Selecta Biosciences and Genovis Enter Exclusive License Agreement to Advance Next-Generation IgG Protease in Gene Therapy and Autoimmune Disease

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- Selecta obtains from Genovis exclusive worldwide rights to Xork, a differentiated IgG protease -
- Selecta combines ImmTOR™ platform with Genovis’ novel IgG protease, Xork, to unlock the full potential of transformative gene therapies and treat certain IgG-mediated autoimmune diseases -
- This novel combination has the potential to simultaneously address two of the key hurdles in gene therapy today: pre-existing immunity and the inability to re-dose AAV gene therapies -

WATERTOWN, Mass., Oct. 21, 2021 (GLOBE NEWSWIRE) -- Selecta Biosciences, Inc. (NASDAQ: SELB), a biotechnology company leveraging its clinically validated ImmTOR™ platform to develop tolerogenic therapies that selectively mitigate unwanted immune responses, and Genovis (GENO), an enzyme technology company, today announced a strategic licensing agreement to advance a next-generation IgG protease. This partnership leverages Genovis’ proprietary immunoglobulin G (IgG) protease, IdeXork (Xork), and Selecta’s ImmTOR platform to enable the dosing of transformative gene therapies in patients with pre-existing adeno-associated virus (AAV) immunity and treat certain IgG-mediated autoimmune diseases.

Most IgG proteases are derived from human pathogens and have a high prevalence of pre-existing antibodies. Xork is derived from a Streptococcal bacterial strain that does not infect humans. The preclinical data generated to date highlights Xork’s differentiated profile - demonstrating very low cross-reactivity with naturally occurring antibodies in human sera while retaining efficient and specific cleavage of human IgG antibodies.

Currently, pre-existing IgG antibodies against AAV gene therapy vectors are a major exclusion criterion for AAV gene therapy eligibility, affecting upwards of 40% of the population. Additionally, de novo immunogenicity that follows treatment by AAV gene therapy results in the formation of high titers of neutralizing antibodies. These neutralizing antibodies preclude re-treatment of those patients who may need additional dosing to maintain therapeutic benefit. The combination of Xork and ImmTOR has the potential to both mitigate pre-existing antibodies to AAV, expanding access to gene therapy to a wider range of patients, and prevent de novo immunogenicity, keeping patients eligible for re-treatment.

Additionally, bacterial-derived IgG proteases are themselves immunogenic. Currently, IgG proteases can only be administered once due to the formation of high titer antibodies against the protease itself. The combination of Xork and ImmTOR is further differentiated by the potential of ImmTOR to mitigate the immunogenicity of Xork and enable re-dosing of Xork, an important benefit for the application of IgG proteases in autoimmune diseases mediated by pathogenic autoantibodies.

Fredrik Olsson, chief executive officer of Genovis, commented, “We are excited to partner with Selecta as we look to expand into the gene therapy field and address the challenge of pre-existing immunity to AAV vectors. While IgG proteases have shown promise, overcoming the immunogenicity of the enzyme remains a significant hurdle. We believe Selecta’s ImmTOR platform, which is designed to mitigate unwanted immune responses, in combination with Xork has the potential to be transformational in both gene therapies and autoimmune diseases.”

“We see this strategic collaboration with Genovis as an important step in expanding our pipeline of novel therapeutics in combination with our ImmTOR platform,” said Carsten Brunn, Ph.D., president and chief executive officer of Selecta. “Our preclinical findings in gene therapy indicate that ImmTOR has the potential to increase transgene expression and durability, enable re-dosing by inhibiting the formation of neutralizing antibodies and potentially lead to safer, more efficacious gene therapy treatment regimens. The partnership between Selecta and Genovis focuses on those patients who would otherwise be unable to be treated due to pre-existing immunity to AAV. The combination of ImmTOR with Xork has the potential to significantly expand access to life changing gene therapies for those patients in need.”

Terms of agreement
Under the terms of the agreement, Selecta has provided Genovis with an upfront payment for an exclusive license to Xork for all therapeutic uses in humans while Genovis retains rights to research, preclinical, diagnostic, and other potential non-therapeutic applications of Xork. Additionally, Genovis is eligible to earn development and sales-based milestones, as well as tiered royalties on worldwide sales in the low double digits.

About Selecta Biosciences, Inc.
Selecta Biosciences Inc. (NASDAQ: SELB) is a clinical stage biotechnology company leveraging its ImmTOR platform to develop tolerogenic therapies that selectively mitigate unwanted immune responses. With a proven ability to induce tolerance to highly immunogenic proteins, ImmTOR has the potential to amplify the efficacy of biologic therapies, including redosing of life-saving gene therapies, as well as restore the body’s natural self-tolerance in autoimmune diseases. Selecta has several proprietary and partnered programs in its pipeline focused on enzyme therapies, gene therapies, and autoimmune diseases. Selecta Biosciences is headquartered in the Greater Boston area. For more information, please visit www.selectabio.com.

About Genovis
Business concept is to apply its knowledge and customer driven innovation to design and provide tools for the development of the drugs of the future. Today Genovis sells several enzyme products known as SmartEnzymes™ all over the world in innovative product formats that facilitate development and quality control of biological drugs. The Group consists of Genovis AB and the wholly owned subsidiary Genovis Inc. (US). Genovis shares are
Selecta Forward-Looking Statements

Any statements in this press release about the future expectations, plans and prospects of Selecta Biosciences, Inc. (“the Company”), including without limitation, statements regarding the unique proprietary technology platform of the Company, the unique proprietary platform of its partners, the programs and potential disease indication targets anticipated under this agreement, the ability of any drug candidate developed under this agreement to offer a therapeutic benefit compared to existing therapies, the potential of ImmTOR to enable re-dosing of AAV gene therapy, to enhance transgene expression and to mitigate immunogenicity, the potential treatment applications of product candidates utilizing the ImmTOR platform in areas such as gene therapy, the ability of the Company and its partners where applicable to develop gene therapy products using ImmTOR, the novelty of treatment paradigms that the Company is able to develop, the potential of the ImmTOR technology platform generally and the Company’s ability to grow its strategic partnerships, and other statements containing the words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “hypothesize,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “would,” and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including, but not limited to, the following: the unproven approach of the Company’s ImmTOR technology, our partners’ ability to develop products under the agreement, undesirable side effects of the Company’s technology, its reliance on third parties to manufacture its product candidates and to conduct its development activities, the Company’s inability to maintain its existing or future collaborations, licenses or contractual relationships, its inability to protect its proprietary technology and intellectual property, the availability of funding sufficient for its foreseeable and unforeseeable operating expenses and capital expenditure requirements, the Company’s recurring losses from operations and negative cash flows from operations, substantial fluctuation in the price of its common stock, and other important factors discussed in the “Risk Factors” section of the Company’s most recent Annual Report on Form 10-K, and in other filings that the Company makes with the Securities and Exchange Commission. In addition, any forward-looking statements included in this press release represent the Company’s views only as of the date of its publication and should not be relied upon as representing its views as of any subsequent date. The Company specifically disclaims any intention to update any forward-looking statements included in this press release.

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