

Q&A with Nissim Chen, CEO of AquiNovo is addressing the growing demand for Fish and the Food Crisis in bringing to market their Peptide-based Technology that Enhances the Growth of Farm Raised Fish



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"We are bringing a disruptive technology to a growing industry, addressing a critical challenge of the immense food crises." - Nissim Chen

CEOCFO: Mr. Chen, what is the concept behind AquiNovo™?

Mr. Chen: AquiNovo was established to meet the ever-growing demand for fish. As marine sources are being depleted, increasing amounts of fish are provided by the Aquaculture industry that has grown significantly in the last 30 years. Actually, since 2014 Aquaculture provides over fifty percent of fish consumed by humans. However, this tremendous growth comes with pressing challenges, the key of which is the need to sustainably increase fish yield. AquiNovo has licensed a technology, invented at the Hebrew University, that enhances growth of farmed fish, therefore shortening time to market for each growth cycle and allowing fish farms to generate more growth cycles using existing infrastructure, thus increasing fish yield using same resources.

CEOCFO: Would you explain how that works?

Mr. Chen: AquiNovo's technology is based on proprietary short peptides, which are basically a truncated, modified forms of naturally occurring peptides in the fish. The activities of these peptides in fish are employed to enhance fish growth when given externally.

CEOCFO: What have you found as you have been testing your theory and testing what you have developed?

Mr. Chen: Lab scale fish studies demonstrates that young tilapia fed with feed containing our peptides show 30-40% higher average weight vs. control group (i.e. tilapia fed with same feed without having the peptide). In addition, we saw larger number of bigger fish in the peptide fed group vs. the control group.

CEOCFO: Are there particular types of fish that might be better or do you see it potentially across the board?

Mr. Chen: Although all our experimental data was obtained using tilapia, we believe that this is a platform technology that can be applied to all farmed fish, since the general natural peptides and the relevant biological systems exist in most, or all fish. There are of course differences between fish species and thus a tailor-made application will be required for each such species. In fact, we have recently identified a lead peptide for growth enhancer of salmon using our in vitro screening system. Our first three products target tilapia, salmon and carp species.

CEOCFO: What surprised you, if anything, as you have done the testing? What have you found that you might not have expected?

Mr. Chen: Well, it is always a great joy to see that a theory indeed materializes. It was a very good surprise to see such a massive effect of our peptides on growth. This, in particular, is an encouraging observation since cumulative knowledge

and experience in life sciences show that animal and plants have a lot of redundant physiology and biochemical activities, that in most cases can significantly reduce, or totally abolish, the requested impact.

CEOCFO: *How would this be administered? Just as part of regular feeding?*

Mr. Chen: Yes. It would be administered as part of the feed, using the regular feeding protocol. Commercial wise, we are planning to manufacture our peptides and sell them to fish feed-additive and/or fish feed companies that would incorporate it into their feed and sell this novel growth enhancing feed to the end customers - hatcheries and fish farms. Thus, by buying the feed that includes our products the hatcheries and fish farms will obtain an easy-to-use, non GMO, non-hormonal solution to decrease time to market and increase yields and revenues.

CEOCFO: *Are there any potential side effects; anything that a farmer or a company wanting to sell the product needs to be on the lookout for?*

Mr. Chen: At our lab scale studies performed so far, we did not observe any visual abnormalities. Fish health and side effects will also be checked in our large-scale studies that started this year. In this context it is also important to note that the administration of the peptides to the fish will only be done for a limited period during growth cycle so to achieve a maximal growth acceleration but zero peptide in the fish at harvest. Measurements of peptide level in fish blood showed a rapid clearance from the blood (within minutes) and we are now testing the same in fish organs.

CEOCFO: *What are the regulatory processes around what you are doing? Where will you be looking first, geographically?*

Mr. Chen: The technology is non-genetically modified (non-GM) and non-hormonal. The designated regulatory status would be for growth promoting feed additive. We will need to apply for regulatory approval in each target territory and obviously, requirements and process are slightly different per each territory. However, in general terms, process in all territories include demonstration of efficiency and safety, to which we already have very encouraging initial data (significant growth enhancement, no visual abnormalities and rapid clearance from blood and water). Geographically, we are very much spread all over the globe based on our target markets: tilapia is mainly produced in Asia and Latin America, salmon is mainly produced in Norway and Chile and carps are mainly produced and consumed in China.

CEOCFO: *What is your financial position today? Are you seeking funding or partnerships? How will you go about moving forward?*

Mr. Chen: The company was established in October of 2015, as part of the Israeli Incubator Program, under which we received our seed funding from Trendlines Group. Six months ago, we were happy to announce our first strategic partnership with Neovia Group, a leading multinational feed and animal health company with over 1.7 billion Euros turnover. Headquartered in France, Neovia operates in more than twenty-eight countries around the world. This partnership includes both \$1.5 million cash investment and development work. We are now in advance discussions with leading players for a strategic partnership with our salmon program. In parallel, we are in the process of seeking additional funds to support and accelerate our current programs whilst extending our pipeline.

CEOCFO: *What has been the interest from the investment community? Do they understand what you are doing?*

Mr. Chen: There is a lot of interest, in particular, taking into account that we are a bit “under the radar” in terms of public relations. All the investors understand the impact of the immense food challenge facing humanity in the next years and decades and therefore realize the importance of the aquaculture industry, the crucial need to sustainably increase fish yields and our disruptive solutions. Having said that, most of the investors, including those who already invest in various agricultural technologies, have very little firsthand knowledge and experience in investing in the aquaculture industry and the relevant investment models and risks. Therefore, a careful patience process is required to establish such investment.

CEOCFO: *Have people been looking for a better way? Are there competing ideas in terms of what you are doing-being able to enhance growth in the way you have?*

Mr. Chen: Yes, this is life...people will always look for better solutions to pressing challenges. There are several feed additives that can generally promote growth, but none is really as potent as our products. One of the interesting examples for innovative solutions in the field is the transgenic salmon: due to the introduction of salmon growth hormone it grows much faster than any ordinary salmon. However, since there is a complete ban on transgenic products in Europe and sever public perception challenge in the US there is zero marketing of this salmon in these territories.

CEOCFO: *Why should people pay attention to Aquinovo? Why is the company so important?*

Mr. Chen: Simply and bluntly put: we are bringing a disruptive technology to a growing industry, addressing a critical challenge of the immense food crises for decades to come.