Natural extracts in weaned piglets nutrition

Grazia Pastorelli[1], Mario Pellacini[2] and Barbara Pizzi[2]
[1]University of Milano, Department of Veterinary Medicine, Italy, [2]Ferrero Mangimi spa, Italy; grazia.pastorelli@unimi.it

Weaning is a crucial period for piglets, during which they undergo severe stress that can affect feed intake, the development of gastrointestinal tract and absorption of nutrients. Meanwhile, the level of antioxidants declines, increasing morbidity and mortality. In the post-weaning period, to minimize complications the piglets' diet can be integrated with natural extracts with antioxidant and anti-inflammatory effects. Moreover the response to oxidative stress is considered as an effective parameter for assessing pig's welfare. The aim of this study is to evaluate the effect of dietary supplementation of natural extracts on piglets performance and total antioxidant activity. KRL test evaluated the total antioxidant activity of whole blood and red blood cell (RBC) by measuring the time required to haemolyse 50% of the RBC exposed to a controlled free radical attack. A total of 160 piglets were assigned to 4 dietary treatments: Control diet (CTR) (Ferrero Mangimi, spa), and CTR diet supplemented with *Boswellia* (500) (BOS), *Uncaria* (200) and *Tanacetum* (50) (U+T) and antioxidant mixture (AM) (*Verbenaceae*, *Liliaceae*, *Labiatae*) (225) mg/kg of diet. Blood samples were collected on day 0, 18 and 28 to assess the KRL test, at the same time recording the pigs' body weight and feed consumption. The KRL value measured on d0 was used as covariate. No effect on growth performance was detected. The KRL test on whole blood did not show any significant difference among experimental groups and over time. The highest value (126.3 min) was found in BOS group on d 28. Red blood cell showed a treatment effect (P=0.05) and a time × treatment effect (P=0.005); least square means found were 67.51, 64.98, 64.11 and 74.41 minutes in AOX, BOS, CON and U+T group respectively. The current results suggest a positive effect of U+T and BOS extracts to be further investigated.