

## DISTRIBUTION OF ECONOMICALLY IMPORTANT VIRAL DISEASES IN CATTLE

Algirdas Šalomska<sup>1,2</sup>, Eugenijus Jacevičius<sup>1</sup>, Kristina Keštaitienė<sup>1</sup>, Saulius Petkevičius<sup>1</sup>, Kazimieras Lukauskas<sup>1</sup>, Vida Liutkevičienė<sup>1</sup>, Jonas Milius<sup>4</sup>, Donatas Venskutonis<sup>3</sup>, Raimundas Mockeliūnas<sup>1</sup>, Juozas Jokimas<sup>5</sup>

<sup>1</sup>*Department of Infectious Diseases, Lithuanian Veterinary Academy, Tilžės g. 18, LT-47181 Kaunas, Lithuania. tel/fax 8 37 363559, e-mail: salomska@lva.lt*

<sup>2</sup>*Department of Virology, Veterinary Institute of Lithuanian Veterinary Academy, Instituto g. 2, LT-56115, Kaišiadorys, Lithuania*

<sup>3</sup>*Kaunas University of Medicine, A. Mickevičiaus g. 9, LT-44307 Kaunas, Lithuania*

<sup>4</sup>*Department of Food Safety and Animal Hygiene, Lithuanian Veterinary Academy, Tilžės g. 18, LT-47181 Kaunas, Lithuania*

<sup>5</sup>*Department of Non-Infectious Diseases, Lithuanian Veterinary Academy, Tilžės g. 18, LT-47181 Kaunas, Lithuania*

**Abstract.** Extending previous studies the current situation of livestock infectious diseases e.g. parainfluenza 3 virus (PI-3), respiratory syncytial virus (RSV), infectious bovine rhinotracheitis (IBR) and bovine viral diarrhoea virus (BVDV) were serologically monitored in 19 randomly selected pedigree cattle farms in Lithuania. From 2006 to 2007 PI-3 and BVDV (n=558), RV and IBR (n=538) using antibody ELISA were tested.

In the majority of serologically investigated farms antibodies for mixed infections of PI-3, BVDV, RV and IBR were detected, and only in five farms antibodies for mixed infections of two or three monitored diseases were diagnosed. PI-3 and RSV were most frequently detected in investigated farms (95%). The mean serological prevalence of IBR and BVDV in investigated farms was 84,2% and 85%. However, among individual animals in tested farms 72,2%, 54,5%, 43,4% and 30,5% were seropositive to PI-3, RSV, BVDV and IBR, respectively. This antibody ELISA test implies that mixed PI-3, BVDV, RSV and IBR livestock virus infectious diseases are frequent in pedigree cattle farms in Lithuania. Moreover, these findings suggest that mean of individual animals in investigated farms are variable, but may be a potential reservoir for virus transmission.

**Key words:** parainfluenza 3, respiratory syncytial virus, infectious bovine rhinotracheitis, bovine viral diarrhoea virus, seroprevalence, cattle.