

GM food safety gains impressive support

By ACSH Staff — April 10, 2014



In an extensive [investigation](#) ^[1], Dr. Matthew V. DiLeo and

colleagues from Cornell University analyzed the biochemical footprints of a variety of tomatoes, some of which had been genetically engineered to ripen more slowly than usual, and compared those to the footprints of conventional varieties (both modern and heirloom types).

About a thousand biochemical metabolites were extracted from each type of tomato and the metabolic profile (metabolome) of each type was compared to the others. In brief, the researchers found that, other than expected changes (i.e., lengthening of ripening), there were no significant biochemical differences between the genetically engineered tomatoes and either the heirloom or modern varieties.

Dr. DiLeo and colleagues used complex analytical methods (liquid chromatography-mass spectrometry) to identify the chemicals resulting from metabolic processes (metabolites) in each variety, and then they performed statistical analyses of the results. Overall, they summarized: While clear trends were related to genetic background and ripeness differences between transgenic genotypes and their nontransgenic parent variety [were not found].

The results of this study support the safety, not only of GM tomatoes, but also of other food crops produced by modern genetic engineering.

As [explained](#) ^[2]by Ron Bailey last year in Reason magazine, while anti-biotech groups have cited many scientific studies, they are without exception poorly designed, implemented or evaluated. He proceeded to show how they seem to support five common myths about biotech crops, but are in fact lacking in scientific credibility.

ACSH's Dr. Ruth Kava emphasized that This latest study really demonstrates how little substance there is behind warnings that biotech crops and foods are dangerous in any way. Whether a tomato has been produced via genetic engineering or older techniques, it's still a healthful food that no one should fear. This study confirms the theoretical and empirical facts: there is no

scientific reason why precise genetic engineering should introduce any traits adverse to human health; and over the past 17 years of widespread consumption of biotech products, not one single instance of harm has been documented.

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[1] <https://www.crops.org/publications/tpg/articles/7/1/plantgenome2013.06.0021>

[2] <http://http://reason.com/archives/2013/02/22/the-top-five-lies-about-biotech-crops/4>