

# 6<sup>th</sup> Global Veterinary Summit

November 14-16, 2016 Atlanta, USA

## Effects of chromium (III) picolinate and chromium (III) picolinate nanoparticles supplementation on growth performance, organs weight and immune function in cyclic heat stressed broiler chickens

Omid Hamidi<sup>1</sup>, Mohammad Chamani<sup>1</sup>, Hasan Ghahri<sup>1</sup>, Ali Asghar Sadeghi<sup>1</sup> and Hassan Malekinejad<sup>2</sup><sup>1</sup>Islamic Azad University, Iran<sup>2</sup>Urmia University, Iran

The experiment is conducted to investigate the effects of dietary chromium (III) picolinate (CrPic) and chromium (III) picolinate nanoparticles (NanoCrPic) supplementation on growth performance, organs weight and immune function of broilers exposed to heat stress. Heat stress (36 °C) was applied for 10 hours per day from the 21<sup>st</sup> to the 42<sup>nd</sup> days. Among 8 experimental treatments; only group T1 represented the non-heat stressed control group fed with a basal diet in comfort zone whereas group T2 represented the heat stressed control group fed with a basal diet. Heat stressed T3, T4, T5 groups were fed with basal diet supplemented with 500, 1.000, 1.500 ppb of CrPic/kg while T6, T7, T8 groups were fed with basal diet supplemented with 500, 1.000, 1.500 ppb of NanoCrPic/kg respectively. Results of the current experiment showed that the non-heat stressed group had a higher final BW, daily weight gain and daily feed intake compared with heat stressed groups during the experiment period (d 21-42), among heat stressed groups, FCR values improved by supplementation of Cr into the diet. NanoCrPic 1.500 treatment had the lowest (P<0.05) FCR (2.14) of the total experimental period among heat stressed groups. The liver weight values of the day 35 of experiment differed significantly (P<0.05). Serum complement component C3 of experimental broilers was severely affected by the Cr supplementation. The results indicated that the nanoparticle supplementation might be an influential method for reduction of heat stress induced disorders which may attribute to the lowering of FCR and provoking the hepatic related alteration including the liver weight.

Omid\_Hamidi2012@yahoo.com

## Antibiotic susceptibility and molecular identification of antibiotic resistance genes of staphylococci isolated from bovine mastitis in central region of Algeria

Saidi Radhwane<sup>1</sup>, Cantekin Zafer<sup>2</sup>, Khelef Djamel<sup>3</sup>, Ergun Yasar<sup>2</sup>, Kaidi Rachid<sup>1</sup> and Solmaz Hasan<sup>4</sup><sup>1</sup>University Saad Dahleb, Algeria<sup>2</sup>Mustafa Kemal University, Turkey<sup>3</sup>Higher National Veterinary School of Algiers, Algeria<sup>4</sup>Yuzuncu Yil University, Turkey

The study was carried out to investigate the phenotypic and genotypic identification of *in vitro* antimicrobial susceptibility of 21 Staphylococci (10 *Staphylococcus aureus* and 11 Coagulase Negative Staphylococci) isolated from bovine mastitis to 12 antimicrobial drugs frequently using in veterinary medicine in Algeria. Isolates of staphylococci from bovine mastitis were tested for antibiotics with disc-diffusion method according to the National Committee for Clinical Laboratory Standards guidelines in the Mueller-Hinton agar and resistant genes *mecA*, *blaZ*, *aac-aph*, *ermA*, *ermC*, *tetK* and *tetM* were detected by PCR. Staphylococci isolates showed high resistance to penicillin (95.23%), oxacillin (80.95%), clindamycine (80.95%) and erythromycin (76.19%) but, no resistance of all these strains was detected for gentamicin. Among 21 isolates of Staphylococci, 20 were found to be methicillin and multidrug resistant. Multidrug resistant strains exhibited several antibiogram patterns (antibiotic I to XIII). The distribution of antibiotic-resistant genes was *mecA* (100%), *tetM* (100) followed by *blaZ* (42.85%). In the present work, the significant determination was the high prevalence of methicillin-resistant Staphylococci, which were resistant to multiple antibiotics. The finding of methicillin-resistant staphylococci (MRS) from bovine mastitis is the first report in Algeria and revealed the status of resistant isolates in herd that might be helpful in treatment, controlling of resistant strains and for deciding culling of cows.

saidi.radhwane@yahoo.fr