
AAAP abstract†


AAAP abstract†


AAAP abstract†

177 Working with Coccivac D in a dry climate. J. Fricke* and T. E. Inglis, Poultry Health Services Ltd., Airdrie, Alberta, Canada.

AAAP abstract†


AAAP abstract†

179 Attenuation of development of *Eimeria maxima* following gamma irradiation. R. Fetterer*, M. C. Jenkins, and R. C. Barfield, Animal Parasitic Diseases Laboratory, Agricultural Research Service, USDA, Beltsville, MD.

AAAP abstract†

180 Oocyst shedding patterns and immune response of turkeys following coccidiosis vaccination. M. Behl*1,2, D. Caldwell3, H. He3, M. Kogut3, R. Spasojevic1, and M. Farnell2, 1Willmar Poultry Company d.b.a. Ag Forte, Willmar, MN, 2Texas AgriLife Research and Extension, College Station, 3USDA-ARS, College Station, TX.

Coccidiosis causes considerable economic damage to the turkey industry. Field strains of *Eimeria* easily develop resistance to anticoccidials making them less effective for long-term use. The objective of the current study was to assess coccidiosis vaccine-associated oocyst shedding patterns and mucosal gene expression in turkeys. In Trial 1, poults were vaccinated via oral gavage with approximately 500 oocysts obtained from a commercially available vaccine at day of hatch. Fecal samples were obtained daily and diluted in water. Oocysts were counted using a hemocytometer. In Trial 2, poults were orally gavaged with water or with approximately 1,000 oocysts on day of hatch and killed at 5, 10, 13, 17, and 20 d post vaccination. Oocyst shedding was determined by shedding patterns observed in Trial 1. Intestinal sections adjacent to Meckel’s diverticulum, the ileocecal junction, and midpoint of the cecum were collected. These tissues were evaluated for mRNA expression of IL-10, IL-1β, and GAPDH. In Trial 1, peaks in oocyst shedding occurred on 5–6, 13–17, and 19–20 d post vaccination. Shedding ceased at approximately 20 d post vaccination. In Trial 2, no significant changes in gene expression of either IL-10 or IL-1β were detected in the tissue adjacent to Meckel’s diverticulum. At the ileocecal junction, IL-10 was significantly upregulated on d 5 and 17, and IL-1β was significantly (*P* < 0.05) downregulated on d 20 post vaccination. In the ceca, both IL-10 and IL-1β were significantly upregulated on d 5, 10, and 13. On d 17, IL-10 was significantly upregulated and later downregulated on d 20. The upregulation of IL-10 and downregulation of IL-1β typically indicates a reduction of immune functionality which is typically seen after clearance of a pathogen. Further research needs to be conducted to elucidate the overall immune response of turkeys during an *Eimeria* infection.

**Key Words:** turkey, coccidiosis, vaccine, IL-10, IL-1β

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