**PSA 2013 Abstract Corrections**

The title of abstract P443, as shown on the abstract CD and in the program book, is incorrect. The corrected abstract is shown below.

**P443 Use of vitamin D$_3$ and its metabolites in broiler feed on immunological parameters and intestinal morphometry.** A. F. Q. G. Guerra*, A. E. Murakami, I. C. Ospina-Rojas, and J. C. Fanhani, Universidade Estadual de Maring, Maring, Paran, Brazil.

Vitamin D$_3$ acts by regulating calcium concentrations in animal blood and muscles; moreover, it is a potent immunomodulator and is important for the development of the small intestine. Vitamin D$_3$ must be metabolized following ingestion into 25-hydroxycholecalciferol (25(OH)D$_3$) in the liver and subsequently into its active metabolite 1,25-dihydroxycholecalciferol (1,25(OH)$_2$D$_3$) in the kidneys. These metabolites are currently commercially available as 1α-hydroxycholecalciferol (1α(OH)D$_3$), a synthetic analog of the active metabolite 1,25(OH)$_2$D$_3$, which is converted into its active form in the liver. The aim of this experiment was to evaluate the effect of different vitamin D metabolites on immune response and intestine morphometrics of broiler chickens. A total of 952 1-d-old male Cobb chicks were used, distributed in a completely randomized design with 4 treatments, 7 replications and 34 birds each. Four different metabolites of vitamin D were evaluated: D$_3$, 25(OH)D$_3$, 1,25(OH)$_2$D$_3$ and 1α(OH)D$_3$, providing 2000 and 1600 IU/kg feed of vitamin D in the initial and grower periods, respectively. The different vitamin D metabolites did not affect the relative weight of the organs, except for the weight of the intestine and liver at 21 and 42 d. There was a significant effect (P < 0.05) of the different vitamin D$_3$ metabolites on villus length of the jejunum and ileum at 7 d, between animals fed with 1,25(OH)$_2$D$_3$ and 1α(OH)D$_3$, for the jejunum and 1,25(OH)$_2$D$_3$ and vitamin D$_3$, for the ileum (P < 0.05). There were no differences (P > 0.05) in the weight of lymphoid organs, cutaneous basophil hypersensitivity reaction, macrophage activity assessment, measurement of nitric oxide and the heterophil-to-lymphocyte ratio. The different sources of vitamin D affected intestine morphometrics in the initial phase, but the effect was not observed in other phases. Immunological parameters were not affected by vitamin D$_3$ metabolites.

**Key Words:** broiler, cholecalciferol, macrophage

An incorrect version of abstract 32 was submitted; the correct version is shown below.

**32 A commercial study comparing the effects of antibiotic and direct-fed microbial supplementation on gut lactic acid bacteria populations in turkeys.** A. J. Madisen*, J. C. Remus*, S. Dunham¹, E. Davis¹, and D. Petri¹, Animal and Environmental Applications, DuPont Nutrition and Health, Waukesha, WI, Danisco Animal Nutrition, DuPont Industrial Bioscience, St. Louis, MO.

Lactic acid producing bacteria (LAB) like Lactobacillus and Enterococcus can be beneficial for poultry. With the use of a specific 3-strain Bacillus subtilis based direct-fed microbial (DFM), the microbial ecosystem can be shifted towards these beneficial bacteria, especially those of the Lactobacillus genera, a commensal bacterial group with numerous beneficial species and no known pathogenic representative. A study was conducted with a commercial integrator to evaluate the differences in the gastrointestinal microbiota of commercially raised turkeys administered different feed additives. In a 2 x 2 arrangement of treatments, factor dietary treatment using a basal diet with either 0.05% Bacillus subtilis-based DFM with 0.005% BMD50 and 0.002% virginiamycin based product in the starter phases or a conventional antibiotic program that included 0.005% BMD50 in the starter phase and 0.002% virginiamycin based product in the finisher/withdrawal (F/WD) phases. For the 2 feed phases, small intestine mucosa was collected from birds in both production phases, including 18 samples each between 2 and 6 wk of age (starter phase) and between 11 and 15 wk of age (F/WD phase). Total LAB counts in the intestinal mucosae of birds did not differ (P > 0.40) between production phases or dietary additives. The proportion of Lactobacillus relative to the total LAB population was greater (P < 0.05) when birds were fed diets with DFM compared with birds fed diets containing AGP during the starter phase; however, no differences were seen between dietary treatments during the F/WD phase (diet x phase interaction, P > 0.05). Inversely, the proportion of Enterococcus relative to the total LAB population was lower (P < 0.05) in birds fed the DFM compared with AGP in the starter phase, but no difference was observed during the F/WD phase (diet x phase interaction, P < 0.05). Results from this study indicate that the inclusion of the DFM shifted the gastrointestinal LAB population toward enhanced Lactobacillus populations and fewer Enterococcus during the starter phase of production.

**Key Words:** virginiamycin, Bacillus probiotic, Lactobacillus, turkey