Effect of Protein Synthesis Modulator and Acute Heat Stress on Serum Biochemical Parameters in Broiler Chicken

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Abstract—*An experiment was conducted to assess the effect of protein synthesis modulator and heat stress on serum biochemical parameters in broiler chicken. A total one hundred ninety two of CARI-BRO Vishal broiler chicken were reared up to five weeks of age and 36th day of age divided into three treatments including control, enhancer and inhibitor, receiving intraperitoneally normal saline, (0.5 ml) glutamine (0.75 mg/Kg of BW) and quercetin (5 mg/kg of BW) respectively. After, 24 hours later each they were exposed to acute heat stress for 0, 2, 5 and 10 hours under 40±1°C; 55% RH after exposure of heat stress immediately collected blood sample and serum were separated after that stored at -20°C until analyzed. The observations were analyzed by 2x3x4 factorial method for both interaction and main effect. Protein synthesis modulator at different period of heat stress (interaction effects) showed significant effect (P<0.05) on serum triglycerides and glucose level but total protein remain unaffected. Serum glucose level was significantly (P<0.05) increased whereas serum triglycerides level was significantly reduced (P<0.05) however no change was observed on level of total protein with duration of heat stress exposure. Serum glucose level was significantly (P<0.05) increased when birds were exposed to acute heat stress but serum triglycerides level and total protein level were unaffected.*

Keywords*: Protein synthesis modulator, heat stress, serum biochemical parameters.*