



Inicio del desarrollo acuicultura en Chile

Innovation at the service of productive development in Chilean aquaculture

In just a few decades, salmonid farming has become an important industry to Chile's economy, coming second only to copper in exports. However, aquaculture still faces many challenges, the most important of which are associated with sanitary and health conditions. Following the 2007 infectious salmon anemia (ISA) outbreak, pressure is on the industry to manage highly contagious diseases while simultaneously preventing decreased production, reducing antibiotic use, and developing new disease prevention/treatment techniques.

One investigator taking on these challenges is Dr. Ruben Avendaño-Herrera, researcher from Universidad Andrés Bello's Faculty of Biological Sciences (Viña del Mar Campus) and the Quintay Marine Research Center of the Faculty of Ecology and Natural Resources, in addition to being a member of the FONDAP-funded Interdisciplinary Center for Aquaculture Research (INCAR). Together with Dr. Rodolfo Paredes, from the Faculty of Ecology and Natural Resources, Dr. Avendaño-Herrera's project aim is to construct a national database of bacterial isolates. This database will facilitate the development of diagnostic tools, promote further studies on antimicrobial susceptibilities, and provide a collection of bacterial cultures that can be applied towards bettering aquaculture production.

This research, which is supported by the Foundation for Agricultural Innovation (FIA) and National Fisheries Service (SERNAPESCA), also aspires to develop a diagnostic tool for the early identification of bacterial pathogens in aquaculture centers, which will aid in defining appropriate treatments.

Dr. Avendaño-Herrera highlights that the project is focused on bacteria that are not considered within active surveillance plans, meaning that these pathogens are not tracked by SERNAPESCA. "This national database will not only allow to identify the principal pathogens that attack salmonids, but also those that are more abundant."

Dr. Avendaño-Herrera adds that by having a guide on the specific characteristics and manifestations of pathogens, the industry will be able to develop effective vaccines for disease prevention. "The idea is to promote the use of vaccines that attack those bacteria that are a true sanitary threat to the country. Through this, we will construct a real protection barrier and decrease the use of antibiotics in aquaculture centers."