

International Conference on **Aquaculture & Fisheries** July 20-22, 2015 Brisbane, Australia

Spleen weight index as a potential virus replication indicator in Rock Bream Iridovirus (RBIV) infected rock bream (*Oplegnathus fasciatus*)

Myung-Hwa Jung

Chonnam National University, Republic of Korea

A wide variety of diseases are associated with enlargement of spleen and fish spleen size is used as a simple measurable immune parameter with a potential role in immune response against pathogen infection. Rock bream iridovirus (RBIV) is a member of the *Megalocytivirus* genus affected to rock beam (*Oplegnathus fasciatus*) are characterized especially by enlargement of spleen, nevertheless, fish ultimately die due to continuous disease progression. In the present study, we compared spleen weight with virus replication in susceptible and resistant rock bream against RBIV infection at high and low susceptible water temperatures. Spleen weight/virus copy number in dead fish (26°C) and survivor (from RBIV re-infection) conditions were 88-132 mg/10⁶-10⁸ and 15-34 mg/10⁰-10¹ respectively. Lethal ratio of spleen index due to RBIV infection was 3.06-5.90 (dead condition) and safe ratio was in the range of 0.34-1.45 (survivor condition). In water temperature shifting (23°C to 17°C) groups, when virus replication reached to peak at 20 d to 30 dpi (10⁶-10⁷), spleen weight reached its highest (104-138 mg) and when fish reached to recovery stage (40 d to 100 dpi), reduced virus copy number (10⁶ reduced to 10¹) with gradually reduced spleen weight (102 reduced to 27 mg) was observed. Our results demonstrated that rock bream with larger spleen index were highly susceptible to RBIV and virus replication is responsible for the alterations of major clinical signs of RBIV infection in fish body. Positive correlation of spleen index with virus replication suggests RBIV infection in rock bream can be identified by spleen index changes and spleen index can be considered as an indicator for assessment of RBIV progression.

Biography

Myung-Hwa Jung is currently working in Chonnam National University, South Korea in the Department of Aqualife Medicine.

gloomy8983@hanmail.net

Notes: