The effect of probiotic and prebiotic in comparison with antibiotic on controlling necrotic enteritis in *Clostridium perfringens* challenged broilers. H. Hoseinyan Bilandi¹, S. Rahimi*¹, A. Jabari², P. Khaki², and A. Haghrusta³, ¹Tarbiat Modares University, Tehran, Tehran, Iran, ²Razi Vaccine and Serum Research Institute, Karaj, Alborz, Iran.

This work was conducted to study the effect of probiotic and prebiotic in comparison with antibiotic on colonization of *C. perfringens* on broilers intestine. In this experiment 225 male chicks (Cobb-500) randomly distributed to 5 dietary groups of 3 replicates with 15 chicks/pen as follows: negative control group; positive control group; probiotic (Primalac); prebiotic (Fermacto); antibiotic (Virginiamycin). On d 14, all the birds except negative control group, were inoculated by oral gavage of sporulated oocysts of *E. acervulina, E. tenella* and *E. maxima*. At 18, 19 and 20 d of age, challenged birds were also gavaged with *C. perfringens* (10⁸ cfu/mL; 1mL/bird). On d-21 and 42, one bird per pen was killed and contents from the cecum were collected and transferred into sterile bottles containing 10 mL of PBS. The suspension was blended and 6-fold serial dilutions were performed. *C. perfringens* were enumerated on Tryptose Sulfite Cycloserine agar after anaerobic incubation at 37°C for 24 h. Results indicated that the challenge depressed broilers growth. Body weight from 4 to 6 weeks of age was significantly higher in negative control group and antibiotic supplemented diets (*P* < 0.05). Experimental diets did not have any significant effect on feed conversion ratio at any period. The results indicated significant (*P* < 0.05) reduction in colonization of *C. perfringens* in the intestine of chickens due to dietary supplementation of probiotic and prebiotic. According to the results of this experiment, one can say that supplementation of Primalac and Fermacto in broilers diets can reduce colonization of *C. perfringens* and necrotic enteritis in broilers intestine.

**Key Words:** probiotic, prebiotic, antibiotic, *C. perfringens*, broiler

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**Toll-like receptors and cytokines profile of chicken challenged with *Clostridium perfringens* and fed organic diets supplemented with MOS.** A. Yitbarek*, J. Brady, H. Echevery, S. Sharif, B. Guenter, J. D. House, and J. C. Rodriguez-Lecompte, University of Manitoba.

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**Characterization of *Clostridium septicum* isolates from cellulitis cases in turkeys.** A. J. Thachil*, A. Ghosh, D. A. Halvorson, and K. V. Nagaraja, University of Minnesota, College of Veterinary Medicine, Saint Paul.

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**Dexamethasone model for cellulitis in turkeys.** K. V. Nagaraja*, A. J. Thachil, A. Sasikala-Appukuttan, C. Heeder, and D. A. Halvorson, University of Minnesota, College of Veterinary Medicine, Saint Paul.

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**Use of a repeatable model creating significant clostridium dermatitis mortality in turkeys to determine management and other risk factors that affect the severity of the disease.** S. Davis*, Colorado Quality Research Inc.

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†This abstract from the American Association of Avian Pathologists (AAAP) is available in the AVMA Convention Notes at [www.avmaconvention.org](http://www.avmaconvention.org) and at [www.aaap.info/2011meeting](http://www.aaap.info/2011meeting).