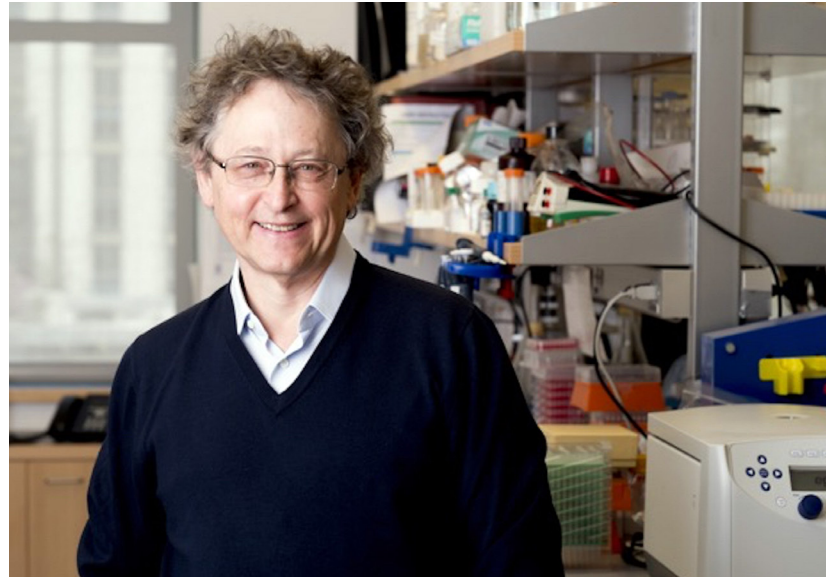


MICHEL NUSSENZWEIG, MD, PhD

Investigator, HHMI

Zanvil A. Cohn and Ralph M. Steinman Professor
The Rockefeller University

“It is very helpful to be able to discuss various aspects of the work with the world-class experts on our Harrington Therapeutics Development team.”



FIGHTING COVID WITH **HUMAN ANTIBODIES**

FOCUS: Human antibodies to prevent and treat COVID-19.

Human antibodies are produced by B lymphocyte cells which circulate in our blood. In 2009 Dr. Nussenzweig, working on treatments for HIV-1, invented a method whereby within a blood sample, a bait is used to isolate and capture the B lymphocyte cells making the specific antibodies of interest.

RNA can be made from those cells, then antibodies cloned from that RNA. An antibody's DNA sequence can then be used to produce a protein used for lab tests on a given disease or condition.

The method has also been applied to individuals infected by a series of other pathogens including Zika and Hepatitis B viruses.

Early in 2020 amidst the burgeoning pandemic, Harrington Discovery Institute provided support to Dr. Nussenzweig's lab to apply its novel "capture" method to SARS-CoV-2. "We already knew how to take an antibody from identification, through testing, through production for human use, and on to phase one human trials—we had done all that with HIV

antibodies," Dr. Nussenzweig says.

"For COVID-19, we used the same trick, but with a different bait— a piece of the SARS spike protein—and we were able to clone the antibodies very rapidly. In fact we're done with recruitment for phase two clinical trials, hoping to move on to phase three."

Immediately following a COVID diagnosis, this method would provide a treatment for unvaccinated individuals, as well as the immune-compromised who don't respond to vaccines, such as transplant recipients, cancer patients and others.

Harrington Discovery Institute

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