

submissions

From: Gaylene Barnes [REDACTED]
Sent: Monday, 9 February 2015 10:27 PM
To: submissions
Subject: Submission – Application A1097

I submit that the approval sought by Monsanto Australia for 'food derived from a genetically modified glyphosate-tolerant and corn rootworm-protected corn line' be **denied** because they have not proven that this corn line is safe for mammalian consumption via reputable scientific studies. The Monsanto 'Supporting Document 1 - Safety Assessment Report' only references 5 studies that specifically examine safety issues on human or mammalian health. All these studies are only in general terms, none of them specifically examine MON87411:

1. Delaney B, Astwood JD, Cunny H, Eichen Conn R, Herouet-Guicheney C, MacIntosh S, Meyer LS, Privalle LS, Gao Y, Mattsson J, Levine M, ILSI (2008) Evaluation of protein safety in the context of agricultural biotechnology. Food and Chemical Toxicology 46:S71–S97
2. Petrick JS, Brower-Toland B, Jackson AL, Kier LD (2013) Safety assessment of food and feed from biotechnology-derived crops employing RNA-mediated gene regulation to achieve desired traits: A scientific review. Regulatory Toxicology and Pharmacology 66:167–176
3. Witwer KW, Hirschi KD (2014) Transfer and functional consequences of dietary microRNAs in vertebrates: Concepts in search of corroboration. Bioessays 36:394–406
4. Witwer KW, McAlexander MA, Queen SE, Adams RJ (2013) Real-time quantitative PCR and droplet digital PCR for plant miRNAs in mammalian blood provide little evidence for general uptake of dietary miRNAs. Limited evidence for general uptake of dietary plant xenomiRs. RNA Biology 10(7):1–7

and,

5. Zhang L, Hou D, Chen X, Li D, Zhu L, Zhang Y, Li J, Bian Z, Liang X, Cai X, Yin Y, Wang C, Zhang T, Zhu D, Zhang D, Xu J, Chen Q, Ba Y, Liu J, Wang Q, Chen J, Wang J, Wang M, Zhang Q, Zhang J, Zen K, Zhang C-Y (2011) Exogenous plant MIR168a specifically targets mammalian LDLRAP1: evidence of cross-kingdom regulation by microRNA. Cell Research 22(107):126

Studies 1 and 2 include Monsanto, Dupont or Bayer employed scientists so can be immediately discounted as conflicts of interest. Study 3 outlines the need that more study is required - yet is nevertheless funded by the Dry Bean Health Research Program and the United Soybean Board. Study 4 states quite explicitly: 'While our results do not support general and consistent uptake of dietary plant miRNAs, additional studies are needed to establish whether or not plant or animal xenomiRs are transferred across the gut in sufficient quantity to regulate endogenous genes.' Study 5 is rather more alarming in that the summary introduction notes that: 'These findings demonstrate that exogenous plant miRNAs in food can regulate the expression of target genes in mammals.'

"Previous studies have reported that the transfer of genetic material from one species to another may modulate the cellular functions of the recipient species. Such examples include human miRNAs targeting viral genes and the translocation of host plant mRNAs into dodder (a parasitic plant). However, to our knowledge, it was still unknown whether plant miRNAs could enter mammals and modulate mammalian cell functions." [<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3351925>]"

Study 5 is also the only study that is purely academic and extensive with funding from research institutes in

China. This study, and the lack of supporting studies referenced by Monsanto make a lie to their claim that : "There are no concerns regarding the safety of the DvSnf7 dsRNA in MON87411. The data provided do not indicate this dsRNA possesses different characteristics, or is likely to pose a greater risk, than other RNAi mediators naturally present in corn. A history of safe human consumption of RNAi mediators exists, including those with homology to human genes."

I suggest more pure and unadulterated scientific research be undertaken before you approve this experimental genetically modified Corn Line. 'Post-market research' carried out in New Zealand and Australia is unethical and downright dangerous, and does not engineer consumer confidence in FSANZ at any level.

Yours Sincerely
Gaylene Barnes

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