

Can genes pass from genetically modified food into our blood, posing dangers?

The 2013 PLoS One article [Complete Genes May Pass from Food to Human Blood](#) is often used as evidence that genes from GMO can “transfer” into our bodies (such as in this article from Collective Evolution). In this post, I’d like to review the paper with you and discuss this nightmare-inducing scenario.

The authors of the paper examined the content of DNA *outside* the human cell, known as “cell free DNA” or cfDNA. As a reminder, the DNA we inherit from both our parents is packed up nicely and tucked away within the nucleus of the cell. The paper outlines that the source of DNA in our plasma (i.e. the stuff that’s in the space between our cells) is thought to originate from cells that have died. However, there are also foreign sources of DNA in plasma from bacteria, viruses, and from our food.

The authors conclude that the presence of foreign DNA in the plasma is not unusual, that its concentration is highest in patients with inflammation, and that these findings should lead us to revisit our views on the degradation and absorption of DNA/RNA in our bodies.

I think that the finding that there is plant DNA circulating in our bodies isn’t a big deal. The paper provides several references for studies that have examined this issue and have found DNA from our food in our organs and tissues (see [here](#) and [here](#)). However, what’s novel and unique in this paper is the suggestion that it’s whole genes, not gene fragments, that are circulating in our plasma and the suggestion that increased levels of circulating plant DNA may be associated with inflammation. As such, I’m going to focus on these unique findings from the paper.

I have several issues with the experiment the authors performed in their lab ...

Read full, original article: [Review of “Complete Genes May Pass from Food to Human Blood”](#)