Importance of the Study

Key words

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

List of abbreviations

Abbreviation	Definition
AdV	Adenovirus
MAdV	Mastadenovirus
SiAdV	Siadenovirus
THEV	Turkey Hemorrhagic Enteritis Virus
HE	Hemorrhagic Enteritis
UTR	Untranslated Region
TU	Transcription Unit
L4P	L4 Promoter
MLP	Major Late Promter
E3P	E3 Promoter
hpi	Hours Post-infection
qPCR	Quantitative Polymerase Chain Reaction

Abbreviation	Definition
FPKM	Fragments Per Kilobase of transcript per Million mapped reads
CP	Coding Potential
TSS	Transcription Start Site
TTS	Transcription Termination Site
SC	Start Codon
STC	Stop Codon
secSC	Secondary Start Codon
secSTC	Secondary Stop Codon
ORF	Open Reading Frame
CDS	Coding Sequence
MLTU	Major Late Transcription Unit
TPL	Tripartite Leader
sTPL	Short Tripartite Leader
TPL3	Third exon of Tripartite Leader
GCN	Genome Copy Number

Hemorrhagic enteritis (HE) is a disease of turkey poults characterized by immunosuppression, bloody diarrhea, and up to 80% mortality. This disease is caused by *Turkey Hemorrhagic Enteritis Virus* (THEV) of which avirulent strains that do not cause HE but retain the immunosuppressive ability have been isolated. The 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 immunosuppression leading to its mitigation, it is imperative that the viral gene(s) mediating the immunosuppression 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 are scantily studied, provides valuable insights into the differences of various adenovirus splicing patterns.