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

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**Research Paper**

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

Keywords:
Candling, Dead in shell, Hairline crack, Hatchability, Water loss


Potency of Sansevieria masoniana Extract Against Antimicrobial Resistant Bacteria Isolated from Feces of Pet – Reptile

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This study conducted to investigate the effects of dietary zeolite on egg production, egg quality as well as some blood constituents of hens under drinking saline well water. 180 hens were randomly divided into six equal groups (30 hens / group). 1 Group (T) served as control, hens drank tap water and fed diet containing 0% zeolite. The second group (T1), hens drank tap water and fed diet containing 4% zeolite. The third group (T2), hens drank tap water and fed diet containing 8% zeolite. The fourth group (S), hens drank saline well water and fed diet containing 0% zeolite. The fifth group (S1), hens drank saline well water and fed diet containing 4% zeolite. The sixth group (S2), hens drank saline well water and fed diet containing 8% zeolite. Laying hens Drinking Saline Well Water in South Sinai. DOI: https://dx.doi.org/10.36380/scil.2019.wvj13


Keywords: Zeolite. Effect of Zeolite Dietary Supplementation on Physiological Responses and Production of Laying Hens Drinking Saline Well Water.
A Review on the Role of Lipid in Selected Apicomplexan, Anaerobic, Kinetoplastid and Intestinal Parasitic Infections.

The apicomplexan parasites utilized lipid particles for various purposes including changing permeability and fragility of host cells, supporting the insertion of parasite into the host cell membrane, and enabling the parasites to change across different stages of the infection. Lipid particles are fundamental to immunity and support pathogen survival. The lipid bodies also play a role in the adaptive immunity and support pathogen survival. The lipid particles are partly or fully utilized by intestinal parasites during infection. The aims of this review are to provide an overview of the role of lipids in selected apicomplexan, anaerobic, kinetoplastid and intestinal parasitic infections. The associations between parasites and the lipid particles affect disease pathogenesis, differentiation and survival of larvae in the host tissue. This review showed that the different in vivo and in vitro studies indicated that lipids have different effects on the growth and virulence of the parasites.

Prevalence of Rabbit Coccidia in Medea Province, Algeria.

Weaners had the highest prevalence (77%, 77/100, P<0.0001), followed by growing rabbits (67%, 67/100, P<0.0001) and weaners and adult rabbits showed the lowest prevalence (46.8%, 30/64) and (36%, 18/50) respectively. In breeding farms, the highest and lowest prevalence were detected in the breeds Flemish Giant and Oryctolagus cuniculus, respectively. The species Eimeria media were the most prevalent species (47.6% and 47.3%). Sulfonamides showed a better protection against E. media when added to rabbit feed, while chloroquine and paromomycin did not show significant differences. The addition of the drug to the feed resulted in a decrease in oocyst shedding.

Potential Ameliorative Effect of Bee's Honey on Experimentally Induced Melamine-Formaldehyde Toxicity in Male Rats.

Potential ameliorative effect of bee's honey on experimentally induced melamine-formaldehyde toxicity in male albino rats showed marked oxidative, biochemical, hematological changes as well as urinary bladder, crystals deposition and stone formation were detected with variable degrees in group 1; negative control, while groups 2, 4, 6 received melamine-formaldehyde orally at dose 50, 100, 1500 mg/kg b.w. Interestingly, rats treated with melamine plus the bee's honey showed mild changes in comparison to the only melamine group. Microscopically, various pathological changes in kidneys, liver, spleen, and lungs were observed in group 1; negative control, while groups 2, 4, 6 received melamine-formaldehyde orally at dose 50, 100, 1500 mg/kg b.w. In conclusion, under the semi-arid conditions, supplementation of exogenous enzymes used at two levels (6 and 10 ml or g/h/d) improved weaning weight and daily milk yield of Barki ewes. The milk yield tended to increase in MPP then MPL groups. The birth and mortality rate from birth to weaning decreased (P<0.05) in treated groups with 5%, 5%, 0% and 0% in MPP and MPL groups, respectively. The conception and lambing rates were tended to differ between groups (P<0.05).

The first mixture of probiotic added as liquid forms (Mixture Probiotic Liquid, MPL), while the second added as powder forms (Mixture Probiotic Powder, MPP). The two forms of probiotics showed significant differences in weaning weights as much as live body weight and milk production of ewes. El-Hawy AS, El-Bassiony MF, Abo Bakr S, Gawish HA, Badawy MT and Gado HM.