°C, 5% CO_2 in air) for 4 hours in the absence (control group) or presence (experimental group) of 4 mg/mL BSA to a final concentration of 50×10^6 sperm cells/mL. Analyses for progressive and non-progressive motility, kinematic parameters and hyperactivity were evaluated using the sperm computer analysis system (SCA, Microptic). The results showed that incubation with BSA, resulted in a significant increase in the 4 h values of curved linear velocity (VCL), percentage of fluctuation (WOB), amplitude of lateral displacement of the head (ALH), transverse whiplash frequency (BCF). Conversely, the mean velocity of sperm movement (VAP), velocity in a straight line (VSL), linearity (LIN) and straightness (STR), significantly decreased. Incubation with BSA, under the established conditions, resulted in activation of spermatozoa per ram. Gametes were recorded as hyperactivated when: VCL > 100 µm/s, ALH > 7 µm, LIN < 50%, were recorded at 4 h. Understanding the process of hyperactivation, under conditions of storage of male ruminant gametes, is essential to optimize the subsequent artificial insemination process.

Keywords: sperm hyperactivation, ram, kinematic parameters.

P1NIPMELB3

LACK OF DIVERSITY IN LEPTIN GENE IN RAMS FROM TWO BULGARIAN SHEEP BREEDS

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ABSTRACT

Improving the productive qualities of sheep through conventional strategies is a laborious and slow process. The application of molecular markers in selection allows for early evaluation of animals. The leptin gene is considered a potential candidate gene for meat and milk production. The aim of the study is to investigate the genetic diversity at the T387G locus situated in exon 3 of the leptin gene in North-East Bulgarian Merino breed rams (a meat and wool breed) and rams from the Bulgarian Dairy Synthetic Population (a specialized milk breed). By applying PCR with the following pair of primers F: 5'-AGGAAGCACCTCTACGCTC-3' and F: 5'- CTTCAAGGCTTCAGCACC -3', a fragment of 471 bp from exon 3 of the gene was amplified. Genotyping was performed using the RFLP method. The resulting fragments were treated with restriction enzyme OliI to detect SNPs. The study showed monomorphism - only the G allele and GG genotype were detected. The results show a highly conserved sequence in the leptin gene of rams from both breeds studied.
Keywords: LEP gene, rams, PCR-RFLP method, Bulgarian Dairy Synthetic Population (BDSP), North-East Bulgarian Merino breed (NEBM).

P1NIPMELB4

STUDY OF THE G1 MUTATION POINT OF THE GDF9 GENE AND ITS RELATIONSHIP WITH FECUNDITY IN AWASI SHEEP

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ABSTRACT

Reproduction has a long-term effect on the efficiency of sheep production, and the reproductive potential of a flock is largely determined by heredity, in particular by candidate genes associated with fertility. One significant candidate gene for fecundity is GDF9 (Growth Differentiating Factor 9). The aim of the present study was to investigate the polymorphism in SNP G1 of the GDF9 gene in ewes of different ages of the Awassi breed raised in Bulgaria and the possible relationship of the identified genotypes with fertility. The study was conducted by the PCR-RFLP method with the application of the restriction enzyme Hhal. An

unsatisfactory level of genetic diversity was found with the presence of two alleles – G (0.98) and A (0.02) and two genotypes – the wild homozygous GG (0.93) and the heterozygous AG (0.07). In terms of litter size, animals with the GG genotype (1.30) had a lower number of lambs born than those with the heterozygous AG genotype (1.38), but the differences were not statistically significant.

Keywords: sheep, Awassi breed, SNP G1 of GDF9 gene, PCR-RFLP method, litter size.

P1NIPMELB5

STUDYING THE RELATIONSHIP BETWEEN HEAT LOAD INDEX, TEMPERATURE-HUMIDITY INDEX AND COMFORT IN DAIRY COWS

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ABSTRACT

The aim of this study was to investigate the relationship between the Heat Load Index (HLI) and the Temperature-Humidity Index (THI) and comfort in dairy cows. The study was conducted with free-stall housed dairy cows in semi-open buildings with automatic curtains in Southern Bulgaria. Individual stalls floors were covered with rubber mats. Measurement were taken for the duration of one year, twice a month, 5 times a day inside the building and on the outside 10 meters away. Cow comfort was determined using the method of Overton et al. (2003) for calculating the Cow Comfort Index (CCI), the Stall Use Index (SUI) and the Stall Standing Index (SSI). The obtained data indicate that the conditions in the building do not differ from these outside. THI is more suitable for measuring the effect of thermal conditions on dairy cows.

Keywords: dairy cows, THI, HLI, heat stress, comfort.

P1NIPMELB6

CLINICAL SIGNIFICANCE OF ANTIOXIDANT ENZYME ACTIVITY AND BLOOD PROFILE ALTERATIONS IN DOGS WITH MAMMARY TUMORS

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ABSTRACT

Oxidative stress plays a significant role in the pathophysiology of numerous diseases, including cancer. Antioxidant enzymes such as superoxide dismutase (SOD) and catalase (CAT) are key components of the cellular defense system against reactive oxygen species. This study aimed to evaluate the activity of SOD and CAT in six clinically diagnosed dogs with mammary gland tumors prior to surgical intervention. The animals, which included different breeds, underwent preoperative blood sampling for hematological, biochemical, and antioxidant enzyme analyses. The hematological evaluation revealed erythropenia, reduced

hemoglobin levels, mild leukocytosis, and an increased platelet count. These findings indicate a systemic response to the neoplastic process, likely involving chronic inflammation and anemia of disease. Changes in the biochemical profile were also documented, supporting a broader metabolic disturbance. Enzymatic assays showed a moderate increase in SOD activity and variable catalase activity, with a tendency toward reduction; this may reflect an impaired oxidative balance in tumor-bearing dogs. These findings support the hypothesis that oxidative stress is involved in the development and progression of canine mammary tumors. Moreover, alterations in antioxidant enzyme activity, combined with hematological and biochemical changes, may serve as potential biomarkers for disease monitoring and therapeutic decision-making.
Keywords: superoxide dismutase (SOD), catalase (CAT), dogs, mammary gland tumors, oxidative stress.

P1NIPMELB7

MICROMORPHOLOGICAL ALTERATIONS IN THE PANCREAS OF RATS FED DIFFERENT HIGH-CALORIE DIETS AND EFFECTS OF REPLACING SUCROSE WITH STEVIOL GLYCOSIDES

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ABSTRACT

The study aimed to evaluate micromorphological alterations in the pancreas of rats fed different high-calorie diets and the effects of replacing sucrose with steviol glycosides. Six groups of rats were fed different diets for a period of five weeks – standard diet (SD), high-fat diet (HFD), high-carbohydrate diet (HCHD), high-fat high-carbohydrate diet (HFHCHD), standard diet plus E960/RA60 (SDRA) and high-fat diet plus E960/RA60 (HFDRA).

Histological studies demonstrated normal architectonics of the pancreas in SD and SDRA groups. In the HFD group clusters of large adipocytes were visible around blood vessels and interlobular connective tissue. In HCHD group dilations of sinusoid capillaries were seen in the endocrine islands. In the HFHCHD group dilated blood vessels and ducts were found in the parenchyma. The acinar cells contained zymogen granules. In HFDRA group dilatations of the ducts and sinusoid capillaries in the islets were found. The acinar cells seemed swollen and contained small vacuoles.
Keywords: rats, high-calorie diets, pancreas, histology.

P1NIPMELB8

SQUAMOUS CELL CARCINOMA OF THE CORNEA IN FRENCH BULLDOG – CASE REPORT

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ABSTRACT

Corneal squamous cell carcinoma (SCC) is considered as a rare condition in dogs and our aim is to report a case of the disease in French Bulldog and discus the factors leading to development of it. Misdiagnosing of SCC can potentially delay treatment and increase morbidity. A 2.6-year-old French Bulldog, with growing, nonpainful mass on the left eye was examined in University veterinary hospital of Trakia university in Stara Zagora. During the examination, a brown mass located on 3 o'clock with oval shape and diameter 4 mm, affection 10 % of the cornea, was suspected as squamous cell carcinoma. A clinical examination showed no evidence of metastases and superficial keratectomy with further conjunctival flap were made and the mass was histologically examined and conformed the clinical diagnose. After 6 months from the surgery, there is no evidence of local or general metastasis. As a conclusion: surgical treatment must be considered the best therapeutic approach for ocular SCC in dogs even it is rare diagnosis.

Keywords: squamous cell carcinoma (SCC), French bulldog, cornea, surgery.

P1NIPMELB9

COMPARATIVE MORPHOMETRIC ANALYSIS OF ŠARPLANINAC AND KARAMAN SHEPHERD DOGS USING 3D COMPUTER TOMOGRAPHY: IMPLICATIONS FOR BREED DIFFERENTIATION AND CONSERVATION

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ABSTRACT

This study aims to elucidate the morphometric differences between two indigenous shepherd dog breeds, the Šarplaninac and the Karaman, utilizing advanced 3D computer tomography (CT). Although the Šarplaninac is internationally recognized by the Fédération Cynologique Internationale (FCI), the Karaman remains unacknowledged, highlighting the need for detailed comparative analysis to underscore their unique biological and cultural attributes. The analysis involves detailed morphometric measurements of the skull through Computer Tomography (CT) and 3D software, as well as a comparison with morphometric zootechnical canine parameters. Through precision measurements of skull morphology conducted with CT imaging and corroborated with 3D software, this research not only refines our understanding of the phenotypic nuances between these breeds but also assesses the viability of 3D morphometric techniques in zootechnical studies. Despite their similar phenotypes, statistical analysis reveals negligible morphometric variance ($p<0.05$), suggesting

subtle yet significant breed-specific adaptations. This study represents a pivotal step towards recognizing and conserving the genetic and phenotypic diversity of these breeds, thereby enhancing our knowledge of their evolutionary trajectories and potential adaptability.

Keywords: morphometric analysis, dog, computer tomography, skull morphology.

P1NIPMELB10

THE SKULL OF THE BROWN BEAR: A REFLECTION OF THE HUMAN IMPACT ON WILDLIFE

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ABSTRACT

This short communication presents the effects of prolonged human interference on the cranial morphology of brown bears (*Ursus arctos*) housed in the Bear Sanctuary in Belitsa, Bulgaria, with a specific focus on the condition of their dental alveoli. Skull specimens from twelve brown bears (seven males and five females) were processed using a traditional anatomical technique involving boiling water maceration followed by immersion in 10% hydrogen peroxide. Detailed examination of both maxillary and mandibular alveoli revealed marked alveolar ridge resorption. This pathological bone loss and remodeling of the alveolar margins likely resulted from traumatic tooth extractions and chronic periodontal or periapical conditions caused by the forced resection of canine teeth, historically performed by handlers for control and entertainment purposes. These findings underscore the profound and lasting physical consequences of captivity and human exploitation, serving as a stark reminder of the broader ecological and ethical implications of wildlife domestication.

Keywords: Brown bear, skull, teeth, alveolar ridge resorption.

P1NIPMELB11

ALPHA-GAL SYNDROME – A MYSTERY OR THE AMERICAS' NEW PANDEMIC – A REVIEW

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ABSTRACT

Ticks and tick-borne diseases are major public health concerns. Recently, a new phenotype of allergy to a disaccharide α-gal (galactose-α-1,3- galactose) caused by a tick bite has been reported. Alpha-Gal syndrome (AGS) represents a unique and complex allergic disorder characterized by the production of specific immunoglobulin E (IgE) antibodies against this kind of carbohydrate. AGS manifests as a delayed hypersensitivity reaction

following the consumption of red meat (e.g., beef, pork, lamb) or exposure to medical products containing α-gal epitopes, leading to symptoms ranging from cutaneous rash, gastrointestinal disturbances (e.g., nausea, vomiting, diarrhoea), to potentially life-threatening anaphylaxis. The pathogenesis of AGS is intricately linked to tick bites, particularly from species such as Amblyomma americanum, as α-gal antigens have been identified in the salivary glands and secretions of various tick species across multiple continents. These findings underscore the role of tick bites in sensitizing individuals to α-gal and highlight the complex immunological mechanisms driving this syndrome. Notably, AGS is distinguished from other food allergies by its delayed symptom onset and the unique carbohydrate-directed IgE response. Despite advances in understanding the association between tick bites and AGS, the precise mechanisms underlying α-Gal-specific IgE production and the immune response to tick-derived antigens remain incompletely elucidated. This review synthesizes current knowledge on the evolutionary origins of α-gal, the pathophysiology of AGS, and its epidemiological and immunological ties to tick species. A deeper understanding of this intricate system is essential for the development of targeted diagnostic tools and therapeutic interventions for this unprecedented allergic disease.

Keywords: Alpha-Gal syndrome, tick-borne allergy, galactose-α-1,3-galactose, delayed hypersensitivity, Amblyomma americanum, red meat allergy.

P1NIPMELB12

EFFECT OF A SOLAR-POWERED HEATING SYSTEM ON GROWTH PERFORMANCE IN WEANED RABBITS DURING WINTER REARING

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ABSTRACT

The present study aimed to evaluate the effect of an autonomous solar-powered heating system on the growth performance of weaned rabbits. The experiment was conducted in February at the Institute of Animal Science – Kostinbrod, using two groups of 15 rabbits each, matched by breed, sex, and age. All animals were housed in identical cages within the same type of modular room (volume 182.91 m³) and fed with a standard pelleted diet. The control group was reared under standard microclimatic conditions without heating, while the experimental group was maintained under improved thermal conditions provided by the heating system. Body weight was recorded on days 35, 70, and 90 of age. Statistical analysis was performed using an independent samples t-test. On day 90, the experimental group showed a trend toward higher average body weight (2558 g) compared to the control group (2412), with $p = 0.0556$. These findings suggest that improved microclimate through sustainable energy solutions may have a positive impact on rabbit growth and welfare during the early fattening period.

Keywords: rabbits, growth, heating, microclimate.

SESSION
INFECTIOUS PATHOLOGY

O2IP1
EFFICACY OF *SALMONELLA* VACCINATION AGAINST *SALMONELLA* ENTERITIDIS AND *S.* TYPHIMURIUM SEROVARS IN COMMERCIAL BROILER FARMS AND ANTIMICROBIAL RESISTANCE OF *SALMONELLA* ISOLATES

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ABSTRACT

Studies were conducted in 6 broiler farms during the period 2019-2022 using the live attenuated vaccine SALMOVAC SE 440 from IDT BIOLOGIKA. Vaccination of the experimental birds with a live vaccine led to the isolation and confirmation of the vaccine strain in the feces samples or cecum contents at the time of slaughter of the birds. During the experiments, 20 salmonella isolates were isolated and proven, the largest number of which were S.Infantis – 13, S.Hadar – 2 and one each of S. Enteritidis, S. Typhimurium, S. Senftenberg, S. Derby and S. Kottbus. In one of the cases, on the 7th day after vaccination, both the vaccine strain and the wild strain of S. Enteritidis were isolated from the feces of vaccinated one-week-old broilers. All isolates of salmonella are resistant to sulfonamides, in most cases to nalidixic acid, ciprofloxacin, tetracycline, streptomycin and trimethoprim. It is interesting that single isolates of S. Enteritidis S. Typhimurium exhibit resistance to colistin. The danger of the presence of resistance of isolates in the consumption of poultry meat is discussed.

Keywords: *Salmonella* Enteritidis, vaccination, broilers, antimicrobial resistance

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O2IP2
ANTIMICROBIAL RESISTANCE OF *ESCHERICHIA* COLI AND *ENTEROCOCCUS* FAECALIS ISOLATES FROM BROILERS VACCINATED WITH LIVE *SALMONELLA* VACCINE

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ABSTRACT

Studies were conducted on broilers vaccinated with a live attenuated Salmonella vaccine for the presence in the carcass, internal organs or cecum of E. coli with demonstrated β-lactamase-producing ability. 8 isolates were obtained, showing multiresistance to 3 and more antimicrobial agents. All 8 isolates showed resistance to ceftriaxone and ceftiofur (third generation cephalosporins), the second preparation being popular and widely used in veterinary practice. 14 isolates of commensal E. coli were tested, which were multiresistant.

All tested isolates showed resistance to nalidixic acid and ciprofloxacin. Resistance to sulfonamides and ampicillin was high. The resistance of 44 isolates of Enterococcus faecalis isolated from the feces of vaccinated broilers was determined, with 18 being multiresistant (to 3 and more antibiotics). The most frequently detected resistance is to erythromycin – 28 isolates, ciprofloxacin – 21 isolates, tetracycline – 17 isolates, gentamicin – 17 isolates. It is interesting to note that there is resistance to chloramphenicol – 5 isolates, and this is a drug banned for use in veterinary practice for many years. The danger to the consumer when consuming poultry products is commented on.

Keywords: Antimicrobial resistance, Escherichia coli, Enterococcus faecalis, vaccination, broilers.

O2IP3

VACCINE IMMUNE RESPONSE IN THE DOG: CHALLENGES

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ABSTRACT

New and little-known science-based data on the vaccination practices of veterinarians in dog vaccinations are presented. The importance of both individual and herd immunity is emphasized for the purpose of preventing the most dangerous infectious diseases in dogs - parvovirus, distemper and infectious hepatitis. The focus is on mass veterinary vaccination schemes for newborns and some common vaccine immunization failures are analyzed. Attention is paid to the duration of vaccine immunity and annual vaccination. Modern approaches for assessing immunity after vaccination are presented and the possibilities for application in practice are interpreted. The principle of evidence-based medicine that "Vaccination should not be given needlessly" is promoted, as well as the principle of "Be wise and immunize, but immunize wisely."

Keywords: vaccines, vaccine immunity, dogs, parvovirus, canine distemper, infectious hepatitis.

O2IP4

DISTRIBUTION OF HEPATITIS E VIRUS IN DOMESTIC RUMINANTS: A REVIEW

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ABSTRACT

Hepatitis E virus (HEV) is a small RNA virus from the Hepeviridae family, causing acute viral hepatitis in humans. The first reports of the infection date back to the 1980s in Afghanistan among soldiers. However, modern data indicate that the virus is globally distributed, infecting millions of people annually. The clinical manifestation of HEV ranges from asymptomatic cases to severe, life-threatening acute hepatitis, particularly in pregnant

women and immunocompromised patients. HEV has a proven zoonotic potential, with pigs and wild boars considered its primary reservoirs. However, substantial evidence suggests that HEV can also circulate among other animal species, including domestic and wild ruminants, in which the infection remains asymptomatic, making them an important reservoir of the virus. Therefore, the present review aims to present the available epidemiological data on the distribution of HEV in ruminants and their role in virus transmission.

Keywords: Hepatitis E virus, HEV, ruminants, zoonosis, prevalence.

O2IP5

STUDY ON THE SPREAD OF ANTHRAX IN ANIMALS, DURING THE PERIOD 2016 – 2018 IN BULGARIA

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ABSTRACT

As a result of superacute and acute diseases, during the period 2016-2018, 102 samples from 87 dead animals (including 54 cattle, 26 sheep, 3 goats and 4 horses) in the Republic of Bulgaria were tested for the presence of B. anthracis. Four feed samples and 11 soil samples were also examined to determine the source of anthrax infection. During the period of investigation 2 pieces of minced sheep and horse meet, 1 piece of mouflon skin, 2 pieces of cattle skins were examined from different farms. Among the discovered carcasses of animals dumped on landfills in the country, 5 ears of a sheep, a goat, a cow and two horses, a tubular bone and sheep wool were examined. As a result of the diagnostic tests conducted, 7 outbreaks of anthrax in cattle and one in sheep were discovered. Epidemiological studies have been conducted in farms affected by diseases.

Keywords: dead animals, diseases, diagnostic tests, anthrax.

O2IP6

CLINICAL STUDIES AND DIAGNOSTIC TESTS IN ENZOOTIC ANTHRAX OUTBREAKS IN BULGARIA, DURING THE PERIOD 2016 – 2018

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ABSTRACT

During the period 2016-2018, clinical studies and diagnostic tests were conducted in 7 newly discovered outbreaks of anthrax in cattle and in one outbreak in sheep, as well as in 55 anthrax-free farms (including: 32 cattle farms, 18 sheep farms, 3 goat farms and 2 horse farms). Data on the clinical condition and pathoanatomical changes of the animals affected by the hyperacute and acute forms of the disease were obtained from each farm. Cultural, microscopic and immunological tests were conducted on 102 samples from 87 dead animals. As a result of the laboratory diagnostic tests conducted, the causative agent of anthrax was identified in 12 cattle and one sheep.

Keywords: anthrax, animals, clinics, pathological changes, diagnostic tests.

O2IP7

DETERMINATION OF THE EFFECTS OF EUTHANASIA METHODS (ICE ASPHYXIATION AND ASPHYXIATION) ON MEAT QUALITY IN NILE TILAPIA (*OREOCHROMIS NILOTICUS*)

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ABSTRACT

Euthanasia methods applied to fish can induce varying levels of stress, which may negatively affect meat quality and shelf life. This study aimed to investigate the effects of two commonly applied euthanasia methods, asphyxiation and ice asphyxiation, on the pH, water activity, color, MDA levels, and the percentage of dry matter and crude protein in the meat of Nile tilapia (*Oreochromis niloticus*). A total of 20 Nile tilapia were divided into two groups of 10 fish each. The first group underwent asphyxiation, while the second group was ice asphyxiation. Samples from both groups were analyzed for pH, water activity, color, MDA levels, and dry matter and crude protein percentages. The results showed that the pH values at 0 hours were 6.36±0.02 for the asphyxiation method and 6.72±0.12 for the ice asphyxiation, with significant differences ($p<0.05$) observed at the 24 hour pH values, which were 6.32±0.07 and 6.58±0.09, respectively. No significant differences were found between the groups for water activity, MDA, color level, dry matter, or crude protein content. However, although no significant differences were observed between the groups, the MDA level on day 7 was lower in the ice asphyxiation, indicating a positive effect. In conclusion; suggest that ice asphyxiation e has a beneficial impact on meat quality and shelf life.

Keywords: meat quality, ice asphyxiation, asphyxiation, nile tilapia.

O2IP8

CONTROL OF *VARROA DESTRUCTOR* WITH DIFFERENT COMBINATIONS OF ESSENTIAL OILS

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ABSTRACT

The parasitic mite, *Varroa destructor* is a major agent responsible for the decline of honey bee colonies *Apis mellifera* worldwide. Maintaining low levels of infestation requires continuous and effective control of the mite. In recent years, various essential oils have been used, alone or in combination. The aim of our study was to test the effectiveness of some of the essential oils used in beekeeping (peppermint, pine and cedar) for the control of *V.*

destructor. The experiments covered 11 apiaries located in three regions of the country. Of the listed essential oils, 9 different combinations were prepared and tested. During the treatment, we monitored the effectiveness against mites, tolerance and safety in the treated colonies. The aim of our study was to test the effectiveness of some of the essential oils used in beekeeping (peppermint, pine and cedar) for the control of *V. destructor*. The experiments included 11 apiaries located in three regions of the country. Of the listed essential oils, 9 different combinations were prepared and tested. During the treatment, we monitored the effectiveness against the mite, tolerance and safety in the treated colonies. After evaluating the results obtained, we settled on the combination of essential oils (CEO)-9, which showed a sufficiently high efficiency (from 87.51% for Pernik to 91.89% for Montana). This combination can be used as an aid in the integrated control to reduce the mite population during the active season, when chemical acaricides cannot be used. Another application is when introducing/receiving a new queen bee by unifying the smell in the bee colony.

ACKNOWLEDGEMENTS: This research was funded by the „Primavet-Sofia", Ltd., Sofia, Bulgaria. We thank all the beekeepers who supported the experiment by providing bee colonies from their apiaries.

Keywords: *Apis mellifera, Varroa destructor,* control, essential oils.

O2IP9

SURVEY OF INTESTINAL NEMATODE INFECTIONS AFFECTING SHELTER DOGS IN NORTH MACEDONIA

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ABSTRACT

Shelter dogs are significantly more susceptible to intestinal parasites compared to owned dogs. Factors such as immunosuppression due to environmental stressors, inadequate sanitation, overcrowding, and limited access to veterinary care contribute to the transmission of parasites in shelters. Furthermore, certain parasites are zoonotic and present public health risks, particularly hookworms and ascarids. This study investigated the prevalence of intestinal nematodes in public shelters in North Macedonia. We analyzed 105 fecal samples from dogs across seven different shelters in the country using the zinc sulfate centrifugal flotation technique. Nematode eggs were detected in 51.43% (54/105) of the samples. Single infection was detected in 22.86% (24/105) of the samples, and mixed infections in 28.57% (30/105) of the samples. Hookworms (Ancylostomatidae) showed the highest prevalence (39.05%, 41/105), followed by *Trichuris* spp. (23.81%, 25/105), *Toxocara canis* (7.62%, 8/105), and *Toxascaris leonina* (1.90%, 2/105). A significant association was observed in mixed infections involving Ancylostomatidae and *Trichuris* spp. (15.24%, 16/105). These findings highlight the urgent need for rigorous parasite control measures in shelters to protect both animal and human health.

Keywords: nematodes, Ancylostomatidae, *Trichuris*, *Toxocara*, zoonoses.

O2IP10

KOI HERPESVIRUS AND SPRING VIREMIA OF CARP – LABORATORY DIFFERENTIAL DIAGNOSTIC MODEL

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ABSTRACT

Laboratory study of fish diseases is a logical sequence set of scientifically based procedures aimed to identify presence or lack of a pathogen. These procedures include quantitative and qualitative assessment of the core finding. Koi herpesvirus disease and Spring viremia of carp are notifiable diseases and part of a mandatory National surveillance program. The monitoring model is focused at animal health in fish farms and excludes sport fishing sites and aquaristics. Two viral pathogens causing the diseases described above. They are highly contagious, infected similar hosts, cause similar clinical and macroscopic signs, and laboratory identification is necessary for confirmation or rejection. The screening surveillance requires systematic laboratory testing of fish samples from fish farms across the country. This type of screening nesessitate the differentiation of several nosological units in laboratory conditions. It's a step-by-step chain from the autopsy and sample preparation through testing and identification until diagnostic process complete with final result.

Keywords: koi herpesvirus (KHV), spring viraemia of carp (SVC), notifiable fish diseases

O2IP11

HYGIENE INDICATORS OF BEEF MEAT TREATED WITH ELECTROACTIVATED WATER

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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. The use of EAW in meat production improves some hygiene indicators and is a cheap, safe, non-toxic and effective option for increasing the quality and extending the shelf life of meat. In the present study, the influence of different types of EAW on some hygiene indicators of beef meat was studied. The following indicators were studied: total microbial count (TMC); *Enterobacteriaceae* count; presence of *Salmonella spp.*; count of coagulase-positive staphylococci and presence of *Listeria monocytogenes*. The results show an improvement in meat hygiene in some types of EAW. The research was funded under the scientific research project of the Scientific and Research Sector of the University of Forestry (НИС–ЛТУ–Б–№ 1286/19.10.2023).

Keywords: Electroactivated (dissociated) water, hygiene indicators, beef meat, storage.

O2IP12

PROBIOTICS AS SELECTIVE INHIBITORS OF PATHOGENS AND EFFECTIVE ALTERNATIVE TO ANTIBIOTICS FOR AVIAN HEALTH

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ABSTRACT

Antibiotics have been used in avians feed to promote growth and prevent disease for a long time. Prolonged use of antibiotics leads to the development of resistant bacteria and the accumulation of antibiotic residue in birds body. The most suitable alternative for antibiotics is probiotics. Probiotics are live microorganisms that provide health benefits when consumed or applied to the avians in the optimum amount. Probiotics are mainly good bacteria and yeast which fight off the pathogenic bacteria, improve the immune system and restore the gut microbial balance. They can eliminate the harmful pathogens following some molecular mechanisms and modulate the immune response of the host birds for their well-being. Unfortinately, the benefit effect of probiotics is non universal, because they affect some microorganisms more than others. This review aims to describe probiotics as a potential growth promoter in avians, with their specificy to inhibit target pathogenic microorganisms in most important avian diseases as an effective alternative to antibiotics.

Keywords: probiotics, selective inhibitors of pathogens, antibiotics, avian health.

O2IP13

PODODERMATITIS IN ZOO ELEPHANTS – MICROBIOLOGICAL STUDIES

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ABSTRACT

Microbiological studies were performed on samples from the feet of elephants with signs of pododermatitis. The patients were the elephant Frostya from the Sofia Zoo, as well as the elephant Mio and Leso from the Athens Zoo. The samples were taken from the contents under the nails and from lesions in interdigital space and on the foot. From the materials from the elephant Frostya from the Sofia Zoo, the Gram-negative species *Serratia marcescens* and *Hafnia alvei* 2 were isolated. *Staphylococcus warneri* and *Staphylococcus simulans* were also isolated, as well as the oval fungus *Cryptococcus neoformans*. From the elephants Mio and Leso, the Gram-negative species *Citrobacter freundii* and *Enterobacter agglomerans* 3, three types of staphylococci – *S. warneri* 1, *S. mucilaginosus* and *S. cohnii ssp. urealyticum*, *Corynebacterium* sp., as well as the oval fungus *Candida glabrata* were isolated. In addition, corynebacteria and fungi with colonies characteristic of *Microsporium* sp. were isolated from

them. The isolated microorganisms are conditionally pathogenic and multiply when the nails and skin of the feet are damaged locally. By improving hygiene conditions and providing greater opportunities for walk, which elephants need, conditions would be created to limit and prevent pododermatitis.

Keywords: pododermatitis, elephant, microorganisms.

O2IP14

SEVERE AELUROSTRONGYLOSIS IN A STRAY KITTEN FROM THE AREA OF SOFIA, BULGARIA

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ABSTRACT

A case of a stray domestic kitten from the Sofia area with an aelurostrongylid infection is described. When the animal was found, it was cachectic, in a serious general condition, with severe respiratory problems and a high flea infestation. Disinfestation and deworming were carried out and symptomatic treatment with antibiotics, corticosteroids and general strengthening preparations was undertaken, which led to a partial improvement in the condition. The persistently elevated body temperature and breathing difficulties are the reason for the subsequent initiation of an alternative one-month treatment with Inflavet® and homeopathic preparations, which leads to a normalization of the body temperature, but the symptoms of the respiratory system persist. At this stage, X-ray and parasitologic examinations were performed, which revealed the presence of bronchopneumonia and *Aelurostrongylus abstrusus* infection. A three-day treatment with ivermectin was carried out, which led to a decrease in the degree of aelurostrongylid infection. One month later, a ten-day treatment with fenbendazole has been carried out, after which a permanent cessation of larval shedding and clinical recovery of the animal is observed.

Keywords: *Aelurostrongylus abstrusus*; *Felis catus;* domestic cat; conventional treatment; alternative treatment.

O2IP15

THE STATUS OF THE EAST BALKAN PIG POPULATION IN THE CONTEXT OF INFECTIOUS DISEASES AND CLIMATE CHANGE

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ABSTRACT

The East Balkan pig is the only preserved autochthonous swine breed in Bulgaria that has survived to the present day. According to unconfirmed data, the breed is over 2500 years old. It is traditionally raised in free-range pasture systems, which contribute to its unique

genetic and ecological characteristics. However, in the past five years, following the introduction of African swine fever (ASF) in Bulgaria, the population has drastically declined. Pasture-based farming has been significantly restricted. Furthermore, a new threat has emerged in 2025, with several outbreaks of foot-and-mouth disease (FMD) among cloven-hoofed animals in Europe. Currently, fewer than 500 animals remain, including offspring. This study aims to provide an updated overview of the breed's status and evaluate the risk of extinction, which could lead to a loss of biodiversity, changes in meat market dynamics, and the disappearance of a breed resilient to climate change. Urgent conservation measures and coordinated veterinary policies are required to preserve this unique genetic resource. The preservation of the East Balkan pig is not only of national but also of World importance in the context of sustainable agriculture and food security.

Keywords: East Balkan Pig, African Swine Fever, FMD, Autochthonous breed, climate change, artificial insemination, crioconservation.

P2IP1

PREVALENCE AND PHYLOGENETIC GROUPS OF *ESCHERICHIA COLI* IN RAW FROZEN CHICKEN MEAT FROM ISTANBUL

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ABSTRACT

Escherichia coli is a bacterium that threatens food safety and public health due to its various pathogenic subtypes. This study investigated the prevalence of *E. coli* in 597 samples of frozen raw chicken meat collected from retail outlets in 2013 in Istanbul, Türkiye. Both conventional microbiological methods and PCR were used for the analysis. *E. coli*-specific 16S rRNA and the *GyrB* gene were confirmed in 6.7% (40 out of 597) of the *E. coli* isolates. *E. coli* isolates from 8 phylogroups (A, B1, B2, C, D, D, E, F, Escherichia cryptic clade I) were investigated by PCR. For phylogenetic analysis of *E. coli* isolates, the presence of *chuA*, *yjaA*, *TspE4.C2*, *arpA*, and *trpA* genes and their interrelationships were measured. According to the PCR results, phylogenetic group A accounted for 15%, group B2 2.5%, group C 35%, group D 12.5%, group E 17.5% and 17.5% untyped *E. coli* isolates. No *E. coli* isolates belonging to phylogenetic groups B1, F, and cryptic clade 1 were detected. According to the results, *E. coli* isolates may potentially be commensal strains. This study comprehensively analyzed the prevalence and phylogenetic grouping of *E. coli* in chicken meat from Istanbul, a major metropolitan city at the crossroads of Asia and Europe.

Keywords: Escherichia coli, chicken meat, phylogenetic group, food safety, Istanbul.

P2IP2

THE IMPORTANCE OF THE PRESENCE OF *ESCHERICHIA COLI* IN CHICKEN EGGS FOR VETERINARY PUBLIC HEALTH

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ABSTRACT

Chicken eggs are an important food in the human diet around the world. Eggs contain a high level of protein, vitamins and minerals. Eggs are an animal-based food source that appeals to people of all ages. Although eggs have protective barriers, they can threaten public health, especially through vertical and horizontal microbial contamination. Studies on the microbiological characteristics of eggs reported that *Escherichia coli* is one of the most frequently isolated bacteria. Pathogenic zoonotic serotypes of *E. coli* are also found in the normal gut flora of chickens. These serotypes include intestinal pathogenic *E. coli* (*IPEC*) and extraintestinal pathogenic *E. coli* (*EXPEC*), which cause severe symptoms in humans. This review covers research on the importance of the presence of *E. co*li in hen eggs for veterinary public health. According to the results obtained from the studies, storage and housing conditions play a critical role on the occurrence of *Escherichia coli* in eggs. Therefore, HACCP (Hazard Analysis and Critical Control Points) and GMP (Good Manufacturing Practice) protocols need to be effectively implemented to keep egg quality and food safety above standards.

Keywords: Egg, *Escherichia coli,* Public Health, Zoonoses.

P2IP3

SEROPREVALENCE OF WEST NILE VIRUS AMONG EQUIDS IN BULGARIA

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ABSTRACT

The aim of the present study was to analyse the seroprevalence of West Nile virus (WNV) among equids in Bulgaria and compare the results of a competitive ELISA versus the virus neutralization test (VNT). A total of 378 serum samples were collected for the study. Serum samples were tested for the presence of IgG and IgM antibodies against WNV protein E by ELISA. Thirty-five samples were WNV-positive by ELISA (9.26% [CI = 6.45–12.88]), of which 15 were confirmed by VNT; therefore, the seroprevalence was 3.97% (CI = 2.22–6.55). No virus-neutralizing antibodies to Usutu virus were detected among the 35 WNV-ELISA-positive equids in Bulgaria. When compared with VNT, ELISA showed 100.0%

sensitivity and 94.5% specificity. The results of the study demonstrate WNV circulation among equids in Bulgaria, indicating that they could be suitable sentinel animals for determining the risk in these regions of the country.

ACKNOWLEDGEMENTS: Grant number 5 FVM/02.06.2022, Trakia University, Faculty of Veterinary Medicine, Stara Zagora, Bulgaria.

Keywords: WNV; horses; donkeys; ELISA; VNT; Usutu virus; seroprevalence.

P2IP4

THE RELATIONSHIP BETWEEN HAEMATOLOGY AND SERUM BIOCHEMISTRY PARAMETER IN CANINE LEISHMANIOSIS

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ABSTRACT

Canine leishmaniasis (CanL) is a zoonotic infection that exhibits a range of clinical and laboratory features in dogs. In this study only seropositive dogs (n=30) with typical clinical signs consistent to Leishmaniasis were included. For hematology and biochemistry analysis, two blood samples (2x5ml) were collected from each dog. The results of hematology analysis (red blood cell count (RBC), hematocrit (HCT), hemoglobin concentration (HGB), mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH), mean corpuscular hemoglobin concentration (MCHC) were indicative to poorly regenerative anemia and the number of RBC were strongly correlated to renal function parameters (creatinine and urea). The alterations of liver and renal enzyme activities, alanine aminotransferase (ALT) and asparate aminotransferase (AST), were not significant but they were in strong association to anemia indicator parameters. According the results, the red RBC count and the level of creatinine can be considered as a significant predictor in Canine leishmaniasis.

Keywords: Canine leishmaniasis, hematology, biochemistry, parameter association.

P2IP5

ORGAN DISTRIBUTION AND PATHOLOGICAL EFFECTS OF *TOXOCARA CANIS* LARVAE IN CHICKENS

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ABSTRACT

This study investigates the organ distribution and viability of *Toxocara canis* larvae in chickens, as well as the clinical presentation and pathological changes associated with toxocarosis. The experiment involved 36 chickens, 30 days old, divided into three groups (n=12 each): two experimental groups (G1 and G2) and one control group (G3). Chickens in G1 were infected with 1,000 *T. canis* eggs each, while those in G2 received 4,000 eggs.

Observations were conducted on days 2, 4, 6, 8, 10, and 12 post-infection. The results demonstrated that the primary target organ for larval accumulation was the liver, where up to 98.28% of all isolated larvae were found on day 4 post-inoculation. A significantly smaller proportion (1.72–9.17%) was found in the lungs. No larvae were detected in the heart, breast musculature, or brain. Clinically, infected birds displayed no apparent signs of disease or abnormal behavior throughout the experimental period. Pathological examination revealed hemorrhages on the serosa and mucosa of the duodenum. Histological analysis identified catarrhal-desquamative inflammation affecting the superficial and middle portions of the intestinal villi, mononuclear round-cell proliferation in the liver, and hemorrhages in the brain.

Keywords: *Toxocara canis*, chickens, migratory pattern, tissue lesions.

P2IP6

INVESTIGATION OF THE EFFICACY OF DORAMECTIN (DECTOMAX™) AGAINST BOVICOLA CAPRAE GURLT, 1843, IN NATURALLY INFESTED DOMESTIC GOATS

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ABSTRACT

Bovicolosis in goats is caused by the biting louse *Bovicola caprae*, Gurlt (1843), from the family Bovicolidae, suborder Ischnocera, order Phthiraptera. Although this species does not feed on blood, its parasitism causes skin irritation, biting, scratching, and disruption of feeding and resting behaviors in the animals, ultimately leading to decreased productivity.

The present study investigates the efficacy of subcutaneously administered doramectin against the biting louse *Bovicola (Damalinia) caprae* in domestic goats. The study included 20 naturally infested goats of the "Bulgarian White Dairy" breed, which were divided into two groups. Animals in Group A (n = 10) were treated with doramectin (Dectomax™) at a dose of 0.2 mg/kg body weight, while animals in Group B (n = 10) received a subcutaneous injection of normal saline in the same volume. Treatment efficacy was assessed on days 3, 14, and 30 post-treatment. In the experimental group, a 94.2% efficacy of the drug was observed as early as the third day post-treatment, which remained consistent until day 30. In contrast, the control group showed no significant differences in the mean infestation intensity compared to the level recorded on the day before treatment.

This study confirms the high efficacy of doramectin against *Bovicola caprae*, making it a suitable option for controlling bovicolosis in goats.

Keywords: goats, lice*, efficacy, Bovicola caprae,* doramectin.

P2IP7

ANALYSIS OF RAW COW MILK QUALITY INDICATORS RELATED TO THE SAMPLING FREQUENCY OF OFFICIAL CONTROL AND SELF-CONTROL

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ABSTRACT

The trend in the European Union is towards increased use of cows' milk and dairy products. A reduction in the number of dairy cows is expected due to the high demands associated with the Green Deal. Increases in feed, electricity and transport prices are leading to higher prices for raw cow's milk and dairy products produced from it. The aim of the present research was to analyze the results obtained from the official control and self-control as well as the frequency of sampling according to national and European legislation. The results of the current study in relation to the raw cow milk quality indicators were obtained from samples taken from three dairy farms over a period of two consecutive years (2023 and 2024). The following parameters were compared: PC, SCC, inhibitors, fat content and freezing point. From the analysis of the results obtained, it was evident that all samples for official control and self-control purposes were correctly taken, and valid and all indicators did not exceed the reference values. However, no legislative norms were found in the current legislation to reduce the sampling frequency.

Keywords: legislation, official controls, raw cow milk, Regulation (EC) No. 853/2004.

SESSION
STUDENT RESEARCH

O3S1
ANTI-TICK VACCINES – NEW PROSPECTS IN PREVENTION OF TICK-BORNE DISEASES IN CANINES AND BOVINES

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ABSTRACT

Ticks and tick-borne diseases are a growing issue in the veterinary field across the world and it is being continuously exacerbated by climate change and the emerging resistance towards acaricides. This report explores anti-tick vaccines as an innovative strategy to prevent the spread of tick-borne diseases and counteract recent epidemiological trends. It will summarize the mechanism of action of anti-tick vaccines, currently commercially-available products for bovines and canines as well as candidate antigens that showed promising results for creating new vaccines.

Keywords: ticks, antigens, vaccines, mechanisms, immunity, prevention

O3S2
COMPARATIVE MORPHOLOGICAL STUDY OF THE BLOOD VESSELS OF THE ZEUGOPODIUM AND AUTOPODIUM IN THE TWO-HUMPED CAMEL (*Camelus bactrianus, L. 1758)*

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ABSTRACT

By macroscopic dissection and radiography in two different projections, the blood vessels of eight limbs (four thoracic and four pelvic) in a two-humped camel (*Camelus bactrianus, L. 1758*) were examined. The main arterial and venous vessels of the zeugopodium and autopodium were compared with the same in cattle and horses. By arteriography, the topographic location of the main vessels was confirmed, which on the thoracic limb are *a. mediana, a. digitalis palmaris communis III*, and on the pelvic limb are the caudal branch of *a. saphena, a. digitalis plantaris communis III.* The main venous vessels of the extremities were observed in a Bactrian camel in the same areas. This scientific research is important for imaging anatomy and vascular surgery, and interventions in the areas of the limbs in veterinary medicine practice in this type of animal.

Keywords: Two-humped camel, arteries and veins of thoracic and pelvic limbs, arteriography.

O3S3

ULTRASOUND PREGNANCY EXAMINATION IN SMALL RUMINANTS: PRINCIPLES, TECHNIQUES, AND APPLICATIONS

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ABSTRACT

Ultrasound pregnancy examination is a crucial tool in reproductive management for small ruminants, allowing early detection of pregnancy, fetal viability assessment, and monitoring of gestational progress. In this study, 30 ewes in mid-pregnancy (2–3 months) were examined using transabdominal ultrasonography. Natural mating was used for insemination, and pregnancy was confirmed in 29 of the animals. Twin pregnancies were detected in 7 ewes. Fetal viability was assessed by heart rate measurement, with an average fetal pulse of approximately 150 beats per minute. Placentome development was also evaluated as an indicator of placental function. All pregnant ewes gave birth during January and February, with those diagnosed with twin pregnancies delivering healthy twin lambs. These findings highlight the reliability of ultrasound in pregnancy diagnosis and fetal monitoring in sheep, facilitating better reproductive and nutritional management.

Keywords: Ultrasound, Pregnancy, diagnostic, small ruminants.

O3S4

CHEMICAL CASTRATION IN DOGS AND CATS

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ABSTRACT

In dogs and cats, chemical castration can be achieved through non-surgical pharmaceutical methods that do not require the removal of the gonads. Such methods include progestins, zinc gluconate injections (Neutersol® and Zeuterin™), deslorelin implants (Suprelorin®), and the Egalitte vaccine. Male dogs can become permanently sterile due to the effects of zinc gluconate, while Suprelorin® and progestins temporarily suppress the production of reproductive hormones. Egalitte is a newer vaccine that has a non-invasive, reversible approach to sterilization. Some exploratory studies follow the use of calcium chloride as a female sterilization agent. Some benefits include lower costs, invasiveness, and risk of surgery. Negative outcomes may include pain, hormonal imbalance, and persistence of behavioral problems. Issues of ethics comprise informed consent, welfare of the animal, population control, and the ability to reverse the operation. As a method of large-scale reproductive management, chemical castration offers a more efficient and less invasive option than surgical procedures.

Keywords: Chemical Castration, alternative methods, dogs, cats.

O3S5

PERSPECTIVES ON SMALL BOWEL TRANSPLANTATION FOR MALABSORPTION AND ENTEROPATHIES IN DOGS - A REVIEW

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ABSTRACT

Small bowel transplantation is a highly specialized procedure for treating end-stage intestinal failure, constrained by significant immunological and technical challenges. Experimental models in dogs take a crucial role in refining surgical techniques and developing optimal immunosuppressive regimens. A comparative analysis of venous anastomoses demonstrates that portal anastomosis is superior to caval anastomosis, as it ensures physiological venous drainage, hepatic detoxification, and better immunological control. Orthotopic transplantation offers the best functional integration but requires complex vascular reconstruction. Advancements in bioengineered grafts, personalized immunosuppression, and regenerative medicine create new opportunities for improving long-term graft survival and function. The development of innovative surgical strategies and immunotherapeutic approaches is essential for the future expansion of the clinical application of small bowel transplantation.

Keywords: small bowel transplantation, grafts, anastomoses, malabsorption, enteropathies.

O3S6

JAW TENSION AND IMMUNE INTENTION: A CLINICAL CASE OF EOSINOPHILIC MASTICATORY MYOSITIS IN A GSD

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ABSTRACT

Masticatory myositis is an immune-mediated disease in which type 2M myosin (a unique myosin isoform found in the masticatory muscles) is targeted and destroyed by the animal's immune system. Predisposed breeds include German Shepherd Dogs, Labrador Retrievers, Doberman Pinschers, Golden Retrievers, and Cavalier King Charles Spaniels, typically around three years of age. This case review describes a 2-year-old German Shepherd Dog presenting with bilateral masticatory muscle atrophy, trismus, and anorexia. Diagnosis was confirmed through surgical incisional biopsy of affected masticatory muscles. This case emphasizes the importance of early recognition and definitive diagnosis in managing immune-mediated myopathies to preserve muscle function and until the whole organism is affected.

Keywords: 2M myosin, canine eosinophilic myositis, masticatory myositis, immune-mediated myopathy, incisional muscle biopsy.

O3S7

COMPARATIVE MORPHOLOGICAL STUDY OF THE MOTOR APPARATUS OF THE FORE- AND HIND LIMB IN THE TWO-HUMPED CAMEL

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ABSTRACT

Four thoracic and four pelvic limbs from two female Bactrian camels (*Camelus bactrianus*, L. 1758) were examined. The beginning and end of the fore- and hind limb muscles were dissected by macroscopic dissection and compared with those of cattle and horses. We observed, described and photo-documented some specific features in the extensors and flexors of the thoracic and pelvic limbs. The identified differences in the structure of the camel's locomotor apparatus are important for its specific functional features, and are of not only morphological but also veterinary interest to scientific researchers and practicing veterinarians.

Keywords: Bactrian camel, locomotor appatus, muscles, extensors and flexors of the limbs.

O3S8

OVERVIEW OF COMMON FOOD-RELATED TOXICOSES IN DOGS

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ABSTRACT

Pets are often curious about their owners' food, but not all human foods are safe for them. Unlike humans, pets may be less tolerant to certain substances, making the consumption of these foods dangerous. Some of the most common products that can cause intoxication in dogs are chocolate, xylitol, raw bread dough, avocado, grapes, raisins and onion. These foods can harm the dog important organ systems and may lead to a fatal outcome if poisoning is not timely diagnosed and the best treatment is not administered. Therefore, it is important for pet owners to be familiar with the proper diet for their pet, which foodstuffs to avoid as well as not feeding kitchen waste. In this paper, we explore why some food items may be harmful to dogs, what the symptoms of poisoning are, and how to handle a suspected case of poisoning.

Keywords: human foods, dog, toxicosis.

O3S9

DYSECDYSIS IN LEOPARD GECKOS (*EUBLEPHARIS MACULARIUS*) - RETAINED SHED AND SOLUTIONS

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ABSTRACT

The leopard gecko (*Eublepharis macularius*) is a reptile species in which skin shedding is a natural cyclical process known as ecdysis. Through this process, geckos remove the outer layer of their skin, facilitating normal growth and preventing the development of parasitic and bacterial infections. Disruptions in this process, known as dysecdysis, occurs when pieces of the skin do not shed completely and remain attached to certain body areas. Retained skin layers can dry out and constrict blood vessels, ultimately leading to avascular necrosis of parts of the limbs or tail. These pathological conditions due to dysecdysis can significantly impair the quality of life and reduce the lifespan of leopard geckos. This article presents clinical cases of dysecdysis in pet leopard geckos in Bulgaria. It also discusses the possibilities for treatment and preventive measures to minimize the risk of this condition.

Keywords: dysecdysis, leopard gecko, retained shed, retained skin.

O3S10

STANDARDIZED EJACULATE ASSESSMENT IN BOAR

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ABSTRACT

Spermatozoa are specialized cells with intrinsic motility, essential for fertilization *in vivo*. Sperm motility is assessed using two main approaches: subjective evaluation under a light microscope and objective analysis via computer-assisted sperm analysis (CASA). This study aimed to perform a standardized ejaculate assessment in six clinically healthy boars of similar age and rearing conditions. Light microscopic evaluation determined total sperm motility at 83±2.7%, with 63±3.33% exhibiting progressive motility. Agglutinated spermatozoa accounted for 14%, and no other endogenous cellular components were observed. Morphological assessment after fixation and staining revealed 8% abnormal spermatozoa, with 2.7% of defects in the head and 5.3% in the tail. Standardized semen assessment remains integral to veterinary reproductive practice, complementing CASA. Combined with proper training, it offers a reliable, accessible, and cost-effective method for evaluating semen quality and predicting artificial insemination success.

Keywords: sperm, boar, standard assessment, motility.

O3S11

INFRARED THERMOGRAPHY IN PANTHERS (*PANTHERA ONCA, PANTHERA LEO, PANTHERA TIGRIS*)

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ABSTRACT

Infrared thermography is a technique that uses infrared cameras to detect and visualize temperature variations on the surface of subject which is why it is a widely used non - invasive method for wild animals. The main advantage is that infrared thermography detects changes in body temperature which can indicate for ongoing inflammation or injury. The aim of our observation was to determine the surface body temperature of animals of Subfamily *Pantherinae* in their living space at Sofia Zoo. The animals were scanned within normal conditions for each species and divided into regions. The max temperature that was observed was 34,13º C on the jaguar and lowest one was 23,20 º C, while on the lion the max was 34,94 º C and the minimum was 23,99 º C. The last animal was tiger and its' highest measured temperature was 34,26 º C and lowest one was 16,12 º C.

Keywords: Infrared thermography, surface body temperature, wild animals.

O3S12

INTRALUMINAL STENT APPLICATION FOR TREATMENT OF TRACHEAL COLLAPSE IN DOGS

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ABSTRACT

Tracheal collapse, as a medical problem, is most typical for small and toy breeds - Chihuahuas, Pomeranians, Toy poodles, Shih Tzus and Yorkshire terriers. Coughing, respiratory distress and general respiratory insufficiency are the clinical signs and they usually occur in middle-aged dogs, but sometimes young dogs can suffer also. Medical treatment with corticosteroids, opioids and antibiotics has a temporary effect and the clinical signs return in a short period of time. The placement of tracheal stents is one of the best options for treatment of tracheal collapse in dogs. Our patients were males - Pomeranian, 5-years old, Chihuahua 13-years old, Yorkshire Terrier 11-years old. The clinical signs varied from a cough to severe respiratory distress. Tracheal collapse was diagnosed in all of the three animals. Stent size was determined based on tracheal dimensions measured from X-ray and CT images. The application of stents was performed under general anesthesia. Postoperative treatment with

antitussives, steroids, antibiotics, and sedatives was done to prevent the edema and to stabilize the stents.

Keywords: dog, tracheal collapse, intraluminal stents.

O3S13

EXPLORING ECG DYNAMICS UPON NOCICEPTION STIMULI IN CATS DURING ROUTINE OVARIOHYSTERECTOMY

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ABSTRACT

Nociception refers to the neural processing of noxious stimuli, which may be interpreted as pain. Nociceptive stimuli can arise from factors that activate pain pathways, such as surgical manipulation. Understanding nociception during surgery is important for anesthesia monitoring, controlling autonomic responses, and improving postoperative recovery. The present study investigates changes in electrocardiographic (ECG) parameters in cats undergoing routine ovariohysterectomy. Statistically significant differences in the electrical activity of the heart were observed during uterine body incision compared to baseline ECG ($p < .0001$), skin incision ($p < .0001$), and ovarian incision (OI) ($p = .002$). ECG values recorded during abdominal wall incision were significantly different from baseline ($p < .0001$) and ovarian incision (OI) ($p = .009$). Significant changes were also noted between left and right OI ($p < .0001$). These findings suggest that ECG monitoring may serve as a sensitive and non-invasive tool for detecting nociceptive responses during various stages of feline ovariohysterectomy.

Keywords: electrocardiography, nociception, ECG parameters, feline, pain management.

O3S14

PARASITIC FAUNA OF DOGS LIVING IN SHELTERS FROM SOFIA AND SOFIA-DISTRICT TERRITORY

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ABSTRACT

A scientific study was conducted on the presence of parasites in dogs kept in shelters. 8 dog objects were covered, in which 171 individual fecal samples were collected. By using routine copro-scopic methods, the sexual products of helminths and protozoa of the studied animals were isolated. Single cases of mono- and mixed infestations with helminths from the family Ancylostomatidae and *Trichuris vulpis* species, as well as protozoa from the Isospora

genus, were identified. The results of the present study reveal the strict measures that are taken to control parasitic infestations in dogs from shelters in and around Sofia city.

Keywords: parasitic fauna, dogs, shelters, helminthes, protozoa.

O3S15

ENDOPARASITIC STATUS OF REPTILES FROM DIFFERENT REGIONS OF BULGARIA

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ABSTRACT

A large-scale study was conducted on the endoparasites carriage in 57 species of reptiles, divided into four large groups: snakes, lizards, crocodiles and turtles. Animals from 27 Bulgarian cities were studied, in which 372 individual fecal samples were obtained from the reptiles. By using a conventional flotation method, sexual products of helminths and protozoa of the studied species were isolated. Few cases of mono- and mixed infestations with helminths of the Oxyuridae family and protozoa of the Isospora genus were identified. The results obtained from the study visulaze the endoparasitic status of a wide variety of reptiles kept as pets in our country.

Keywords: endoparasites, reptiles, oxyurids, isospora, pets.

O3S16

CANINE HYPOTHYROIDISM WITH CLINICAL SIGNS OF ALOPECIA WITHOUT PRURITUS - A CASE REPORT

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ABSTRACT

The present report describes a case of an 8-year-old neutered female mixed breed dog with progressive alopecia without pruritus or additional clinical signs. Initial diagnosis includes microbiology and fungal culture, both of which do not detect the presence of microorganisms. Hormonal studies for hyperadrenocorticism are within normal limits. Due to persistent alopecia, an incisional skin biopsy was performed along with a complete thyroid hormone panel. Subsequently, the dog develops chronic intermittent diarrhea, which initially improved with a hydrolyzed protein diet but later recurred, accompanied by lethargy and an increase in body mass. Endocrinological results confirmed hypothyroidism as the underlying cause. The condition was managed with lifelong replacement therapy with levothyroxine. This case highlights the importance of a thorough endocrine evaluation in dogs with nonpruritic alopecia and systemic signs, highlighting hypothyroidism as a potential differential diagnosis.

Keywords: canine hypothyroidism, alopecia, dermatology, endocrine pathology.

O3S17

APPLICATION OF ELECTROACTIVATED AQUEOUS SOLUTIONS IN THE SEAFOOD INDUSTRY

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ABSTRACT

Electroactivated aqueous solutions has been increasingly used in the seafood industry in recent years. The electroactivation 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. These solutions have powerful disinfecting and antioxidative properties, making them ideal for cleaning, decontaminating and preserving particularly for seafood products. Their use has a positive physiological and microbiological effects in seafood processing - different fish species, shrimp, oysters, mussels, crabs, octopus and other hydrobionts, to enhance food safety, quality and sustainability. They are also used in the pre-packaging of seafood and other products without changing their taste.

The research was funded under the scientific research project of the Scientific and Research Sector of the University of Forestry (НИС–ЛТУ–Б–№ 1286/19.10.2023).
Keywords: electroactivated aqueous solutions, application, seafood industry.

P3S1

VETERINARY MEDICINAL PRODUCTS USE AND ANTIMICROBIAL RESISTANCE CONTROL

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ABSTRACT

This work includes an overview of legislative changes in the use of veterinary medicinal products. These developments are a result of global initiatives of control over antimicrobial resistance (AMR). The main focus of the research is the list of antibiotics intended only for human use by the World Health Organization (WHO). In synchrony with the intention of the European Commission to familiarize young people, this report may contribute to a better understanding of the "One Health" conception and the awareness of the threat of AMR. Public documents of the WHO and the United Nations, as well as documents of harmonized European legislation and national regulatory framework were analyzed with methods of content analysis, deductive analysis, complex analysis and synthesis. Databases for monitoring the use of antimicrobials are analyzed, the impact of risk factors for AMR is compared, and conclusions for adequate future actions to control AMR are drawn.

Keywords: antimicrobial, resistance, One Health, veterinary medicinal products.

P3S2

STATUS AND CONVERSATION MEASURES OF BROWN BEARS (URSUS ARCTOS L.) ON THE BALKANS – COMPARATIVE ANALYSYS BETWEEN THE COUNTRIES OF THE REGION

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ABSTRACT

This publication is dedicated to the Brown bear (Ursus arctos L.) – one of the most significant representatives of the fauna of the Balkans, important for protecting the balance of local ecosystems. Brown bears are subjected to serious dangers, including loss of habitat, climate change and poaching therefore the conservation of the species is of critical importance. Different protective measures are being adopted, both on national and international level, such as legislative initiatives, restauration of habitats, improving social awareness on the topic, etc. These measures include the combined effort of wildlife protection organizations, local communities, government bodies. Despite that, the population of Brown bears remains endangered. This work analyses monitoring data, compares conversation measures and explores the influence of risk factors and the status of the species in different countries of the region. To finalize, the article provides conclusions in regards to future developments of the conservation of the species.

Keywords: Ursus arctos, brown bear, population, status, protection, ecosystems.

P3S3

LEGISLATION ANALYSIS AND VETERINARY HYGIENE PARAMETERS RELATED TO CAMEL BREEDING IN BULGARIA

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ABSTRACT

The camel (*Camelus spp*.) is a mammal classified within the order *Artiodactyla* and the family *Camelidae*, which is well-adapted to living in harsh conditions. Both one-humped (*Camelus dromedarius*) and two-humped camels (*Camelus bactrianus*) are bred for meat, milk and wool production. However, the main source of income from camel breeding in the country is related to tourism. The present study aims to analyze national and European legislation and address important veterinary hygiene parameters associated with breeding one-humped camels. The study revealed that there are no specific regulatory acts in the field, and currently, the general requirements for farm animals are taken into account and should be followed. There is a need to improve, supplement and unify the legislation relating to camel farming to protect the health of this animal species. These changes would also inevitably strengthen controls on the camels welfare and will contribute the safety and quality of camel products.

Keywords: Camels, camel breeding, legislation, veterinary hygiene parameters.

P3S4

LION'S MANE MUSHROOM: A NATURAL APPROACH TO PREVENTING NEUROLOGICAL DISEASES IN DOGS – A REVIEW

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ABSTRACT

Lion's Mane mushroom (*Hericium erinaceus*) has garnered attention for its potential benefits in preventing and managing neurological diseases in dogs. Neurological disorders, including cognitive decline and nerve damage, are a common challenge in dogs. As dogs age, they may experience Canine Cognitive Dysfunction (CCD), akin to Alzheimer's in humans. Emerging research suggests that Lion's Mane mushroom (*Hericium erinaceus*) exhibits neuroprotective and neurotrophic properties, primarily through stimulating the production of nerve growth factor (NGF) and supporting myelination. Incorporating Lion's Mane mushroom into your dog's diet may offer neuroprotective benefits, potentially preventing or mitigating neurological diseases. The objective of this review is to evaluate whether daily supplementation with lion's mane mushroom extract can prevent or slow neurological deterioration in aging dogs.

Keywords: Hericium erinaceus, prevent, neurological disorder, neuroprotective, neurotrophic.

P3S5

VIRTUAL REALITY AND ARTIFICIAL INTELLIGENCE IN VETERINARY MEDICINE – A REVIEW

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ABSTRACT

This review article explores the growing application of artificial intelligence (AI) and virtual reality (VR) in veterinary medicine. Veterinary students and increasingly utilize VR simulations to practice procedures without the ethical challenges of live animal use. In image diagnostics, AI offers rapid and precise evaluations of radiological and laboratory data. Additionally, these technologies promote and improve safe surgical planning, and better client communication. Several case studies highlight the importance of VR and AI during training and planning complex surgical procedures. As these innovations become more accessible, their impact on veterinary care is expanding exponentially, improving the precision, efficiency, and compassion of veterinary care

Keywords: artificial intelligence, virtual reality, veterinary education, diagnostic imaging, surgical planning.

P3S6

OFFICIAL CONTROL OF REMOTE TRADE IN FOODSTUFFS

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ABSTRACT

With the growing global population and the food and health crises of recent decades, ensuring sufficient and safe food resources is becoming increasingly important. In the European Union, the legislation in the field of agri-food chain management provides an effective and harmonized legal framework that lays down the requirements for raw materials and products at each stage of production, processing and trade, in accordance with the "from farm to fork" concept. At the same time, the consequences of Covid 19 for the food industry and public health, as well as modern trends in digitalization in all spheres of society, have led to new challenges in ensuring safety guarantees through the introduction of remote food trade. This study investigates the intensity of e-commerce in food in one administrative region in the country for the period 2020-2024. Analysis is made on the main groups of food from animal and plant origin that are subject to online supply through a variety of channels – social media, couriers, electronic applications, etc. An emphasis is made on the official control procedures of such business operators, indicating the scope of sanctions imposed in case of established violations that pose a risk to product safety.

Key words: food safety; official controls; remote trade; electronic distribution; food business operators.

P3S7

ANTIMICROBIAL RESISTANCE – STRATEGIES AND OPPORTUNITIES

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ABSTRACT

The ability of microorganisms to survive and multiply in the presence of an antimicrobial agent at a concentration sufficient to inhibit or kill bacteria will have an increasingly critical impact on human and animal health and global food production. Although antimicrobial resistance (AMR) is a natural phenomenon, the crisis is exacerbated by the widespread use of antibiotics in healthcare, agriculture and the release of antibiotic-laden industrial waste into the environment, and the still insufficient availability of alternative antimicrobial agents. This paper analyses the common legal framework at international and European level for combating antimicrobial resistance in the light of the One Health approach. It focuses on good practices for the responsible use of antibiotics, including an

integrated approach between the main stakeholders - human and veterinary medicine, agriculture, the environmental sector and consumers.

Keywords: antimicrobial resistance, one health, responsible use, alternative therapy.

P3S8

LATE GESTATION-ASSOCIATED BIOCHEMICAL AND PHYSIOLOGICAL SHIFTS IN DAIRY COWS

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ABSTRACT

During pregnancy, significant immunological and metabolic adaptations occur in dairy cows to support the proper intrauterine development of the fetus. This study aims to investigate hematological, biochemical, and physiological changes in dairy cows during the last trimester of pregnancy. The results are compared with values obtained from non-pregnant cows outside of estrus. The analysis reveals statistically significant differences ($P \leq 0.05$) in key parameters. Compared to non-pregnant cows, the average cortisol levels in pregnant cows increase by 0.46 U/ml, increased ALT activity (33.5 ± 3.89 U/ml vs. 27.33 ± 1.97 U/ml), elevated WBC count (11.48 ± 4.32 x10⁹/L vs. 7.08 ± 1.07 x10⁹/L), and a rise in body temperature (37.88 ± 0.12°C vs. 37.45 ± 0.31°C). In contrast, glucose levels were slightly lower in pregnant cows (5.75 ± 0.19 mmol/L vs. 6.14 ± 0.22 mmol/L). Pulse rate also increased significantly during pregnancy (115.67 ± 15.65 bpm vs. 90.67 ± 15.31 bpm). These findings provide valuable insights into the physiological adaptations occurring in dairy cows during late pregnancy, contributing to a deeper understanding of metabolic and cardiovascular dynamics in this critical period.

Keywords: cows, pregnancy, biochemical, physiological, changes.

P3S9

HEPATIC NODULAR HYPERPLASIA IN A 10-YEAR-OLD BULGARIAN SHEPHERD DOG – A CASE REPORT

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ABSTRACT

Nodular hyperplasia of the liver is a spontaneous lesion of unknown origine that occurs mostly only in older dogs. There is no gender or breed predisposition. The diagnosis can be a challenge due to the clinical and pathological similarities with other chronic liver injuries including regenerative nodules, cirrhosis, tumors and other. In the current case a geriatric male Bulgarian shepherd dog was presented in terminal condition, with a clinical sign of vomiting, lack of appetite, ascites and cachexia. Most of the parameters of the biochemical profile for liver functions was in normal range. Ultrasonographic examination showed a nodular hypoechogenic parenchymal structure of the liver. During the necropsy

multiple non-capsulated nodular masses of the liver was detected. Microscopically, remained lobular histoarchitecture with lipid and glycogen degeneration of the hepatocytes was observed. The clinical and postmortem signs was characteristic for diagnosis of hepatic nodular hyperplasia.

Keywords: hepatic nodular hyperplasia, liver, dog, histopathology.

CONTENT