



Immunome Awarded Department of Defense Contract to Develop Biosynthetic Convalescent Plasma for COVID-19

Up to \$13.3M funding to accelerate development and early clinical testing of antibodies derived from large-scale B cell interrogation of COVID-19 “Super-Responders”

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EXTON, Pa.--(BUSINESS WIRE)--Immunome, a biotechnology company that harnesses the human B cell response to develop first-in-class therapeutics for oncology and infectious diseases, announced today it has been awarded up to \$13.3M from the U.S. Department of Defense (DoD) to use its proprietary technology to develop a novel biosynthetic convalescent plasma (BCP) as a new potential approach to combat the COVID-19 pandemic. Immunome's technology works with breadth, depth and speed to interrogate B cells from patients who have successfully recovered from the COVID-19 infection. Through this effort, Immunome intends to identify a combination of antibodies that are broadly active against the virus, enable multiple viral clearance mechanisms and will be synthetically manufactured for availability to broad patient populations.

Immunome's scientific founder, Dr. Scott Dessain, MD, PhD, and his colleagues have validated this technology platform by successfully identifying broadly neutralizing antibodies against various strains of the poliovirus^{1,2,3}. In addition to using this technology to prevent and treat COVID-19, the company is in pre-clinical testing of antibody-based therapeutics against multiple novel oncology targets.

“With this endeavor, Immunome is harnessing its foundational B cell biology and antibody expertise towards COVID-19 research. We are thankful to the DoD, in collaboration with the Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense (JPEO-CBRND) and its Joint Project Manager for Chemical, Biological, Radiological and Nuclear Medical (JPM CBRN Medical), for understanding and recognizing the potential of Immunome's therapeutic antibody discovery engine in the development of a new treatment against the deadly SARS-CoV-2 virus,” said Purnanand Sarma, PhD, president and CEO of Immunome. “Our proprietary technology is designed to rapidly evaluate the broad immune response of patients who have recovered from COVID-19 by generating up to 10,000 B cell hybridomas from each patient. By doing this in a completely unbiased manner, we aim to isolate the most potent antibodies against this viral threat. If successful, this approach may be used for both treatment and prophylaxis.”

Convalescent plasma, which is derived from patients who have recovered from a disease, has been used to treat patients during the 1918 flu pandemic and more recently to fight severe cases of the flu, MERS, SARS, and even COVID-19. While promising, convalescent plasma has limitations, such as availability of donor plasma at large scale, donor-to-donor variability related to their individual response, and time of collection. Immunome's approach is designed to overcome these challenges and provide an industrially scalable, standardized process for development and manufacturing of a BCP alternative to convalescent plasma that may comprise 4-6 highly potent anti SARS-CoV-2 antibodies.

“Antibody-rich plasma from COVID-19 survivors is emerging as a successful treatment for newly infected patients,” said infectious diseases specialist Dr. Jeffrey Henderson, MD, PhD, an associate professor of medicine at Washington University School of Medicine in St. Louis and a member of the National COVID-19 Convalescent Plasma Project (www.ccpp19.org). “These results suggest that Immunome’s approach of reproducing the multi-faceted antibody response of COVID-19 survivors could be particularly effective in treating patients, or possibly as a preventive. The consistency and scale of lab-produced antibodies also may help more rapidly facilitate the supply of antibodies available for clinical use.”

The DoD’s JPEO-CBRND, and its subordinate JPM CBRN Medical, provide medical countermeasures for the warfighter and the nation against biological and chemical agents of concern. This award draws on that expertise to respond to the COVID-19 outbreak.

Immunome’s technology may also have applicability beyond COVID-19, as it can also be used as a rapid response technology to quickly develop treatments during future outbreaks from other infectious agents.

About the DoD

The United States Department of Defense is an executive branch department of the U.S. federal government charged with coordinating and supervising all agencies and functions of the government directly related to national security and the United States Armed Forces.

About the JPEO-CBRND and JPM CBRN Medical

The Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense (JPEO-CBRND) protects the Joint Force by providing medical countermeasures and defense equipment against chemical, biological, radiological and nuclear threats. As an effective DoD acquisition program, the JPEO-CBRND’s vision is a resilient Joint Force enabled to fight and win unencumbered by a CBRN environment; championed by innovative, agile, results-oriented acquisition professionals. The Joint Project Manager for Chemical, Biological, Radiological, and Nuclear Medical (JPM CBRN Medical) facilitates the advanced development and acquisition of medical solutions to combat CBRN and emerging threats. JPM CBRN Medical works with JPEO-CBRND’s Joint Project Lead for Chemical, Biological, Radiological and Nuclear Defense - Enabling Biotechnologies to provide new and improved medical countermeasures to enable a single treatment for many threats, rapid medical countermeasure responses, genomic sequencing and the capability to diagnose CBRN threats before the onset of symptoms. To learn more about JPEO-CBRND’s COVID-19 response, visit <https://www.jpeocbrnd.osd.mil/coronavirus>.

About Immunome

Immunome is developing first-in-class therapies by unlocking the disease-educated B cell response from patients. Its proprietary discovery engine identifies antibody-target pairs by interrogating the patient response with depth, breadth, and speed. Using this rich source of antibody-target pairs, Immunome is developing new therapies and exploring vast, untapped biology in high unmet need areas, such as cancer and infectious diseases. For more information about the company, visit immunome.com.

¹ *Vaccine*, 35:5455-5462; 2017 (doi: 10.1016/j.vaccine.2017.03.038.)

² *J Virol Methods*. 276:113785 (doi: 10.1016/j.jviromet.2019.113785)

³ *Antibodies*, 9; 2020 (doi.org/10.3390/antib9010005)

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