

Detection of Elephant Endotheliotropic Herpes Virus in a Wild Asian Elephant Calf in Thailand by Using Real-Time PCR

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Abstract : In January 2018, a male wild elephant, approximately 2 years old, was found dead in Phu Luang Wildlife Sanctuary, Loei province. The elephant was likely to die around 2 weeks earlier. The carcass was decayed without any signs of attack or bullet. No organs were removed. A deadly viral disease was suspected. Different organs including lung, liver, intestine and tongue were collected and submitted to the veterinary research and development center, Surin province for viral detection. The samples were then examined with real-time PCR for detecting U41 Major DNA binding protein (MDBP) gene and with conventional PCR for the presence of specific polymerase gene. We used tumor necrosis factor (TNF) gene as the internal control. In our real-time PCR, elephant endotheliotropic herpesvirus (EEHV) was recovered from lung, liver, and tongue whereas only tongue provided a positive result in the conventional PCR. All samples were positive with TNF gene detection. To our knowledge, this is the first report of EEHV detection in wild elephant in Thailand. EEHV surveillance in this wild population is strongly suggested. Linkage between EEHV in wild and domestic elephants should be further explored.

Keywords : elephant endotheliotropic herpes virus, PCR, Thailand, wild Asian elephant

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020