Molecular Analysis of *Coxiella Burnetii* by Isocitrate Dehydrogenase Gene Sequence-Based Typing and PCR-RFLP in Isfahan, Iran.

Nokhodian Z, Khalili M, Ataei B, Feizi A, Moradi A, Rostami S and Yaran M.

ABSTRACT

In the recent years, considerable advances have been made in the detection and genotyping of *Coxiella burnetii*, the causative agent of Q fever. The selection of appropriate genotyping method has enabled description of the clonal diversity of *C. burnetii* around the world. Since, in the place of study, *C. burnetii* genotyping has not been done, the *icd* gene Restriction fragment length polymorphism (RFLP) and sequence-based typing for differentiation between the genomic detected *C. burnetii* from the various sources and compared the two methods is used. In an observational study, a total of 15 genomic positive cases of *C. burnetii* infection from different sources in Isfahan province (Central Iran) were enrolled and underwent two genotyping methods: the *icd* gene PCR-RFLP and *icd* gene sequence-based typing. The degree of similarity between the *icd* gene sequences was high (98.3-100%). In compare with *C. burnetii* Nine Mile *icd* gene sequence, the nucleotide sequences were different at 11 positions, which resulted in 7 differences in the amino acid sequences. After digesting the 370 bp amplified *icd* gene fragments all the samples indicated only one band of 370 bp, while amplified *C. burnetii* Nine Mile strain *icd* gene were digested into two bands with sizes of 221 bp and 149 bp. The results of two genotyping methods matched together. Used methods in present study were cheaper and easier than new methods and they can used for detection of acute and chronic phases of
infection.

**Keywords:** Coxiella burnetii, Isocitrate dehydrogenase, Iran, Restriction fragment length polymorphism, Sequence-based typing

The Protective Role of Date Palm (Phoenix Dactylifera Seeds) against Aflatoxicosis in Broiler Chickens Regarding Carcass Characteristics, Hepatic and Renal Biochemical Function Tests and Histopathology.

Abdel-Sattar WM, Sadek KM, Elbestawy AR and Mourad DM.

ABSTRACT

Harmful effects caused by aflatoxin (AF) directed researchers towards to find out new strategies for its control and detoxification increasing the safety of poultry feed. The aim of the present work was to study the protective role of date pits (*Phoenix dactylifera*) seeds against aflatoxicosis regarding carcass traits, biochemical function tests and histopathology of both liver and kidney in broiler chickens. 210 one-day old Arbor Acres broiler chicks were allotted into 7 equal groups as the first control (G1) supplemented by the basal diet, G2 had the basal diet with date pits supplementation 2%, G3 fed on the basal diet with date pits 4%, G4 was fed a basal diet containing 100µg aflatoxin/kg (100 ppb). G5 fed on a basal diet containing Hydrated Sodium Calcium Aluminum Silicates (HSCAS) 0.3% plus aflatoxin, (G6) fed a basal diet containing date pits 2% plus aflatoxin and finally G7 fed a basal diet containing date pits 4% plus aflatoxin. The aflatoxin supplemented to the broiler ration from first day to the end of experiment at 35 days. Aflatoxins supplementation significantly increased relative liver and small intestine weight, affect liver and kidney biochemical function tests and induced histopathological changes as fatty degeneration of hepatocytes, and interstitial nephritis with mononuclear cell infiltrations in both liver and kidney, respectively. However, addition of date pits (2% and 4%) and HSCAS (0.3%) to broiler's diet partially ameliorated these harmful effects of aflatoxins, indicating their protective effect against aflatoxicosis and this protection is dose-related. Addition of date palm seed (2% and 4%) gave a better results regarding carcass traits, biochemical parameters and histopathological examination of liver and kidney, finally concluding that date palm seed powder could be used as an effective feed additive to control aflatoxicosis in poultry with avoiding harmful effect of chemical mycotoxin binders (HSCAS).

**Keywords:** Aflatoxins, Broilers, Biochemical traits, Carcass characteristics, Date palm, Histopathological changes.
Potency of Sansevieria masoniana Extract against Antimicrobial Resistant Bacteria Isolated from Faeces of Pet – Reptile

Presented by: A Rahma, Faqihah, Ly Widya, Idris Widya, Ya Pakee

**ABSTRACT**

Sansevieria masoniana (SM) leaf extract is known to possess potent antimicrobial activity. The objective of this study was to determine the potency of SM extract against isolated bacteria from pet-reptile faeces collected in Surabaya from February 2018 until January 2019.

**MATERIALS AND METHODS**

A total of 129 fresh faecal samples were collected from pet-reptile. All the isolated bacteria were tested against several antibiotics using disc diffusion method, and SM extract using minimum inhibitory concentration test.

**RESULTS**

A total of 114 bacteria were isolated from the faeces of pet-reptile. The highest percentage of isolated bacteria was from *Enterococcus sp* (44.96%), followed by *Escherichia coli* (34.88%). Potency of SM extract proved that extract potential to inhibit the colonisation of isolated bacteria from faeces of pet-reptile. The minimum concentration of SM extracts that potentially inhibit the colonisation of both resistant and susceptible isolated bacteria was 62.5 mg/mL.

**CONCLUSION**

Sansevieria masoniana leaf extract is effective in inhibiting the growth of isolated bacteria from pet-reptile faeces.
Laying Hens Drinking Saline Well Water in South Sinai.

**ABSTRACT**

This study conducted to investigate the effects of dietary zeolite on egg production, egg quality, productive performance, and eggshell quality. Experimental diets were T1, control diet without OP; T2, 5% UOP; T3, 5% TOP; T4, 10% UOP; T5, 10% TOP. The results indicated that rabbit group fed 5% TOP recorded a better weight ranging from 729.20 to 738.30g were divided to five experimental groups. The current study investigated the effect of replacement of Untreated Orange Pulp (UOP) and Treated Orange Pulp (TOP) protein by basal diet protein on growth performance, digestion and T5, 10%TOP. The results indicated that rabbit group showed significant decrease in total protein, globulin, glucose and total antioxidant capacity concentrations as compared to the hens of T and T2 groups. Red blood cells capacity concentrations as compared to the hens of T and T2 groups. Alanine transaminase, aspartic transaminase and creatinine were significantly increased in the hens of S group compared to them in T, T1 and T2 groups. Egg weight significantly increased in the hens of S group (S), hens drank saline well water and fed basal diet. 5

**KEYWORDS:** Hematological parameters, Laying hens, Productive performance, Saline water, Heat stress, HSP70, Physiological responses, Productive and reproductive performance, Rabbits under Hot Desert Conditions.

**REFERENCES**


Sakr OG, Mousa BH, Emam KRS, Morsy AS and Ahmed NA. (2019). Heat stress, HSP70 gene expression, and blood constituents of hens under drinking saline well water. 180 hens were randomly divided into six equal treatments (20 rabbits/treatment), namely T1, T2, T3, T4, T5 and T6. T1 served as control. The rabbits of second, third and fourth groups were heat-shocked at 3, 25, 60, 3+25 and 3+25+60 days of age, respectively. HSP70 expression and physiological parameters were significantly different among these groups. Conception rate was higher in the does of T5 than that in T3, T4 and T6. Litter traits, productive and reproductive performance, Rabbits under Hot Desert Conditions.

DOI: 10.36380/scil.2019.wvj13


Research Paper

The current study investigated the effect of replacement of Untreated Orange Pulp (UOP) and Treated Orange Pulp (TOP) protein by basal diet protein on growth performance, digestion and nutritive value of growing rabbits. Best economic efficiency observed with 10%UOP followed by 5%TOP. It was concluded that rabbit group fed 5%TOP recorded a better weight ranging from 729.20 to 738.30g were divided to five experimental groups. The results indicated that rabbit group showed significant decrease in total protein, globulin, glucose and total antioxidant capacity concentrations as compared to the hens of T and T2 groups. Red blood cells capacity concentrations as compared to the hens of T and T2 groups. Alanine transaminase, aspartic transaminase and creatinine were significantly increased in the hens of S group compared to them in T, T1 and T2 groups. Egg weight significantly increased in the hens of S group (S), hens drank saline well water and fed basal diet. 5
**ABSTRACT**

The present study aimed to evaluate the impacts of probiotic mixtures as a biological feed additive on the productive performance of Barki sheep. The experimental design involved two forms of probiotics: a powder mixture (Mixture Probiotic Powder, MPP) and a premix of two microbial species (Lactobacillus plantarum and Enterococcus faecalis, MPL). Five experimental groups were established: 18 lambs in group 1 (negative control), 18 lambs in group 2 (MPL), 18 lambs in group 3 (MPP), 18 lambs in group 4 (5% of MPL and 5% of MPP), and 18 lambs in group 5 (5% of MPL and 0% of MPP). The results indicated that feed intake was higher in MPL and MPP treated groups compared to the control group. The conception and lambing rates were slightly different between groups, but the number of lambs born alive was significantly higher in MPP groups. The average daily gain of lambs as well as weaning weights increased (P<0.05) in MPL and MPP groups. Thyroid hormones T3 and T4 concentrations increased (P<0.05) with enzymes mixtures. This study suggests that the inclusion of probiotics in the diet of Barki sheep can enhance productive performance.

**Keywords:** Probiotics, Biological additives, Productive performance, Reproduction, Milk, Barki sheep.

**DOI:** 10.36380/scil.2019.wvj13

**A Review on the Role of Lipid in Selected Apicomplexan, Anaerobic, Kinetoplastid and Intestinal Parasitic Infections.**

Lipid particles are fundamentally engaged in producing more complex lipids, developing protective mechanisms against host innate and adaptive immunity, and supporting pathogen survival. The lipid bodies also utilized by the intestinal parasites to produce more complex lipids, develop protective mechanisms against host innate and adaptive immunity, and support pathogen survival. The lipid bodies also utilized by the intestinal parasites to produce more complex lipids, develop protective mechanisms against host innate and adaptive immunity, and support pathogen survival. The lipid bodies also utilized by the intestinal parasites to produce more complex lipids, develop protective mechanisms against host innate and adaptive immunity, and support pathogen survival.

**Keywords:** Host-pathogen interactions like cell signaling and immunity, as a source of eicosanoid components and cellular signaling molecules. Because of the variation in modes of life, different parasites can partly or fully utilize significant amounts of lipids during infection. The aims of this paper were to provide an overview to the role of lipids in selected apicomplexan, anaerobic, and intestinal parasitic infections.

**ABSTRACT**

Eimeria's are routinely found in horses, humans, and other mammalian species. This is a review of the pathogenic Eimeria species affecting horses, dogs, cats, and humans. Eimeria species, including Eimeria cuniculi, Eimeria suis, Eimeria bovis, and Eimeria tenella, infect the small intestine of susceptible hosts, causing diarrhea and weight loss. The prevalence of coccidiosis is high in horses, dogs, and cats, and the infection is common in humans, especially in children. The overall prevalence of coccidial infections in horses was 47.6% (197/414). In breeding groups, but the number of lambs born alive was significantly higher in MPP groups. The average daily gain of lambs as well as weaning weights increased (P<0.05) in MPL and MPP groups. Thyroid hormones T3 and T4 concentrations increased (P<0.05) with enzymes mixtures. This study suggests that the inclusion of probiotics in the diet of Barki sheep can enhance productive performance.

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