Novel Peptides for the Control of Reproduction in Fish (Yissum)

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Enables hormonal manipulation of the reproductive cycle

Categories	Agriculture, Aquaculture, Fish Culture, Animal Sciences, Mariculture
Development Stage	Preliminary proof of concept; ongoing research
Patent Status	United States patent application filed.

Highlights

- The endocrine regulation of vertebrate reproduction is achieved by the coordinated actions of several peptide neurohormones.
- With fish being an important food source, there is a need to better understand how to increase their reproductive capabilities.
- However, in fish, it was found that the same genes did not appear to be directly involved in the initiation of the reproductive cycle as was shown for mammals.

Our Innovation

Following the identification of Neurokinin B (NKB) genes in fish, we developed analogs that enable manipulation of hormonal activity and reproductive cycles. Antagonists will enable the inhibition of reproduction of farmed fish.

Key Features

- The new analogs will help to obtain successful spawning and improved egg quality in farmed fish, especially of fish species that are late-maturing.
- The new antagonists will help to prevent early sexual maturation of farmed fish that ends up in small size cultured fish.
- Simple and low cost method
- Unlike other agents that are in the market, the new agent will enable the control of different stages of fish reproduction.
- The novel agents will be appropriate for both males and females.
- These analogs will fit different species of fish.

Development Milestones

- Seeking an industrial partner to commercial this technology and further funding of research.

The Opportunity

- The method (inject fish with hormones) been used today is expensive.
- This novel agent will be able to either facilitate or halt fish reproduction.
- Can fit many fish species, at different stages.

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