Incorporated Administrative Agency
Fisheries Research Agency

Press Release

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Incorporated Administrative Agency, Fisheries Research Agency

Chips for quick and harmless diagnosis of flounder diseases developed
– Enabling health checks on flounder by blood tests –

Points:
・Analysis chips that can quickly detect signs and history of infections have been developed.
・Flounder can be tested alive and their health monitored by regular checkups.

1. The Fisheries Research Agency, Oita Prefectural Agriculture, Forestry and Fisheries Research Center, and Nippon Veterinary and Life Science University have jointly developed analysis chips that can detect early-stage diseases in flounder, which is an important aquaculture species.
2. The chip contains many antibodies and pathogen proteins for detecting specific components in the blood of flounder. Infections, signs and histories of infection can be quickly diagnosed simply by sampling a small amount of blood from a live flounder and making it react on the chip. Spots corresponding to the diseases will develop color on the chip if the fish has been infected.
3. The technology enables early detection of diseases that cause serious damage in flounder farms, and will help aquaculture farmers to prevent diseases from spreading and to mitigate damage.
4. As for the future prospects, the diagnostic technology will be improved for practical use in aquaculture farms. Further studies will also be conducted in order to establish ways to look after the health of flounder through regular blood checkups.

* The results were obtained in a study project entitled “Development of flounder health care technologies using antibodies and protein chips” of “The project for developing practical technologies for promoting new agricultural, forestry and fisheries policies 2007-2009,” of the Agriculture, Forestry and Fisheries Research Council.

For more information, call the Fisheries Research Agency at:
TEL: 045-227-2621
Public Relations Section, General Planning and Coordination Department Headquarters

Mitsuru Ototake TEL: 0599-66-1839 (Director, Division)
Aquatic Animal Health Division, National Research Institute of Aquaculture

Chihaya Nakayasu TEL: 0596-58-6479 (Head)
Bio-defense Group, Aquatic Animal Health Division, National Research Institute of Aquaculture

15F Queen’s Tower B, 2-3-3 Minato Mirai, Nishi-ku, Yokohama 220-6115
TEL: 045-227-2600 FAX: 045-227-2700
http://www.fra.affrc.go.jp