
Adimab Scientists Report the Isolation of Highly Potent anti-RSV Antibodies

Panel Includes Several Product Candidates That Could Lead to Improved Therapeutic and Prophylactic Treatments

Lebanon, New Hampshire – December 9, 2016 – Scientists at Adimab, LLC, the global leader in the discovery of human antibodies, today published a report in *Science Immunology* about the isolation of a panel of novel, highly potent anti-RSV antibodies from human donors. All antibodies were isolated from naturally infected adults using Adimab's single B cell isolation technology. The newly reported panel comprises the most potent anti-RSV antibodies found in the literature to date. The work follows a publication from earlier this year on broadly neutralizing anti-Ebola antibodies generated using the same technology.

"We developed a fast and efficient B cell cloning technology that works seamlessly with our yeast-based antibody discovery and optimization platform," Dr. Laura Walker, lead scientist of the study, remarked about the underlying technology that led to the isolation of this novel panel of antibodies. "We are excited about these antibodies for potential therapeutic use, and also about the contributions that the work stands to make to future vaccine design."

Dr. Walker's team cloned over 300 RSV-specific antibodies from the memory B cells of three healthy adult donors using the Adimab B cell isolation platform. With these antibodies, the authors were able to generate a comprehensive map of the antigenic topology of the RSV fusion (F) protein. The target protein exists in two conformations, known as prefusion and postfusion, the former of which has recently been stabilized by Dr. Jason McClellan's lab at Dartmouth College. The team at Adimab was able to identify a previously undefined antigenic site on prefusion F, termed site V, which nearly half of the most potent neutralizing antibodies engaged.

"Working with Adimab has been great. It has given us the ability to identify antibodies from human donors with remarkable efficiency and speed," said Dr. McClellan, Assistant Professor of Biochemistry at Dartmouth College's Geisel

School of Medicine. "With this new panel of antibodies in hand, we have created a detailed picture of the human antibody response to RSV infection. These results will facilitate the generation and validation of new RSV vaccine candidates."

"Dr. Walker's team has again shown the power of our human B cell isolation technology. Within weeks her team was able to isolate some of the most potently neutralizing anti-RSV antibodies reported to date. Naturally, we are excited about the prospect of improving the clinical outcomes of RSV infections and finding a suitable partner for clinical development and commercialization," said Tillman Gerngross, Chief Executive Officer and Co-Founder of Adimab.

The study, entitled "Rapid profiling of RSV antibody repertoires from the memory B cells of naturally infected adult donors", is available online and will be published in the December 9, 2016 issue of *Science Immunology*. This is the largest panel of RSV neutralizing antibodies published to date, and the sequences will be made available via GenBank.

Currently, Adimab's B cell isolation technology can be deployed against any human or murine memory B cell source. This includes naturally infected or vaccinated donors, as well as immunized mice. The antibodies can be isolated, cloned, and produced for characterization in a matter of weeks. Once transferred into the Adimab system, the antibodies can be further optimized with a wide array of protein engineering tools. In the past year alone, Adimab has applied this technology to multiple targets including Ebola (published in *Science* in February 2016 and available here), RSV, CD3, and most recently to Zika virus.

About Adimab

Over the past seven years, Adimab has established antibody discovery collaborations with over 40 companies including many leading pharmaceutical companies, such as Merck, Novo Nordisk, Biogen, GSK, Roche, Novartis, Eli Lilly, Genentech, Celgene, Gilead, Kyowa Hakko Kirin, Takeda, and Sanofi. In addition, Adimab has partnered with several smaller publicly traded companies, such as Acceleron, Merrimack Pharmaceuticals, Kite, Five Prime, as well as leading venture-backed companies including Jounce, Mersana, Alector, Arsanis, Surface Oncology, Potenza, Tizona, Tusk and several academic institutions such as Memorial Sloan Kettering and MD Anderson. The Adimab antibody discovery and optimization platform has also been transferred to several large pharmaceutical companies including Merck, Novo Nordisk, Biogen and GSK for internal use.

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