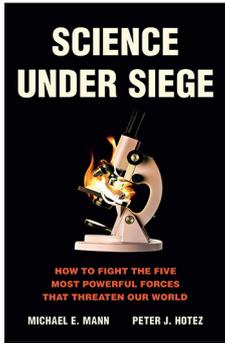




## Book

# From doing science to saving science



**Science Under Siege: How to Fight the Five Most Powerful Forces that Threaten Our World**  
 Michael E Mann, Peter J Hotez  
 PublicAffairs, Hachette Book Group, 2025  
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Science and scientists are under assault. From denial of vaccines to climate change, political leaders are increasingly sacrificing democracy as well as science on the altar of populism and authoritarianism. While scientists often see the result of such attacks on science and scientific institutions through loss of funding or jobs, they are sometimes naive about the underlying forces behind such attacks, weakening their ability to fight back.

Michael E Mann and Peter J Hotez's *Science Under Siege: How to Fight the Five Most Powerful Forces that Threaten Our World* is an important and timely book, published in a year of immense turmoil in the USA with large-scale defunding of scientific research, full-frontal attacks on public health agencies, loss of thousands of science and public health jobs, and a rapid erosion of academic freedom. This book is the result of a collaboration between two scientists working in entirely different fields. Mann is a climate scientist whose previous books include *The Hockey Stick and the Climate Wars*. Peter J Hotez is a physician-scientist who works on infectious diseases and vaccinology, and has authored books including *The Deadly Rise of Anti-science: A Scientist's Warning*. While their fields of scientific research differ, both have endured incredible attacks, including death threats, for their courageous stance on science, and their willingness to engage with the public, the media, and policy makers. Having individually written about their experiences in dealing with anti-science, Mann and Hotez decided to combine forces during the pandemic. Not surprisingly, they have used climate, vaccine, and pandemic denialism as case studies to dissect why science is under attack, who fuels such attacks, and who stands to profit.

They identify five main forces of anti-science, "the 5 Ps": the plutocrats; the authoritarian petrostates (along with

the polluters and the politicians who back them); the pros who use their professional credentials to promote contrarian views; the propagandists who amplify them on various platforms; and elements of the press that are often uncritical, and willing to promote disinformation for scoring clicks. The book breaks down each of these anti-science forces, and dives deep into everything from wealth concentration via tax avoidance, dark money, and Russian bots to the politics of Make

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America Great Again and right-wing Christian nationalism. The book makes for serious, often depressing reading, especially in the current context of an unrelenting assault on science in some settings, but scientists have no choice but to educate themselves and get more political, if they want to save science. Staying naive is not an option.

Crucially, Mann and Hotez warn us not to descend into despair and give up. As they argue, "While there is urgency, there is still agency. We can still avert disaster if we can understand the nature of the mounting antisience threat and formulate a strategy to counter it." They offer several helpful ideas for how scientists can respond to the current crisis, including enhancing science communication, defending scientists and science agencies, and countering disinformation. They call for universities and institutions to protect academic freedom, and

actively resist the pressure of corrupt, autocratic politicians. They also call for measures to reduce the wealth and influence of plutocrats, common-sense regulation and oversight of media, and for everyone to take an active role in preserving democracy, because authoritarians typically neither like science nor scientists. Ultimately, the public needs to stand by scientists and science.

It has been heartening to see numerous March For Science protests around the USA, and new movements such as Stand Up For Science and Defend Public Health. Several prominent scientists have recently published books on attacks on science, and scientists at organisations such as the US National Institutes of Health and the Centers for Disease Control and Prevention have quit or publicly spoken up against political interference. Universities are doing more to protect academic freedom and in October, 2025, most of the universities that the White House approached about a proposal to offer more federal funding towards schools aligned with Trump's conservative priorities rejected the plan.

These are hopeful developments and signal that change is possible, even during the darkest of times. There is strength in numbers, and scientists must learn to join larger pro-democracy and people's movements and coalitions. Our science training may not have prepared us for such work, but we can no longer sit in the safety of our laboratories and expect the world to get better.

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### Further reading

- Fauci A. On call: a doctor's journey in public service. Viking, 2024
- Hotez PJ. The deadly rise of anti-science. Johns Hopkins University Press, 2025
- Howard J. We want them infected. Redhawk Publications, 2024
- Mann ME. The hockey stick and the climate wars: dispatches from the front lines. Columbia University Press, 2012
- Offit PA. Deadly choices: how the anti-vaccine movement threatens us all. Basic Books, 2015
- Ratner A. Booster shots: the urgent lessons of measles and the uncertain future of children's health. Avery/Penguin, 2025