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Effects of protective immunity water temperature on mortality in Rock Bream Iridovirus (RBIV) infected rock bream (*Oplegnathus fasciatus*) and survivors obtain

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Rock Bream Iridovirus (RBIV) causes huge losses especially in rock bream *Oplegnathus fasciatus*. Rock bream injected with RBIV and held at 29, 26, 23 or 20°C had 100% mortality. Conversely, all infected fish held at 17°C survived even after the temperature was progressively increased to 26°C at 100 days post infection (dpi). Rock bream exposed to virus and held for 2, 4 and 7 days at 23/26°C before the temperature was reduced to 17°C had mortality rates of 26.6/73.2%, 66.6/100% and 93.4/100% respectively through 100 dpi. When surviving fish had the water temperature increased from 17 to 26°C at 100 dpi, they did not exhibit signs of disease and had low virus copy numbers (below 103). To investigate the development of a protective immunity, rock bream were infected with RBIV and held at 23°C before shifting the water temperature to 17°C at 4 dpi. All injected fish survived until 120 dpi. While 100% of the previously unexposed fish died, 80.2% of the previously infected fish survived. When the survivors were re-challenged again at 160 dpi, no further mortality occurred. The high survival rate of fish following re-challenge with RBIV indicates that protective immunity was established in the surviving rock bream.

Biography

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

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