

# WORKSHOP

**Interaction between GI tract microbe and piscine host**

**消化道微生物与鱼源宿主互作国际研讨会**

**Beijing, China • 9-10 April 2013**

**ORGANIZER**



<sup>1</sup>Innovative Direction of Aqua Feed & Feed Additive,

<sup>2</sup>Key Laboratory for Feed Biotechnology of the Ministry of Agriculture,

Feed Research Institute of Chinese Academy of Agricultural Sciences

## Background:

A more complete use of food resources and available space is achieved in the present aquaculture system, particularly in China. However, such aquaculture mode always results in high stocking density and consequently may depress the immune system (cellular and humoral immune) of piscine host and increases their susceptibility to diseases. It has been known that the gut microbe plays an important role in providing nutrients, regulating epithelial development, and instructing innate immunity. However, although more and more scientists are revealing the full pictures of these biological effects, we still know few about the characterization/mechanism of these interactions. The purpose of this workshop is attempted to provide an overview of “Interaction between GI tract microbe and piscine host”, including (but not limited to);

- a) Techniques to encode gut microbe;
- b) The physiological structures of fish gastrointestinal tracts and where is the gut microbe (allo, auto, invasion, translocation, etc.);
- c) Interaction between gut microbe and host fish (nutrition, immunity, disease protection, endocrine, etc.);
- d) Different testing models (*in vivo*, *in vitro*, *ex vivo*, cells; gnotobiotic animals);
- e) The future of this field.

## Organized by:

Innovative Direction of Aqua Feed & Feed Additive, Key Laboratory for Feed Biotechnology of the Ministry of Agriculture, Feed Research Institute of Chinese Academy of Agricultural Sciences.

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## Exclusive sponsorship:

Novus International, Inc.

## Venue/Contact:

The conference room in the 1<sup>st</sup> floor of the Feed Research Institute of Chinese Academy of Agricultural Sciences, Beijing, China;  
Mr. **Suxu He**, email: [hesuxu@caas.cn](mailto:hesuxu@caas.cn), phone: **+86-10-82106089**.

## PROGRAM

### Tuesday 9 April

- 08:30-08:40      Opening ceremony
- SESSION  
08:40-9:40      **Chair – Daniel Merrifield**  
Invited speaker  
**Immune responses of salmonid fish to an intestinal parasite  
*Ceratomyxa shasta***  
Prof. Yongan Zhang  
Institute of Hydrobiology, CAS
- 09:40-10:40      Invited speaker  
**The role of microbe in gastrointestinal amino acid metabolism**  
Dr. Zhaolai Dai  
Texas A&M University/China Agricultural University
- 10:40-10:50      **COFFE BREAK**
- 10:50-11:50      Invited speaker  
**Dietary modulation of the gut microbiota of fish**  
Dr. Daniel Merrifield  
Plymouth University
- 11:50-12:00      General discussion
- 12:00-14:00      LUNCH
- SESSION  
14:00-15:00      **Chair – Zhigang Zhou**  
Invited speaker  
**Mechanism of cellulosic digestion in the intestine of grass carp  
(*Ctenopharyngodon idellus*)**  
Dr. Shangong Wu  
Institute of Hydrobiology, CAS
- 15:00-16:00      Invited speaker  
**The probiotics and gut microbe in grouper**  
Dr. Yunzhang Sun  
Jimei University
- 16:00-16:10      **COFFE BREAK**

- 16:10-17:10 Invited speaker  
**Probiotics and microbial succession in the intestines of cultured fish and water**  
Dr. Xiaoping Zhang  
Zhejiang University
- 17:10-17:30 **Ex vivo models for assessing feed additives and disease resistance**  
Dr. Samuel Voller  
Plymouth University
- 18:00-20:00 Dinner

**Wednesday 10 April**

- SESSION  
08:30-9:30 **Chair –Ooi Ei Lin**  
Invited speaker  
**Effects of dietary essential oil on production, immunity, gut microbiota, and disease resistance of tilapia, *Oreochromis niloticus***  
Dr. Ooi Ei Lin  
NOVUS INTERNATIONAL, INC
- 09:30-10:30 Invited speaker  
**Comparison of adhesive gut bacteria, immunity, and disease resistance in juvenile hybrid tilapia fed different *Lactobacillus* strains**  
Prof. Zhigang Zhou  
Feed Research Institute, CAAS
- 10:30-10:40 **COFFE BREAK**
- 10:40-11:40 Invited speaker  
**NGS & Microbial Communities**  
Prof. Yong Zhao  
University of Toronto/Beijing Computing Center
- 11:40-12:00 General discussion
- 12:00-14:00 LUNCH
- SESSION  
14:00-15:00 **Chair –Yunzhang Sun**  
Invited speaker  
**The intestinal tight junction of grass carp (*Ctenopharyngodon idellus*)**

Dr. Fan Xu  
Suzhou University

15:00-16:00 Invited speaker  
**Composition and spatial structure of the gastrointestinal mucus layers in domestic animal**  
Dr. Guifang Dong  
Wuhan Polytechnic University

16:00-16:10 **COFFE BREAK**

16:10-16:30 *For volunteer* (Submission deadline Friday 5 April)

16:30-16:50 *For volunteer* (Submission deadline Friday 5 April)

16:50-17:10 *For volunteer* (Submission deadline Friday 5 April)

17:30-19:30 Dinner

**Map of Feed Research Institute of Chinese Academy of Agricultural Sciences  
(By walk about 10 min from Beijing Friendship Hotel to FRI)**

