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She is a co-author with two genetic engineers of the book, *GMO Myths and Truths*, published in 2015 by Earth Open Source, which aims to explain in lay terms the evidence urging caution with regard to genetically modified crops and their associated Pesticides.

Memo of Presentation to the Monsanto Tribunal

by Claire Robinson, editor, GMWatch.org

This is a summary of my presentation to the Monsanto Tribunal, which focuses on Monsanto's history of involvement in dishonest, deceptive, and non-transparent efforts to control the scientific and public discourse on genetically modified (GM) foods and crops (and associated pesticides), and to force its products into countries across the globe.

Monsanto and other GMO developer companies design regulatory systems for GMOs¹

Monsanto and other agricultural biotechnology and chemical companies have heavily influenced the regulatory system by which genetically modified organisms (GMOs) are evaluated for safety in various countries across the globe. They have done this through the International Life Sciences Institute (ILSI), a lobby group that works in the arena of regulatory science and is funded by companies including Monsanto, Bayer, Dow, and Syngenta.²

The result is a weak regulatory system based on a concept known as the comparative safety assessment, which allows GMOs to be approved largely on the basis of a crude comparison with the non-GMO 'parent' organism. As long as the GMO passes this weak test of equivalence, further rigorous safety testing is not required.

There is nothing wrong with beginning a safety assessment with a comparative assessment, as long as this is followed by further rigorous comparative tests on the GMO and its non-GMO parent, such as –omics analyses (to measure protein content, metabolites and gene expression) and long-term animal feeding trials.

But a major problem with the comparative safety assessment is that, as the name suggests, regulatory and advisory authorities are beginning to treat it as a safety assessment in itself, rather than as just the first in a series of mandatory steps in the assessment process. In other words, EFSA and the EU Commission are moving towards a scenario in which if the GMO passes this weak test – and many have, in spite of having significant differences from the non-GM comparators – then they are not subjected to further rigorous testing.

Allowing GMO developer companies to design regulatory procedures for their own products is equivalent to allowing a student to write his own examination paper.

¹ This section is adapted from Fagan J, Antoniou M and Robinson C. *GMO Myths and Truths*, 2nd edition. Earth Open Source, 2014. <http://earthopensource.org/gmomythsandtruths/sample-page/2-science-regulation/2-1-myth-gm-foods-strictly-tested-regulated-safety/>

² Sourcewatch. 2016. http://www.sourcewatch.org/index.php/International_Life_Sciences_Institute

Monsanto and the US government use bullying and illicit tactics to pressure other countries to accept GMOs

While Monsanto positions itself as a science-based company, its way of getting its products accepted in countries across the globe often owes little to science and much to bullying and illicit tactics.

“Causing pain” to countries that don’t want GM crops

In 2011 diplomatic cables disclosed by Wikileaks showed that the US government represents Monsanto’s interests by pushing other countries to adopt GM crops.

The cables revealed that the US embassy in Paris advised Washington to start a military-style trade war against any European Union country that opposed GM crops.³

In response to moves by France to ban a Monsanto GM corn variety in late 2007, the ambassador, Craig Stapleton, a friend and business partner of former US president George Bush, asked Washington to penalise the EU and particularly countries which did not support the use of GM crops.

"Country team Paris recommends that we calibrate a target retaliation list that causes some pain across the EU since this is a collective responsibility, but that also focuses in part on the worst culprits."

In other cables, US diplomats around the world are found to have pushed GM crops as a strategic government and commercial imperative. The cables also show US diplomats working directly for GM companies such as Monsanto.

Bribery in Indonesia

In 2005 the BBC reported that Monsanto had agreed to pay a \$1.5m (£799,000) fine for bribing an Indonesian official in a bid to avoid environmental impact studies being conducted on its GM Bt insecticide-containing cotton.⁴

³ Vidal J, Wikileaks: US targets EU over GM crops. The Guardian, 3 Jan 2011.
<https://www.theguardian.com/world/2011/jan/03/wikileaks-us-eu-gm-crops>

⁴ BBC News. Monsanto fined \$1.5m for bribery. 7 Jan 2005.
<http://news.bbc.co.uk/1/hi/business/4153635.stm>

Bt cotton was introduced in South Sulawesi province in 2001. Two years later it was withdrawn after its failure to perform triggered farmer protests.⁵

Attempting to discredit inconvenient studies

Monsanto has used underhand, deceptive, and non-transparent tactics to try to discredit scientific studies that present results that threaten the company's interests. In some cases Monsanto's activities are overt, but more usually the company's interests and messages are represented and voiced by third parties such as public relations firms or supposedly independent academics and scientists (the "third-party" PR technique).

Notable examples of studies targeted by Monsanto, its collaborators and allies in deceptive and vicious smear campaigns aimed at getting the papers retracted are:

1. A long-term toxicity study⁶ showing that two Monsanto products, a GM herbicide-tolerant maize (NK603) and the Roundup herbicide it was engineered to tolerate, had toxic effects on rats when fed over the long-term period of 2 years.
2. A study showing GMO contamination of native Mexican maize.⁷

All scientific studies have strengths and limitations and the two papers above are no exception. However, subsequently published research has revealed that the first study provided valuable data with potentially major implications for human and animal health⁸; and has confirmed the main finding of the second study.⁹

⁵ GRAIN. [Bt cotton - the facts behind the hype](https://www.grain.org/es/article/entries/582-bt-cotton-the-facts-behind-the-hype). January 2007. <https://www.grain.org/es/article/entries/582-bt-cotton-the-facts-behind-the-hype>

⁶ Séralini et al. RETRACTED: Long term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize. *Food Chem Toxicol.* 2012;[50\(11\):4221-4231](https://doi.org/10.1016/j.fct.2012.05.028). <http://www.sciencedirect.com/science/article/pii/S0278691512005637>. The study was subsequently republished as: Séralini et al. Republished study: long-term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize. *Environmental Sciences Europe.* 2014. 26:14. <https://enveurope.springeropen.com/articles/10.1186/s12302-014-0014-5>.

⁷ Quist D, Chapela IH. Transgenic DNA introgressed into traditional maize landraces in Oaxaca, Mexico. *Nature* 414:541-543. <http://www.ncbi.nlm.nih.gov/pubmed/11734853>

⁸ Mesnage et al. Transcriptome profile analysis reflects rat liver and kidney damage following chronic ultra-low dose Roundup exposure. *Environmental Health* 2015;14:70. <https://ehjournal.biomedcentral.com/articles/10.1186/s12940-015-0056-1>.

⁹ Serratos-Hernández J-A, Gómez-Olivares J-L, Salinas-Arreortua N, Buendía-Rodríguez E, Islas-Gutiérrez F, de-Ita A. Transgenic proteins in maize in the Soil Conservation area of Federal District, Mexico. *Front Ecol Environ.* 2007;5(5):247-252. doi:10.1890/1540-9295(2007)5[247:TPIMIT]2.0.CO;2; Pineyro-Nelson A, Van Heerwaarden J, Perales HR, et al. Transgenes in Mexican maize: molecular evidence and methodological considerations for GMO detection in landrace populations. *Mol Ecol.* 2009;18:750-61. doi:10.1111/j.1365-294X.2008.03993.x.

Third-party technique: Monsanto recruits supposedly independent scientists to promote its messages

Emails disclosed as a result of freedom of information requests reveal that Monsanto and other GMO developer companies recruit supposedly independent scientists and academics to promote messages that support the companies' commercial interests (the so-called third-party public relations technique). The conflict of interest is not disclosed and the academics are described to the public only by their publicly funded roles.

For example, Prof Kevin Folta of the University of Florida successfully solicited a \$25,000 grant from Monsanto for his biotechnology outreach activities.¹⁰ Yet Folta subsequently claimed he had "nothing to do with Monsanto", emphasizing that he is an independent scientist working in a public institution and funded from public sources.¹¹ Folta even advised Monsanto on how to pay the \$25,000 grant so that it was not "publicly noted".¹²

In a similar example, in late 2011 Monsanto gave a grant to Bruce M. Chassy, a professor emeritus at the University of Illinois, to support "biotechnology outreach and education activities". The grant amounted to more than \$57,000 over less than two years. Yet Chassy did not disclose his financial relationship with Monsanto on state or university forms aimed at detecting conflicts of interest. Documents further suggest that Chassy and the university took measures to hide the Monsanto deposits from public scrutiny.¹³

In yet another example, Monsanto told a professor what to write. According to a story in the Boston Globe, "A Harvard Kennedy School professor wrote a widely disseminated policy paper last year in support of genetically modified organisms at the behest of seed giant Monsanto, without disclosing his connection... Monsanto not only suggested the topic to professor Calestous Juma. It went so far as to provide a summary of what the paper could say and a suggested headline. The company then connected the professor with a marketing company to pump it out over the Internet as part of Monsanto's strategy to win over the public and lawmakers."¹⁴

¹⁰ Robinson C, Matthews J. Kevin Folta received \$25,000 from Monsanto. GMWatch, 7 Aug 2015. <http://gmwatch.org/news/latest-news/16340>

¹¹ Matthews J. Death threats, libel, and lies – Part 2: Documented liar? GMWatch, 13 Sept 2015. <http://gmwatch.org/news/latest-news/16408-death-threats-libel-and-lies-part-2-documented-liar>

¹² Robinson C. Folta affair exposed in the New York Times. GMWatch, 6 September 2015. <http://www.gmwatch.org/news/latest-news/16393>

¹³ Eng M. Why didn't an Illinois professor have to disclose GMO funding? WBez.org, March 15, 2016. <https://www.wbez.org/shows/wbez-news/u-of-i-professor-did-not-disclose-gmo-funding/eb99bdd2-683d-4108-9528-de1375c3e9fb>

¹⁴ Krantz L. Harvard professor failed to disclose connection. Boston Globe, 1 October 2015. <http://www.bostonglobe.com/metro/2015/10/01/harvard-professor-failed-disclose-monsanto-connection-paper-touting-gmos/LJipJQmI5WKS6RAgQbnrN/story.html?event=event25>

Conclusion

Monsanto claims to be a science-based company. But the examples given in this presentation suggest that it frequently engages in dishonest, deceptive and non-transparent activities in its attempts to gain acceptance for its GM crops and their associated pesticides. It tries to discredit and shut down scientific research and debate that threaten its commercial interests. And rather than relying on rigorous science to foster confidence in, and demand for, its products, it promotes weak regulatory processes and uses bullying and illicit tactics to pressure countries to allow these products to be marketed in their territories. The end result of such behaviour is a distortion of scientific knowledge and discourse, with consequent risks to human and animal health and the environment.