

Malpractice on Dr. Oz: Case of the malignant Arctic Apple

Dr. Mehmet Oz, the Harvard University trained physician who hosts his eponymous talk show, regularly commits malpractice—there is no way to sugar coat it. That's not just my perspective—that's the view of a long list of distinguished science and medical experts.

Among Oz's most recent anti-science stumblings, in 2011, he ballyhooed a dubious, and now retracted, [study](#) to justify promoting green coffee extract as a weight loss supplement. He compared the coffee extract to "magic." Hundreds of [sites touted](#) his miracle food—despite the fact there was no evidence behind his claims. Sales of these Oz-approved supplements soared.

In fact, using green coffee extract could be dangerous. That's classic Mehmet—promoting fringe science, and in this case, pure quackery, and lining his pockets in the process. But there is no such thing as magic, and science commentators galore, and eventually Congress, called him out on his bogus claims.

At a 2014 hearing, the Senate Commerce, Science, and Transportation Committee grilled Oz for promoting unproven weight loss supplements like green coffee extract and raspberry ketones. At the hearing, "The scientific community is almost monolithic against you in terms of the efficacy of the three products you called 'miracles'," [said](#) Senator Claire McCaskill. The senator accused him of cheapening his show, undermining his credibility and endangering the gullible.

"With power comes a great deal of responsibility," McCaskill lectured him. Oz, looking stunned, sheepishly admitted that the science behind some products he often touts is weak, and appeared to pledge to set a higher ethical bar.

Promises, promises.

The public flogging didn't deter him, as he promptly returned to the set, and within days resumed dispensing his usual prescription of quack diet tells and questionable science. He continues to regularly feature alternative medicine like homeopathy on his show, earning the now often-used media title of America's chief "[snake oil salesman](#)."

Oz is a relentless opponent of modern biotechnology, often peddling the latest scare study, sometimes, as in the case of the now infamous Seralini rat cancer study, within days of its scientific evisceration or retraction. There are reasonable questions that can be raised about the role GE crops play in our modern agricultural and food distribution system, but that's not where Oz goes when he discusses GMOs on his show. He is not about illumination; he promotes obfuscation.

Although every one of the world's leading scientific organizations has issued statements that GE techniques are inherently safe, Oz promotes unfounded fears that GE feeds are untested and potentially dangerous. And as in the case of the green coffee extract fiasco, because he is perceived as believable by so many credulous viewers, once Oz stakes out a high profile position, the damage is done and often irreparable: science and credible medicine is eroded,

So it was not surprising, although it was disheartening when, when last week Oz took to the public airwaves to tell his acolytes why he will not be eating the latest approved genetically modified food, the Arctic Apple. The apple has been tweaked so it doesn't prematurely turn brown—a genetic adjustment that will save consumers tens of millions of dollars a year while increasing consumption of a nutritious fruit. It's approval sent Oz into the deep end, prompting me and Henry Miller, a distinguished geneticist, to write our recent article in *Slate*. It's certainly resonated with readers, as the heated and sometimes enlightening discussion in the commentary section illustrates. Here is summary.

Surgeon-turned-television doctor Mehmet Oz opened his show on March 10 with a “Dr. Oz Investigation” on the newly U.S. Department of Agriculture–approved “Arctic” apple, which doesn't undergo the unappetizing browning that other apples do when it's bitten, bumped, or cut. The episode, titled “The Non-Browning GMO Apple: Is It Safe?,” pushed the fallacy that there is some sort of “right to know” (via labeling) whether a food has been produced with the techniques of molecular genetic engineering (aka “genetic modification,” or GM).

The reason the Arctic apple doesn't discolor involves ingenious but simple biology. Enzymatic browning in apples is caused by the fruit's intrinsic chemical reaction to cell injury, which ruptures the cells and triggers chemical reactions between the enzyme polyphenol oxidase (PPO) and the substances that cause the apple flesh to turn brown. A family of four genes controls the majority of PPO production, and by inserting low-PPO-producing genes from other apples, scientists were able to turn off more than 90 percent of PPO production.

Oz ... interviewed Neal Carter, apple grower and founder of Okanagan Specialty Fruits, the creator of the Arctic apple. When asked how to detect whether a nonbrowning apple is rotting, Carter explained, “It's important to understand that Arctic apples are just like any other apple in this regard.” He described how only the *enzymatic* browning of the Arctic apple has been “turned off.” When an apple rots, pathogens have their own enzymes that make it turn brown. Thus, these apples will brown when they rot.

Now that this remarkable fruit has jumped through the required regulatory hoops, Dr. Oz and other fear-mongers are trying to elicit totally unwarranted consumer apprehension about it.

Read full original article: [Low-Hanging Fruit: Dr. Oz sows seeds of mistrust on genetic engineering](#)

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