

# International Conference on Veterinary & Animal Sciences

July 15-16, 2019 | Kuala Lumpur, Malaysia

## Dose response of black mink to aleutian mink disease virus

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Eight black female mink were inoculated with each of the eight 10-fold serial dilutions ( $10^0$  to  $10^{-7}$ ) of a 10% spleen homogenate prepared from the spleens of mink infected with a local strain of Aleutian mink disease virus (AMDV). Mink were anesthetized and inoculated intranasally with 0.5 mL of each inoculum dose. Blood samples were collected prior to inoculation and at 20, 35, 56, 84, 140 and 196-day post-inoculation (dpi). Anti-AMDV antibodies were tested by counter-immunoelectrophoresis (CIEP) and viral DNA was tested by PCR. Animals which were PCR or CIEP positive at 196 dpi ( $n=41$ ) were killed at 218 dpi, and blood samples were collected. Antibody production persisted in all seroconverted mink until the termination of the experiment, whereas 71.1% of the mink showed irregular or short-lived viremia, suggesting that PCR is not an accurate diagnostic tool for AMDV-infection in chronically infected mink. Logistic regression analysis showed that the significant association between inoculum dose and the incidence of viremia disappeared after 84 dpi, which was the result of a combination of short-lived viremia and secondary infections. Persistent antibody production resulted in significant associations between inoculum dose and the incidence of seropositive mink on all sampling occasions. Antibody titer at 218 dpi significantly decreased by decreasing inoculum dose, which was primarily the result of the length of time elapsed between the establishment of infection, measured by viremia, and the time of assessing antibody titer. This relationship is important when antibody titer is used to identify tolerant mink.

### Biography

Hossain Farid is an adjunct professor in the Department of Animal Science and Aquaculture at Dalhousie University Faculty of Agriculture. He received his Ph.D. degree in Animal Breeding and Genetics from the University of Alberta, Canada, in 1986. He joined Dalhousie University in 1990 and retired in 2017. His research has been focused on the application of molecular techniques to animal improvement, including genotyping of Canadian purebred sheep for resistance to scrapie, and genetic selection of mink for resistance to the Aleutian mink disease virus.

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## Modulus of elasticity of equine third metacarpal bone determined by the digital image correlation method

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**Introduction:** Bone tissue has heterogenous, anisotropic behaviour and its mechanical properties are different in various regions as well as in particular directions. The modulus of elasticity is a measure of the stiffness of an elastic material. It can be determined by many different methods like: bending and compression tests, ultrasound, Quantitative Computed Tomography.

There are many factors that can affect the compressive strength values and further calculations giving inaccurate results.

**Materials and Methods:** 60 cube samples (5x5x5 mm) of equine cortical bone were cut out from dorsal, palmar, lateral and medial surface of third metacarpal bone. The bones were collected from healthy horses slaughtered in the slaughterhouse. One wall of each cube in 3 different directional variants was covered by paint texture. Uniaxial compression test of each cube was performed with assistance of optical system for stress-strain detection of bone sample. Elastic modulus was calculated for each loading direction: longitudinal, dorso-palmar and medio-lateral.

**Results:** Bone samples from the dorsal aspect of the metacarpal bone were the strongest, while the samples from palmar surface showed the lowest resistance. The highest values of the elastic modulus were calculated for compression test in longitudinal direction.

**Conclusion:** Digital Image Correlation is an optical method, which improves the accuracy of the strain determination in bone sample. The compressive test gives more information about bone strength since it allows to measure it in three different directions.

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### Biography

Bernard Turek has completed his PhD in 2000 year from Warsaw University of Life Sciences, Poland. He is the head of Surgery Division in Large Animals Diseases Department with the clinic Warsaw University of Life Sciences. He is mainly focused on the treatment of fractures in horses and fixations technics. The results of his clinical work were presented at many international congresses and published in veterinary literature.

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## The effect of different composition of oil palm frond and rice crop residue fermentation quality of agricultural waste based-complete feed silage

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The objective of the current study was to evaluate the nutritive value and fermentation quality of agricultural waste based-complete feed silage with different composition of oil palm frond and rice crop residue. Total of 4 treatments were (A) king grass 70% + cassava waste 12% + tofu waste 15% + lactic acid bacteria (LAB) 3%; (B) king grass 50% + rice crop residue 20% + cassava waste 12% + tofu waste 15% + LAB 3% (C) king grass 50% + oil palm frond 20% + cassava waste 12% + tofu waste 15% + LAB 3%; (D) king grass 50% + rice crop residue 10% + oil palm frond 10% + cassava waste 12% + tofu waste 15% + LAB 3%. The liquid of epiphytic lactic acid bacteria was sprayed on the top of silage material with a concentration of  $4.0 \times 10^6$  cfu/g and then mixed by the hand. About 500 g of silage materials were packed into plastic silos and stored in the room temperature for 30 days. The results of this study showed that dry matter and organic matter contents of silage was affected ( $P < 0.05$ ) by different composition of oil palm frond and rice residue. Silage C had the highest dry matter and organic matter contents than other silage. There were no significant differences in crude protein and NDF contents among silage treatments with crude protein and NDF values varied from 14.5 to 15.0 and 57.1 to 58.9, respectively. The silage A produces the highest ( $P < 0.01$ ) lactic acid followed by the lowest ( $P < 0.01$ ) pH value compared to other silage. Silages A and C had lower ( $P < 0.01$ ) N-NH<sub>3</sub> concentration compared to silages B and D. Silage C had the lowest total VFA concentration compared to other silages. Silage A had the highest Fleigh Point followed by silages C, D and B. It was concluded that replacement of 20% of grass with oil palm frond in silage C produces a quality silage fermentation similar to silage A as a control.

### Biography

Budi Santoso is a Dean Faculty of Animal Science, University of Papua, Indonesia. He got Doctor Degree from Iwate University, Japan in 2004. He did his postdoctoral research at Obihiro University of Agriculture and Veterinary Medicine, Japan in 2010 and 2011. He has published more than 25 papers in National and International journals and has been serving as an editorial board member of Tropical Animal Science Journal, Indonesia.

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## Mechanical vectors related to camel trypanosomosis in Al Kharj Town, Riyadh region, Kingdom of Saudi Arabia

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The present study was conducted to determine the prevalence of camel trypanosomosis and its vectors in Al-Kharj, Central part of Saudi Arabia. One hundred and seven serum samples were examined to detect the presence of *T. evansi* infection by CATT test. Eight NZI traps for sampling of biting flies were deployed in farms where camels and cows were kept, including water station, people houses, cactus farm (Aloe vera), irrigated areas, open Range, sheep house and control. Camel trypanosomosis prevalence was 21.5% during the study period. The highest catches of flies were around water station and people houses. The biting flies caught were *Stomoxys calcitrans* and some mosquito's species. *Stomoxys calcitrans* may be an important mechanical vector of camel trypanosomosis in the study area.

A peak of muscidae abundance was observed in March and April.

**Keywords:** Camel trypanosomosis, muscidae, mosquitoes, seasonal variation, Al-Khari and Nzi traps.

### Biography

Mohamed El Wathig is currently at Animal Quarantine of Jeddah Islamic Port, (MEWA) KSA. He was graduated for the bachelor of veterinary medicine in 2003 at University of Khartoum, after accomplishing his master in Preventive Medicine & Public Health, he got his Ph.D. degree in Parasitology (2018) from Sudan Academy of Sciences, Sudan. He actively participates in international conferences and has published articles in National and International journals.

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## Introducing a management setup for lion cubs' adoption in Sri Lankan safari park

**Priyasad Ediriwarne**

*Ridiyagama Safari Park, Sri Lanka*

Unless the fecal sample test for presence of Progesterone or urine test for the presence of lioness placental hormone, Relaxin, it is very difficult to diagnose pregnancy in lioness. But in Safari Park settings most of the time pride of lions are allowed to live in free ranging pattern and it is very difficult to collect fecal and urine samples with animal identity. Even though gross observations are not such accurate for pregnancy diagnosis; in Safari park we use gross observations for pregnancy diagnosis of lioness.

In the safari park lions pride there is a lioness called "Sheena" which had cascades of still births and birth complications. During last month, we noticed abdominal enlargement and enlargement of her mammary glands. So we guess she was in late pregnancy about 120 days. Since we have experienced so many failures regarding her cub delivery, we needed to ensure no more failures in this time. When we felt "Sheena" is in her late pregnancy period, we directed her to a separate cage and appointed an assistant to observe lioness health condition.

One day "Sheena" was restless with thick vaginal discharges. On that night "Sheena" delivered four healthy cubs. Each and every cub were checked for diseases and abnormalities and found they are healthy enough to survive. Their health and nutrition were closely measured, while they were allowed to play in their pens, while mother to exhibit her natural mothering ability, to ensure good health and wellbeing of babies.

In Sri Lanka, "Ridiyagama" is one and only safari park. So "Sheena" is the first ever lioness who gave birth under semi captive conditions. All for cubs were released after 7 months of age. All of them were very healthy at the releasing point.

With successful case handling we received a good experience. Not only for lions we apply above method for other animal species 7 in Ridiyagama Safari park.

### Biography

Priyasad Ediriwarne or better say the Lions 'Doctor (that is how the press calls him) is a Veterinarian and a well-known person to Sri Lankan Wild Life Lovers. He is not only a Veterinarian but also true animal lover. Very few of us are lucky enough to get engaged in something we really love in doing as our job and he is indeed a lucky person who really enjoys his career. Throughout the time he spent as a veterinary student at the University of Peradeniya Sri Lanka, he has shown a great interest and compassion towards animals specially those who are victims of either various illnesses or other circumstances such as human inflicted traumas, RTA etc. Currently he is the Residential Veterinarian at Ridiyagama Safari park which is the only Safari Park in Sri Lanka. Other than that he is an active member of the World Small Animal Veterinarians' Association.

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## Rodlet cell sequences and olfaction in catfish

**Mahmoud Awad and Dalia Ibrahim**

*South Valley University, Egypt*

Rodlet cells (RCs) are exceptional cells of mysterious origin distinguished in teleosts. Two totally different origins have been claimed for RCs. The first exogenous origin proposes that RC is a parasite and the second endogenous one, mostly predominant, describe it to be an immune or a secretory cell. Various sequences of RCs including immature, developing and mature stages have been verified in various fish organs, nevertheless, RCs sequences have not been identified in cat fish. Therefore, this study is considered to be the first record for the appearance of RCs stages in the olfactory organ of cat fish with the aid of light and electron microscopic tools. Several stages of RCs could be identified in the sensory and non-sensory epithelia of the olfactory lamellae including immature RC residing towards the basement membrane, granular (most numerous) and vesicular RCs in the connective tissue core and in the lamina propria of the olfactory organ. Mature dormant RCs were numerous small elongated cells and they reacted intensely positive with S-100 protein. Secretory (pre-ruptured and ruptured forms) RCs could be identified releasing their contents both to in and outside the olfactory lamellae. Collectively, RCs are component of the cellular elements of the catfish olfactory organ and they may play a vital role in catfish olfaction.

### Biography

Mahmoud Awad is a lecturer of Histology, Faculty of Veterinary Medicine, South Valley University; He got the pH degree from the United Graduate School of Veterinary Science, Iwate University, Japan. He is interested in stem cell research and molecular biology. He is an expert in tissue culture and reproductive biology. He has published 6 research articles and 1 book.

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## Development of a protein - Iron enriched goat meat powder fortified with herbs of Assam

**Mineswar Hazarika, N. Nahardeka and A. Das**

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A ready to eat protein-iron enriched goat meat powder fortified with certain herbs and animal by-products was developed to supply to much needed animal protein and iron hunger population of India. Low consumption of animal protein and iron is a matter of concern. Animal protein consumption in India is one of the lowest in the world. Around 50% of expectant mothers and puberty attained girls are also chronically deficient in iron and thus, they are supplied with dietary iron in the form of tablets, capsule and syrup but not without problems. The goat meat powder was prepared from the meat (Chevon) of Assam Hill Goat, a native indigenous breed of Assam as the meat is universally accepted without any religious prejudice. Certain indigenous herbs of Assam which are normally used as food additive since time immemorial and known to have potent medicinal values were used in this study. The herbs Modhusuleng (*Polygonum caespitosum*), Narasimha (*Murraya koenigii*), Podina (*Mentha viridis*), Fermented Bamboo Shoot (*Bambusa balcooa*), Gol Nemu (*Citrus aurantifolia*) were added in the product. Goat blood collected hygienically was also used as a source of animal protein and iron. Necessary spices and salt were also added as required. Minced goat meat (Chevon) was mixed with the above herbs and marinated for 1 hour and then steam cooked for half an hour. The cooked chevon was then mixed with goat blood and dried at 60°C for 4 hours in a mechanical dryer. The dried meat mix was ground into powder, packed in HDPE food grade packaging materials, stored at room temperature and subjected to quality studies. A control sample without blood and herbs was also prepared. Proximate composition reveals 6.07 and 4.92% Moisture, 68.11 and 65.87% Protein, 13.24 and 16.56% Ether extract, 11.07 and 10.34% Ash and 2.128 mg/kg and 1.771 mg/kg Iron for treated and control samples respectively. Microbial quality was found to be in acceptable level during six months of study period. The encouraging results of the study indicate that this technology could commercially be exploited for large scale production and use in protein-iron deficient groups of population after clinical trial and authentication.

### Biography

Mineswar Hazarika completed his Master of Veterinary Science from Haryana Agricultural University, India and Ph.D. from University of Veterinary Science, Budapest, Hungary. He has 36 years of teaching and research experience in the subject of Meat Science and Technology. He has guided 15 master and 4 Ph.D. scholars so far. Presently he is working as the Head of the department of Livestock Products Technology and Principal Investigator of the All India Coordinated Research Project on Post Harvest Engineering and Technology in Assam Agricultural University, Guwahati, India. He has published 67 research papers in reputed journals.

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## Brucella melitensis detected in Egyptian apparently healthy cattle molecular and serological tests

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University of Sadat City, Egypt

Brucellosis represents a serious problem in cattle relaying huge economic losses. *Brucella meletensis* on of brucella strains that can infect human which its usual host is sheep, might isolated from cattle. The aim of present study was detection of brucellosis among cattle population in Menoufia governorate, Egypt and analyze risk factors. Serologically brucella were detected with RBPT. Evaluation of the specificity and sensitivity of RBPT, IC assay and cELISA against CFT test were done. Molecular detection of brucella using PCR and bacteriological isolation followed by phenotypic and molecular typing of the isolated bacteria. The overall prevalence using RBT was 1.44%. Holstein Friesian cattle have highest prevalence (1.57%) while native cattle were (1.28%). Cattle over 3 years old have the highest seroprevalence (2.77%). The positive result for RBPT, cELISA, IC Assay and CFT were 91%, 60%, 91% and 88% respectively after examination 100 serum sample. *Brucella melitensis* biovar 3 was isolated from the tissue specimens (uterus and/or lymph nodes). PCR targeting (Immuno-dominant antigen, gene bp26) generated product of 450 bp from (16/20) tissues specimens. These findings assisting in future planning pragmatic control strategies against bovine brucellosis in Egypt and for herd health fertility.

**Keywords:** Cattle, brucellosis, PCR, serological tests.

### Biography

Akram Salama is an Assistant professor at University of Sadat City. He was graduated for the bachelor of veterinary medical sciences in 2004, After accomplishing his master in Infectious Diseases, he got his Ph.D. degree in Infectious Diseases (2014) from Menoufiya University-Sadat City Branch, Sadat City, Menoufiya, Egypt. He actively participates in many international conferences and has published more than 25 papers in National and International journals and has been serving as an editorial board member of Archive on Veterinary Science and Technology.

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## Effect of red grapes pomace powder on storage stability of mutton rolls at refrigeration temperature ( $4 \pm 1^\circ\text{C}$ )

**Apoorva Argade, Ashok Malik, Sanjay Yadav, Sajid Hussain and Satyavir Ahlawat**

*Lala Lajpat Rai University of Veterinary and Animal Sciences, India*

The study was conducted with an objective to evaluate the effect of red grapes pomace powder (RGPP) incorporation on shelf life of developed functional mutton rolls. The rolls were prepared with addition of RGPP (3%) and BHT (0.01% as positive control), besides other ingredients which were added in control. The products were stored at refrigerated temperature ( $4 \pm 1^\circ\text{C}$ ) and their physico-chemical properties, sensory evaluation, and microbiological quality were analyzed at regular interval of 4 days. The results indicated that the products containing RGPP had higher sensory scores, and lower TBA values as well as total plate counts than control products. The instrumental color values ( $L^*$ ,  $a^*$ , and  $b^*$ ) also indicated the effect of RGPP on objective scale. Control samples were microbiologically spoiled after 12<sup>th</sup> day whereas RGPP treated samples were within the microbiological safety limits up to 16 days of storage. It can be concluded that RGPP (3%) can be incorporated to increase shelf life of developed functional mutton rolls without compromising the sensory quality at refrigeration ( $4 \pm 2^\circ\text{C}$ ) temperature.

**Keywords:** Red grapes, mutton rolls, storage stability.

### Biography

Apoorva Argade is a PhD Scholar (student) at Hisar, College of Veterinary Science, Lala Lajpat Rai University of Veterinary and Animal Sciences (LUVAS), Hisar-125004, Haryana, India. She did her MVSc (LPT) at Lala Lajpat Rai University of Veterinary and Animal Sciences. She has published more than 10 research articles in meat and dairy field.

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## Hydrops of the fetal membranes associated with fetal deformities and fetal papyraceous mummification in sheep

**Ahmed Saad A. Hassaneen, Islam Farag Fouad and Abdelnaser Abdelmonim Azab**

*South Valley University, Egypt.*

Hydrops of the fetal membranes is one of the pathological disorders of pregnant animals in different species including sheep, goat, and cow. It can be defined as dropsical condition of the fetal sacs in which there is an increase in the production of fetal fluids with excessive accumulation in the fetal sacs. Causes of hydrops include genetic, placental, and hepatic or renal fetal circulation defects. Hydrops conditions affect the dam and the fetus as well. These conditions are likely associated with genetic or congenitally deformities in the fetus (es). The etiology of hydrops-associated congenital malformations is not clear because of the complex mechanisms that may be involved.

Fetal mummification means fetal death at the middle or last third of gestation without regression of the corpus luteum due to genetic defects, torsion of umbilical cord, placental defects or infections, the presence of high circulating progesterone leads to retention of the fetus (es) with subsequent absorption of the fetal fluids resulting in a parchment-like fetal membranes resulting in papyraceous mummification.

A three-years and sixth-months-old full-term pregnant Rahmani ewe (parity = 2; body weight = 45 kg) was introduced to Veterinary Teaching Hospital, Faculty of Veterinary Medicine, South Valley University, Egypt. It showed bilateral excessive round-shape abdominal distention with strong straining and colic. Upon thoroughly obstetrical examination it revealed failure of dilatation of the most caudal cervical ring. After successful surgical interference, 6 dead fetuses were delivered; 3 mummified fetuses and 3 fully-developed dead malformed fetuses with ankyloses, brachygnathy, and inferior arthrogyposis.

### Biography

Ahmed Saad A. Hassaneen is a Lecturer at South Valley University. He was graduated for the bachelor of veterinary medical sciences in 2006, and he was ranked the first among undergraduate students. After accomplishing his master in theriogenology, he got his Ph.D. degree in animal reproduction from Nagoya University, Japan in 2016. He actively participates in many international conferences. He is supervising 5 postgraduate students (2 Ph.D. "doctor" and 3 master). He is teaching theriogenology, obstetrics, artificial insemination to undergraduates and reproductive biology, and methods of scientific research to postgraduates and he is an editor of SVU-International Journal of Veterinary Sciences.

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## Comparison of CT findings in dental diseases in rabbits, guinea pigs and chinchillas

**Wojciech Borawski, Dominika Kubiak-Nowak, Milena Skorupska, Radosław Sokalski, Barbara Żukow and Zdzisław Kielbowicz**

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Guinea pigs, chinchillas and rabbits are most frequently kept as pets small mammals with a hypselodontic type of dentition. Of the numerous rodent species, only 5, including chinchilla and guinea pig, are classified as full elodonts, which means that not only their incisors but also premolars and molars are the teeth that continue their growth throughout the lifetime of the animal. The teeth of a domestic rabbit, an animal belonging to lagomorphs, are high-crowned and they are constantly growing, making rabbit, chinchilla as well as guinea pig more susceptible to dental diseases which, in turn, leads to conditions that affect the animal's health and as a result forces the owners to seek help in a professional veterinary clinic. In each of these three animal species, diagnosis of dental diseases is difficult, mostly impossible without using diagnostic imaging methods. Clinical symptoms are non-specific, usually including lack of appetite, weight loss, apathy, difficulty in chewing and swallowing food. Using computed tomography, due to its cross-sectional nature, provides much more information about the condition of the patient's teeth than the most commonly used radiographic examination, thus allowing to plan a more effective and better-suited treatment method. Computed tomography allows to image the subtle, invisible in a regular X-ray examination, changes as well as provides far better image of advanced lesions, the precise assessment of which is impossible because of overlapping of anatomical structures.

Study evaluated 120 patients (40 rabbits, 40 guinea pigs and 40 chinchillas) suffering from dental diseases. The aim of the thesis is a comparative assessment of changes in stomatognathic system in those three kept as pets small mammals and determinate the impact of dental problems on different anatomical structures of their skull.

### Biography

Wojciech Borawski graduated from the Faculty of Veterinary Medicine at the Wroclaw University of Environmental and Life Sciences. Since 2015 employed in Imaging Department of the Department of Surgery. Professional interests and research are concentrated on the imaging diagnostic methods of small animal's diseases with particular emphasis on small mammals, reptiles and birds

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