ISOLATION OF NATURAL REPRESENTATIVES OF CARP LACTOFLORA TO CREATE PATHOGEN CONTROL AGENTS THAT CAN BE ALTERNATIVE TO ANTIBIOTICS

M. Urazova[1], K. Zakarya[1], Z. Sarmurzina[1], G. Bissenova[1], G. Abitayeva[1], A. Shevtsov[2], Zh. Tekebayeva[1], I. Tynybayeva[2], A. Abzhalelov[1]

[1]РГП «РКМ» РК
[2]РГП «Национальный центр биотехнологии « МОН РК

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Currently, the microbiome of commercial fish species is being actively studied. In reviews, mainly based on metagenome analysis features and formation of intestinal microflora of various fish species of North America, Asia and Europe have been presented. Results of these researches showed that lactic acid bacteria (LAB) are common microbial group of intestinal microbiota of fish (Wu et al., 2012; Ye et al., 2014; Borsodiet al., 2017; Wang et al., 2018). In our research a characteristic of 22lactic acid bacteria isolated from Common Carp (*Cyprinus carpio*) intestines were studied. All of them were tested for their ability to inhibit growth of *Aeromonas punctate*, *Shewanella xiamenensis*, *Pseudomonas aeruginosa*,*Pseudomonas taiwanensis*.In sum, 7 isolates with high antagonistic activity were selected. 16S rDNA gene sequencing identified them as *Lactobacillus fermentum*(4), *Lactobacillus casei/paracasei* (2) and *Pediococcus pentosaceus* (1). All identified isolates can grow in wide temperature range (10° C to 37° C) and in presence of bile. Earlier the species of Lactobacillus, Lactococcus, Streptococcus, Enterococcus,Pediococcus and Carnobacteriumgenera were isolated from carp intestines (Bucio et al., 2006; Wang et al., 2018). We isolated only strains, belonging to 3 species (*Lactobacillus fermentum, Lactobacillus casei/paracasei* and *Pediococcus pentosaceus*). It is low rate of species diversity. Perhaps this is due to the conditions, when we made isolationof LAB. It wasmade at the transition period from wintering to active spawning.The climate of Central and Northern Kazakhstan is severe and it is characterized by a cold winter lasting 5,5-6 months. Long wintering is a stress for an animal, and its microflora too. During the wintering period, carps do not feed, the composition of their microflora becomes poorer.The dominance of somespecies among intestinal LAB during cold period should be due to their specific characteristics, such as resistance to low temperatures and unfavorable environmental factors.Selective 7 strains could be alternatives to antibiotics for freshwater aquaculture in Kazakhstan.