

New Adjuvanted Vaccine Candidate Using IDRI Formulation Demonstrates Coronavirus Pan-Vaccine Potential

Seattle – May 3, 2021 – The Infectious Disease Research Institute (IDRI), Duke Human Vaccine Institute, and 3M have collaborated to create a vaccine candidate with potential to provide protection against multiple variants of SARS-CoV-2, as well as other coronaviruses. Study results published in the May 10th edition of *Nature* show the vaccine candidate, which combines a nanoparticle developed by a Duke-led research team with IDRI’s novel formulation of 3M’s “3M-052” compound, stimulates increased levels of production of “broadly neutralizing antibodies” against several strains of coronavirus, including bat coronaviruses.

Results showed the adjuvant component of the vaccine candidate provided a critical boost to induce the robust protection against SARS-CoV-2 and increased production of antibodies that may confer protection against emerging SARS-CoV-2 variants, potentially preventing future pandemics.

IDRI’s formulation of 3M-052 is an “adjuvant” formulation – it is designed to stimulate and to enhance the strength and breadth of immune responses produced by vaccines. An “adjuvanted” vaccine, such as the Duke-3M-IDRI candidate, not only holds promise for broad protection against the whole family of coronaviruses, but also may reduce the need for booster shots, which appear likely and necessary with currently authorized SARS-CoV-2 vaccines.

“The global COVID-19 pandemic comes amidst an alarming rise of coronavirus-related outbreaks over the past decades,” **Dr. Corey Casper, CEO of IDRI said.** “A pan-vaccine is needed to help end the fight against COVID-19 and be ready for the next pandemic. An effective coronavirus vaccine remains out of reach for millions of people around the globe, and this groundbreaking technology could provide broad protection against coronaviruses now and in the future.”

Multiple studies have shown that the 3M-052/Alum formulation elicits a strong, durable immune response in preclinical studies and these promising results continue to be studied at major academic centers across the U.S. “The 3M-052/Alum adjuvant formulation is enabling advanced development of new vaccines against challenging disease targets, including an ongoing Phase 1 clinical trial with an HIV vaccine candidate,” said Dr. Christopher Fox, Vice President of Formulations at IDRI and inventor of the adjuvant formulation technology.

Researchers also tested an mRNA vaccine candidate similar to those now approved for emergency use to determine their ability to generate neutralizing antibodies against additional coronaviruses other than COVID-19. Results from this study demonstrate that RNA vaccine technology also produces antibodies, albeit at lower levels than the adjuvanted vaccine, that may also confer protection from emerging COVID-19 variants and future pandemics.

The world has seen a dramatic increase in the number of global pandemic infections from coronaviruses over the last two decades, with outbreaks of SARS, MERS and most recently SARS-CoV-2. According to Dr. Casper, “We envision a near future where vaccine adjuvants will offer the type of protection that will be required to prevent respiratory pandemics with coronavirus or influenza. We are working with partners to quickly move these solutions to early phase clinical trials in humans so they can be part of a multi-pronged approach to reduce the chance that something like the COVID-19 pandemic could ever happen again.”

Members of the media wishing to conduct interviews with Dr. Casper prior may contact Alex Siciliano of The Petrizzo Group: alex@petrizzogroup.com or at (626) 818-8093.

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IDRI is a nonprofit biotech organization located in Seattle, Washington that combines high-quality scientific research with product development and manufacturing capabilities to help combat some of the world's deadliest diseases, including COVID-19. For nearly three decades, much of IDRI's work has been focused on creating immune-enhancing technologies that improve the body's natural response to disease. It is IDRI's mission to make these technologies widely available at a low cost and to build a world in which every person has access to the tools that harness their immune systems and allow for a long, healthy life free of disease.