

## **Betanodavirus infection in golden pompano, *Trachinotus blochii*, fingerlings cultured in deep-sea cage culture facility in Langkawi, Malaysia**

### **Abstract**

Golden pompano, *Trachinotus blochii* is a new marine fish candidate for aquaculture in Malaysia. The fingerlings of the fish are not yet produced locally but imported from neighboring countries and Taiwan. In the present study we report the first molecular detection of betanodavirus from diseased golden pompano fingerlings cultured in a deep-sea cage culture facility in Langkawi, Malaysia. The virus caused the fish fingerlings to exhibit abnormal swimming behavior, dark skin coloration and loss of appetite prior to mass mortality. Histopathological examination revealed acute cell vacuolation in both brain and retina tissues of the affected fingerlings. Results of viral culture, RT-PCR and DNA sequencing further confirmed the role of betanodavirus infection in the outbreak. Although phylogenetic analysis and mean nucleotide sequence of RNA2 genome of the betanodavirus showed high similarity to RGNNV betanodavirus isolated from Taiwan, origin of infection is difficult to establish since the RGNNV is also commonly reported in the Southeast Asian region and has the widest range of host marine fish species. Nevertheless, the finding of the present study requires a review of procedures in importing fish fingerlings for sustainable growth of the marine aquaculture industry in Malaysia.