

GloFish

GloFish fluorescent aquarium fish are “Glo-ing the Distance.”

By Alan Blake, CEO of Yorktown Technologies, the exclusive licensor of GloFish fluorescent fish.

Click images to enlarge

Photos courtesy www.GloFish.com. It has been more than five years since GloFish® hit the market. Although they generated quite a stir when they were first introduced, they are now generally accepted, with an ever-growing demand. They have made a significant impact on the hobby, and will likely do so for years to come. This article will take a look at how things started, where we are now and our thoughts on what the future holds for GloFish.

GloFish: The Beginning

The idea for the development of GloFish originated with the company co-founder, Dr. Richard Crockett in 2001. During his undergraduate studies, Dr. Crockett learned about fluorescent protein marker genes. These genes drive the expression of fluorescent proteins that allow scientists to harmlessly observe and track cellular development. They have been used for more than a decade in combination with zebrafish to better understand important questions in genetics, molecular biology and vertebrate development.

Dr. Crockett was intrigued by the possibility of using these genes to develop fish with novel fluorescent colors without the use of injected dyes or hormones. Each fish would be born with its unique color, which would then be passed along to its offspring. In this way, marine coloration could be possible in a freshwater fish without any harm to the fish.

It turned out that fish such as Dr. Crockett envisioned had already been developed by Dr. Zhiyuan Gong at the National University of Singapore to help detect environmental pollutants. By adding a fluorescence gene from a sea coral to the zebrafish, Dr. Gong thought that one day the fish could be used to determine when a waterway was contaminated. The first step in developing these pollution-detecting fish was to create fish that would be fluorescent all the time. The offspring from these fish were the fish that we ultimately marketed as GloFish.

Having identified fish that could be sold to the ornamental fish market, we worked for nearly two years to exclusively obtain the intellectual property rights to produce and market the fish. This process included not only ensuring we had the rights to market our fish, but also that our intellectual property, including patents, trademarks and licenses, would prevent others from doing so.

The final step in the process was to be absolutely certain that the fish would be safe for the environment and for human health. In addition to our internal safety review, we painstakingly worked with distinguished scientists and multiple state and federal regulatory agencies. All of these agencies, including the Food and Drug Administration (FDA), which has regulatory authority for genetically modified animals, concluded that our fish were as safe as wild-type zebrafish.

Market Launch

With the preliminary legwork complete, we teamed up with two of the largest ornamental fish distributors in the world to produce and market our fish: Segrest Farms, Inc. and 5-D Tropical, Inc., both in the Tampa, Florida area. Shortly thereafter, in late November 2003, we announced that we would soon begin marketing GloFish, the first biotech animal to become publicly available in the United States.

Within 24 hours, news of the GloFish launch was on the front page of both the New York and Los Angeles Times, and appeared on ABC's Good Morning America, CBS's Morning Show and Evening News, FOX News, CNN, MSNBC, NPR radio and dozens of other global media outlets. The amount of attention our little fish received was truly astonishing.

The scrutiny was great, and there was some concern it could overshadow our marketing efforts. However, by consistently focusing the media and other stakeholders on our scientific and regulatory review process, we found great success in educating journalists, and ultimately the public as a whole, about the safety of our fish.

Current Trends

It has now been more than five years since the start of GloFish sales. Given their novelty and media attention, it was often stated at the time of our launch that GloFish was no more than the latest industry craze. Predictions were made that it would be a “here-today, gone-tomorrow” sensation.

But, our fish are now among the most popular in the industry. This was not something that happened overnight, but instead over many years of diligently focusing on quality and building our brand. Perhaps the biggest boost came when we added the Electric Green® and Sunburst Orange® lines to the original Starfire Red® line. This allowed GloFish owners to create a “splash” of different colors in their aquarium. Our fish are now available in virtually all retail chains and most independent retail stores, with the number of stores that carry our fish continuing to grow.

Given the unique nature of GloFish, we think that the sales success has in large part been due to our work in educating the public and retail stores about our fish. As part of this effort, we have recently revamped our website with some great videos of GloFish under white, black and actinic lighting.

Regulatory Environment

GloFish are probably the most scrutinized fish to ever be sold in the ornamental fish marketplace. Regulatory jurisdiction for our fish in the United States is maintained by the FDA because they consider the novel gene to be an animal drug. Our company welcomes this federal oversight because it provides the public with a comprehensive third-party review of human health and ecological safety. Details regarding the Federal regulatory review process can be found [here](#).

Intellectual Property

Through the years, we have received a number of questions regarding our intellectual property rights, particularly the prohibition on intentionally breeding and selling GloFish. Some people have said that we should not be able to have patents that would prevent them from breeding or selling GloFish (license statement). As we hope people understand, our company has invested a tremendous amount of time and money in the development of GloFish. As this article outlines, this has been far from a short or easy road, but instead one that has required an enormous and steady commitment for almost eight years. Without the ability to protect our investment, we would not be able to maintain our business, continue to market the lines we have or introduce new lines in the future.

GloFish in Education

We have been pleased to find interest in our fish from the educational community. In particular, we have received inquiries from a number of educators that were interested in our fish as a teaching tool to help students understand the scientific, ethical and regulatory aspects of biotechnology. We have recently posted a number of lesson plans on our website and think they will be valuable classroom resources.

Future Prospects

One of the most common questions we receive is whether we are working on additional lines of fish. Although we don't have near-term plans to introduce any new lines, we do hope to bring additional lines to market over time. Given all of the considerations, particularly the extensive FDA review and intellectual property concerns, it is a long process and it is critical that we don't take any short cuts. At the same time, the introduction of new lines is not only important for the long-term success of our company, but also something that is beneficial to the entire industry.

We look forward to continuing to market our fish and we are very grateful for all of the support we have received since their launch 5 years ago. We encourage hobbyists to visit our website at www.GloFish.com and contact us with their thoughts!