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DISEASES CAUSED BY BACTERIAL PATHOGENS IN SALTWATER

Yukinori Takahashi

Department of Applied Aquabiology, National Fisheries University, 2-7-1 Nagata-Honmachi Shimonoseki, Yamaguchi 759-6595, Japan.

Terutoyo Yoshida, Issei Nishiki

Department of Aquaculture, Faculty of Agriculture, University of Miyazaki, 1-1 Gakuen Kibanadai-nishi, Miyazaki 889-2192, Japan.

Masahiro Sakai

Department of Biochemistry and Applied Biosciences, Faculty of Agriculture, University of Miyazaki, 1-1 Gakuen Kibanadai-nishi, Miyazaki 889-2192, Japan.

Kim D. Thompson, Alexandra Adams

Institute of Aquaculture, University of Stirling, Stirling, Stirlingshire, FK9 4LA, Scotland, UK.

Tae-Sung Jung

Aquatic Biotechnology Center of WCU Project, College of Veterinary Medicine, Gyeongsang National University, Jinju, Gyeongnam 660-710, South Korea.

Takashi Aoki

Consolidated Research Institute for Advanced Science and Medical Care, Waseda University, 513, Wasedaturumaki-cho, Shinjuku-ku, Tokyo 162-0041, Japan.

Hisatsugu Wakabayashi

Emeritus Professor, the University of Tokyo, 1688 Futatsugi, Matsudo, Chiba 270-0027, Japan.

Jun-ichi Hikima

Department of Biochemistry and Applied Biosciences, Faculty of Agriculture, University of Miyazaki, Miyazaki, Japan

Tomokazu Takano

Aquatic Animal Health Division, National Research Institute of Aquaculture, Fisheries Research Agency, 422-1 Nakatsushimaura, Minami-ise, Mie 516-0193, Japan.

Takaji Iida

Japan Sea National Fisheries Research Institute, Fisheries Research Agency, 422-1 Nakatsushimaura, Minami-ise, Mie 516-0193, Japan.

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Vibriosis, Gram-positive bacteria, virulence factors, vaccine, Tenacibaculosis, *Tenacibaculum maritimum*, *Tenacibaculum ovuliticum*, gliding bacteria, *Edwardsiella tarda*, septicaemia, yellowtail, bacterial infection, jaundice.

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Summary

This chapter also summarized eight different fish diseases from saline water, viz. 1) Saltwater Streptococcosis (*Streptococcus Dysgalactiae*, *Streptococcus Iniae*, *Streptococcus parauberis*), 2) Nocardiosis, 3) Mycobacterial disease, 4) Pasteurellosis, 5) Vibriosis, 6) Tenacibaculosis, 7) Edwardsiellosis (*Edwardsiella tarda*), and 8) bacterial hemolytic jaundice. The characteristics of disease agent, and pathogenesis, histopathological interest, diagnostic method, chemotherapy and disease control were introduced.

1. SALTWATER STREPTOCOCCOSIS

Terutoyo Yoshida

1.1. *Lactococcus Garvieae*

1.1.1. Abstract

Lactococcus garvieae infections occur in fish species cultured in saltwater and freshwater. Formerly, the causal agent isolated from diseased yellowtail, *Seriola quinqueradiata*, *L. garvieae* was classified as *Streptococcus* sp. in Japan. Later, the isolate was identified as a new species, *Enterococcus seriolicida*. Then, *E. seriolicida* was reclassified as a junior synonym of *L. garvieae*. One of virulence factors in *L. garvieae* is suspected to be a capsule with the resistance of opsono-phagocytosis in fish phagocytic cells. A variety of fish species including freshwater and saltwater fishes are susceptible to *L. garvieae* and effective vaccines have been developed to prevent *L. garvieae* infection.

1.1.2. Introduction

Lactococcus garvieae infections in fish species cultured in saltwater and freshwater have occurred. Formerly, the causal agent isolated from diseased yellowtail, *L. garvieae* was