

## News &amp; Comments

***Bacillus licheniformis* (BLFPs): An Agent to Modulate the Bacterial Community Composition in Broilers***Abir Hariz*

The low growth rate and poor feed conversion ratio of broilers raised in intense industrial farming methods, which are also frequently exposed to pathogens, there are significant financial losses to the poultry industry globally. Antibiotic-resistant bacteria may evolve or be selected among broilers because of the misuse and overuse of antibiotics as growth boosters. As a result, many nations have outlawed the use of antibiotic growth boosters in poultry feed. In a recent study, the researchers found that *B. licheniformis* fermented products (BLFPs) improved broiler growth, decreased the risk of enteric disease, and altered the gut microbiota.

Broiler health and growth performance under the challenge of *C. perfringens* and *E. tenella* are improved when dietary supplementation with BLFPs is used. In a prior study, the researchers discovered that adding 3 g kg<sup>-1</sup> of BLFPs to broiler feed improved body weight, increasing weight by 12.9% on day 35 compared to control broilers. Furthermore, the performance of broilers fed 3 g kg<sup>-1</sup> BLFPs was identical to that of the group given enramycin. In line with previous research, the current study demonstrated a weakening association between the quantity of *Lactobacillus* spp. and broiler growth performance.

According to the results of the current investigation, supplementation with 1 g kg<sup>-1</sup> BLFPs specifically boosted *L. crispatus* and *A. muciniphila* abundance while decreasing that of *B. fragilis* and *C. bacteria* CHKCI001. "Our correlation findings further showed that the abundance of *L. crispatus* and *A. muciniphila* was inversely correlated with the abundance of *B. fragilis* and *C. bacteria* CHKCI001," said the authors. These findings suggest that *L. crispatus* and *A. muciniphila* may inhibit the growth of *B. fragilis* and *C. bacteria* CHKCI001 in broiler cecal digesta. The current study, in response to BLFP and enramycin therapy, undertook an integrative investigation of the bacterial community composition and ARG distribution in the cecal digesta of broilers for the first time. Therefore, the ARG results may make it easier to assess whether using BLFPs as an antibiotic substitute is feasible.

**KEYWORDS**Antibiotic resistance gene, *Bacillus licheniformis*, broiler, enramycin, microbiota