



BOOK OF ABSTRACTS

CHARACTERIZATION OF *VIBRIO* AND *PHOTOBACTERIUM* SPECIES ISOLATED FROM GREEK AQUACULTURE

P. Katharios¹, P. Kalatzis^{*1,2}, R. Bastias¹ and D. Kokkari¹

¹*Institute of Marine Biology, Biotechnology and Aquaculture, Hellenic Centre for Marine Research, Gournes, Heraklion, Crete, Greece*

²*Department of Biology, University of Crete, Voutes, Crete, Greece*

The Vibrionaceae are a family of Proteobacteria containing some of the most important fish pathogens including *Vibrio* and *Photobacterium* species. Members of these two genera have been devastating the Mediterranean aquaculture for many years. In this work we present data on the biochemical and molecular characterization of several clinical strains isolated from Greek aquacultures.

Most of these clinical strains belong to the following species: *Vibrio anguillarum*, *V. harveyi*, *V. parahaemolyticus*, *V. fischeri*, *Photobacterium damsela* subsp. *piscicida*, *Photobacterium damsela* subsp. *damsela*. The biochemical characterization was based on the BIOLOG GEN III standardized micromethod which is using 71 carbon source utilization assays and 23 chemical sensitivity assays to provide a phenotypic fingerprint of the bacteria. The strains were grouped using Direct Genome Restriction Enzyme Analysis (DGREA) and the 16S ribosomal RNA of the representatives of each group were sequenced following PCR with universal primers. The sequences were used in phylogenetic analysis. The Greek clinical strains were compared against characterized pathogenic bacteria provided from international collections.

The results of this study are discussed with reference on the severity of each clinical case. The final goal of this work is to develop a biorepository of pathogenic strains belonging to these species to be used as hosts for isolating lytic bacteriophages. A thorough characterization of the bacteria will give us a better understanding on the host specificity of phages and the mechanisms of resistance development, towards phage therapy development.