

JEFFREY GLENN, MD, PhD

Joseph D. Grant Professor and
Professor of Microbiology and Immunology
Stanford University School of Medicine

“Our Harrington team is very helpful in finding solutions and breaking down barriers that we encounter in the practical aspects of moving our products forward.”

A LAB THAT WAS **PREPARED FOR COVID**

FOCUS: Single dose antiviral therapeutic for COVID-19.

In 2018, Dr. Jeffrey Glenn was named a Harrington Scholar-Innovator for his work toward developing a single-dose therapeutic to treat all strains of Influenza A virus—an endeavor fueled by Dr. Glenn’s commitment to preventing the first major influenza epidemic since 1918.

Exciting progress was being made, when suddenly another type of virus began spreading across the globe.

Fortunately, perhaps no lab in the world was in a more advantageous position to pivot from its current work to solving the challenges of COVID-19.

The viral genome consists of various stems and loops called the RNA secondary structure. “Many viruses encode critical regulatory signals in these RNA secondary structures,” Dr. Glenn says. “My thinking was that these structures, which are highly conserved (relatively unchanged through the eons) are clearly very important; if


a drug disrupted them, that could inhibit the virus from developing resistance.” Dr. Glenn and his team immediately redirected and modified this groundbreaking approach to influenza toward developing a therapeutic for COVID.

By employing a similar strategy, they identified molecules capable of preventing clinical symptoms in mice when given before or after a SARS-CoV-2 infection. Potentially, this therapeutic could also be used by someone at risk of being exposed to COVID, and would mitigate the disease for someone already infected.

Importantly, because his molecules target the virus outside of the region used to make COVID vaccines, Dr. Glenn accurately predicted his approach would work equally well on both regular viruses and vaccine-resistant variants.

“Because our approach can be applied to any virus of interest, this work could be important for future pandemics, which as a virologist I can tell you, will occur,” Dr. Glenn says.

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