

Beijing duck Hepatitis used as an Animal Model for Screening and Evaluating Antihepatitis B virus drugs. Hong-shan Chen, Zhuang Li, Wen-guang Yang, Ju-tao Gao, Chen Liu, He-ying Qian. Institute of Medicinal Biotechnology, Chinese Academy of Medical Sciences, Beijing, People's Republic of China

Beijing ducks are susceptible to DHBV infection, their natural infection is below 10% in Beijing, 1-day old ducklings injected intravenously with DHBV positive sera, 90-100% infection can be obtained on 5-7 days after infection, DHBV-DNA and DNAP can be detected in duck sera for 3 wks up to 3 months and even longer in liver. DHBV-DNA, DNAP and reverse transcriptase can be detected in DHBV replicative complex extracted from infected duck livers. The hepatocyte cultures from Beijing ducks can be infected 100 % with DHBV, DHBV DNA and DNAP were detected in the supernatant fluid and cell extracts. A program of in vitro and in vivo systems were set up for screening and evaluating anti-hepatitis drug. PFA was found effective in all the DHBV systems, it inhibited DHBV DNAP and reverse transcriptase in vitro, inhibited DHBV-DNA and DNAP in infected hepatocyte cultures. PFA 150-250 mg/kg I.P. bid for 5, 7 and 10 days given to experimentally or natural infected ducks, serum DHBV DNA and DNAP were decreased significantly during the treatment and lasted for several days according to the regimen and dosage of PFA, rebounding of DHBV markers in duck sera or liver were observed after cessation of treatment, even more than 2 courses of PFA were given. Ara-AMP and FMAu were also found to be effective but with less extent, reappearance of viral markers in duck sera or liver also observed.