

## **Infectivity of avian Hepatitis E virus isolated from China**

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**A**vian hepatitis E virus (HEV) was first isolated in the USA in 2001 from chickens with hepatitis-splenomegaly (HS) syndrome with the increased mortality, decreased egg production, blood fluid in the abdomen and an enlarged liver and spleen. In 2005, avian HEV was also isolated from healthy chicken flocks. At present, avian HEV infection is endemic in many countries including USA, Spain and China. In 2010, an avian HEV isolate named CaHEV was identified and characterized from a flock of 37-week-old broiler breeder hens with HS syndrome in Shandong, China. Based on the near-complete genomic sequence analysis, CaHEV shares the highest identity (98.3%) with avian HEV from Europe and belonged to avian HEV genotype 3. The infection stock of CaHEV generated by collecting the fecal and bile suspensions from the inoculated chickens was used to inoculate intravenously 15-week-old SPF chickens at approximately  $10^4$  GE of CaHEV stock (1 ml of the 10% fecal and bile suspension). Fecal shedding of viruses was detected from 3 to 54 day post inoculation (dpi) and viremia was detected in sera from 6 to 21 dpi in all challenged chickens. By 2 week post inoculation (wpi), all inoculated chickens had seroconversion and anti-avian HEV IgG was detected upto 12 wpi. In addition, big livers and spleens were found in two inoculated chickens necropsied at 8 wpi and subcapsular hemorrhages were observed in the livers from chickens necropsied at 6 to 7 wpi. These results showed that CaHEV is infectious.

### **Biography**

Qin Zhao has completed his Ph.D in 2010 from Shandong Agriculture University, China. At present, he is a postdoctoral fellow in Dr. Zhou's lab in College of Veterinary Medicine, Northwest A & F University. He isolated and characterized avian HEV strain from China. His research focus is on the antigenicity and vaccine design for avian HEV. He has published 15 papers in reputed journals.

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