

SCIENCE

# The Vaccine Scientist Spreading Vaccine Misinformation

Robert Malone claims to have invented mRNA technology. Why is he trying so hard to undermine its use?

By Tom Bartlett



Steve Helber / AP ; The Atlantic

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Robert Malone—a medical doctor and an infectious-disease researcher—recently suggested that the Pfizer and Moderna vaccines might actually make COVID-19 infections worse. He chuckled as he imagined Anthony Fauci announcing that the vaccination campaign was all a big mistake (“Oh darn, I was wrong!”) and would need to be abandoned. When he floated that nightmare scenario during a recent

podcast interview with Steve Bannon, both men seemed almost delighted at the prospect of public-health officials and pharmaceutical companies getting their comeuppance. “This is a catastrophe,” Bannon declared, beaming at his guest. “You’re hearing it from an individual who invented the mRNA [vaccine] and has dedicated his life to vaccines. He’s the *opposite* of an anti-vaxxer.”



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Before going any further, let’s be clear that the back-and-forth between Bannon and Malone was premised on misinformation. The vaccines have repeatedly been shown to help prevent symptomatic coronavirus infections and reduce their severity. Malone was riffing on a [botched sentence](#) in a *USA Today* article, one that was later deleted but not before being screenshotted and widely shared. That kind of overheated, spottily sourced conversation is par for the course on shows like Bannon’s, which traffic in a set of claims that sound [depressingly familiar](#): The vaccines cause more harm than experts are letting on; Fauci is a liar and possibly a fascist; and the mainstream news media is either shamelessly complicit or too stupid to figure out what’s really going on.

In that alternate media universe, Robert Malone’s star is ascendant. He started popping up on podcasts and cable news shows a few months ago, presented as a scientific expert, arguing that the approval process for the vaccines had been unwisely rushed. He told Tucker Carlson that the public doesn’t have enough information to decide whether to get vaccinated. He told Glenn Beck that offering incentives for taking vaccines is unethical. He told Del Bigtree, an anti-vaccine activist who opposes common childhood inoculations, that there hadn’t been sufficient research on how the vaccines might affect women’s reproductive systems. On show after show, Malone, who has quickly amassed more than 200,000 Twitter followers, casts doubt on the safety of the vaccines while decrying what he sees as attempts to censor dissent.

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Wherever he appears, Malone is billed as the inventor of mRNA vaccines. It's in his Twitter bio. "I literally invented mRNA technology when I was 28," says Malone, who is now 61. If that's true—or, more to the point, if Malone *believes* it to be true—then you might expect him to be championing a very different message in his media appearances. According to [one recent study](#), the innovation for which he claims to be responsible has already saved hundreds of thousands of lives in the United States alone; there's [talk](#) that it may soon lead to a round of Nobel Prizes. It's the kind of validation that few scientists in history have ever received. Yet instead of taking a [victory lap](#), Malone has emerged as one of the most vocal critics of his own alleged accomplishment. He's sowed doubt about the Pfizer and Moderna vaccines on pretty much any podcast or YouTube channel that will have him.

Why is the self-described inventor of the mRNA vaccines working so hard to undermine them?

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Whether Malone really came up with mRNA vaccines is a question probably best left to Swedish prize committees, but you *could* make a case for his involvement. When I called Malone at his 50-acre horse farm in Virginia, he directed me to a [6,000-word essay](#) written by his wife, Jill, that lays out why he believes himself to be the primary discoverer. "This is a story about academic and commercial avarice," it begins. The document's tone is pointed, and at times lapses into all-caps fury. She frames her husband as a genius scientist who is "largely unknown by the scientific establishment because of abuses by individuals to secure their own place in the history books."

The abridged version is that when Malone was a graduate student in biology in the late 1980s at the Salk Institute for Biological Studies, he injected genetic material—DNA and RNA—into the cells of mice in hopes of creating a new kind of vaccine. He was the first author on [a 1989 paper](#) demonstrating how RNA could be delivered into cells using lipids, which are basically tiny globules of fat, and a co-author on [a 1990 \*Science\* paper](#) showing that if you inject pure RNA or DNA into mouse muscle cells, it can lead to the transcription of new proteins. If the same approach worked for human cells, the latter paper said in its conclusion, this technology "may provide alternative approaches to vaccine development."

These two studies do indeed represent seminal work in the field of gene transfer, according to Rein Verbeke, a postdoctoral fellow at Ghent University, in Belgium, and the lead author of [a 2019 history](#) of mRNA-vaccine development. (Indeed, Malone's studies are the first two references in Verbeke's paper, out of 224 in total.) Verbeke told me he believes that Malone and his co-authors "sparked for the first time the

hope that mRNA could have potential as a new drug class,” though he also notes that “the achievement of the mRNA vaccines of today is the accomplishment of a lot of collaborative efforts.”

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Malone says he deserves credit for more than just sparking hope. He dropped out of graduate school in 1988, just short of his Ph.D., and went to work at a pharmaceutical company called Vical. Now he claims that both the Salk Institute and Vical profited from his work and essentially prevented him from further pursuing his research. (A Salk Institute spokesperson said that nothing in the institute's records substantiates Malone's allegations. The biotech company into which Vical was merged, Brickell, did not respond to requests for comment.) To say that Malone remains bitter over this perceived mistreatment doesn't do justice to his sense of aggrievement. He calls what happened to him “intellectual rape.”

One target of Malone's ire, the biochemist Katalin Karikó, has been featured in multiple news stories as an mRNA-vaccine pioneer. CNN called her work “the basis of the Covid-19 vaccine” while a *New York Times* headline said she had “helped shield the world from the coronavirus.” None of those stories mentioned Malone. “I've been written out of the history,” he has said. “It's all about Kati.” Karikó shared with me an email that Malone sent her in June, accusing her of feeding reporters bogus information and inflating her own accomplishments. “This is not going to end well,” Malone's message says.

Karikó replied that she hadn't told anyone that she is the inventor of mRNA vaccines and that “many many scientists” contributed to their success. “I have never claimed more than discovering a way to make RNA less inflammatory,” she wrote to him. She told me that Malone referred to himself in an email as her “mentor” and “coach,” though she says they've met in person only once, in 1997, when he invited her to give a talk. It's Malone, according to Karikó, who has been overstating his accomplishments. There are “hundreds of scientists who contributed more to mRNA vaccines than he did.”

Malone insists that his warning to Karikó that “this is not going to end well” was not intended as a threat. Instead, he says, he was suggesting that her exaggerations would soon be exposed. Malone views Karikó as yet another scientist standing on his shoulders and collecting plaudits that should go to him. Others have been rewarded handsomely for their work on mRNA vaccines, he says. (Karikó is a senior vice president at BioNTech, which partnered with Pfizer to create the first COVID-19 vaccine to be authorized for use last year.) Malone is not exactly living on the streets:

In addition to being a medical doctor, he has served as a vaccine consultant for pharmaceutical companies.



In any case, it's clear enough that Malone isn't singularly responsible for mRNA vaccines. The process of achieving major scientific advancements tends to be more cumulative and complex than the apple-to-the-head stories we usually tell, but this much can be said for sure: Malone was involved in groundbreaking work related to mRNA vaccines before it was cool or profitable; and he and others who believed in the potential of RNA-based vaccines in the 1980s turned out to be world-savingly correct.

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Malone may keep company with vaccine skeptics, but he insists he is not one himself. His objections to the Pfizer and Moderna shots have to do mostly with their expedited approval process and with the government's system for tracking adverse reactions. Speaking as a doctor, he would probably recommend their use only for those at highest risk from COVID-19. Everyone else should be wary, he told me, and those under 18 should be excluded entirely. (A June 23 statement from more than a dozen public-health organizations and agencies strongly encouraged all eligible people 12 and older to get vaccinated, because the benefits "far outweigh any harm.") Malone is also frustrated that, as he sees it, complaints about side effects are being ignored or censored in the nationwide push to increase vaccination rates.

You might very well walk away with the skewed sense, after hearing Malone speak or reading his posts, that there is a far-reaching COVID-19 cover-up and that the real threat is the vaccine rather than the virus. I've listened to hours of Malone's interviews and read through the many pages of documents he's posted. He is a knowledgeable scientist with a knack for lucid explanation. It doesn't hurt that he looks the part with his neatly trimmed white beard, or that he has a voice that would be well suited for a meditation app. Malone is not a subscriber to the more out-there conspiracy theories regarding COVID-19 vaccines—he doesn't, for instance, think Bill Gates has snuck microchips into syringes—and he sometimes pushes back gently when hosts like Bigtree or Beck drift into more ludicrous territory.

And yet he does routinely slip into speculation that turns out to be misleading or, as in the segment on Bannon's show, plainly false. For instance, he recently tweeted that, according to an unnamed "Israeli scientist," Pfizer and the Israeli government have an agreement not to release information about adverse effects for 10 years, which is hard to believe given that the country's health ministry has already warned of a link between the Pfizer shot and rare cases of myocarditis. Malone's LinkedIn account has twice been suspended for supposedly spreading misinformation.

Read: [The mRNA vaccines are extraordinary, but Novavax is even better](#)

His concerns are personal, too. Malone contracted COVID-19 in February 2020, and later got the Moderna vaccine in hopes that it would alleviate his long-haul symptoms. Now he believes the injections made his symptoms worse: He still has a cough and is dealing with hypertension and reduced stamina, among other maladies. "My body will never be the same," he told me. In media appearances, he often notes that he has colleagues in the government and at universities who agree with him and are privately cheering him on. I spoke with several of these people—vaccine scientists and biotech consultants, suggested by Malone himself— and that is not what they told me. The portrait they paint of Malone is of an insightful researcher who can be headstrong. They related accounts of him, pre-pandemic, getting booted from projects because he was hard to communicate with and unwilling to compromise. (Malone has acknowledged his penchant for butting heads with fellow scientists.) And they are taken aback by his emergence as a vaccine skeptic. One called his eagerness to appear on less-than-reputable podcasts "naive," while another said he thought Malone's public rhetoric had "migrated from extrapolated assertions to sensational assertions." Stan Gromkowski, a cellular immunologist who did work on mRNA vaccines in the early 1990s and views Malone as an underappreciated pioneer, put it this way: "He's fucking up his chances for a Nobel Prize."

It's only in the curious world of fringe media that Malone has found the platform, and the recognition, he's sought for so long. He talks to hosts who aren't going to question whether he's the brains behind the Pfizer and Moderna shots. They're not going to quibble over whether credit should be shared with co-authors, or talk about how science is like a relay race, or point out that, absent the hard work of brilliant researchers who came before and after Malone, there would be no vaccine. He's an upgrade over their typical guest list of chiropractors and naturopaths, and they're perfectly happy to address him by the title he believes he's earned: inventor of the mRNA vaccines.

The irony is that, to the audiences who tune in to those shows, the vaccines are seen as a scourge rather than a godsend. No matter how nuanced Malone might try to be, or how many qualifiers he appends to his opinions, he is egging on vaccine hesitancy at a time when hospitals in the least-vaccinated parts of the country are struggling to cope with an influx of new COVID-19 patients. If you want proof of that, scroll through the many comments from his followers thanking him for confirming their fears. Malone has finally made his mark, by undermining confidence in the very vaccine he says wouldn't be possible without his genius. It's a victory, of sorts, but one that he and the rest of us may come to regret.

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*This article originally stated that Malone was once forced to declare bankruptcy. Although he has previously said that he "went bankrupt," he has never actually declared bankruptcy. The article has also been updated to acknowledge that Malone cited an unnamed scientist in his tweet about an alleged agreement between Pfizer and the Israeli government, and to include the year that Malone developed COVID-19.*

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