Signatures of Directional and Balancing Selection in the Silverside Basilichthys microlepidotus (Teleostei: Atherinopsidae) Inhabiting a Polluted River

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 Currently environmental pollution is one of the most important factors affecting natural populations and acting as a strong selective pressure. Therefore, identifying genes and their alleles implied in population survival within contaminated areas is a relevant issue. In this context, freshwater systems are likely among those that have been most impacted by pollution. The Maipo River is one of the most polluted basins in Chile, surrounded by 40 % of the human population of the country. There are five populations of the endemic silverside Basilichthys microlepidotus inhabiting this river, two in polluted areas and three in non-polluted areas. The goal of this study was to identify candidate loci or loci potentially under directional and balancing selection related to pollution in B. microlepidotus. To this end, a genome scan (AFLP markers) was performed, comparing between fish located in polluted and non-polluted areas and between fish i