"Lying" is considered one of those words civilized people should never say. That's why politicians never use it. Instead, their opponents are "misinformed" or "misspeaking" or "using alternative facts."

Well, the time for civility is over. Journalist -- if we can actually call him that -- Danny Hakim is lying to you. And it's not his first rodeo, either. He's built quite a track record for himself at the New York Times, publishing distorted information about GMOs and comparing agricultural pesticides to "Nazi-made sarin gas."

Now, Mr. Hakim has written an article about how "unsealed documents" from Monsanto supposedly reveal all sorts of clandestine, evil behavior. The punchline, as usual, is that glyphosate is killing everybody, and not only did Monsanto cover it up, so did the U.S. government. It would be a plot befitting a whole season of the X-Files, but here it is in "America's newspaper of record."

Who Makes Glyphosate (Roundup)?

Mr. Hakim starts lying early and often. He refers to Roundup as "Monsanto's flagship product," which is technically true, but highly misleading. The active ingredient is glyphosate, a chemical that has been off-patent for 17 years. That means any company in the world can make a generic version of Roundup. And so they do. According to Curry Hilton, an economist, 40% of the world's glyphosate is produced by Chinese companies. You can walk into your local Home Depot and buy glyphosate under the generic brand names Compare-N-Save or RM43.

So, what explains the obsession with Monsanto? Soon, it won't even exist anymore, as it is in the process of being bought out by Bayer. At this point, the only plausible interpretation remaining is
that Mr. Hakim and the *New York Times* have an ideological axe to grind with biotech and chemical companies.

**Does Glyphosate Cause Cancer? Try PubMed**

Even if it is true that Monsanto is an evil company that is trying to murder your grandmother and destroy Earth, a fundamental scientific question remains: *Does glyphosate actually cause cancer?* That's a question that has been thoroughly researched, but Mr. Hakim didn't bother to look up any of it.

Instead, Mr. Hakim cites IARC (International Agency for Research on Cancer), a notoriously bizarre group within the World Health Organization that considers red meat and alcohol to be as dangerous to human health as tobacco, asbestos, and plutonium [6]. Anything IARC concludes must be verified with further research.

The equivalent of Google in the biomedical community is a search engine operated by the National Institutes of Health called "PubMed." This is the go-to search engine for every biomedical researcher. (However, just as with Google, some sources provided by PubMed are more reliable than others.) A search for "glyphosate cancer review" [7] in PubMed yields important information.

Findings based on the opinions of four expert panels were published [8] in the reputable journal *Critical Reviews in Toxicology* in 2016. The panels vehemently disagreed with IARC's conclusion:

> The incidences of neoplasms in the animal bioassays were found not to be associated with glyphosate exposure on the basis that they lacked statistical strength, were inconsistent across studies, lacked dose-response relationships, were not associated with preneoplasia, and/or were not plausible from a mechanistic perspective. The overall weight of evidence from the genetic toxicology data supports a conclusion that *glyphosate (including GBFs and AMPA) does not pose a genotoxic hazard and therefore, should not be considered support for the classification of glyphosate as a genotoxic carcinogen*. The assessment of the epidemiological data found that the data do not support a causal relationship between glyphosate exposure and non-Hodgkin's lymphoma... As a result, following the review of the totality of the evidence, the Panels concluded that the data do not support IARC's conclusion that glyphosate is a "probable human carcinogen" and, consistent with previous regulatory assessments, further concluded that glyphosate is unlikely to pose a carcinogenic risk to humans. [Emphasis added]
Another published finding from one of the panels lambasted IARC's methodology: “[T]he Expert Panel concluded that there was sufficient information available from a very large number of regulatory genotoxicity studies that should have been considered by IARC.” In other words, the panel said IARC ignored evidence it didn’t like. Other than fraud, an accusation of disregarding relevant data is about as serious as it gets in the scientific community.

And, as luck would have it, a European Union agency today announced that glyphosate does not cause cancer.

Why Read the New York Times?

Last week, we caused weeping and gnashing of teeth and (we like to imagine) the rending of garments when we classified the science reporting of the New York Times as borderline junk science. Despite Carl Zimmer’s protest that the organization has won Pulitzer Prizes, this hit piece on agricultural technology (as well as a recent piece proclaiming the benefits of acupuncture) completely justify our decision.

If you want to reinforce your anti-biotechnology, pro-alternative medicine beliefs, read the New York Times. If you want serious science journalism, read something else. Nearly anything else. Preferably us, though.