Dr. Ramlan earned his Bachelor of Science degree in Biochemistry from University of Malaya, Kuala Lumpur in 1988. He received his Master of Science degree in Clinical Biochemistry in 2000 from the University Putra Malaysia. After 14 years of service in the government he was awarded post-graduate scholarship and obtained his PhD in 2006 from University of Sheffield, United Kingdom in Molecular Biology and Biotechnology.DrRamlan joined the Department of Veterinary Services in 1991 as Research Officer specializes in animal's vaccine development.

During Nipah outbreak in 1998/1999, he was involved directlyand responsible in laboratory diagnosis and testingNipah. He was appointed as the director of Veterinary Research Institute in 2007 and served as reference laboratory for all animal's diseases in the country. He has beenactive in scientific publication and currently serving as Chief Editor of the Malaysian Journal of Veterinary Research.

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EMERGENCE OF NIPAH VIRUS

In Malaysia

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Abstract

The Nipah outbreak that rocked the swine industry in Malaysia in 1998/1999 has brought about positive changes to the industry. Around 1.1 million pigs were culled as a result of about 105 deaths in humans, mainly affecting swine farmers and their families. The disease was initially considered to be Japanese Encephalitis but subsequently announced to be a novel paramyxovirusnamed Nipah virus.In VRI, the reference laboratory for Nipah was set up to monitor the Nipah disease nationwide and carry out research to update and upgrade information pertaining to the disease in swine and other species. From 2001 to 2011,a total of 28,866 samples involving most animal species includingpigs are tested every year to ensure a national free status. The tests conducted to establish the free status are ELISA or PCR. In pigs, the tests are being done on commercial pig farms whereby 15 percent of the sow population is tested on a yearly basis. The results this far indicate Malaysia has not detected Nipah in swine from 2002 till now indicating the effectiveness of the control methods implemented.

Abstract

A pig-borne virus causing viral encephalitis amongst human beings in Malaysia was detected in 1997 by the Ministry of Health. Initially, the disease was considered to be Japanese encephalitis. Subsequently, it was thought to be a Hendra-like viral encephalitis, but on 10th April, 1999 the Minister of Health announced this mysterious and deadly virus to be a new virus named Nipah virus. The virus was characterized at CDC, Atlanta, Georgia. The gene sequencing of the enveloped virus revealed that one of the genes had 21% difference in the nucleotide sequence with about 8% difference in the amino acid sequence from Hendra virus isolated from horses in Australia in 1994. The virus was named after the village Nipah. In all, the Ministry of Health declared 101 human casualties, and 900,000 pigs were culled by April, 1999. The worst affected area in Malaysia was Negri Sembilan. The symptoms, incubation period in human being and pigs, animal to human transmission, threat of disease to other livestock, and control program adopted in Malaysia is described.

Abstract

Nipah virus, a novel paramyxovirus, closely related to Hendra virus emerged in northern part of Peninsular Malaysia in 1998. The virus caused an outbreak of severe febrile encephalitis in humans with a high mortality rate, whereas, in pigs, encephalitis and respiratory diseases but with a relatively low mortality rate. The outbreak subsequently spread to various regions of the country and Singapore in the south due to the movement of infected pigs. Nipah virus caused systemic infections in humans, pigs and other mammals. Histopathological and radiological findings were characteristic of the disease. Fruitbats of Pteropid species were identified as the natural reservoir hosts. Evidence suggested that climatic and anthropogenic driven ecological changes coupled with the location of piggeries in orchard and the design of pigsties allowed the spill-over of this novel paramyxovirus from its reservoir host into the domestic pigs and ultimately to humans and other animals.