



Detection of hepatitis E virus genome in pig livers in Antioquia, Colombia

C. Gutiérrez-Vergara, J. Quintero, J.F. Duarte, J.P. Suescún and A. López-Herrera

Laboratory of Animal Biotechnology, BIOGEM Research Group,
Animal Production Department, Universidad Nacional de Colombia,
Medellín, Antioquia, Colombia

Corresponding author: C. Gutiérrez-Vergara
E-mail: ccgutier@unal.edu.co

Genet. Mol. Res. 14 (1): 2890-2899 (2015)

Received May 25, 2014

Accepted October 20, 2014

Published March 31, 2015

DOI <http://dx.doi.org/10.4238/2015.March.31.20>

ABSTRACT. Hepatitis E is a form of endemic acute hepatitis found in humans in many countries worldwide and is caused by the hepatitis E Virus (HEV). Detection of HEV in pigs indicates that they may be carriers, possibly through zoonosis. The prevalence of HEV in pigs in Colombia is unknown. Studies in the US found that 11% of pig livers sold in grocery stores are contaminated with HEV. It is also known that HEV can be inactivated when cooked, as it is labile to high temperatures. The aim of this study was to determine HEV contamination in pig livers sold in Medellín, Antioquia. A total of 150 livers from 5 slaughterhouses and 100 livers in grocery stores from different social strata of the city of Medellín analyzed to detect a segment of the HEV open reading frame-1 using reverse transcription-polymerase chain reaction. The results showed that 41.3% of pig livers from slaughterhouses and 25% of livers from grocery stores tested positive for HEV. Thus, the HEV genome is present in pig livers sold in Antioquia, revealing the presence of this virus in pigs from Colombia and the need subject entrails to proper cooking processes before consumption. Further research is required to determine the role of this virus in public health and pork

production in Colombia.

Key words: Hepatitis E virus; Liver; Pigs; Zoonosis;
Reverse transcription-polymerase chain reaction