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**SCREENING THE OCCURRENCE OF GROUPER IRIDOVIRUS (GIV)
IN CAGE CULTURED GROUPERS IN SABAH USING POLYMERASE
CHAIN REACTION (PCR) TECHNIQUE**

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ABSTRACT

This investigation was conducted following mass mortalities of grouper larvae at the hatchery of the Borneo Marine Research Institute. Total genomic DNA from grouper larvae were extracted and subjected to polymerase chain reaction using specific primers targeting two genes, which are the major capsid protein and the ATPase genes of grouper iridovirus. However, none of the samples produced any visible band after the amplification of either gene. This however does not rule out the possibility of other viruses or bacteria causing the mass mortalities of grouper larvae in the hatchery. Therefore, it is recommended that investigation on the present of nervous necrosis virus (VNN) should also be conducted as these two viruses produce very similar disease manifestation when infecting grouper. Although, no iridovirus was detected in artificially produced grouper larvae at the Borneo Marine Research Institute, the precautionary measures should be monitored all the time as to prevent any viral contamination into the grouper broodstock already established in the hatchery.

INTRODUCTION

Groupers are vulnerable to several viral diseases such as the grouper iridovirus disease (GIVD), viral nervous necrosis virus (VNN), spinning grouper virus (Nodavirus), striped jack nervous virus (SJNNV), herpes virus, lymphocystis, golden eye disease (Astro-like virus) and red grouper reovirus. These viruses are known to infect vital organs of grouper such as the kidney, spleen, brain and nervous system, and eyes. The mortality due to viral infection can be very serious in grouper, sometimes up to 100%. Grouper iridovirus has been widely reported in Taiwan, Thailand and Singapore but no report in Malaysia so far recorded.

The symptoms of the viral infection includes lethargic, in appetite, floating at water surface or at the bottom of the cage net where the fish die at night (Chua et