Emergence of Inclusion body hepatitis in broilers
Holly S. Sellers, MS., PhD
Poultry Diagnostic and Research Center
Department of Population Health
College of Veterinary Medicine
University of Georgia, Athens, GA USA 30602

hsellers@uga.edu

Inclusion body hepatitis (IBH) is a disease of young broilers caused by aviadenoviruses. Clinical signs often include sudden mortality and grossly apparent swollen livers with pale or hemorrhagic foci. Five groups of aviadenoviruses have been identified based on full genome sequencing and restriction enzyme digest patterns of genomic DNA. Within the 5 species of aviadenoviruses, 12 serotypes (1-7, 8a, 8b, 9-11) have been identified by virus neutralization assays. Not all aviadenoviruses are associated with disease; however, viruses belonging to FAV groups D and E have been associated with IBH. Tentative diagnosis is based on mortality and gross lesions with confirmation by histopathology on affected tissues and/or PCR. Both live and inactivated vaccines are utilized outside of the United States to control disease; however, commercial vaccines are not available in the U.S., use of field isolates in autogenous (custom) vaccines has become widespread over the past few years as clinical cases of IBH have significantly increased. Vaccination of breeders and parent stock is utilized to prevent vertical transmission and provide transfer of maternal antibodies to protect progeny during the first few weeks of life. IBH has historically been considered a secondary pathogen and incidence associated with immunosuppression with Infectious bursal disease virus (IBDV). Predominant adenoviruses isolated from IBH flocks primarily belonged to groups FAV E, FAdV 8a and FAV D, FaDV 11; however, a shift in incidence and predominant adenovirus associated with IBH occurred several years ago. Now, FAV group E, FAdV 8b has become the most prevalent adenovirus isolated from clinical cases of IBH, not only in the U.S. but also worldwide. Once thought of as a secondary pathogen, now it appears as though these viruses are acting as primary pathogens. The inclusion of FAV E, FAdV 8b isolates in autogenous vaccines is prevalent.