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Professor Bruza

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Genetically Modified World: The Death of Planet Earth?

In 1973 the world was irreversibly changed forever and the course of history markedly altered as Pandora's Box was opened unleashing a force that could never be put back in. The new field of biotechnology had manifested in the world as Genetically Modified Organisms (GMOs) had been set loose into the delicate balance of Earth's ecosystem and the food chain which feeds all life on the planet. Before long, GMOs had evolved to be used for food consumption by all animals, mankind, and ultimately, all living things known to us. Some call them GM foods and some refer to them as "frankenfoods." It's proponents and profiteers insist that GMOs are a new golden era savior of mankind providing enhanced nutrition, cures for diseases, and the long-sought means to provide enough food to feed the starving masses across the globe. In fact, unbiased science, most of it suppressed, proves precisely the opposite. So much so that it may be ultimately proven, even if too late, that the unleashing of GMOs upon our world, which is already far in progress, turned out to be more dangerous to humanity's survival than the unleashing of nuclear warfare on a global WW-III scale. The proof is in: Those exposing the alarming evidence become targets of fierce corporate retaliation; scientifically proven human and animal health hazards are suppressed with involvement of corporate, science, and government corruption; the entire delicate ecosystem of earth that supports all living things is at risk for destruction, while corporate-generated propaganda in favor of GMO biotechnology is proven to be as pathetically toxic and corrupt as the GM organisms themselves.

The background of the biotech industry started with the conception, gestation, birth and gigantic growth of the globally-notorious Monsanto corporation with its

countless, powerful tentacles that now impact the governments and institutions of practically every place on earth. (Monsanto: A new Strategic Direction Under the Same Name pars. 1, 2, 3; Monsanto Today^{par} 9). Established in 1901 for production of the well-known carcinogenic sweetener saccharine, Monsanto was named after Olga Monsanto, the wife of John Queeny. In the 1940s Monsanto expanded into the agricultural industry with newly discovered insecticides and, in the 1970s, had its big break with the discovery of the now infamous toxin, glyphosate (Monsanto: A New par 1; Monsanto Today par 1). Monsanto has since been the global leader of production and proliferation of chemical poisons used on plants, insects, and humans, such as DDT/Agent Orange used on U.S. servicemen in the Viet Nam war. As new chemical and biological discoveries were made, Monsanto solidified its position at center stage to become the core of the biotech industry as a pioneer of mass-introduction of GMOs into the human food chain in 1994, shortly before unleashing their controversial, patented GM "Bt" crops (*Bacillus thuringiensis*) into mainstream human consumption in 1996 (Rich pars 11, 13; Smith, "Monsanto Endangers," 8). With its mega-billions of dollars of profits came a degree of power able to manipulate governments throughout the world and to harass, terrorize, and utterly ruin honest scientists and scholars who prudently attempt to expose scientific studies that show GMOs are dangerous to all life on Earth including the entire human species whose very survival is now in jeopardy (Smith, "Protect," 23; Smith, "Campaign," 38-39).

When mega-billion dollar corporations which wield more power than most governments are found to use that power to crush scientists and scholars who have a long-established track record of credibility, sound reason informs that there's likely something the Goliath is trying to hide. Monsanto is the tip of the spear for "The Big 7," the seven leading biotech/GMO global seed companies. The others are Dupont/Pioneer Hi-Bred, Syngenta, Group Limagrain, Land O'Lakes/Winfield Solutions, KWS AG, and Bayer" (Wholers 75). Together, these seven corporate giants "control 71 percent of the world seed market and account for about \$50 billion per annum in sales of

seeds...[in a] market monopoly" (Wholers 75). As of 2013, "[m]ore than 80 percent of corn and more than 90 percent of soybeans planted in the United States contain GM traits patented by Monsanto [in its] monopolistic dominance" (Wholers 75). Throughout U.S. history, until recently, the government exercised its authority to break up such monopolistic corporations based on their knowledge of history showing the incalculable damage such corporate monopolies tend to exercise against the nation and its people. Those dangers are magnified unimaginably when such monopolies control a product as fundamental as the seeds and crops needed by every human being to sustain their lives. As if this weren't bad enough as to Monsanto alone, "[t]o maintain their market monopoly, the [seven top GMO] companies have entered into mutually beneficial alliances by agreeing to 'cross license proprietary germplasm and technologies, consolidate R&D efforts, and terminate costly patent litigation battles'" (qtd. in Wholers 75). This level of power to pay off and control "experts," members of Congress, scientists, big media and publishers, judges and government agency heads for treatment favorable to their profiteering agendas, creates an environment conducive to retaliatory conduct against anyone who opposes them (Smith, "GMO," 12; "Monsanto Ordered," 8-9). "Tragically, scientists who voice their criticism [or] have discovered incriminating evidence, have been threatened, stripped of responsibilities, denied funding or tenure, or fired" (Smith, "Protect," 23). As one example of how "The Big 7" use this power, consider the experience of Dr. Arpad Pusztai, a once-highly respected world renowned biochemist:

Dr. Pusztai was the world's top researcher in his field and a senior researcher at the prestigious Rowett Institute in Scotland. He had been working on a UK government grant to design long-term testing protocols that were intended to become part of the official European GM food safety assessment process. But when Pusztai fed supposedly harmless GM to rats, they developed potentially precancerous cell growth, smaller brains, livers and testicles, partially

atrophied livers, and a damaged immune system... Moreover, the results clearly indicated the cause of the problem was...from the process of genetic engineering itself. (Smith, "Campaign," 38)

The industry's prompt retaliatory response included firing Dr. Pusztai from his esteemed job of 35 years, his research team was suddenly disbanded, he was threatened with lawsuits to suppress his findings, his team's effective testing protocols were all discarded, and the industry ignited a campaign of disinformation to discredit Dr. Pusztai's findings (Smith, "Campaign," 38-38; Smith, "Protect," 23). This example represents similar treatment to countless others who've tried to expose the truth of GMO dangers. So, what are they trying to hide with this high power muzzling? Lets take a look.

Numerous scientific studies, including some peer-reviewed, have been conducted in the U.S. and abroad, independently coming to the same conclusions of alarming dangers to human and planetary health from GMOs. For example, the peer-reviewed journal, Reproductive Technology, accepted for publication the 2011 study at Sherbrooke University Hospital in Quebec finding Bt toxin in 93 percent and 80 percent, respectively, of pregnant women and umbilical blood in their fetuses. Many other credible, scientifically controlled studies have found GMO foods unsafe, causative of many diseases, cancers, organ failure and destruction, miscarriages, fetal damages, painful suffering, death, and much more. While there are now thousands of varieties of GMO-infected foods at market, Monsanto's two flagship items are most worthy of commentary here. Their Bt crops, corn and soy, foremost, and their "Round-up Ready" crops and concomitant chemicals, both introduced to the market in 1996, represent the broader GMO problem. Some argue that "Bt" is a naturally-occurring soil bacteria that acts as a natural insecticide and therefore must be harmless to humans. But this sophist argument doesn't hold up because "[t]he GM version is built-in; every plant cell has its own spray bottle [in its cells]. The toxin doesn't

wash off; it's consumed" (Smith, "GMO," 12). It works by breaking open the stomachs of the insects it kills. That gut breaker is now inside the cells of our own guts. In addition, "the plant-produced version of the poison is thousands of times more concentrated than the spray...it actually fails the World Health Organization's (WHO's) allergen screening tests" (Smith, "GMO," 12). These stunning facts are countered by industry assertions of safety. But such "claim[s] of safe use of Bt spray ignores peer-reviewed studies showing just the opposite" (Smith, "GMO," 12). Additional symptoms from GMO ingestion include proven tissue damage, harmful immune responses, adverse reactions to other foods not previously extant, a host of flu-like ailments, the deaths of goats, buffalo and sheep by the thousands from feeding on post-harvested GMO cotton plants. In one village, Indians "allowed their 13 buffalo to graze on Bt cotton plants for the first time. After just one day's exposure, all died" (Smith, "GMO," 13). In his book Genetic Roulette: The Documented Health Risks of GMO Foods, Jeffrey Smith details "input from more than 30 scientists [presenting] 65 health risks of GM foods...document[ing] lab animals with damage to virtually every system studied; thousands of sick, sterile, or dead livestock; and people [with] toxic or allergic reactions to eating GM products, breathing GM pollen, or touching GM crops" (Smith, "Campaign," 41). Regarding Monsanto's Roundup Ready, the crops are genetically modified, i.e., "made ready" to withstand the otherwise fatal poison glyphosate spray which goes from the GMO genes directly into our bodies. Roundup glyphosate has been documented all around the world to be associated with "large-scale human toxicosis...oesophageal cancer...blood disorders... [and] infertility," [redacted] [and] has been linked to sterility, hormone-disruption, abnormal and lower sperm counts, miscarriages, placental cell deaths, birth defects, and cancer, to name a few" (Smith, "Endangers," 9, 10)-in animals and humans. In light of these staggering damages backed up by credible scientific findings, how is it that the majority of the public is so cluelessly uninformed?

Monsanto and the biotech industry at large have a long track record

of suppression, devious manipulation, coverups and misleading of both the government and major media as well as their own scientific community and the public concerning the grave dangers of GMO foods and GM environmental products. These powerful corporations have won government officials and entire agencies to their nefarious side of the equation, keeping them all in the dark. Jeffrey Smith explains:

The EPA's [Environmental Protection Agency's] own expert Scientific Advisory Panel said that...studies 'suggest that Bt proteins could act as antigenic and allergenic sources.' But the EPA ignored the warnings. They also overlooked studies showing that 500 people... showed allergic and flu-like symptoms while they were exposed to [Bt] spray ...to kill gypsy moths." (Smith, "GMO," 13)

Biotech promoters of GMOs also hide behind claims that since the mid-1990s thousands of different GMO food varieties have been consumed by millions of people (Marsa 42) with presumably no plague-scale health hazards shown. However, as the same GMO researcher acknowledges, "there is no way to trace back potentially adverse health consequences" (Marsa 42). Actually, there has been some degree of tracing back and every such episode has shown disastrous results, for example, "increased incidence of ills such as asthma, allergies, ADHD, and gastrointestinal disorders" (Marsa 42). "These studies raise questions that demand answers, but government has chosen thus far not to do that" according to agricultural policy expert, Charles Benbrook, at Washington State University (Marsa 42). When we "follow the money," we find recurring instances such as, "[c]hemical giants like Monsanto, DuPont, and Dow helped raise \$45 million dollars to help defeat...California's Proposition 37, a ballot measure for labeling genetically modified foods" (Marsa 43). What are they trying to hide? Project Censored, a public interest group, described the Dr. Pusztai incident, addressed earlier, as one of the ten most underreported major events of the year (Smith, "Campaign," 39). Mainstream media have consistently suppressed evidence of GMO's harmful effects. For example, they "failed to cover the prelim-

inary study from the Russian National Academy of Sciences [showing] more than half of the offspring of mother rats fed GM soy died within three weeks" compared to nine percent of deaths on non-GMO natural soy (Smith, "Campaign," 39). The same media giants suppressed the fact that "the only human GM study ever published showed that the foreign genes inserted into GM food crops can transfer, [and did], into the DNA of our own gut bacteria (Smith, "Campaign," 39). U.S. Food and Drug Administration (FDA) scientists complained that they raised concerns within their agency that GMO foods could generate "unpredictable and hard to detect allergins, toxins, new diseases and nutritional problems," urging long term studies, but their own agency ignored them (Smith, "Campaign," 39). At least one politically appointed FDA official in charge of policy is a former Monsanto attorney and vice president (Smith, "Campaign," 39). Such obvious conflicts of interest should be shocking; instead, they are not uncommon. Scientists from the Indian Council of Medical Research, the American Medical Association (AMA) and WHO urge independent studies, but continue to be ignored by the three U.S. government agencies tasked with overseeing and protecting the nation's food and ecological environment, the FDA, EPA, and United States Dairy Association (USDA). In response to the alarming study proving alien genes inserted into soy beans transfer into the human gut, all Monsanto had to do to ward off an investigation was to merely state the DNA is killed during digestion -- a statement proven by clinical studies to be false (Smith, "Protect," 25). The result is a GMO world that has the realistic potential to kill off all life on planet Earth. A "smoking gun" of bribery may never surface, because of more subtle ways to achieve that essential end; nonetheless, these many examples speak volumes as to the corruption, suppression and cover ups.

"The Web of Life," is a factual reality that all living things in, on, and around our planet symbiotically and synergistically interact with each other, each playing a special role of uniquely feeding and being fed from the others in a perfectly designed web. The late R. Buckminster Fuller recognized it as a gigantic

perpetual motion machine. Extinction or significant alteration of enough of these unique living things so delicately balanced in symbiotic synchronicity will so imbalance the web that it will destroy all of the life it supports. The introduction of GMOs into this delicate balance provide a realistic chance of irreversibly destroying the web if the GMO juggernaut is not halted soon. Warning alarms have been sounded for more than two decades, including by reputable scientists (Marsa 42; Rich par. 12). GMOs and their destructive interrelated chemicals have left a wake of ruin in everything from soil nutrient wreckage and killing off of it's vital creatures, to oceans and waterways with their myriad life forms, to pollinating bees, birds, and butterflies, the entire vital insect world, and the human species. For example, from 1999 to 2011, an astounding 383 million pounds of powerfully toxic glyphosate has been used by farmers, most in Monsanto's Roundup herbicides, compromising nature's balance and nutritional value of some 135 million acres of the best U.S. soils for crop use. Much of the rest of the world's once-richest farmlands suffer a similar fate. The disastrous results are many, including ^{the fact that} "plant diseases are enjoying an unprecedented explosion across America's most productive crop lands" (Smith, "Endangers," 11). "What we do know is that constantly spraying genetically modified crops with [Monsanto's chemical insecticide] Roundup has...spawned a new generation of herbicide-resistant superweeds [which] have driven a 7 percent increase in herbicide use since 1996" (Marsa 43). Some of the many different plant diseases include those destroying root and stem, wilting leaves and stocks, destroying necessary good bacteria, and creating chemical-resistant insects that destroy crops worse than before the GMO tampering (Smith, "Endangers," 8-12; Engdahl, "Genetic," 12). It's everything the opposite of what Monsanto originally promised in order to win over farmers to buy their destroyer-products. Crop yields everywhere glyphosate is used are significantly reduced; Monsanto's siren chorus is that it would increase yields to feed the world's starving masses (Smith, "Endangers," 11). Most alarmingly, "[o]ne study showed that it took up to 22 years for glyphosate to degrade only half

its volume" (Smith, "Endangers," 10). And what about the animals feeding on these crops, which we, in turn, feed on? Red flags and alarm bells are ringing: studies find "some intestinal damages, [adverse] structural changes in the kidneys, pancreas, and spleen; infertility, low birth weights in mice litters; and cancerous tumors in rats" (Marsa 42). Dangers to the insect world that sustains human life are worse. Prolific author and GMO researcher William Engdahl explains: "Conclusions of the first ever worldwide study of declines of insect species and numbers has just been published in the journal, Biological Conservation," with shocking findings, including that "over 40% of insect species are threatened with extinction" (Engdahl, "We're," 1). Practically every insect, grub, bug and microbe plays a vital part in that web of life, such as bees and butterflies, without which, all life on earth would die. The study reveals that this habitat loss is driven primarily by agrochemical pollutants such as glyphosate. Birds, fish, amphibians and other aquatic creatures have suffered a similar decline timed to the emergence of GMO crops and chemicals. "Especially alarming were the declines in bee populations" declining by 52 percent in Britain and 67 percent in the Netherlands since the 1980s (Engdahl, "We're," 1). Massive declines in the USA, as well, are most pronounced where GMO corn is most prolifically produced using glyphosate. Since 1947, shortly after glyphosate was introduced, the U.S. bee population has declined by more than 50 percent and some 97 percent of California's Monarch butterfly population has disappeared between the 1980s and 2017 (Engdahl, "We're," 2). Without bees and butterflies to pollinate crops, there are no crops. The earthworm population suffers a similar fate. Without them to reconstitute the soils and their nutrients, there isn't sufficient nutrition for plants to take up and feed humanity. Concerning the insect populations, Engdahl reminds us:

[I]nsects make up the structural and functional base of many of the world's ecosystems. A world without birds and bees would be one of catastrophic damage to all life on our planet. Without insects,

ecosystems collapse. Rather than solving world hunger as the agribusiness industry likes to claim, their promotion of select pesticides such as glyphosate threaten to destroy the food system.

(Engdahl, "We're," 2)

Without bees, butterflies, and birds to pollinate, the human race would become extinct in fairly short order. Will we stop this before it can't be turned back?

In the face of the mass of evidence exposing the dangers of **GMOs, including peer-reviewed studies, there continue to be a plethora of arguments to the contrary** alleging GMOs are safe. Those which argue vociferously are relatively easy to discredit. The subtle ones, however, come as wolves in sheep's clothing. They have an edge on the ability to mislead, let in the gate as a Trojan Horse. "Genetically Modified Foods: Overview" comes across as just such an article. It has no sharp edges, able to put our vigilance to sleep, letting our guard down. Throughout this article by Alex Rich and Tom Warhol, the very discerning eye can see an almost continuous thread of pro-GMO bias, often hiding in the patchwork of balanced views. The article omits parts of events and results of studies, downplays or ignores facts that support a position opposing GMOs, yet at the same time craftily covers up the almost covert bias. The authors claim "GMOs [are] food...chemically altered to give the food more nutrients, a better appearance, or a longer shelf life"(Rich, et al. par. 1). It sounds good, but the scientific facts have proven the nutrition is damaged, not enhanced. Also hidden in that statement is an erroneous *assertion* that GMO's are chemical based; in fact DNA modifying at the cellular level, the essence of what GMO opposers oppose, is a far different matter. Another example of misleading material is equating modern GMO production and results with that of centuries of making hybrid animals such as champion horses or dogs, and crossing certain tomato varieties and flowers to produce something different. This is deceptive because none of those equate with the present-day inserting of fish genes into bananas or blasting insect killing bacteria inside of the micro-genes of staple crops, yet

Rich, et al. would have us believe one equates with the other in order to set up the straw man to knock it down (Rich, et al., pars. 2, 11). A final example is that of devious omissions, downplaying and selective parsing. The authors refer to the Arpad Pusztai case described earlier, merely telling the reader that his team "found that some strains of GM potatoes were toxic to rats" (Rich, et al., par. 14). They go on to emphasize that the study findings were criticized by other scientists, as if they discredited them, which is an erroneous and misleading inference, at best (Rich, et al., par. 14). In addition, the essence of the Pusztai incident was omitted altogether: the hammering retaliatory reprisals, dissolving of the science team, cutting off funding, canceling the project, firing the doctor from his 35-years long position, threatening him with financial ruin, and other damages, to muzzle him from further exposing his findings of GMO dangers. Rich, et al., give a good mask of "balanced objectivity," for example, "there is evidence showing that GM crops both reduce and increase biodiversity," (par. 13), but these appear to be carefully planted tidbits of relatively innocuous value, planted as a ruse to mislead that the article is fair. On balance, overall, the article is rife with subtle hints of grossly pro-GMO bias.

There can be no doubt as to the dangers that GMOs pose for the world and for the actual survival of humanity and our living Earth. The evidence presented, ranging from Monsanto's toxic history and ruthless retaliatory practices to muzzle opponents, to the biotech industry's willful destruction of the Earth's ecosystem and all the life it supports, shouts in one grand chorus that the GMO movement may be more dangerous to humankind than unleashed nuclear war, and could actually spell the doom for planet Earth. The health hazards for all animals and human beings on the planet and for all creatures, plants, organisms, waterways, atmosphere, the soil of the Earth itself and all the populations these contain are sufficiently well documented. And that, even in the face of powerful suppression, manipulation, obstruction tactics and retaliatory practices engaged in by those in opposition,

to silence and emasculate everyone and everything opposed to the GMO juggernaut. Every claim of GMO safety which has been subjected to testing, has failed and been shown to lack credibility and any viable evidence. The only thing left in doubt is whether sanity will intervene in time to stop the GMO movement before it is utterly too late to undo the damages already done and hold the tide against any furtherance of the contents of Pandora's Box entering our world and threatening the extinction of mankind.

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