



WORLD AQUACULTURE 2015

Aquaculture For Healthy People, Planet and Profit

May 26-30, 2015
Jeju Exhibition & Convention Center
Jeju, Korea

THE ANNUAL INTERNATIONAL CONFERENCE & EXPOSITION OF
WORLD AQUACULTURE SOCIETY
ASIAN-PACIFIC CHAPTER, WAS
KOREAN CHAPTER, WAS

HOSTED BY
Korean Society of Fisheries and Aquatic Science
Jeju Special Self-governing Province
Jeju Special Self-governing Provincial Council
Jeju Fish-Culture Fisheries Cooperatives




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PREFACE

World Aquaculture 2015

Welcome to World Aquaculture 2015, the annual international conference and exposition of the World Aquaculture Society (WAS). This year's annual meeting is co-organised with the Asian-Pacific Chapter of the WAS and the Korean Chapter of the WAS. On behalf of the World Aquaculture Society, its chapters and our co-hosts: the Korean Society of Fisheries and Aquatic Science, the Jeju Special Self-governing Province, the Jeju Special-governing Provincial Council, and the Jeju Fish-Culture Fisheries Cooperative, it is my pleasure to welcome you Jeju, Korea. We hope you enjoy and benefit from the conference, the trade show, and all the history and culture that Jeju has to offer.

This year's conference theme, *Aquaculture For Healthy People, Planet and Profit*, highlights the importance of aquaculture in global seafood production, recognizes that aquaculture products form a healthy and nutritious component of our diet, and is a sustainable and economically important sector, especially in many rural and coastal areas of the world.

To support this theme, we have three plenary speakers: **Dr. Kang-sen Mai**, Professor of aquaculture nutrition, Ocean University of China, Qingdao, China, **Shakuntala Haraksingh Thilsted**, Senior Nutrition Adviser at WorldFish Center in Bangladesh, and **Dr. Young-hoon Jung**, Head of Fisheries Policy Department, Ministry of Oceans and Fisheries, who will speak to aspects related this year's theme at the Plenary session. As well, we have organised the 1st AquaForum, which has been specifically created to benefit industry professionals with a full day of industry-focussed presentations. The trade show features over 150 exhibitors. And lastly, the main scientific program at the conference features 56 sessions over four days, covering a diverse array of aquaculture-related topics and speakers, as well as a dedicated poster session.

There will of course be many social events (welcome reception, student reception, President's reception, happy hours) that are important occasions to network with new and familiar colleagues. As well, there are farm tours and visits to regional sites of interests that offer up a flavour of the diverse culture and scenery that exists in this special UNESCO World Natural Heritage site.

We want to thank and recognize the many people who have helped to organise and sponsor this event and to also acknowledge Jeju Special Self-Governing Province Governor, **Mr. Won, Heeryong**, Chairperson of Jeju Special Self-Governing Provincial Council, **Mr. Koo, Sung-Ji**, and Director General of Marine and Fisheries Bureau of Jeju Provincial Government, **Mr. Lee, Saeng-Gi**. As you walk the trade show, mingle in the hallways, and attend presentations, please remember to recognize the important contribution of the conference sponsors and all the people that work tirelessly and volunteer some long hours to prepare and organize this annual event.

Again on behalf of the World Aquaculture Society, our conference organising team, and our co-hosts, welcome to World Aquaculture 2015 and Jeju. We do hope you profit from the occasion!

G. Jay Parsons, PhD, International Chair WA'15 Steering Committee
Albert Choi, PhD., Co-Chair WA'15 Steering Committee
Roy Palmer, International Chair WA'15 Program Committee
S. Charles Bai, PhD, Co-Chair WA'15 Program Committee

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WA 2015 JEJU

World Aquaculture 2015 Jeju

ABSTRACTS

THE SIGNIFICANCE OF MULTIPLE BACTERIAL INFECTIONS IN *Lutjanus sp.* IN MALAYSIAN MARINE CAGE CULTURE SYSTEM

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The epizootiology of disease problems in *Lutjanus erythropterus* (Crimson snapper) was conducted in Pulau Langkawi Kedah, the northern state of Peninsular Malaysia, for a period of eight months until harvest due to reported continuous mortality of about 30% after two months introduction, incurring high economic loss. Infected fish was morbid, discoloured with haemorrhagic ulcers in dorsal areas and severe necrosis of caudal region. Monthly sampling revealed multiple *Vibrio* infections with variable prevalence rate during grow-out stage as shown in Fig.1.

Necropsy revealed abnormal liver, with cases of severe whitish nodules in kidney and spleen. The caudal peduncle area was soft and fluffy to touch, releasing yellowish exudates when cut. Histopathological diagnosis of the kidney, spleen and muscle using Grocott and Modified Ziehl Nelsen staining revealed red, long, thin and filamentous organisms in the granulomatous lesions suggestive of nocardiosis shown in Fig. 2. Further sampling of the *Lutjanus sp* that were above 250g(5*month), showed exophthalmus with watery brain, in which case *Streptococcus iniae* was isolated for three consecutive months. Vibriosis was prevalent throughout the culture period with concurrent infection of *V. vulnificus* and *V. alginolyticus* during the later period nearing harvesting. The study has shown that multiple bacterial infections are prevalent throughout culture period infecting at different level and stages of fish growth causing continuous mortality. High economic loss is expected with the recorded pattern of disease infections and thus knowing the source of fish with better treatment regime for effective control is needed for sustainable healthy Snapper)

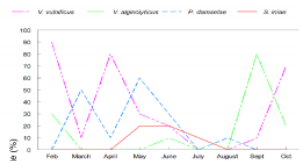


Fig.1. Multiple *Vibrio* sp. infection in *Lutjanus erythropterus* (Crimson Snapper)



Fig.2. *Nocardia* spp. Infection in *Lutjanus erythropterus* (Crimson Snapper)