Inhibrx and The Alpha-1 Project Collaborate to Develop a Recombinant Alpha-1 Antitrypsin with Improved Properties

Inhibrx's AAT-Fc therapeutic should benefit patients with enhanced efficacy and less frequent dosing
Alpha-1 Project collaborating with industry to accelerate drug development

LA JOLLA, CA and MIAMI, FL, September 17, 2015 /PR NEWSWIRE/ —Inhibrx and The Alpha-1 Project, Inc. (TAP), a wholly owned subsidiary of the Alpha-1 Foundation, today announced they are collaborating to develop a recombinant alpha-1 antitrypsin therapeutic with improved properties. As a part of the collaboration, TAP is making an equity investment in Inhibrx's AAT entity. Terms of the collaboration and equity investment were not disclosed.

Genetic emphysema is caused by a deficiency in alpha-1 antitrypsin (AAT), a protein that protects tissues such as lung from the destructive enzymes of inflammatory cells. In people who have AAT deficiencies, these inflammatory enzymes cause excessive breakdown of lung tissue, resulting in emphysema – also a key feature of a syndrome known as COPD (chronic obstructive pulmonary disease). "Recent studies show augmentation therapy with plasma derived AAT protein is effective in slowing the progression of lung destruction in patients with Alpha-1," said John Walsh, CEO and co-founder of the Alpha-1 Foundation.

Inhibrx developed a fully active recombinant AAT IgG Fc fusion protein engineered to eliminate inactivation by oxidation and further extend half-life. In animal studies, this therapeutic injected intravenously reached the lung and significantly inhibited neutrophil elastase activity. Sensitive ex vivo immunogenicity testing indicate a lower risk of immunogenicity with Inhibrx's AAT-Fc therapeutic compared to serum derived AAT. Serum derived products are produced from pooled donor serum, wherein allelic variation can introduce multiple protein species into the final product, thereby enhancing the risk of immunogenicity. Recombinant proteins are derived from clonal genetic material enabling the production of homogenous therapeutic protein products.

"Inhibrx's AAT-Fc therapeutic should benefit patients with enhanced efficacy and less frequent dosing," said Mark Lappe CEO of Inhibrx. "In addition, our therapeutic has superior manufacturing economics and is scalable as demand increases."

Inhibrx's AAT-Fc therapeutic will be manufactured in mammalian cells, the industry standard for commercial therapeutic antibody and Fc fusion protein production. Cell line development data indicate this therapeutic is a high yielding protein that is easily scalable.

"This is another example of TAP collaborating with industry to accelerate the drug development process," said Jean-Marc Quach, Executive Director of TAP. "If we are successful in our efforts, our patients will experience an improvement in the quality of life through less frequent dosing and enhanced efficacy," he added.

About Inhibrx

Inhibrx is a biologic therapeutic company focused on the treatment of high unmet medical needs in oncology, infectious disease and inflammatory conditions. Inhibrx's proprietary platforms enable fit-for-function biotherapeutics that optimally interface with the biology of each target antigen, focus immune activation and mediate enhanced signaling. Inhibrx's programs are based on comprehensive target discovery and selection expertise coupled with the creative implementation of multiple antibody and biologic development strategies.

About The Alpha-1 Project

Mission statement: The Alpha-1 Project will work with patients, academia, pharmaceutical and biotech companies, and public health organizations in the relentless pursuit of cures and therapies for COPD and liver disease caused by Alpha-1 Antitrypsin Deficiency. For more information, visit www.thealpha-1project.com. The Alpha-1 Project is a wholly owned for-profit subsidiary of the Alpha-1 Foundation. For more information on the Foundation, visit alpha1.org.

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