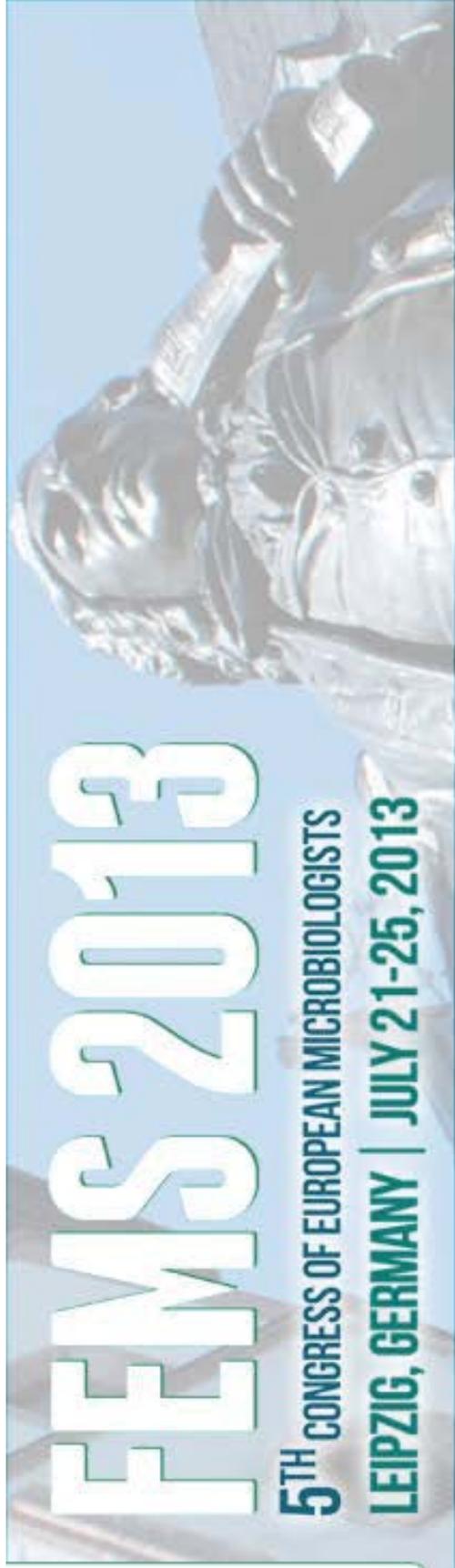




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BACTERIOPHAGES AGAINST VIBRIOS OF LIVE FEEDS IN MARINE AQUACULTURE HATCHERY

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Background: Vibrios are major pathogens in aquaculture causing a wide range of diseases. In marine hatcheries they are transferred through live feeds to the delicate fish larvae causing substantial mortalities. At these early stages of fish development, immune system is not sufficiently developed for vaccination while the use of antibiotics will disturb the microbial community of the tank with negative impact on fish survival, growth and quality. Disinfecting live feeds is a common practice in most hatcheries, which however also alters the microbial community of the larval rearing tank. A promising alternative is the use of bacteriophages, which can selectively exclude unwanted pathogens without affecting beneficial bacteria of the live feeds culture.

Objective: The isolation and partial characterization of Vibrios and their corresponding phages present in live feeds tanks of marine hatchery.

Methods: Vibrios were isolated in selective medium from water samples of live feeds tanks of a marine hatchery. The bacteria were separated according to their plasmid profile and were used as hosts to detect phages. Water samples from different locations in Crete were used to inoculate *Vibrio* spp enrichment cultures and isolate bacteriophages. Phages were isolated and characterized with standard techniques.

Conclusions: *Vibrio* spp isolates were obtained from rotifers and *Artemia* and were separated in two groups according to their plasmid profile. 7 bacteriophages were isolated infecting the *Vibrio* isolates with different intensities. Direct application of phage cocktail to reduce Vibrios in fish hatcheries is discussed.