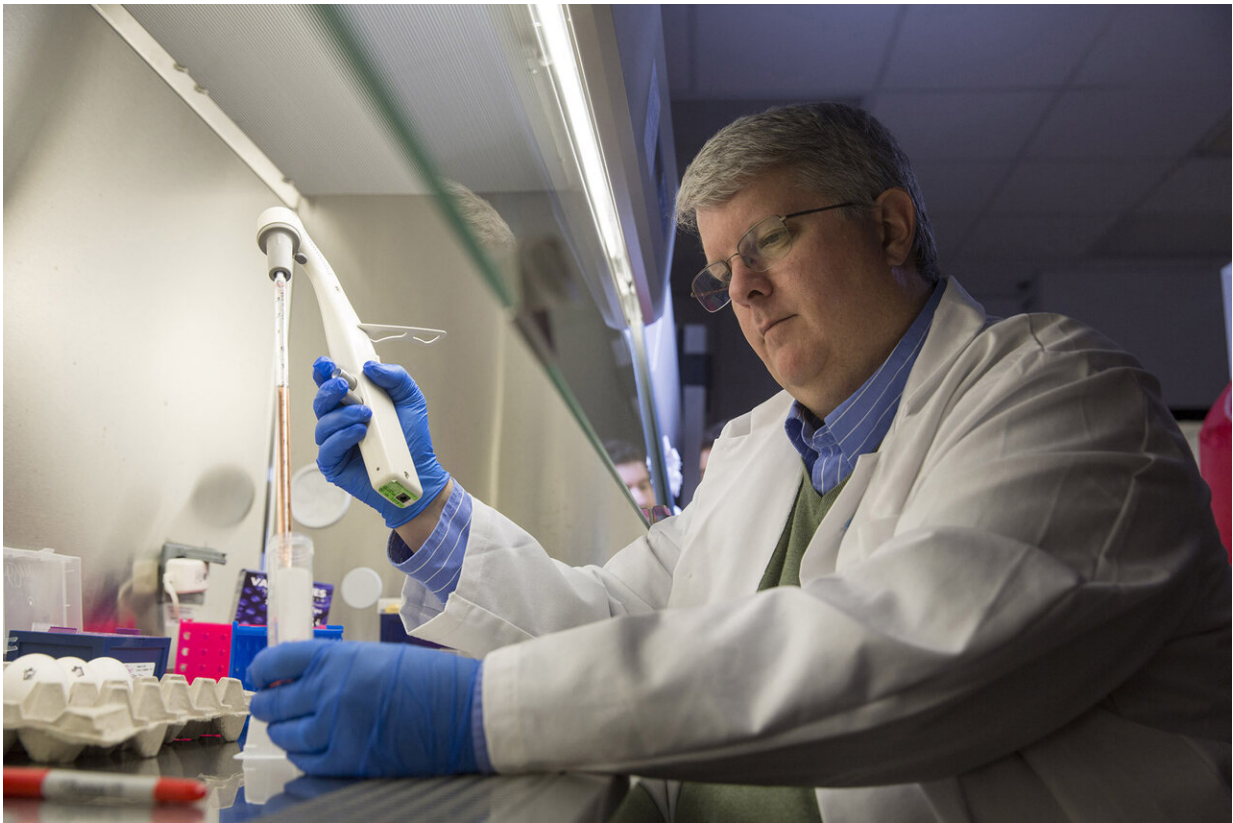


Researchers analyzing coronavirus genome to develop vaccine

March 25 2020, by James Hataway



Ted Ross, UGA professor and Georgia Research Alliance Eminent Scholar of Infectious Diseases. Credit: Peter Frey/UGA

A team of researchers at the University of Georgia are developing and testing new vaccines and immunotherapies to combat the novel

coronavirus that has infected hundreds of thousands across the world.

The team is led by Ted M. Ross, Georgia Research Alliance Eminent Scholar and director of UGA's Center for Vaccines and Immunology. He has partnered with other laboratories and [biotechnology companies](#) to create new vaccines that could one day provide protection against the virus that causes COVID-19.

Scientists in his lab have already begun analyzing the [viral genome](#) to find the right targets that will prompt the [immune system](#) to create protective antibodies, and they will examine how effective those targets are in small-scale lab tests soon.

Ross has spent most of his career studying viruses and developing new vaccines and treatments to combat them, but he is perhaps best known for his efforts to develop a universal influenza vaccine that could protect against all forms of the virus and eliminate the need for seasonal flu shots.

While the lessons learned from his work on influenza and other viruses will inform his work, the [coronavirus](#) presents a unique set of challenges.

"Most people already have some immunity to influenza, but nobody has immunity to this coronavirus, which is one reason it has spread so quickly," Ross said. "The scientific community is hard at work, but there's still so much we don't know about this virus, and it will take time to gather quality data."

A successful vaccine could, however, turn the tide in the fight against the coronavirus in humanity's favor. Widespread distribution of a vaccine would create enough herd immunity to protect most people and prevent another outbreak.

Shutdowns, [travel restrictions](#) and sheltering in place could halt the spread of COVID-19, but those actions may not be enough to eradicate the disease completely.

"It's possible that public health interventions will help slow the spread, but we just don't know for sure," Ross said. "It's also possible that this [virus](#) could circulate continuously in [human populations](#), and that's where a vaccine would become an essential tool."

There is a profound sense of urgency within the [scientific community](#) to find new solutions, and many researchers are sharing data as soon as it becomes available to hasten the development of diagnostics and treatments, Ross said.

But he cautions that creating, testing and manufacturing a [vaccine](#) will take time, so it's important for people to heed the advice from the Centers for Disease Control and Prevention and their state and local governments.

"Even when processes have been expedited, vaccines must go through a series of rigorous tests to prove that they are safe and effective, and that could take many months," Ross said. "In the meantime, the best thing we can do is to follow basic preventative guidelines outlined by the CDC, because those are the best weapons we have right now."

For more information about what you can do to protect yourself and others, visit the [CDC's website](#).

Provided by University of Georgia

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