

Session Search



16S rDNA-Metagenomic Sequencing of Bone Lesions Caused By Femoral Head Necrosis in Broilers #P639

Date: Monday, January 13

3:00 pm - 4:30 pm

Description:

Presenters: **Ricardo Zanella** *EMBRAPA/CNPq*, **Mauricio Cantao** *EMBRAPA - Swine and Poultry*, **Adriana Ibelli** *EMBRAPA-Suínos e Aves*, **Jane de Oliveira Peixoto** *EMBRAPA-Suínos e Aves*, **José Rodrigo Pandolfi** *EMBRAPA-Suínos e Aves*, **Luiz Lehmann Coutinho** *ESALQ- USP*, **Douglas D. Rhoads** *University of Arkansas*, **Adnan Al-Rubaye** *University of Arkansas/Fayetteville*, **Robert F Wideman** *University of Arkansas*, **Monica Correa Ledur** *Embrapa Swine and Poultry National Research Center*

P639 - 16S rDNA-Metagenomic Sequencing of Bone Lesions Caused By Femoral Head Necrosis in Broilers

Genetic selection for faster growth has negatively affected the locomotor and metabolic functions of some broilers. Bone-related problems have been observed in higher frequency than in the past and are generating economic losses to producers and to the industry, in addition to affecting animal welfare. Approximately 46% of the chickens with clinical signs of lameness sampled in our study showed evidence of femoral head necrosis ranging from light to advanced stages. The objective of our study is to identify different bacterial species present in the lesions caused by femoral head necrosis in a commercial broiler line with a 16S rDNA-Metagenomic sequencing approach with the *Illumina*-MiSeq. Samples were collected from affected and normal femurs from chickens at 21 and 35 days of age raised in the same barn in a dark house system with the capacity for 12,000 animals. Samples were collected at the end of winter time in the Southern region of Brazil. The sequences will be analyzed with Mothur software to clean up the data, to classify in operational taxonomic units (OTUs), and to identify the bacterial species using RDP Database. The identification of bacterial species involved with lameness problems in broilers will be useful to better understand the mechanisms associated to this disorder. Intervention strategies could be implemented to minimize possible environmental contamination with specific pathogens, aiming to reduce the prevalence of this problem, and consequently its economic losses. In addition, improvements of health indicators for broilers during production are expected.