Importance of the Study

Key words

Alternative splicing, Turkey hemorrhagic enteritis virus, Adenovirus, Transcriptome, RNA sequencing.

Hemorrhagic enteritis (HE) is a disease of turkey poults characterized by immunosuppression (IS), bloody diarrhea, and up to 80% mortality. This disease is caused by *Turkey Hemorrhagic Enteritis Virus* (THEV) of which avirulent strains (THEV-A) that do not cause HE but retain the immunosuppressive ability have been isolated. The THEV-A Virginia Avirulent Strain (VAS) is still used as a live vaccine despite its immunosuppressive properties. Thus, vaccinated birds are rendered more susceptible to opportunistic infections and death than unvaccinated cohorts. To establish the genetic basis by which VAS brings about IS leading to its mitigation, it is imperative that the viral gene(s) mediating the IS be well-characterized. As the viral splicing and gene expression patterns are unknown, the most pressing need was for a well-characterized transcriptome of THEV. Also, the detailed characterization of a non-human adenovirus splice map, which is scantily studied, provides valuable insights into the differences of various adenovirus splicing patterns.