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Sherman Wilhelm  
Florida Department of Agriculture  
and Consumer Services  
Division of Aquaculture  
1203 Governor's Square Boulevard, 5<sup>th</sup> Floor  
Tallahassee, Florida 32301

Dear Sherman Wilhelm:

Thank you for discussing the Transgenic Aquatic Species Task Force with us last week. This issue is of great interest to the Center for Food Safety (CFS). CFS is a national non-profit membership organization working to protect human health and the environment by curbing the proliferation of harmful food production technologies and by promoting organic and other forms of sustainable agriculture. CFS has members in Florida and members who regularly vacation in Florida to enjoy the state's diverse aquatic life. Due to the potentially destructive environmental impacts and serious human health impacts caused by transgenic fish, we are reviewing the proposed draft policy. CFS thanks you for the opportunity to comment on this draft policy and will provide you with comments prior to the meeting in February. Because the task force is presently reviewing the risks posed by the GloFish, CFS submits the following comments highlighting our concerns with the commercialization of the GloFish.

The GloFish is intended primarily for ornamental use in home aquariums but could be put to other uses and readily enter the animal and human food chains through accidental or intentional releases. The GloFish now being sold contains inserted genetic constructs including genes from a sea anemone that cause it to glow fluorescent red and which may result in other expression products. Based upon an independent scientific review, it has come to our attention that the genetic modification of the GloFish occurs by use of genes, promoters, and vectors that may cause potentially harmful environmental, animal health, and human health impacts. Green and yellow versions of the GloFish also are likely to be released soon; they will present the same or similar risks.

According to this scientific review, these fish are genetically engineered with the aid of plasmids, specifically: *pdsRed-1* (for red coloration), *pEGFP-1* (enhanced green fluorescence protein), and *pEYFP-1* (enhanced yellow fluorescence protein). Each of these plasmids contain antibiotic resistance marker genes. Several scientists have cautioned about potential negative impacts from the wide use of antibiotic resistance marker genes, as they may result in long-term environmental, animal health, and human health impacts. Moreover, these fish contain novel potentially mobilizing genetic sequences. They are created utilizing a shuttle vector, which is a vector capable of replicating itself in other species as well as the host species. Further, these fish are engineered in such a way that they contain other potentially dangerous material, including, but not limited to, simian and human viruses.

When released into the wild, intentionally or accidentally, the GloFish are likely to be consumed by predatory fish, birds, and mammals and thereby enter the animal and human food chains. The public may be exposed to antibiotic-resistant bacteria and suffer health impacts as a result of the unsafe use of antibiotic-resistance genes, in addition to exposure to viruses and other inserted constructs, in the engineering of the GloFish.

In light of this scientific information, CFS requests that the potential human and animal food safety significance of this information be extensively analyzed by this task force. CFS specifically requests that the task force conduct a full risk assessment and that these findings should be open to public comment prior to deciding whether or not to approve this fish. Please let us know if we can provide you with any further information.

Sincerely,

Tracie Letterman  
Fish Program Director