

Newsletter 26: The House of Frankenstein: The FDA and GMO Salmon

Dear Readers,

In this installment of my free newsletter series I share something I wrote on the theme of GMO and the genetic alteration of life forms. This is an account of the most extraordinary corruption of public officials within the US Government Food and Drug Administration granting approval, something completely outside its legal purview, for a Panama-based company to commercially sell the world's first genetically modified animal, salmon. On August 4, 2017 this same company began sale of its GMO salmon in Canada. The entire fraudulent attempt to engineer life, the genetic manipulation of organisms grew out of a project financed by the Rockefeller Foundation growing out of their obsession with eugenics. The true agenda of the hotly debated GMO issue is far more related to a covert eugenics strategy than most people realize. Those of you who are not familiar with it might enjoy reading my book, *Seeds of Destruction: The Hidden Agenda of Genetic Manipulation* which as of this writing has been translated into 14 foreign languages and has become an international bestseller on the subject.

Thank you for your support and feel free to share this,

F. William Engdahl

Customer Reviews of [*Seeds of Destruction: The Hidden Agenda of Genetic Manipulation*](#):

"Most Important Book of this New Century" -- David Chu

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"Could not put it down till I read it through." -- Blue Rabbit

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"WARNING: If you are timid and faint of heart, do not read "SEEDS of DESTRUCTION" by F. William Engdahl. Instead, go back to sleep, and take comfort in being lied to by American corporations and U.S. governmental agencies. After all, ignorance is bliss. Otherwise, "SEEDS of DESTRUCTION" is a MUST-READ book" -- Justin Time

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The House of Frankenstein--FDA and GMO Salmon

By F. William Engdahl

24 November, 2015

After more than three decades of researching and writing on themes of mankind's inclination to abuse and harm our fellow human beings, I rarely receive something so shocking I have difficulty to write about it. A recent decision of the United States Government's Food and Drug Administration (FDA) to permit commercialization of the first-ever GMO animal for human consumption, despite an unprecedented 2 million opposing citizen petitions, and despite opposition of 40 members of Congress, more than 300 environmental, consumer, health and animal welfare organizations, salmon and fishing groups and even supermarket chains,¹ is such an instance. It astonishes me.

On November 19, 2015 the FDA approved the commercialization of a genetically modified animal for the first time anywhere in the world. Hello, GMO salmon! Welcome ladies and gentlemen to the House of Frankenstein. Please read on, as you likely will not believe the level of malicious insanity at President Obama's FDA today.

The original *House of Frankenstein* Hollywood film of the 1940's was based on a novel by Mary Wollstonecraft Shelley. It dealt with a fictional human cloning by a scientist, Victor Frankenstein, who makes an experiment in human cloning in which he creates an unexpected monster, cloned with the brain of a convicted murderer.

'sound science and comprehensive review...'

The 2015 version of the House of Frankenstein deals with a far more criminal and grotesque creation, the genetic manipulation of salmon. In their press release of November 19, the Washington FDA declared that, "Based on sound science and a comprehensive review, the US Food and Drug Administration is taking several important steps today regarding food from genetically engineered (GE) plants and animals, including the first approval for a genetically engineered animal intended for food, AquAdvantage Salmon."²

The FDA statement continues, "The FDA has thoroughly analyzed and evaluated the data and information submitted by AquaBounty Technologies regarding AquAdvantage Salmon and determined that they have met the regulatory requirements for approval, including that food from the fish is safe to eat," said Bernadette Dunham, D.V.M., Ph.D., director of the FDA's Center for Veterinary Medicine.³

What is this thing called AquAdvantage Salmon? It's a genetically modified hybridization between GMO Atlantic salmon (*Salmo salar*) and closely related wild brown trout (*Salmo trutta*). The inventors took a growth-hormone gene from the Chinook salmon and a piece of DNA from the brown ocean trout. Both combine to create a fish that grows year-round, allegedly cutting feed costs and the time it takes to reach marketable size.

The FDA claims that the GMO Salmon hybrid does not require to be labeled that it is a GMO hybrid. They state, "the FDA can only require additional labeling of foods derived from GE {GMO-w.e.} sources if there is a material difference – such as a different nutritional profile –

between the GE product and its non-GE counterpart. In the case of the AquaAdvantage Salmon, the FDA did not find any such differences." ⁴

Then in one of the most incredible statements of a statement filled with lies and misleading half-truths, the FDA concludes that the "FDA has determined that the approval of the AquaAdvantage Salmon application would not have a significant environmental impact because of the multiple and redundant measures being taken to contain the fish and prevent their escape and establishment in the environment." ⁵

The truth about GMO Salmon

In May, 2013 a group of scientists in Canada published the results of their study of the possible dangers of AquaBounty Technologies' GMO salmon in the proceedings of the Royal Society of Canada. Their conclusions, were they taken seriously in Washington would have shut the door on FDA approval once and for all. They were totally ignored by the FDA who relied instead on evidence presented them by AquaBounty Technologies.

The Canadian scientists concluded that, "Interspecific hybridization is a route for transgenes from genetically modified (GMO) animals to invade wild populations, yet the ecological effects and potential risks that may emerge from such hybridization are unknown..." ⁶ Interspecific hybridization is a term for creating a hybrid by mating two different plant or animal species. The well-established "precautionary principle" at this point would tell the FDA, "Whoa, boy! We haven't a clue what happens if we let this genie out of the bottle." Instead, they said, "Damn the torpedoes. Full speed ahead with GMO salmon. We don't give a shit what the potential human or animal consequences are."

The 2013 Canadian study continues, "In stream mesocosms designed to more closely emulate natural conditions, transgenic hybrids appeared to express competitive dominance and suppressed the growth of transgenic and non-transgenic (wild-type) salmon by 82 and 54 per cent, respectively." ⁷

The study concludes that, "Ultimately, we suggest that hybridization of transgenic fishes with closely related species represents potential ecological risks for wild populations and a possible route for introgression of a transgene, however low the likelihood, into a ***new species in nature (emphasis added-w.e.)***...complex competitive interactions associated with transgenesis and hybridization could have substantial ecological consequences for wild Atlantic salmon should they ever come into contact in nature." ⁸

Frankenstein salmon escaping to nature

As noted in the official FDA statement, they dismiss the risk of GMO hybrid salmon escaping into nature because of what the FDA claims are stringent controls in the breeding farm the company has in...Panama.

To my knowledge, Panama is not especially known for its rigorous animal safety standards. Even if it were, however, the FDA chose to ignore the fact that AquaBounty's GMO salmon facility in Panama had been repeatedly fined by Panamanian authorities for repeated environmental violations. Those included a security lapse that led to 'lost' salmon in

Panama, and the fact that AquaBounty out-sourced the "strict security" of its main Panama facility to an unknown independent contractor in 2013 to maintain security of the facility and other day-to-day practices. In summer of 2014 the independent contractor died, leaving management of the facility in limbo for weeks, pending signing of a new lease with new operators.⁹

If that were not enough ground to deny the safety claims of AquaBounty, the fact that the company plans to sell its GMO hybrid salmon eggs to fish farmers worldwide, ought to have been grounds to deny license. If the GMO salmon eggs are sold worldwide to salmon farmers, marketed as cost-reducing, fast-growth eggs, the eggs will undoubtedly end up being sold to conventional open net-pens, the standard system for the global salmon aquaculture industry, and, significantly, a form of confinement from which millions of farmed salmon have escaped in the past.¹⁰

In making its safety assessment the FDA simply violated standard scientific safety tests. They included no in-depth analysis of hazardous weaknesses in AquaBounty's salmon-confinement system and no examination of the consequences should the company's GMO salmon escape. Also absent was a formal "uncertainty analysis." Anne R. Kapuscinski, an environmental studies professor at Dartmouth College and co-author of a book about risk-assessment science applied to genetically modified fish, called the FDA's environmental assessment "not even close to approaching the standards of state-of-the-art risk assessment."¹¹

The FDA scientific evaluation that led to approval was more than deficient in what they claimed was "sound science and comprehensive review."

The FDA has done a neat trick. The review of GMO hybrid salmon from AquaBounty as well as a row of other such animal GMO applications waiting future FDA approval is being made under the category of "new animal drugs." (sic!). That allows the FDA to bypass normal substantive input from other agencies—like the National Oceanic and Atmospheric Administration, the National Marine Fisheries Service, the US Fish and Wildlife Service, or the Environmental Protection Agency—that have actual expertise in areas such as fisheries and ecological risk. Because of concerns over trade secrets, the process also mostly takes place in the dark.¹²

The reader should decide if the FDA is guilty of simply sloppy procedure or of deliberate malign action. If this decision is allowed to stand, and GMO animal products appear on our supermarket shelves unlabeled, as the FDA has ruled, the future of our food is truly become a House of Frankenstein.

Endnotes:

¹ Andrew Kimbrell, FDA Approves First Genetically Engineered Animal for Human Consumption Over the Objections of Millions, Center for Food Safety, November 19th, 2015, <http://www.centerforfoodsafety.org/press-releases/4131/fda-approves-first-genetically-engineered-animal-for-human-consumption-over-the-objections-of-millions#>.

² FDA Press Release, FDA takes several actions involving genetically engineered plants and animals for food, Food and Drug Administration, November 19, 2015, <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm473249.htm>.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

⁶ Krista B. Oke, et al, Hybridization between genetically modified Atlantic salmon and wild brown trout reveals novel ecological interactions, 29 May 2013, The Royal Society of Canada, Biological Sciences. Proceedings, <http://rspb.royalsocietypublishing.org/content/280/1763/20131047.full.pdf+html>.

⁷ Ibid.

⁸ Ibid.

⁹ Center for Food Safety, DOCUMENTS REVEAL AQUABOUTYS IRRESPONSIBLE MANAGEMENT PRIOR TO FINES FOR ENVIRONMENTAL VIOLATIONS ON GE SALMON, November 19th, 2014, <http://www.centerforfoodsafety.org/issues/309/ge-fish/press-releases/3610/documents-reveal-aquaboutys-irresponsible-management-prior-to-fines-for-environmental-violations-on-ge-salmon>.

¹⁰ Ibid.

¹¹ Jocelyn C. Zuckerman, Examining the True Risks of GMO Salmon, April 26, 2013, <http://organicconnectmag.com/project/examining-the-true-risks-of-gmo-salmon/>.

¹² Ibid.