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[\[Aquaculture\] NCKU Professor Developed Real-Time Method to Monitor Grouper Disease](#)

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NCKU Realtime News (2011/07/29) Tzong-Yueh CHEN, the Chair of the Institute of Biotechnology at National Cheng Kung University (NCKU), has developed a real-time polymerase chain reaction (PCR) detection method to timely and accurately monitor virus inspection in grouper fish farming.

According to Tzong-Yueh CHEN, grouper is the most valuable fish in Taiwan's fish market but it often suffers from virus and leads to severe loss in fishery. The annual output of groupers in Taiwan is 17,000 tons and is 23% of global aquaculture production, but virus has caused a high mortality and a huge economic loss.

A distinctive feature of the real-time PCR method, which is 10 times more sensitive than conventional PCR, is the use of fin tissue as the virus detecting target organ where tissues can be sampled from the same fish.

"Without scarifying the test fish, like taking tissues out from its eye or brain, this method can be applied to precious fish which worth tens of thousands of dollars," Tzong-Yueh CHEN stated.

In an experiment of a 2-week monitoring on 24 grouper fish farms, the real-time PRC method had determined that the virus infection had spread to the entire population of affected farms in an hour.

CHEN believed the method should be extended and rooted to fish farmers to grasp the concept of disease surveillance and thus warn of virus infection prior to an outbreak.

In addition, his research has been published in the Journal of Clinical Microbiology of the American Society for Microbiology in 2011 and is Taiwan's first aquaculture paper to be included in this magazine.

Reference:

[NCKU Realtime News 2011/07/29](#)

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[National Science Council International Cooperation Sci-Tech Newsbrief](#)  
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