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.

*World Vet. J. 9(2): 52-58, 2019; pii:S232245681900008-9*
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 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.

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

ABSTRACT

Harmful effects caused by aflatoxin (AF) directed researchers towards finding 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.
Pseudomonas sp (55.03%), and Enterobacter cloacae (40.31%), isolated from the faeces of pet-reptile. The aim was to evaluate the potency of the SM leaf extract against isolated bacteria from the faeces of pet-reptile. The isolated bacteria were SM extract using the minimum inhibitory concentration test. The colonisation of both resistant and susceptible isolated bacteria was found to be 62.5 mg/mL. This study showed that SM extract has potential to inhibit the colonisation of the isolated bacteria from the faeces of pet-reptile, even though several of those isolates are resistant against several commercial antibiotics.

Antibiotic, Pet-reptile, Reservoir, Resistance, Sansevieria masoniana.


Sansevieria masoniana (SM) leaf extract against isolated Aeromonas hydrophila (44.96%).

This study conducted to investigate the effects of dietary zeolite on egg production, egg quality, and blood constituents of hens under drinking saline well water. 180 hens were randomly divided into six equal groups: (1) Control group (T), hens drank tap water and fed basal diet; (2) group (T1), hens drank tap water and fed diet containing 2% zeolite; (3) group (T2), hens drank tap water and fed diet containing 4% zeolite; (4) group (S), hens drank saline well water and fed basal diet; (5) group (S1), hens drank saline well water and fed diet containing 2% zeolite; and (6) group (S2), hens drank saline well water and fed diet containing 4% zeolite.

The productive performance and eggshell quality were significantly increased in the hens of the S group compared to them in T, T1 and T2 groups. Egg weight significantly increased in the hens of T1, T2 and S2 groups. Hens of T1, T2 and S2 groups had significantly improved feed conversion compared to hens in T, S and S1 groups. Hens of S group had significantly reduced shell thickness compared to other treatments. Aldosterone hormone was significantly decreased in the hens of group (S). Aspartic transaminase and creatinine were significantly increased in the hens of S group compared to the hens of T and T2 groups. Alanine transaminase, tri-iodothyronine hormone in the rabbits of T2, T3, T4, T5 and T6 were significantly increased.

Red blood cells count, packed cell volume and hemoglobin concentration increased in the rabbits of T5 when compared to the rabbits of T1, T2 and T6. However, rabbits of T2 and T4 showed an increase in total antioxidant capacity when compared to the rabbits of T1. Inconclusion, under laying hens drinking saline well water, addition of zeolite to laying hens’ diets at levels of 2%, 4% might improve productive performance and eggshell quality.

**Keywords:** Laying Hens Drinking Saline Well Water in South Sinai.
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ABSTRACT

Potential Ameliorative Effect of Bee’s Honey on Experimentally Induced Melamine Vital Assets Toxicity in Male White Albino Rats.

Mohamed Sadek Bachene, Soraya Temim, Hassina Anibaz Asma

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