

How RFK, Jr.'s science disinformation machine rolls on despite so many debunking articles (like this one)

The presidential campaign of Robert F. Kennedy Jr. is a reminder of the insidious imbalance of conspiracy theories: They are always easier to state than to disprove. RFK Jr. can make a claim in minutes that can take hours to dispute and explain. Give him three hours—say, the length of a Joe Rogan episode—and RFK Jr. can unspool so many falsehoods and semi-truths that untangling them fully would require a book-length response.

As the COVID-19 pandemic fades, the public has built a healthy resistance against spurious claims about COVID medication or vaccines, claims the ostensible Democratic candidate has done much to advance. However, we have no such safeguard against the uptake of disinformation about agriculture and industry, and RFK Jr.'s conspiratorial claims in those areas stand out as being equally pervasive, tendentious, and plain wrong.

Take for example, his claim that atrazine, a common herbicide, effeminates frogs. He recently [told](#) right-wing pundit Jordan Peterson:

There's atrazine throughout our water supply, and atrazine, by the way, if you—in a lab—put atrazine in a tank full of frogs, it will chemically castrate and forcibly feminize every frog in there and 10 percent of the frogs, the male frogs, will turn into fully viable females able to produce viable eggs.

Atrazine is one of America's most popular commercial herbicides and essential to preserving crop yields and providing affordable food in a growing world. RFK Jr.'s statements, echoing earlier [claims](#) by Alex Jones that globalists are "putting chemicals in the water that make the friggin' frogs gay," are based on discredited research papers by UC Berkeley biologist Tyrone Hayes. His findings that atrazine triggered sex changes in frogs has [since been debunked](#).



Credit: PickPik (Public Domain)

There's a straight line between RFK Jr.'s commitment to the gay frogs myth and his disparaging suggestion that these chemicals are also connected to "transgenderism." Of course, neither claim can be reliably backed up. When Hayes originally published his findings, the Environmental Protection Agency conducted a thorough review and found no affirmative evidence. The EPA couldn't even use Hayes' data because it didn't meet scientific standards, nor did Hayes hand over the data he relied on for his research. In fact, Hayes's studies had been published without review by the National Academy of Sciences. In over [7,000 studies](#) that both pre- and post-date his research on the effects of atrazine, none ever came to the same conclusions as Tyrone Hayes.

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Scientific fact relies on replicability. If multiple scientists can't recreate the results of an experiment, then

odds are there was something wrong with the original experiment, not the researchers who tried to replicate it. Yet oddball, one-off, un-replicated studies live on as convenient nuggets of disinformation for those seeking to prove, in this case, a grand government conspiracy to abolish masculinity.

For RFK Jr., fighting pesticides isn't only a matter of ideology—it's business. In 2018, he won a settlement of \$290 million for a client claiming to have suffered from non-Hodgkin's lymphoma. The man claimed that the weedkiller RoundUp—using the active ingredient glyphosate and produced by Bayer subsidiary Monsanto—gave him cancer. Independent scientists have [not found](#) a causal effect between glyphosate and cancer. Even though that didn't stop RFK Jr. from winning an enormous settlement for his client, a chemical manufacturer's desperation to make a damaging lawsuit go away by settling without going to trial does not by itself give the lawsuit's claims the imprimatur of scientific fact.

Hashing out scientific debates in court creates an evidentiary mess. Say what you will about outsourcing the arbitration of truth to regulatory agencies, but their innate strength is the ability to process large data sets. Courts, by contrast, have only an instrumental interest in the truth, which is established only insofar as it is relevant to disputes over the law. And the large sums that are often at stake have given rise to an industry of trial lawyers who make their living by skimming money from large class-action lawsuits that can be joined by just about anyone.

Litigators like RFK Jr. do quite well for themselves by disparaging everything from vetted chemicals to Wi-Fi—anything where a weaponized interpretation of industrial science could cause enough of a potential public relations problem for a major company to elicit a large settlement. This way of doing things provides no reliable information to consumers, who are left with a dizzying array of media reports on these cases that tend to confuse legal acts like settlements with revelations of actual harm. As a result, the public is kept in the dark about the true risks of their weed killer or wireless router, complex regulatory approval processes be damned.

Those processes can be hard to explain and virtually impossible to make compelling to a non-specialist, which in most cases is even more true of the underlying science. And that is a major vector of our current predicament: The often-painful complexity of scientific findings is something that helps conspiracies find audiences. Conspiracy stories are simple, whereas reality is complicated.

The primary vehicle for RFK Jr.'s conspiracy theories is his website and organization, Children's Health Defense, which Facebook and Instagram [removed](#) last year for repeatedly peddling misinformation. Children's Health Defense [relayed](#) information that glyphosate residues were found in urine and breast milk, but conveniently passed on the opportunity to provide context. The study Children's Health Defense shared used an ELISA test to find evidence of glyphosate. The German Federal Institute for Risk Assessment (BfR) [affirmed](#) that there was no evidence proving that glyphosate levels in breast milk were above legal limits, and [reported](#) that detecting glyphosate in itself is a fundamentally complicated endeavor and that the ELISA is not an adequate way of going about finding it. The two independent studies that the BfR commissioned were put together in an [article](#) for the *Journal of Agricultural and Food Chemistry*. They used liquid chromatography coupled with mass spectrometry (LC-MS/MS) or gas chromatography coupled with mass spectrometry (GC-MS/MS)—processes that are, according to the risk assessment institute, 10 times more trustworthy than regular tests for detecting pesticides.

Did your eyes start to go unfocused during that last paragraph? It's a case in point: RFK and his ilk operate with the benefit of simple, memorable, sweeping statements—for instance, *there are scary chemical residues in our bodies*—while those of us analyzing the validity of the specific claims embedded in those statements come across as pedantic, obfuscating, or even just plain boring.

Discussing science in the public square is hard, and it requires the average person to invest more time than they might have available. But the investment of time is exactly what understanding our complicated world requires.

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