

12th International Congress on**Microbial Interaction and Applications of Beneficial Microbes**

July 17-18, 2017 Munich, Germany

**Konstantinos Kormas***University of Thessaly, Greece***Bacteria as true residents in the gastrointestinal tract of commercially reared fish**

Bacteria are the main symbionts of the gastrointestinal tract (GIT) of practically every macro-organism that has been studied so far. Usually the benefits of this symbiosis are far more significant than the harmful (pathogenic/toxic) symbiotic relations occurring in some animals. Of all the GIT-bacteria systems known to date, aquatic animals are among the least studied. The GIT of commercially reared fish, consist an excellent ecosystem for the investigation of the origin, establishment and growth of their bacteria populations. The major reason for this is that the GIT of reared fish: (1) receives a relatively constant food supply of specific ingredients, serving as the growth medium of the symbiotic bacteria; (2) is characterized by a rather constant suite of *in situ* environmental conditions, which set a stable and known profile of incubation conditions of the symbiotic bacteria; and (3) aquaculture installations come in various systems and can be found in a wide array of locations around the world covering both freshwater, brackish and marine habitats. Available studies to date, depict that: various reared fish species harbor different but specific prokaryotic communities, being shaped by the supplied diet and/or the animal's habitat; have temporally variable symbiotic bacterial communities; populations of reared species have distinct GIT bacterial communities compared to their wild counterparts; there is uncertainty on the fish GIT bacteria origin; and the understudied effect of the individual variability vs. individual-independent, limits us from depicting a true core microbiome for species of reared fish.

Biography

Konstantinos Kormas received his BSc (1994) and PhD (1998) from the Biology Department of the University of Athens, Greece. He worked as a Post-doctoral fellow at the Trondhjem Biological Station, Norway and Woods Hole Oceanographic Institution, USA. Since 2015, he is a Professor of Aquatic Microbial Ecology at the University of Thessaly, Greece. His research focuses on the patterns and processes that underpin the distribution and abundance of microorganisms in different habitats of the aquatic environment, including plankton, benthos and symbionts. He has published more than 80 papers in peer-reviewed journals

kkormas@uth.gr**Notes:**