

Scientists discover potential coronavirus remedy—at least, for mice and hamsters

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Scientists at the University of Pittsburgh School of Medicine say they have discovered a super-potent molecule that was "highly effective" at preventing and treating COVID-19 when tested in mice and hamsters.

Sounds promising, but it's too early to get your hopes up. Animal studies like this are notorious for not translating to human test subjects. And Pitt's experimental approach, which uses a "[human monoclonal antibody](#)," is not novel; it's being pursued by numerous research groups and the federal government.

A monoclonal antibody is a laboratory-made version of proteins naturally produced by the [immune system](#) to fight invading germs.

Whether natural or monoclonal, antibodies can prevent infection by binding to parts of viruses that they use to break into cells and start replicating.

What the Pitt scientists did was identify and then

make just the tiny component of the antibody that binds to the coronavirus "spike" protein—the rodlike projections the virus uses to attach to and enter cells. Even though this monoclonal antibody, called Ab8, foiled the spike protein, it did not bind to human cells, suggesting it would be safe to use in people. Ab8 is so tiny that the researchers speculate it might be administered with an inhaler, rather than shots.

"Antibodies of larger size have worked against other [infectious diseases](#) and have been well tolerated, giving us hope that (Ab8) could be an [effective treatment](#) for patients with COVID-19 and for protection of those who have never had the infection and are not immune," coauthor John Mellors, chief of the infectious-disease division at Pitt, said in a statement.

Time will tell. While Pitt is still studying its [experimental drug](#) in animals, two other [monoclonal antibodies](#) are in late-stage human testing, called clinical trials.

Like most groups racing to find breakthroughs to curb the pandemic, Pitt's researchers and media-relations folks are inclined to get very excited. Back in April, they issued a news release about their novel vaccine candidate. "When tested in mice, the vaccine, delivered through a fingertip-sized patch, produces [antibodies](#) at quantities thought to be sufficient for neutralizing the virus."

So far, that novel vaccine has not moved into clinical trials, because it is not listed on [clinicaltrials.gov](#), the U.S. government website that publishes trial protocols from around the world.

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