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Research Article **Published Date:- 2020-12-11**

Characterization of Salmonella spp. isolated from small turtles and human in Republic of Korea

In 2013, the World Health Organization (WHO) reported that small, pet turtles had caused multistate Salmonella outbreaks in the United States, from where small turtles were subsequently exported into the Republic of Korea. We investigated cases of salmonellosis in South Korea associated with domestic small turtles and analysed genetic characteristics of Salmonella isolates in commercially-available small turtles. We traced six Salmonella serovars, known to have caused human infection in the United States (S. Sandiego, S. Pomona, S. Poona, S. Newport, I 4,(5),12:i:-, and S. Typhimurium), in isolates from suspected Salmonella infection cases in Korea from 2006 to 2015. Additionally, we conducted a pilot study of isolates from small turtles being sold in Korean markets, and performed molecular genetic analysis on the identified strains. S. Pomona was identified in one Salmonella infection case, while all strains isolated from small turtles belonged to either subspecies I (enterica, n = 10, 71.4%) or subspecies IIIb (diarizonae, n = 4, 28.6%). Two serovars (S. Pomona and S. Sandiego) that were highly associated with turtle-to-human transmission were identified with 100% homology to human isolates. Previous to this study, turtle-associated human S. Pomona infections were not well reported in Korea. We report Salmonella infection in small turtles in Korea, and confirm that small turtles should be considered the first infectious agent in S. Pomona infection. We therefore suggest quarantine measures for importing small turtles be enhanced in Korea.

Case Report **Published Date:- 2020-11-02**

Gastrointestinal stromal tumor resulting in recurrent colic in a arabian horse gelding a report of case

Background: A Grey 12-year-old Arabian endurance horse gelding was referred to the SHS Veterinary Center for anorexia, mild colic of 5 days duration, and melena of 1 day duration. The owner reported recurring colic, 12 episodes of mild colic in the previous year.

Methods: On admission, vital signs were within normal limits and body condition score was estimated to be 3/9.

Results: Packed cell volume (PCV) was 28% [reference range (RR): 31% to 47%] and plasma total protein was 58 g/L (RR: 60 to 80 g/L). Hematochezia was observed. Abdominal ultrasound examination detected no abnormalities. Over the next 12 h, the horse experienced hematochezia and several mild episodes of colic and death. A necropsy was performed. A mass arising from the right dorsal ascending colon near the base of the cecum and extending transmurally from the colonic mucosa into the mesocolon was a 8 cm × 5 cm × 8 cm firm, homogenous, tan mass. The portion of the mass that extended into the colonic lumen was pedunculated, with an ulcerated surface. The adjacent segments of colon were markedly reddened and edematous. Histologically, the mass was comprised of large interweaving sheets of small, spindle cells with ill-defined cell borders embedded in abundant myxomatous matrix. Tumor cells contained scant eosinophilic cytoplasm and oval to elongate nuclei with finely stippled chromatin and inconspicuous nucleoli. Mitotic figures were rare (1/10) high power fields. Tumor infiltrated between the muscularis interna and the muscularis externa at the myenteric plexi.

Conclusion: Gross and histologic appearance, were consistent with a diagnosis of gastrointestinal stromal tumor.

Review Article **Published Date:- 2020-08-28**

Veterinary vaccine development: The helical project

Vaccine production process have been fuzzy journey to the public and, in some degrees, to those in the setting. By clearly showing the lengthy and challenging journey of vaccine development process, thereby suggesting the economic and health implication of improper use of veterinary vaccines, the paper tries to add the attention given to infection prevention. Starting from the foundations, the types and requirements of veterinary vaccines are described. The paper concludes with current research and regulatory quos in the topic.

Research Article **Published Date:- 2020-07-27**

Evaluation of Single Bilateral Intratesticular Injection of Cetrimide for Nonsurgical Sterilization of Adult Male Albino Mice

Nonsurgical fertility control is increasingly advocated as more cost-effective than surgical sterilization to manage stray animal populations in a different part of the world. An experimental study was conducted from December 2018 to April 2019 at Mekelle University to evaluate the effect of single bilateral intratesticular injection of cetrimide 2% in adult albino mice. A total of 20 clinically healthy albino mice selected based on their age and sex and were divided randomly into five groups and evaluation was conducted for 30 days after intratesticular injection of cetrimide solution 2% at the dose rate of 5, 10, 15 and 20 mg per testis and for control 0.1 mL normal saline per testis per 100 g body weight were given. All albino mice were evaluated for 30 days at a fixed interval. Change in body weight, scrotal width, sexual behavior, and fertility performance was also assessed. On day 30, all albino mice were sacrificed for histopathological study. Means? ± ?Standard deviation of the mean, one-way, and a mixed model ANOVA (for repeated measures) was used to summarize the data, determine the effects of group and time on bodyweight and scrotal width. The significant increase in body weight (p - 0.001) and significant reduction of scrotal width (p - 0.001) were noted in all cetrimide treated in comparison to control groups. In addition, there was a significant ($p < 0.05$) reduction of scrotal width in albino mice after intratesticular injection of cetrimide on day 1, 10, 15, 20, 25, and 30 with respect to their experimental groups. Testicular histology revealed that there were multinucleated giant cells in seminiferous tubules, derangement of tubular architecture along with infiltration of leucocytes and appearance of fibrous tissue were seen on testicular sections at a dose rate of 15 and 20 mg. Similarly, a significant change in the sexual behavior of the treated males and no pregnancy was detected on female albino mice after 21 days post-coital at 10, 15, or 20 mg cetrimide-treated males. In conclusion, a single bilateral intratesticular injection of cetrimide 2% at a dose of 15 and 20 mg might provide an effective way of sterilization and may be considered as an alternative to surgical castration in male animals. Besides, further assessment should be done in the future to identify the mechanism of infertility.

Review Article **Published Date:- 2020-05-22**

Review on impacts of COVID-19 pandemic on life animals and dairy product processing industries of the world

This review was conducted for the objective of assessing causes of COVID-19 pandemic impacts on life animals and dairy product processing industry of the world. Since its outbreak in Wuhan town of China, the newly emerged strains of corona virus COVID-19 causes incredible crisis both on life animal and its product especially dairy industry of the globe. During the outbreak of the virus, majority of the world people were stayed home to prevent the spread of the diseases. At that time, the wildlife found in the zoo were exposed to diseases and missed human attention, global wildlife trade was spotlighted and wildlife was running… wild. For the reason of COVID-19 pandemic, many schools and restaurants which received dairy product from dairy producers and cooperatives were shutdown. Due to schools and restaurant shutter, milk supply chain was disrupted. For this moment milk demand and supply was decreased, huge volume of milk was dumped, mode of milk trade was changed, market and farm prices was fluctuated, import- export route was interrupted and Farm workforce absenteeism were some of the challenges cases dairy industry crisis. Trade law modification, provision of financial assistance for dairy industry and farmers, and expansion of export route were the measures taken by concerned bodies to save dairy industry from corona virus crisis. Therefore, COVID-19 pandemic is the disaster diseases which causes social and economic crisis on dairy producers of the world. So, to save wildlife and dairy industry from corona virus crisis, global solidarity prevention is mandatory.

Research Article **Published Date:- 2020-04-14**

In vitro antimicrobial activity of a black currant oil based shampoo versus a chlorhexidine 4% shampoo on bacteria strains isolated from canine pyoderma: A comparative study

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Over the last few years, antimicrobial shampoo therapy has been increasingly used to treat skin infections in order to reduce systemic use of antibiotics. This study was aimed to compare the In vitro bactericidal effect of a black currant oil based shampoo (S1) to a chlorhexidine 4% shampoo (S2) against methicillin-sensitive Staphylococcus pseudintermedius (MSSP), methicillin-resistant Staphylococcus pseudintermedius (MRSP), Staphylococcus aureus (SA), Escherichia coli (EC) and Pseudomonas aeruginosa (PA) isolates.

A collection of 50 bacterial strains from skin swabs of dogs with superficial recurrent pyoderma was selected: 10 MSSP, 10 MRSP, 10 SA, 10 EC and 10 PA. The two shampoos were blindly tested in duplicate with a microdilution plate method, with scalar concentrations from 1:2 to 1: 256. The MBC was performed for each dilution. A linear regression was used to detect a statistically significance between the two shampoos.

All isolates were completely killed at 1:2 up to 1:16 dilution of the two antiseptic products. At the 1:32 dilution the first bacterial growths were observed, in particular for 2 and 4 strains of MRSP by S1 and S2 respectively. The first lethal dilution for SA was at 1:64 for S1/S2 and only for S2 against SP. No significant difference was observed between the two shampoos according to the results of linear regression significant for: i) MRSP, PA and EC ($p < 0.05$); ii) MSSP and SA ($p < 0.1$).

This study showed that both black currant oil based shampoo and chlorhexidine 4% shampoo have a similar In vitro bactericidal activity.

Research Article **Published Date:- 2020-03-05**

Dairy cattle producers' perception on Oestrus Synchronization and mass artificial insemination services in Waliso and Ilu Districts of South West Shoa Zone of Oromia, Ethiopia

The study was conducted in Ilu and Waliso districs of South West Shoa Zone to investigate the perception of dairy cattle producers on oestrus synchronization and mass artificial insemination services. A total of 122 respondents (38 from Ilu and 84 from Waliso districts) owning at least one lactating cow and participated in synchronization program were randomly selected and interviewed individually by using semi- structured questionnaire. Both primary and secondary data were used to generate reliable information on the intended topic. All collected data were analyzed using SPSS statistical package version 20 and the output was presented by descriptive statistics such as percentage and mean values in inform of graphs. Most of the respondents (67.15%) indicated that their satisfaction level towards synchronization and mass artificial insemination was low. Only few of them reported being satisfied as (medium-13.45%, good - 12.35% and very good - 7.05%). This might be because of shortage of feed, silent heat, poor performance of the inseminator and low awareness of farmers on the technology. From the study it was also noted that the overall percentage (26.22%) of calving rate to oestrus synchronization and mass artificial insemination was low. This might be due to heat detection problem (36%); A.I technician efficiency (29.25%), absence of A.I technician (23.9%) and distance of A.I center (10.25%). Therefore, the skill and knowledge based training should be given for both the farmers and implementers to enhance perception and adoption of the technology.

Research Article **Published Date:- 2020-03-03**

Common reproductive problem associated with one humped camel (Camelus dromedarius) in West Africa

The problems of reproduction in the camel are not extensively investigated as in the bovine, caprine and ovine species. There is need to elucidate the problem in detailed in order to overcome the problem of production and genetic multiplication. The information collected on these problems is derived mainly from questioning the camel owners, slaughterhouse material and very limited clinical and farm observations.

Research Article **Published Date:- 2020-03-03**

Anatomical changes of the development of red Sokoto goat stomach

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This study is aimed at investigating the age related changes in postnatal development of red Sokoto goat stomach. In this study, a total of ten red Sokoto goat digestive tract samples were used and they were grouped into five (5) age categories (group A to E). The goat ages were estimated using dentition eruption and wearing. The stomach was identified and separated from the other part of digestive tract. The gross study revealed that the stomach was composed of four (4) segments that named; rumen, reticulum, omasum and abomasum with anatomical demarcations between them. The biometric study of weight, length, width, thickness, and volume was found to be increasing with advancement in postnatal ages with the following valves shows the mean value of weight, length, width, thickness and volume were to be 29 to 58.0 (g), 23.5, to 52.1 (cm), 15.4 to 29.0 (cm), 0.48 to 1.0 (mm) and102 to 432 (cm3) from group A to group E respectively. Based on the above findings it was suggested that more research should be conducted using histological techniques and electron microscopy in order to finalize on the findings.

Research Article **Published Date:- 0220-08-10**

Consequence of birth year, type, sex, season and flock on birth weight trait of Kajli sheep

The liaison of birth weight to neonatal and mature vigor is especially given important if have the acquaintance of factors distressing in birth weight. Unbiased Best linear prediction of breeding values was estimated from pedigree birth weight records of 13715 Kajli sheep of livestock Experiment Station Khizerabad born 1994 to 2010, and Livestock Experimental Station, Khushab. Data records were statistically analyzed by means of using computer programmed Mixed Model Harvey's Least Squares and Maximum Likelihood. An animal model was used for heritability estimation following Maximum Likelihood procedure. Estimates of birth weight heritability in Kajli sheep were 0.05 ± 0.019. The estimated breeding values of both forms for males, females, and sire were calculated with significant variation. Both farms data were analyzed by using an animal model program. The squares mean slightest for weight at birth (kg), remained 4.13 ± 0.01 kg. In addition, birth of the year, the birth of type, flock and sex significantly affects the ($p < 0.001$) trait of birth weight. The domino effect of the current study has rational implications not only for sheep husbandry nevertheless as well as for amplified acquaintance of parameters which drastically persuade deviation of weight in birth as weight in birth has become itself noteworthy forecaster of anon fitness outcomes. These results showed the decreasing genetic and static phenotypic at birth weight. It is likely that there are complex interactions between genetics and environmental factors of parental, placental and fetal origin. Birth weight is highly influenced trait by maternal nutrition, genes, care, management, climate, seasonal variation and type of birth.
