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27.07.2015 Column: Society Region: USA in the World

A Killer-Diller: GMO Soy makes Formaldehyde in our Gut



Of course only very pathologically damaged mothers would ever knowingly feed their family formaldehyde. But that's precisely what hundreds of millions of families are unknowingly doing around the world every day. A brilliant new scientific experiment has proven in a peer-reviewed study published in the journal, *Agricultural Sciences*, that human consumption of GMO soy creates a cumulative toxic effect: the accumulation of formaldehyde in the body, along with a dramatic reduction of a specific anti-oxidant essential to detoxify cells. For humans or animals, eating GMO soy is tantamount to drinking a toxic cocktail.

The study was carried out by Dr. V.A. Shiva Ayyadurai, an MIT-trained systems biologist, who used CytoSolve, a new systems biology method to integrate 6,497 in vitro and in vivo laboratory experiments, from 184 scientific institutions, across 23 countries. The study revealed that there was a dramatic accumulation of formaldehyde, a known Class 1 carcinogen, and a dramatic depletion of glutathione, an anti-oxidant necessary for cellular detoxification, in GMO soybeans and soy products. Not good...

What the study opens in a dramatic way is the urgency of a fundamental recalibration of the entire United States and EU testing procedure now used by the US and EU government agencies when they make a decision that a given GMO seed--Monsanto GMO corn or Syngenta GMO soybean or any other--is safe for human or animal consumption.

The study has just been published in the peer-reviewed journal *Agricultural Sciences*. It uses modern computational systems biology methods to reveal that genetically engineered soy (the GMO tested) creates significant disruption to the levels of formaldehyde, a known carcinogen, and to glutathione, an important anti-oxidant necessary for cellular detoxification. A group of medical doctors and scientists reviewing Ayyadurai's study noted, "The computational results suggest substantial difference in concentrations of formaldehyde and glutathione in the genetically engineered soybean (GMO) tissues. These significant changes in key biomarker concentrations could cause deleterious biological impacts. The...results reveal how a 'small,' single recombinant DNA event may create 'large,' unpredictable, systemic perturbations to molecular systems equilibria. In light of such changes, it is clear to say that GMOs and non-GMOs may not always be 'substantially equivalent.'"

Substantially equivalent?

How does the United States Food and Drug Administration (FDA), the agency responsible for assuring the safety of the food we eat, currently test GMO seeds before certifying them as safe for humans? Well, it doesn't test them at all. Run that by again slowly, you say? Not at all? How can this be?

In 1992, President George H. W. Bush held a closed-door White House meeting with the top leadership of Monsanto, the world's largest GMO purveyor and maker of the world's best-selling weed-killed paired by contract to all its GMO seeds. At that White House meeting Bush agreed to the Monsanto request that there be no intrusive independent government tests of the health and safety of its GMO seeds. The US President agreed to impose something known as the Doctrine of Substantial Equivalence as the sole "test," supplemented by test results supplied by Monsanto or other GMO companies.

What criterion do the government agencies apply to GMO products under the Doctrine of Substantial Equivalence?

Simply, they compare if the GMO corn ear looks like a non-GMO corn ear; if it smells like a non-GMO corn ear; if it tastes like a non-GMO corn ear; if it feels like... In short, there are no US FDA or US Department of Agriculture health and safety tests. It would suggest that Monsanto and other GMO agribusiness giants might not want genuine transparent testing of their GMOs for very good reason. They have something very ugly to hide.

Since 1992, through four different presidents—Bush Sr., Clinton, ‘Baby’ Bush, Obama—that Doctrine of Substantial Equivalence has never been altered. To make certain it is not, Monsanto former Vice President, Michael R. Taylor, was named by President Obama to be FDA Deputy Commissioner for Foods. Taylor has had a long career covering up for Monsanto. In an earlier stint at the FDA under President G.W.H. Bush in 1991, Taylor, then Deputy Commissioner for Policy, signed the Federal Register notice stating that milk from cows treated with Monsanto BGH growth hormones did not have to be labeled as such. He also co-authored the FDA 1992 policy statement on genetically engineered plant foods that established Monsanto's desired Doctrine of Substantial Equivalence.

Dr. Ray Seidler, a former senior Scientist with the US Environmental Protection Agency, commenting on the new study stressed, "The discovery reported by Dr. Ayyadurai reveals a new molecular paradigm associated with genetic engineering that will require research to discover why, and how much formaldehyde and glutathione concentration, and what other cellular chemicals relevant to human and animal health, are altered. We need the kinds of standards Dr. Ayyadurai demands to conduct such research."

Seidler continued, "Formaldehyde is a known class-1 carcinogen. Its elevated presence in soybeans caused by a common genetic engineering event is alarming and deserves immediate attention and action from the FDA and the Obama administration. Soy is widely grown and consumed in the US, including by infants fed baby food products, with 94% of soy grown here being genetically engineered."

Formaldehyde is used as a disinfectant. It's also used for preservation of biological specimens, and for the embalming of human remains. It is commonly used in nail hardeners and nail varnish. In September 2007, the European Union banned the use of formaldehyde due to its carcinogenic properties as a biocide, including embalming, under the Biocidal Products Directive (98/8/EC). Now it's being quietly produced in the consumption of GMO soy by EU citizens and animals fed imported GMO soy "power feed," which is the vast majority of cattle and pigs in the EU today.

To stress, because of the Doctrine of Substantial Equivalence approved by President Bush Sr. at the request of Monsanto in 1992, almost 100% of all soybeans grown in the USA is GMO and produced highly toxic Class 1 carcinogen, formaldehyde in the body of the human or animal.

The USA today is the world's leading producer and exporter of soybeans and soy meal used around the world in "high-protein" animal feed mixes, or for direct human consumption. The world's second largest soybean grower, Argentina, since the corrupt President Carlos Menem gave Monsanto exclusive growing rights in the 1990's, is today almost 100% GMO. The third major grower, Brazil, is 85% GMO soy.

This means, simply put, if you are one of hundreds of millions in the EU, USA or even China, who consumes soybeans either as milk substitute or as a food, you are eating a substance that is creating cumulative formaldehyde in your system and at the same time, dramatically lessening the needed production of the vital anti-oxidant that we need to detoxify our cells. As the late great singer, guitarist and song-writer, Bo Diddley, would say, eating GMO soy is a real "killer-diller."

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