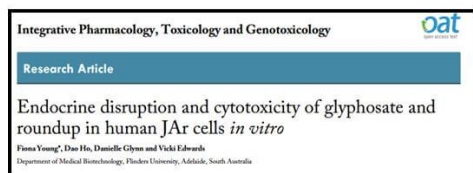


# Talking Biotech: Anti-GMOers misrepresent glyphosate study; Carrots' evolutionary roots and future

Several trends are present in the anti-ag-biotech literature. First, many papers are poorly done, present opinion without data, or overstep the data accumulated. These papers appear in low-impact journals, oftentimes without peer review, and typically are experimental dead ends. These works, and their authors, have limited credibility in the scientific community, yet are darlings of the activist movement. Today a more disturbing trend is apparent. Good science, performed correctly and rigorously, is misrepresented in the popular media.

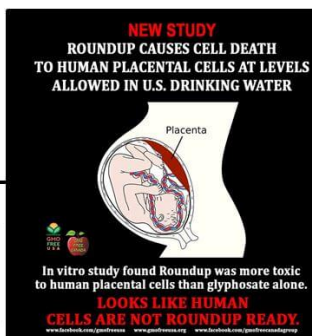
A case is Dr. Fiona Young's work published in Integrative Pharmacology, Toxicology and Genotoxicity. The work showed that glyphosate has little effect on tissue culture cells, but the formulation with surfactants ('detergents' that help penetrate cells) does kill cells at higher concentrations, likely due to the surfactant effects on membranes. There was no evidence of endocrine disruption. But an overzealous activist movement, including author Jeffery Smith, reads a title and spreads the message that Dr. Young's group shows evidence of endocrine disruption. In other words, they get it 100% backwards from what the report really says, and then they use this misrepresentation to generate fear around agricultural chemicals that people rarely encounter anyway.

In Questions and Answers: A video spread like wildfire about a family and pesticides in their urine. What does it really mean? In Amazing Crop History, Drs. Shelby Ellison and Philipp Simon talk about carrot's evolutionary roots, where it came from, its interesting history, and the future of carrot in modern breeding efforts.



## PART 1.

Good science,  
misinterpreted.



## PART 2. Carrot Domestication and Breeding With Dr. Philipp Simon & Dr. Shelby Ellison



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