Research Paper

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

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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 a 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 370bp, while amplified *C. burnetii* Nine Mile strain *icd* gene were digested into two bands with sizes of 221bp and 149bp. 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.

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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

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ABSTRACT

Research Paper aimed to evaluate the potency of Sansevieria masoniana (SM) extract to inhibit the colonisation of bacteria isolated from the faeces of pet-reptile. A total of 129 fresh faecal samples were collected from 72 snakes, 43 lizards and 14 tortoises. The isolation was conducted using the Micro ID system. All the isolated bacteria were tested against several antibiotics using disc diffusion method, and SM extract using minimum inhibitory concentration test. The isolated bacteria were proven that SM extract potential to inhibit the colonisation of both resistant and susceptible isolated bacteria was 62.5 mg/mL. This study proved that SM extract potential to inhibit the colonisation of the isolated bacteria from faeces of pet-reptile, even though, several of those isolates resistant against several commercial antibiotics. The minimum concentration of SM extracts that potential to inhibit the colonisation of the isolated bacteria was 62.5 mg/mL. This study proved that SM extract potential to inhibit the colonisation of both resistant and susceptible isolated bacteria was 62.5 mg/mL. This study proved that SM extract potential to inhibit the colonisation of the isolated bacteria from faeces of pet-reptile.
Laying Hens Drinking Saline Well Water in South Sinai. This study conducted to investigate the effects of dietary zeolite on egg production, egg quality compared to them in T, T1 and T2 groups. Egg weight significantly increased in the hens of group showed significant decrease in total protein, globulin, glucose and total antioxidant 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 significantly decreased shell thickness compared to other treatments. In conclusion, under drinking saline well water, addition of zeolite to laying hens' diets at levels 4 % might improve Zeolite.

Keywords: Laying hens, Productive performance, Saline water, Digestibility, Economic, Growing rabbits, Performance, Plasma, Yeast.
A Review on the Role of Lipid in Selected Apicomplexan, Anaerobic, Kinetoplastid and Intestinal Parasitic Infections.

Lipids are a diverse class of biomolecules that play a major role as energy source, membrane, and promote growth, invasion and optimal replication of the organism. In anaerobic parasites, the lipid plays a considerable role as growth promoter, increasing virulence, role in different stage of the parasites infection. The associations between parasites and the host-pathogen interactions like cell signaling and immunity. As a sources of eicosanoid facilitation, the lipid particles can be used to produce more complex lipids, develop protective mechanisms against host innate and adaptive immunity, facilitate encystation and vesicle formation as well as initiation of immune system and immune responses. The apicomplexan parasites utilize lipid particles for various purpose including changing cell membrane, and promote growth, invasion and optimal replication of the organism.

Infection, Lipid, Parasitic, Role

PREVALENCE OF RABBIT COCCIDIA IN MEDEA PROVINCE, ALGERIA

ABSTRACT

The current study examined the prevalence of coccidial infections in rabbits from the Medea province using faecal samples collected from 50 farms in six regions of the province. Each faecal sample was subjected to oocyst counting and isolation. The prevalence of coccidial infections was 47.6% (197/414). Sulfonamides showed a better protection against Eimeria than other treatments. The prevalence of coccidiosis is high in the Medea province. This parasitosis has an economic impact for poultry, livestock, and humans. The results of the current study will help in discussing the epidemiological situation of rabbit coccidiosis in Medea province and take appropriate measures to minimize the economic losses caused by this parasitosis.

Eimeria's...