Selecta Biosciences Collaborators at the National Cancer Institute Present Preclinical Data Showing SVP-Rapamycin Application to Cancer Therapy

October 31, 2016 8:01 AM ET

- *Data Underscore Potential of SVP-Rapamycin to Improve Therapeutic Benefit and Tolerability by Mitigating Unwanted Human Immune Responses*
- *Results Presented at the Immunogenicity and Bioassay Summit*

WATERTOWN, Mass., Oct. 31, 2016 (GLOBE NEWSWIRE) -- Selecta Biosciences, Inc. (NASDAQ:SELB), a clinical-stage biopharmaceutical company developing a novel class of targeted antigen-specific immune therapies, today announced that results from preclinical studies involving SVP-Rapamycin, the company's novel immunotherapeutic, were presented by its collaborators Ira Pastan, MD, Chief of the Laboratory of Molecular Biology, and Ronit Mazor, Ph.D., Postdoctoral Fellow at Center for Cancer Research at the National Cancer Institute (NCI), part of the National Institutes of Health.

Through a collaboration under a Cooperative Research and Development Agreement (CRADA) between Selecta and NCI, the results were obtained by co-administration of SVP-Rapamycin with an investigational anti-cancer therapeutic, LMB-100. LMB-100 is a next-generation recombinant immunotoxin (rIT) developed in the Pastan Lab that is currently undergoing Phase 1 clinical trials at the NIH Clinical Center in patients with mesothelioma and pancreatic cancer.

Dr. Pastan's presentation at the Immunogenicity and Bioassay Summit 2016 in Baltimore, Maryland was entitled, "Strategies to Reduce Immune Response to Immunotoxins," and Dr. Mazor's presentation was entitled, "Induction of Tolerance to Immunotoxins Using Nanoparticle Delivery of Rapamycin." Further, Dr. Mazor presented a poster with the title "Nanoparticle-Encapsulated Rapamycin Prevents Primary and Secondary Immune Responses in Murine Models."

LMB-100 is a next-generation immunotoxin comprised of a mesothelin-targeting antibody fragment linked to an engineered cytotoxic domain of Pseudomonas exotoxin A. The majority of mesothelioma patients treated with an earlier version of LMB-100, called SS1P, experienced dose-limiting immune responses despite the use of potent immunosuppressants. However, the few patients tolerating more than one treatment cycle in this trial showed marked antitumor activity in patients with chemotherapy-refractory mesothelioma.

The co-administration of SVP-Rapamycin with LMB-100 in mice models prevented the formation of anti-LMB-100 antibodies and allowed for the administration of at least four treatment cycles, representing a marked increase in the number of effective doses that could be administrated without the onset of neutralizing antibodies. Further, in a tumor model, the addition of SVP-Rapamycin restored the beneficial effect of LMB-100 on controlling tumor growth.

"These pre-clinical proof of concept data clearly demonstrate the potential benefit of co-administrating LMB-100 and SVP-Rapamycin, two products currently used in clinical trials," said Peter Keller, M.Sc., Chief Business Officer at Selecta. "The program is part of our objective to extend our clinical pipeline by applying our SVP technology platform to oncology treatments. In oncology, the effectiveness of many therapies could be enhanced by antigen-specific mitigation of undesired immune responses."

Selecta is developing SVP-Rapamycin for co-administration with biologic therapies for the antigen-specific mitigation of undesired humoral and cellular immune responses. The company is focused on three strategic areas: enzyme therapy, gene therapy and oncology. SVP-Rapamycin has the potential to be co-administered with a multitude of biologic drugs that have been identified in each of these areas to increase the number of treatable patients and/or enhance efficacy and safety.

Selecta's lead product candidate, SEL-212, applies SVP-Rapamycin to pegsiticase, a pegylated uricase. SEL-212 is designed to be the first non-immunogenic version of uricase, an immunogenic enzyme that targets uric acid. SEL-212 is in a Phase 2 clinical trial and is being developed for patients with chronic refractory and tophaceous gout.

About LMB-100

LMB-100 is a next generation immunotoxin comprised of a mesothelin-targeting antibody fragment linked to an engineered cytotoxic domain of Pseudomonas exotoxin A. Mesothelin, a cell surface antigen discovered in Ira Pastan's laboratory at NCI, is overexpressed in mesothelioma, pancreatic, ovarian and lung cancers. Dr. Pastan is a world-renowned expert in the design and development of immunotoxins. A first generation mesothelin-targeted immunotoxin, SS1P, could only be given for 1 cycle because it was immunogenic, but showed marked antitumor activity in patients with chemotherapy-refractory mesothelioma, when combined with drugs to suppress the development of anti-drug antibodies. LMB-100 was engineered to reduce immunogenicity and off target toxicity. LMB-100 is currently in phase 1 clinical studies by CCR investigators at the NIH Clinical Center in Bethesda, Maryland.

About Selecta Biosciences, Inc.

Selecta Biosciences, Inc. is a clinical-stage biopharmaceutical company developing targeted therapies that use immunomodulators encapsulated in nanoparticles to induce antigen-specific immune responses to prevent and treat disease. Selecta's proprietary Synthetic Vaccine Particle (SVP) technology is a highly flexible nanoparticle platform, capable of incorporating a wide range of antigens and immunomodulators, allowing the SVP-based products to either induce antigen-specific tolerance or activate the immune system.

Selecta's focus and strategy is to leverage its SVP immune modulating platform to develop and commercialize highly differentiated life-sustaining biologic drugs that are uniquely capable of mitigating the formation of anti-drug antibodies (ADAs). Proprietary programs that use SVP-Rapamycin to enhance efficacy and safety of therapy include SEL-212, Selecta's lead Phase 2 clinical program in chronic refractory gout, and two gene therapies programs for genetic metabolic diseases. Tolerance-inducing SVP biological products also have potential applications in the treatment of allergies and autoimmune diseases.

Selecta is also developing SVP products that activate the immune system to prevent and treat cancer, infections and other diseases.

Selecta is based in Watertown, Massachusetts, USA. For more information, please visit http://selectabio.com.

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 impact of the Company's initial public offering on its financial position and the development of its pipeline, the timing of the Phase 2 clinical trial of SEL-212, including initiation, announcement of data, conference presentations, the number of centers in the Phase 2 clinical trial of SEL-212, the ability of the Company's SVP platform, including SVP-Rapamycin, to mitigate immune response and create better therapeutic outcomes, the potential treatment applications for SVP products, the sufficiency of the Company's cash, cash equivalents, investments, and restricted cash 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 uncertainties inherent in the initiation, completion and cost of clinical trials including their uncertain outcomes, the availability and timing of data from ongoing and future clinical trials and the results of such trials, whether preliminary results from a particular clinical trial will be predictive of the final results of that trial or whether results of early clinical trials will be indicative of the results of later clinical trials, the unproven approach of the Company's SVP technology, potential delays in enrollment of patients, undesirable side effects of the Company's product candidates, its reliance on third parties to manufacture its product candidates and to conduct its clinical trials, the Company's inability to maintain its existing or future collaborations or licenses, its inability to protect its proprietary technology and intellectual property, potential delays in regulatory approvals, the availability of funding sufficient for its foreseeable and unforeseeable operating expenses and capital expenditure

requirements, substantial fluctuation in the price of its common stock, a significant portion of the Company's total outstanding shares are eligible to be sold into the market in the near future, and other important factors discussed in the "Risk Factors" section of the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission, or SEC, on August 9, 2016, and in other filings that the Company makes with the SEC. In addition, any forward-looking statements included in this press release represent the Company's views only as of the date of this release and should not be relied upon as representing its views as of any subsequent date. The Company specifically disclaims any obligation to update any forward-looking statements included in this press release.

Contact Information:
Jason Fredette
Selecta Biosciences
617-231-8078
jfredette@selectabio.com

Selecta Biosciences Inc