

**Robert Wallace Malone** (born 1959)<sup>[1]</sup> is an American [virologist](#) and [immunologist](#). His work has focused on [mRNA](#) technology, pharmaceuticals, and drug repurposing research. During the [COVID-19 pandemic](#), he has been criticized for promoting [misinformation](#) about the safety and efficacy of [COVID-19 vaccines](#).

### Early life and education

Robert Malone received his [BSc](#) in [biochemistry](#) from the [University of California, Davis](#) in 1984, his [MSc](#) in [biology](#) from the [University of California, San Diego](#) in 1988, and his [MD](#) from [Northwestern University Feinberg School of Medicine](#) in 1991.<sup>[5][6][7]</sup> He attended [Harvard Medical School](#) for a year-long postdoctoral studies program.<sup>[8]</sup>

### Career

In the late 1980s, while a graduate student researcher at the [Salk Institute for Biological Studies](#) in San Diego, California, Malone conducted studies on messenger ribonucleic acid ([mRNA](#)) technology, discovering that it was possible to transfer mRNA protected by a [liposome](#) into cultured cells to signal the information needed for the production of proteins.<sup>[9][2]</sup> In 1987, Malone performed a landmark experiment on [transfection](#) of RNA into human, rat, mouse, [Xenopus](#), and [Drosophila](#) cells, published in 1989.<sup>[10][11]</sup> A follow-up study also published in 1989 found that frog embryos absorbed such mRNA. A 1990 paper, in collaboration with [Jon A. Wolff](#), [Dennis A. Carson](#), and others, first suggested the possibility of synthesizing mRNA in a laboratory to trigger the production of a desired protein.<sup>[12]</sup> These studies are recognized as among the earliest steps towards [mRNA vaccine](#) development.<sup>[13][10][1][14][15]</sup> Malone claims to be the inventor of mRNA vaccines, and while Stan Gromkowski, an early mRNA vaccine researcher and cellular immunologist, views Malone as "an under appreciated pioneer" who could be in contention to win a Nobel Prize for his work,<sup>[1]</sup> credit for the distinction is more often given to later advancements by [Katalin Karikó](#) and [Drew Weissman](#)<sup>[16][10]</sup> or [Moderna](#) co-founder [Derrick Rossi](#),<sup>[9][17][18]</sup> and was ultimately the result of the contributions of hundreds of researchers, including Malone.<sup>[19]</sup>

Malone has served as director of clinical affairs for Avancer Group, a member of the scientific advisory board of [EpiVax](#), assistant professor at the [University of Maryland, Baltimore](#) school of medicine, and an adjunct associate professor of [biotechnology](#) at [Kennesaw State University](#).<sup>[20]</sup> He

was CEO and co-founder of **Atheric Pharmaceutical**,<sup>[21]</sup> which in 2016 was contracted by the **U.S. Army Medical Research Institute of Infectious Diseases** to assist in the development of a treatment for the **Zika virus** by evaluating the efficacy of existing drugs.<sup>[22][23][24][25]</sup> Until 2020, Malone was chief medical officer at Alchem Laboratories, a Florida pharmaceutical company.<sup>[26]</sup>

## **COVID-19**

In early 2020, during the **COVID-19 pandemic**, Malone was involved in research into the heartburn medicine **famotidine** (Pepcid) as a **potential COVID-19 treatment** following anecdotal evidence suggesting that it may have been associated with higher COVID-19 survival. Malone, then with Alchem Laboratories, suspected famotidine may target an enzyme that the virus (**SARS-CoV-2**) uses to reproduce, and recruited a computational chemist to help design a 3D-model of the enzyme based on the viral sequence and comparisons to the **2003 SARS virus**.<sup>[27][28]</sup> After encouraging preliminary results, Alchem Laboratories, in conjunction with New York's **Northwell Health**, initiated a clinical trial on famotidine and **hydroxychloroquine**.<sup>[27]</sup> Malone resigned from Alchem shortly after the trial began and Northwell paused the trial due to a shortage of hospitalized patients.<sup>[26][29]</sup>

With another researcher, Malone successfully proposed to the publishers of *Frontiers in Pharmacology* a special issue featuring early observational studies on existing medication used in the treatment of COVID-19, for which they recruited other guest editors, contributors, and reviewers. The journal rejected two of the papers selected: one on **famotidine** co-authored by Malone and another submitted by physician **Pierre Kory** on the use of **ivermectin**.<sup>[29]</sup> The publisher rejected the ivermectin paper due to what it stated were "a series of strong, unsupported claims" which they determined did "not offer an objective nor balanced scientific contribution."<sup>[29]</sup> Malone and most other guest editors resigned in protest in April 2021, and the special issue has been pulled from the journal's website.<sup>[29]</sup>

Malone received criticism for propagating **COVID-19 misinformation**, including making claims about the toxicity of **spike proteins** generated by some **COVID-19 vaccines**;<sup>[2][18][4][30]</sup> using interviews on mass media to popularize medication with **ivermectin**;<sup>[31]</sup> and **tweeting** a study by others questioning vaccine safety that was later retracted.<sup>[2]</sup> He said that **LinkedIn** temporarily suspended his account over a post stating that the Chairman of

the [Thomson Reuters](#) Foundation was also a board member at [Pfizer](#), and other posts questioning the efficacy of some COVID-19 vaccines.<sup>[32][33]</sup> Malone has also falsely claimed that the [Pfizer–BioNTech](#) and [Moderna](#) COVID-19 vaccines could worsen COVID-19 infections,<sup>[1]</sup> and that the [Food and Drug Administration](#) (FDA) had not granted full approval to the Pfizer vaccine in August 2021.<sup>[34]</sup> December 29, 2021, [Twitter permanently suspended](#) Malone from its platform, citing "repeated violations of our COVID-19 misinformation policy",<sup>[35][36]</sup> after he shared on that platform a video about supposed harmful effects of the Pfizer vaccine.<sup>[37]</sup>

On December 30, 2021, Malone claimed on the [The Joe Rogan Experience podcast](#) that something called "*mass formation psychosis*" was developing in American society in its reaction to COVID-19 just as during the rise of [Nazi Germany](#).<sup>[38][39]</sup> Clips of the podcast episode were removed by [YouTube](#) from their platform, reportedly in violation of the site's Community Guidelines.