TRANSGENIC SALMON IS FRAUGHT WITH UNCERTAINTIES AND IRREVERSIBLE HARMFUL CONSEQUENCES.

In **May 2016**, the Canadian Food Inspection Agency approved the sale of the GM fish. In **July 2017**, AquaBounty Technologies said they had sold 4.5 tons of AquaAdvantage salmon fillets to customers in Canada.

AquaBounty first asked the FDA to approve the **fish** for human consumption in 1996. But the FDA said because this was the first genetically modified animal that would be eaten by humans, the agency wanted to take it slow and weigh the pros and cons.Nov 19, 2015

Aquadvantage salmon FDA Approval

The Food and Drug Administration (**FDA**) **approved** AquaBounty Technologies' application to sell the **AquAdvantage salmon** to U.S. consumers on November 19, 2015. ... The decision marks the first time a **genetically modified** animal has been **approved** to enter the United States food supply.

The AquaBounty transgenic Salmon are only **allowed** to be raise in two land-bases tanks

Submission to the FDA

TRANSGENIC SALMON IS FRAUGHT WITH UNCERTAINTIES AND IRREVERSIBLE HARMFUL CONSEQUENCES.

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By Joan Russow PhD Global Compliance Research Project

It is reported that the FDA is poised to approve Genetically engineered Aquabounty Salmon for human consumption;

If approved, it would be the first-ever GE animal permitted for human consumption in the U.S. On April 26 2013 the 120-day comment period ended with 1.8 million submissions opposing the approval of Aquabounty salmon.

Once approved, will it be exported everywhere? Unless there is a global ban on genetically engineered food and crops, global citizens will have to be constantly vigilant and have to oppose over and over again each new product introduced by this rogue technology. Please sign global petition **http://www.change.org/en-CA/petitions/the-un-general-assembly-institute-a-global-ban-on-genetically-engineered-food-and-crops**

UPDATE; Until recently, Canada had permission to produce transgenic eggs for research purposes without testing for harm to human health and the environment; Now it has been approved; How easily it slips from research to approval Canada has been grossly /criminally negligent.

Everyone is criminally negligent who (a) in doing anything, or (b) in omitting to do anything that it is his duty to do, shows wanton or reckless disregard for the lives or safety of other persons" (where 'duty' means a duty imposed by law). (Section 216, Canadian Criminal Code)

The DNA of the top fish has been genetically engineered to produce growth hormones all the time for its entire life. People who eat this fish will be eating this DNA, along with the growth hormones. (photo from Cornucopia)

Aqua Bounty's Atlantic salmon contain a growth gene implanted from another variety of salmon that is activated by DNA from an eel-like creature called the ocean pout.

Submission, on transgenic Salmon, to the FDA April 12 by Joan Russow Global Compliance Research Project TRANSGENIC SALMON IS FRAUGHT WITH UNCERTAINTIES AND IRREVERSIBLE HARMFUL CONSEQUENCES.

Aquabounty salmon is transgenic because there are two different species involved; Chinook salmon and Ocean Pout. The Aquabounty application for commercial release is based on the eggs being produced on P.E.I., and the fish being reared in Panama. *If approved for commercial release* it would be the first transgenic animal to be approved for human consumption.

In 2010 the Food and Drug Administration (FDA) approved transgenic salmon for human consumption. While the Gadabout transgenic salmon will not be commercially release until the FDA has completed their final Environmental

Assessment, the FDA released a draft EA with a preliminary finding of no significant impact. There is still time for public submission until April 26, 2013. What happens in Canada is key to the application being reviewed by the FDA because the eggs are to be produced in Prince Edward Island. If there is enough opposition to these eggs being produced in Canada, this could cause the Aquabounty proposal to fail.

FLAWED INITIAL FDA APPROVAL PROCESS

Dr. Michael Hansen, Senior Scientist at Consumers Union (publisher of Consumer Reports) writes that the FDA determination of no additional significant health risk is based on manipulated data and inadequate studies. Allergy risk findings were based on only six fish, and those allergic to finfish could experience severe allergic reactions.

Friends of the Earth writes, "GE salmon are unhealthy and suffer from skeletal deformities, jaw erosions, inflammation, lesions, increased susceptibility to disease, and increased mortality, raising serious … human health concerns from eating sick fish. Overall, GE salmon have 40% higher levels of IGF-1."

"IGF-1 is a hormone that has been associated with increased risk of a number of cancers, especially prostate, breast, colorectal and lung," adds Dr. Hansen.

The Center for Food Safety summarizes that the science is not there to say these fish are safe to eat. Further research is needed.

The Consumer's Union has stated that the first transgenic animal for human consumption is in danger of being approved without the input of relevant scientists. The CU points out that 9 out of the 13 committee members are veterinarians

Not one single food safety scientist specializing in food allergies

No endocrinologist knowledgeable about growth hormones

Not one fish ecologist and two of the members have vested interests because they are involved with Genetically engineering **animals (one of the two has worked with Monsanto)**

APPROVAL PROCESS IN CANADA

Transgenic salmon has not been approved for human consumption in Canada. However, in a report from the Canadian Environment Commissioner, it was indicated that "given the FDA decision that it would be safe for human consumption, that most likely it would be deemed safe for human health in Canada. "There would have to be a separate application for commercial release in Canada. The section that is responsible for determining whether transgenic salmon would be safe for human consumption is the Bureau of microbial Hazards in the department of Health.

The government section that is responsible for determining whether there will be an impact from transgenic salmon the Environment is the "New Substance Notification Regulation (organisms) under the Canadian Environment Protection Agency (CEPA). I asked why there had been no review done on the transgenic salmon eggs produced in Prince Edward Island. And I was told that it was a research facility and for that it received an exemption. I queried the fact that it was no longer just research because the eggs were shipped to Panama and that became a difficult issue because it involved the transfer of living modified organisms. The provisions for the transfer of living modified organisms come under the Biosafety Protocol and even though Canada was not a party Panama was.

The representative from CEPA section told me that if it is approved in the US and if Aquabounty applies for commercial release in Canada, the company would have to present a package. And along with that CEPA would conduct a review of the literature pertaining to the potential impact on the environment. Before commercial release CEPA would also work with the section in Health Canada.

If it were approved for commercial release in Canada, the responsibility of Canadian Food Inspection Agency CFIA would be to monitor if the Company were complying with regulations set down by Health Canada.

What is decided by the FDA is crucial to Canada because of the practice of what is described as "test

once' which has over the years been introduced in trade agreements between Canada and the US and others.

FALSE CLAIMS BY AQUADVANTAGE® FISH AQUABOUNTY

"With a global population pressing against food supplies and vast areas of the ocean swept clean of fish, tiny AquaBounty Technologies Inc. of Waltham, Mass., says it can help feed the world" NOTE; this was the claim also made by Monsanto. The Company then goes on to say:

"Aqua advantage is an environmentally sustainable alternative to the current farmed salmon. AAS will be grown as sterile all female populations in land-based facilities. As a result, Salmon cannot escape or reproduce in the wild and pose no threat to wild populations"

NOTE; the pens have to be near a water source or waterway and the sterility of the transgenic fish is according to DFO (99.8% or other sources say 99% to 95% successful.

In Panama where they have taken extraordinary care in having the land-based site impervious to escaping fish and predators, a tree fell on the complex and transgenic fish escaped. They could survive in the nearby waterways that go into the Pacific Ocean but not in the Pacific Ocean because the temperature would be too high. An issue that has to be addressed is also that if escaped, predators would cause them to move up the food chain.

An FDA advisory panel will have to consider the effect of the fish on wild populations because of the possibility of escapes, failed sterilization of eggs, and impact on the food chain. And sales to producers overseas, out of reach of U.S. regulators.

POTENTIAL DISEASE SPREAD IN CLOSE CONTAINMENT

Currently there is a Petition submitted to the Canadian Environment Commissioner

(i) There is sufficient scientific evidence that *ISA and other viruses are in farmed salmon, and have even spread to wild salmon, that these viruses have arisen because of salmon aquaculture and that these viruses are harmful to salmon and to human health: Why has the precautionary principle in the agreement on straddling fish, not been invoked and salmon aquaculture prohibited in Canada?

See film on http://dissidentvoice.org/2013/03/salmon-confidential/

***Infectious salmon anemia** or **anaemia** (**ISA**) is a viral disease of Atlantic salmon (salmon salara) that affects fish farms in Canada, Norway, Scotland and Chile

(ii) There is sufficient scientific evidence that transgenic salmon could be harmful to the environment and human health that they could develop disease in land based pens, and that here could be accidents resulting in their escaping into the nearby water system and into the food chain: why was the precautionary principle not applied in PEI where the eggs are produced and in Panama where they are growing in pens, and transgenic salmon test sites have been prohibited and why will the precautionary principle not be invoked to prevent transgenic salmon from being permitted to be produced in Canada and sold for human consumption.

***A tree fell on the land-based pen in panama and the fish escaped into the local river. Also, the transfer from PEI to Panama violated the precautionary principle in the Biosafety protocol.**

CONGRESS ATTEMPTED TO BLOCK THE APPROVAL OF TRANSGENIC SALMON

Recently the U.S. Congress has voted to block the approval of genetically-modified salmon produced in part on Prince Edward Island. The response of Aqua bounty is troubling.

Ron Stotish, from Aqua Advantage told CBC News that he is astonished a handful of people can sidetrack a 15-year science-based review.

"This is really more of a public relations ploy and an attempt to generate negative publicity," said Stotish.

Stotish and other experts don't believe this amendment will affect the process in the end. The FDA decision could come before the bill is passed, or the amendment might not survive the final vote." Given that the approval period has been extended, it could be that the bill might pass before the FDA approval.

UNCERTAINTIES AND THE PRECAUTIONARY PRINCIPLE.

The release of transgenic salmon, with all the extenuating uncertainties about health and environmental impact will be in violation of the precautionary principle.

PRECAUTIONARY PRINCIPLE

At the United Nations Conference on Environment and Development the precautionary principle was established as an international peremptory norm; it appeared in different versions;

In the universally adopted Rio Declaration, the precautionary principle read;

Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation." (Rio Declaration, UNCED1992).

In the Convention on Biological Biodiversity, the precautionary principle read; where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat

and in the UN Framework Convention on climate change there was the obligation

to take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures

Under article 6 of the 1995 agreement "relating to the Conservation and management of straddling fish stocks and highly migratory fish stocks …is the obligation to invoke the precautionary principle.

And

1. To apply the precautionary approach widely to conservation, management and exploitation of straddling fish stocks and highly migratory fish stocks in order to protect the living marine resources and preserve the marine environment.

2. To be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.

Under article 6 are obligations for implementing precautionary measures

6 3(d) develop data collection and research programmes to assess the impact of fishing on non-target and associated or dependent species and their environment, and adopt plans which are necessary to ensure the conservation of such species and to protect habitats of special concern.

PRECAUTIONARY PRINCIPLE EXTENDED TO HEALTH BY THE WORLD HEALTH ORGANIZATION

Precautionary principle extended to be applied to health article by World Health organization www.euro.who.int/__data/assets/piffle/0003/91173/E83079.pdf· PDF file in this file the precautionary principle has been extended to cover health.

Thus, where there is a threat to human health and the environment the Lack of full scientific certainty must not be used as a reason to postpone measures to prevent the threat.

THE PRECAUTIONARY PRINCIPLE MUST BE INVOKED, AND THERE SHOULD BE A COMPLETE BAN OF

TRANSGENIC SALMON (AS WELL AS WITH OTHER ANIMAL PRODUCTS). TO PROCEED WITH THIS PROPOSAL WOULD BE GROSSLY NEGLIGENT - ENDANGERING HUMAN HEALTH

STUDY RELATED TO INTERBREEDING

http://rspb.royalsocietypublishing.org/content/280/1763/20131047