

# An Introduction to Genetic Engineering

## PART 2

By Patrick Redmond



This is the second part of a conference given by Patrick Redmond. We published the first part in the previous issue of the Michael Journal, the subject was on the dangers of microchips.

Patrick Redmond graduated with a Doctorate in History from the University of London, England in 1972. He taught at the University of the West Indies in Trinidad, then at Adhadu Bello University in Kano, Nigeria before joining IBM. He worked in IBM for 31 years before retiring. During his career at IBM he held a variety of jobs. These included; from 1992 until 2007 working at the IBM Toronto lab in technical, then in sales support. He has written two books and numerous articles. Here is the second half of a presentation he gave in Toronto on April 13, 2008.



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Now that I've made you a bit nervous about chips, I would like to talk to you about genetic engineering. For thousands of years, farmers controlled most of the world plant breeding, through selecting, saving and breeding seeds. This has changed. For two generations, science has manipulated food and agriculture at the molecular level. They created plants that could absorb synthetic fertilizers and some that tolerate toxic chemicals. Among the many seeds that have been genetically modified in this manner are: corn, soy, cotton seed, canola, golden rice, sugar, and many more. Some artificial foods have been genetically modified (GM). For example, Aspartame is a GM food, and they use GM modified bacteria to create it.

Two authors have written a lot about how this change took place. They are William Engdahl in *Seeds of Destruction – The Hidden Agenda of GMO Foods* and Jeffrey Smith in his books *Seeds of Deception* and *Genetic Roulette*. Both have websites. Smith's website is: [seedsofdeception.com](http://seedsofdeception.com), and their books are quoted by the ETC Group for their fine work "Down on the Farm: the impact of Nano-Scale Technologies on Food and Agriculture."



Genetically Modified Foods

In 1947, Nelson Rockefeller founded the International Basic Economy Corporation (IBEC). Through it, he introduced "mass-scale agribusiness in countries where US dollars could buy huge influence in the 1950s and 1960s." Nelson then allied with grain-trading giant Cargill in Brazil where they began developing hybrid corn seed varieties with big plans for them. They would make the country "the world's third largest producer of (these) crop(s) after the US and China." It was part of Rockefeller's "Green Revolution" that by the late 1950s "was rapidly becoming a strategic US economic strategy alongside oil and military hardware."

The Green Revolution spread across Latin America during the 1950s and 1960s. It was then introduced in Asia and India.

Nelson worked with his brother, JD III, who set up his own Agriculture Development Council in 1953. They shared a common goal – "cartelization of world agriculture and food supplies under their corporate hegemony."

According to the ETC Group in 1973, Rockefeller interests created the trilateral commission to have business control agriculture, now called agribusiness, among other things. Nixon had Kissinger use the food for peace programs as a means to replace small farms with agribusiness to control world food. He gave control over food to Cargill, Archer Daniels Midland and Continental Grain.

The same seduction was later used to promote the Gene Revolution with Rockefeller interests and the same agribusiness giants backing it.

"Green Revolution" tactics were painful and took a devastating toll on peasant farmers. They destroyed their livelihoods and forced them into shantytown slums that now surround large Third World cities. There they provide cheap exploitable labor from people desperate to survive and easy prey for any way to do it.

The "Green Revolution" was based on the "proliferation of new hybrid seeds in developing markets" that characteristically lack reproductive capacity. Declining yields meant farmers had to buy seeds every year from large multinational producers that control their parental seed lines in house. A handful of company giants held patents on them and used them to lay the groundwork for the later GM revolution.

By the early 1970s, agribusiness producers controlled US food supplies. They could now go global on a scale that was without precedent. The goal: "staggering profits" by restructuring "the way Americans grew food to feed themselves and the world." They used the UN and the World Trade Organization to do this.

Canada has done something on the same lines; the Ministry of Agriculture relies on private companies to make most of its decisions. Canada is very much a supporter of the entire GM Initiative. Countries which work under the influence of the GM group, such as Canada and the United States, now are undermining bio-safety protocol. In 1992, Canada and the United States and a few other countries demanded that the bio-safety protocol of the World Trade Organization (WTO) not be used if it limited trade. They went on from there to prohibiting countries from using testing, food safety laws, and product standards against GM foods. They allowed the World Trade Organization to find countries which did not sell GM foods. If Canada found a particular GM food harmful and tried to ban it, they would be fined. The EU has banned GM foods and has been fined hundreds of millions in foods since, year after year. In 2006 Canada, the United States and Argentina succeeded in preventing Europe from bypassing GM foods; they complained to the WTO and demanded that the EU stop prohibiting GM foods in Europe because there was a lot of resistance in Europe to these foods, and the WTO agreed.

The tribunal of the WTO meet in secret; they don't say when it's meeting, where it's meeting and all the court documents are confidential. They choose which experts they listen to and those they don't want to listen too. Members of the tribunal work for the large companies that control the food. By undermining the resistance in Europe, they hope to undermine it in the rest of the world, and so everyone will have to go along with it. Here is how tightly they control the American market:

— **By 2004, the four largest beef packers controlled 84% of steer and heifer slaughter – Tyson, Cargill, Swift and National Beef Packing;**

— **Four giants controlled 64% of hog production – Smithfield Foods, Tyson, Swift and Hormel;**

— **Three companies controlled 71% of soybean crushing – Cargill, ADM and Bunge;**

— **Three giants controlled 63% of all flour milling, and five companies controlled 90% of global grain trade;**

— **Four companies controlled 89% of the breakfast cereal market – Kellogg, General Mills, Kraft Foods and Quaker Oats;**

— **In 1998, Cargill acquired Continental Grain to control 40% of national grain elevator capacity;**



GMO foods in a store in China

— **Four large agro-chemical/seed giants controlled over 75% of the nation's seed corn sales and 60% of it for soybeans while also having the largest share of the agricultural chemical market - Monsanto, Novartis, Dow Chemical and DuPont; six companies controlled three-fourths of the global pesticides market; Monsanto and DuPont controlled 60% of the US corn and soybean seed market – all of it patented GMO seeds, and;**

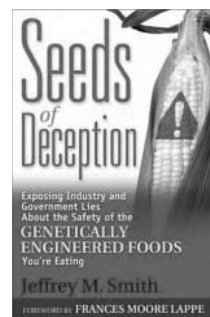
— **10 large food retailers controlled \$649 billion in global sales in 2002, and the top 30 food retailer's account for one-third of global grocery sales.**

The industry is then the second most profitable national one after pharmaceuticals with domestic annual sales exceeding \$400 billion. We see comparable levels of control in many countries outside the USA.

Ten large food retailers control about six-hundred and forty-nine billions worth of sales. (That was in the year 2002.) It's the second most profitable business in the United States after the pharmaceutical industry which is controlled by similar groups.

It took them a long time to gain this control over the food supply of the entire world; William Engal in his book writes how they gained control of rice. It took 17 years to spread GM rice around the world.

The Rockefeller Foundation financed the training of hundreds of graduate students and developed an "elite fraternity" of top scientific researchers at Foundation-backed research institutes. It was a diabolical scheme aiming big – to control the staple food for 2.4 billion people and in the process destroy the biological diversity of over 140,000 developed varieties that can withstand droughts, pests and grow in every imaginable climate. Asia was the prime target, and Engdahl explained the sinister tale of a Philippines-based Foundation-funded institute (IRRI). It had a gene bank with "every significant rice variety known" that comprised one-fifth of them all. IRRI let





agribusiness giants illegally use the seeds for exclusive patented genetic modification so they could introduce them in markets and dominate them by requiring that farmers be licensed and forced to pay annual royalty fees.

They do a lot of cross-species experimentation with the seeds. For example, they put human genes into some types of rice to boost pharmaceuticals. Researchers at the University of Victoria inserted modified frog genes into tomato plants to make them produce a chemical that reduces infection. They are tightening their control over food supplies around the world; they needed a new technology that would allow them to sell seed that would not reproduce.

**They developed one called GURTS, Genetic Use Restriction Technologies, these are known as Terminator seeds. The process is patented, applies to all plants and seed species that if planted will not work; they will not grow.**

**In 2007, Monsanto acquired Delta & Pine Land (D&PL). D&PL had global Terminator patent rights and successfully extended them on GURTs. The deal made Monsanto "the overwhelming monopolist of agricultural seeds of nearly every variety," that includes fruits and vegetables from the company's acquisition of Seminis a year earlier. With that company, Monsanto is now first in vegetables and fruits, second in agronomic crops, and the world's third largest agrochemical company. With D&PL, the company has absolute control over the majority of plant agricultural seeds as well. In addition, they're getting into the genetic engineering and patenting of animal seeds.**

A closely related technology is called T-GURT seeds, or second-generation Terminators, nicknamed "Traitor." The technology relies on controlling both plant fertility and its genetic characteristics with "an inducible gene promoter" called a "gene switch." GMO pest and disease-resistant crops only work by using a specific chemical compound that companies like Monsanto make. Farmers buying seeds illegally won't get the compound to "turn on" the resistant gene. Traitor technology thus creates a captive new market for the GMO giants, and Traitor is cheaper to produce than Terminator seeds. Even if you buy these seeds, to use them you have to buy the chemical to turn them on, so that they work. Why do they want this control? Why do they want to control the food of everybody in the world?

The main reason for all of this is of course, money; huge profits are made by control of the food of the world. Secondly, by controlling food they can exercise a much tighter control over people. It fits in with the elite's plan to depopulate the world. Some of the New World Order people are calling for a massive depopulation of the earth. The Rockefeller Foundation aims to reduce population through human reproduction with GMO seeds.

As Jeffrey Smith in his book "Seeds of Deception" noted: one way or other, the Rockefeller Foundation aims to reduce population through human reproduction by spreading GMO seeds. It's doing it cooperatively with the UN World Health Organization (WHO) by quietly funding its "reproductive health" program through the use of an innovative tetanus vaccine. Combined with HCG natural hormones, it's an abortion agent preventing pregnancies, but the women getting it are not told.

Another instance of how the scheme ties in with Rockefeller Foundation population control strategy. In 2001, it was aided when the privately-owned biotech company, Epicyte, announced it successfully developed the "ultimate GMO crop" – contraceptive corn. It was called a solution to world "over-population," but news about it vanished after Biorex acquired the company. The groups controlling this monopolization of food have been very successful in limiting public awareness of the dangers the food and the control pose to the world.

### What damage do they do?

**The GMO monoculture onslaught threatens plant species diversity everywhere. With full Washington and WTO backing, major biotech companies are patenting every plant imaginable in GMO form. By the beginning of the new millennium, Engdahl referred to a "Gene Revolution (as a) monsoon force in world agriculture" with four dominant companies controlling GMOs and related agrichemical markets – Monsanto, DuPont, Dow Agrisciences and Syngenta in Switzerland from the merger of the agriculture divisions of Novartis and AstraZeneca.**

Jeffrey Smith in his book "Seeds of Deception," explained the dangers with GM foods. He wrote: "GM foods today saturate our diet. Over 80% of all supermarkets processed foods contain them. Others include grains like rice, corn and wheat; legumes like soybeans and soy products; vegetable oils; soft drinks; salad dressings; vegetables and fruits; dairy products including eggs; meat and other animal products; and even infant formula plus a vast array of hidden additives and ingredients in processed foods (like in tomato sauce, ice cream and peanut butter). They're unrevealed to consumers because labeling is prohibited yet the more of them we eat, the greater the potential threat to our health."

The government of Canada has refused consistently to label GMO foods; it doesn't want people to know what they are eating. We're all lab rats in a non-controlled unregulated mess of humans, according to Jeffrey Smith. With these foods our bodies have a hard time finding protein, in this way the intestines are destroyed.

Another problem with GMO foods has come in the damage they do to the critical role of bees in world agriculture. GMO seeds reduce the capacity of pollen. Bees, when eating the pollen, find no protein. As a result, their intestines are destroyed. This will lead to the decline in organic agriculture. Without pollination, crops will die off. Famine is inevitable.

The destruction of bees will lead to a decline in agriculture, because without pollination crops die off and famine becomes more likely. Most of the people working in the GMO industry sign contracts or agreements not to reveal anything, but obviously sometimes information gets out.



**GMO foods have disastrous effects on general health**

The world's leading lectins and plant genetic modification expert, UK-based Arpad Pusztai, was vilified and fired from his research position at Scotland's Rowett Research Institute for publishing industry-unfriendly data he was commissioned to produce on the safety of GMO foods.

Rats fed GMO potatoes had smaller livers, hearts, testicles and brains, damaged immune systems, and showed structural changes in their white blood cells making them more vulnerable to infection and disease compared to other rats fed non-GMO potatoes. It got worse. Thymus and spleen damage showed up; enlarged tissues, including the pancreas and intestines; and there were cases of liver atrophy as well as significant proliferation of stomach and intestines cells that could be a sign of greater future risk of cancer. Equally alarming – this all happened after 10 days of testing, and the changes persisted after 110 days that's the human equivalent of 10 years.

There are scientists in this industry who are speaking out, and one of them is the ETC Group, a group in Canada. They are scientists who are working in the area who are alerting people about what is going on, probably to get people to stop using such foods. The website of Jeffrey Smith has recommendations for people on how to promote non-GM foods in schools so they are healthier. But still the experimentation of food goes on, and if you think GMO foods is the end of it, you are in for a surprise.

Nanotechnology is moving into this area now quite a bit. ETC put out an article on how to use this technology on a farm. What is nanotechnology? The manipulation of matter is using the scale of at-

oms and molecules. A nanometer is one-billionth of a meter, which is very tiny. It's converging with other technologies to start changing the food that we eat. The handful of food and nutrition products are continuing with invisible, unlabeled, and unregulated nano-particles are already commercially available.

A number of pesticides formulated are already on the market, and have been released into the environment. This market is becoming very important, and Nobel Laureate Dr. Richard Smalley was telling people that the market for food and food processing at NanoTech is estimated to be an excessive two billion already, and will be more than twenty billion by 2010. An example of food that has Nano-particles is canola oil. Minute compressed micelles, called nano-drops are added. They serve as a liquid carrier to allow penetration of vitamins, minerals and phyto-chemicals to the oil. When ingested they are supposed to inhibit transportation of cholesterol into the bloodstream.

They serve as a liquid carrier so that you can put whatever you want into the canola oil. The people who promoted it said that you could put vitamins and minerals and fight off chemicals with the oil, and it's supposed to do good things for you, so if you put canola oil they can potentially prohibit cholesterol in the bloodstream. But they can also put other stuff that might not be so good.

Creating the first GMO animal population is also part of the scheme with the prospect of transforming world chickens into GMO birds. Engdahl put it this way: "By 2006, riding the fear of an avian flu human epidemic, the GMO or Gene Revolution players were clearly aiming to conquer the world's most important source of meat protein, poultry." You will often see on your television "avian flu hits Turkey, they have to kill 1 million chickens" or "avian flu hit Vietnam, they're going to kill a million chickens." They have basically removed all the small producers from the market so the big companies like Tyson can be the only producers of chickens, that means only GMO chickens.

Cows have been genetically modified to enhance milk production or produce drugs. For example, the New Zealand ERMA has genetically modified cattle with cattle casein genes, or the human myelin basic protein gene, or deleted the cattle lactoglobulin gene. One result of this is the increased presence of estrogen in boys.

In 2005, Monsanto applied to the WTO for international patent rights for its claimed genetic engineering of a means to identify pig genes derived from patented male swine semen. The company also wants patents and the right to collect license fees for particular farm animals and livestock herds. If granted, "Any pigs that would be produced using this reproductive technique would be covered by these patents." Several techniques are being used and patented as fast as GMO lawyers can submit applications to lock up animal life as intellectual property.

There has been the cloning of animals, and here is a list with the year and type of animal:

- Sheep 1996
- Cattle 1998
- Goat 1998
- Pig 2000
- Rabbit 2001
- Horse 2003

DNA tracking is an easy way to identify cloned animals and their products, such as milk.

However, that would require registering cloned animals. We will soon see cloning of genetically engineered animals. Scientists at the University of Guelph have created enviro-pigs which have been genetically engineered to have lower phosphorus levels in their excrement, producing pig waste that is more environmentally friendly. Numerous experiments have been carried out between animals and humans.

**The National Geographic (Jan 2005) noted the Mayo Clinic created pigs with human blood flowing through their bodies. In 2003, Shanghai Second medical university fused human cells with rabbit eggs. At the University of Minnesota Center for Cardiovascular Repair, scientists did first was to use detergents and other chemicals to wash out all the old heart cells from rat and pig hearts, explained lead investigator Doris**

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Taylor, who is director of the center. What was left was a scaffold of tubes that once were the organ's blood vessels. Stem cells were then injected into that scaffold, where they were supplied with nutrients that allowed them to grow to create a new organ. Within eight days, the hearts were pumping.

In the United Kingdom, the Human Fertilization and Embryology Authority announced support for the creation of animal-human hybrids and the Government has approved it. The Catholic Church has denounced this but the scientists said it's ok, we're going to kill them before they are born. The authority was supporting the scientists who had created Dolly the sheep and who wanted to combine human cells with cow or rabbit cocytes to study motor neuron disease. The scientists at Newcastle and King's College said the hybrid human-bovine embryos could prove useful in pursuing treatments to prevent Parkinson's disease and Alzheimer's, as well as spinal cord injuries, diabetes and arthritis. Instead of using human eggs, the researchers will remove the nuclei from cows' eggs and replace them with cells from the patients to create cloned stem cell lines that contain the same genetic mutation that results in these neurological disorders. One way they get approval for these kinds of things is to have famous actors who have different diseases go in for tests and experimental surgeries.



Artificial hormones are injected

Esmail Zanjani at the University of Nevada has added human stem cells to sheep fetuses. These sheep have livers that are up to 80 percent human – and make all the compounds human livers make. (*Journal Gazette 11/21/04*) Genetic engineering also involves work at the gene level for humans.

Scientists at Harvard and Princeton have built tiny implantable devices that can monitor the activities and characteristics of human cells. They are constructed entirely of DNA, RNA and proteins and direct therapies to diseased cells and tissues. The bio-computer's input is RNA, proteins and chemicals found in the cytoplasm; output molecules indicating telltale signals are monitored by lab equipment.

Engineers at Rutgers are creating an ultra tiny motor that would be part of a system that would travel through patient's bloodstreams to help repair damaged cells, organs and DNA. 50,000 of them equal 1 human hair. Proteins and DNA molecules will be the building blocks.

Engdahl reviewed the "revolution" in animal factory production that EarthSave International founder and Baskin-Robbins heir, John Robbins honestly, thoroughly and compassionately covered in two explosive books – "*Diet for A New America*" in 1987 and "*The Food Revolution*" in 2001.

They were both stinging indictments of corporate-produced foods – horrifying animal cruelty, unsafe foods, unsanitary conditions, rampant use of antibiotics humans then ingest, massive environmental pollution, and new unknown dangers from genetic engineering – all allowed by supposed government watchdog regulatory agencies that ignore public health concerns. Genetic engineering leads to synthetic biology, which will be discussed in the last part of this conference.

**Patrick Redmond**

# Pro-Life March in Washington, D.C.

January 22, 2009 marked the 36th anniversary of the Supreme Court's decision on Roe vs. Wade. EWTN reported as many as 400,000 people (about 300,000 youth) took part in the March for Life in Washington, DC. With a van filled with 55,000 leaflets on the beautiful message of Our Lady of America, we left Massachusetts on the morning of January 21st and headed to Washington.

We went directly to the Basilica of the Immaculate Conception, which is the National Shrine for the United States and assisted at the Vigil Mass, which was presided over by Cardinal Rigali from Philadelphia. Afterwards we offered our leaflets to those leaving the Basilica. The following morning we returned to assist at Mass and once again offered our leaflets to those pilgrims who had traveled from all over the United States, Canada and even parts of Europe to take part in the Pro Life March.

From there we headed over to the National Mall in downtown Washington, which is the main gathering area for the speakers and marchers. Hundreds of thousands of marchers began arriving; young people, seminarians, nuns, priests, brothers and even many of the older generation congregated to the spot and we were kept very busy all day trying to supply as many people as we could reach with our leaflets.

During this time, people were setting up their banners, and organizing themselves to begin marching towards the Supreme Court building on Constitution Avenue. After the crowd had continued onwards, we proceeded towards the Union Station, where all the buses were waiting to take the pilgrims back to their respective homes. There we offered bundles of our leaflets to the persons in charge of the buses, and many priests took some for their various parishes. We passed almost all of our leaflets, with the great help of Our Lady of America, who opened hearts to us through Her beautiful message.

We would like to thank all of those who helped us in this distribution. There were about 35 volunteers not including the many people who took large stacks and enthusiastically passed them among the crowd themselves. In our immediate group we had Adrienne O'Donnell, Lynn Mason, Marie Anne Jacques, Pascal Richard, Melvin Sickler & Francois Cright who had come all the way from Ontario and Quebec, Canada. Yves & Anne-Marie Jacques and six of their children came from Massachusetts and many friends from their parish of Our Lady of Czestochowa also helped in the distribution. Tom and Colleen Polyanski were with us from Maryland and The Franciscan Friars of the Immaculate from Connecticut. Dominic Roberto from Pennsylvania took 20,000 leaflets to spread in his area. We thank you for your precious collaboration during this successful leaflet distribution.

This message of Our Lady of America is directed particularly to the youth of America "who are willing wholeheartedly to follow Our Lady in her great battle against evil" and who will "bear the special title of "Torcbearers of the Queen." You are truly fulfilling this desire of "the Queen." This beautiful new leaflet can be ordered from us in any quantity, please feel free to call us at 1-888-858-2163.



## Consecration to Jesus Through Mary and Apostolate in California

Last December my wife Anne-Marie and I were invited to San Francisco to witness the Consecration of fifty members of the Pilgrims of St. Michael as "Slaves of Jesus Through Mary", according to St. Louis-Marie Grignion de Montfort. This Consecration was organized by our good friends Elysa Cortez and Connie Arnaldo, both ardent distributors of our leaflets in the San Francisco area. Connie has been a member of the Pilgrims of St. Michael for over 10 years. Every day she takes the train to and from work and brings with her a bundle of leaflets to distribute all along her route. She also takes many subscriptions to the "Michael" Journal. Many of those who were making their Consecration that day were there as a result of those leaflets and now help in the apostolate work themselves. We had very good meetings with the people of San Francisco who were eager to learn about our work. We also visited many of our subscribers and left bundles of our leaflets all over the Bay area. The Pilgrims there are now preparing to receive 100,000 leaflets in Spanish and in English to be distributed at the Pro-Life March in San Francisco on January 24<sup>th</sup>.



Newly consecrated Pilgrims of St. Michael

At the end of our week of apostolate Anne-Marie returned home to our family in Massachusetts and I continued on to Los Angeles where I was met by our devoted Pilgrim, Virginia Ahumada. She had organized in advance many meetings for us and in our visits we delivered almost 100,000 leaflets to various prayer groups and organizations. A Catholic station with over 100,000 listeners, Radio Guadalupe, gave us an interview where we explained the work of the Pilgrims of St. Michael and Social Credit. Fr. Juan Rivas, the radio announcer, was extremely interested in our work and invited us to return again in the future. Virginia plans on continuing devoting all her free time to the apostolate. She ordered two more pallets of leaflets in English and Spanish and is in the process of organizing a "Total Consecration" according to St. Louis-Marie Grignion de Montfort in the Los Angeles area for 2009.



I felt at every moment the gentle hand of our Blessed Mother guiding us in our apostolate and that is why this work in California was such a great success. To the Pilgrims of St. Michael and all the other groups in California that worked in cooperation with us and which are too numerous to mention, I thank you all!

**Yves Jacques**  
Pilgrim of St. Michael