



## Abstract

# Serologic Analysis of Hepatitis E Virus Infection in Patients with Kidney-Related Illnesses <sup>†</sup>

Martynas Simanavičius <sup>1,\*</sup>, Arūnė Verbickaitė <sup>1</sup>, Paulius Lukas Tamošiūnas <sup>1</sup>, Ernesta Mačionienė <sup>2</sup> and Indrė Kučinskaitė-Kodžė <sup>1</sup>

<sup>1</sup> Life Sciences Center, Institute of Biotechnology, Vilnius University, 10257 Vilnius, Lithuania; arune.verbickaite@gmc.vu.lt (A.V.); paulius.tamosiunas@bti.vu.lt (P.L.T.); indre.kodze@bti.vu.lt (I.K.-K.)

<sup>2</sup> Institute of Clinical Medicine, Faculty of Medicine, Vilnius University, 03101 Vilnius, Lithuania; ernestabra@gmail.com

\* Correspondence: martynas.simanavicius@bti.vu.lt

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**Abstract:** Hepatitis E is a globally distributed human disease caused by the hepatitis E virus (HEV). HEV is a positive-sense, single-stranded RNA virus that belongs to the family *Hepeviridae*. Within the genus *Orthohepevirus*, seven HEV genotypes infect various mammalian hosts. HEV genotypes HEV-1 to HEV-4 and HEV-7 can infect humans. HEV-3 is zoonotic with the domestic pig, wild boar, deer and other mammalian species as reservoirs. HEV-3 is an underestimated emerging threat which is spread across Europe. It is transmitted through undercooked pork meat or other products, and with blood components through transfusions. HEV-3 infection in immunocompetent patients is self-limiting and clinically asymptomatic. However, immunocompromised individuals are at a high risk of developing chronic hepatitis E. Chronic infection may lead to life-threatening liver cirrhosis. Patients with kidney transplants or kidney-related illnesses are in this risk group. In this study, a serologic analysis of blood samples obtained from kidney transplant recipients, patients with chronic kidney disease, patients under dialysis and healthy controls was performed. A prevalence of anti-HEV antibodies was assessed by commercial and in-house ELISAs.

**Keywords:** hepatitis E virus; serologic assay; kidney-related illnesses; humans



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