## Genetic relationships of the first isolate of EEEV in the state of Vermont

Kali D. Saxton-Shaw<sup>1</sup>, Jeremy P. Ledermann<sup>1</sup>, Joan L. Kenney<sup>1</sup>, Erica Berl<sup>2</sup>, Alan C. Graham<sup>3</sup>, Ann M. Powers<sup>1</sup>, Joel M. Russo<sup>4</sup>, John-Paul Mutebi<sup>1</sup>

<sup>1</sup>CDC, Division of Vector Borne Diseases, Fort Collins, CO, USA <sup>2</sup>Vermont Department of Health, Burlington, VT, USA

<sup>3</sup>Vermont Agency of Agriculture, Food & Markets, Waterbury, VT, USA

<sup>4</sup>United States Department of Agriculture, APHIS VS, Montpelier, VT, USA.

## Abstract

The first outbreak of eastern equine encephalitis (EEE) in Vermont occurred on an emu farm in Rutland County in 2011. The first isolation of EEE virus (EEEV) in Vermont (VT11) was during this outbreak. Phylogenetic analysis showed that VT11 was most closely related to FL01, a strain from Florida isolated in 2001 which is both geographically and temporally distinct from VT11 and this suggests that VT11 evolved from a FL01-like ancestor. EEEV RNA was not detected in any of the 3,905 mosquito specimens tested, and the specific vectors associated with this outbreak are unknown.