Selecta Biosciences Announces First Patient Dosed in Phase 1 Trial of SVP-Rapamycin and LMB-100 Combination Therapy in Mesothelioma

WATERTOWN, Mass. – March 12, 2018 – Selecta Biosciences, Inc. (Nasdaq: SELB), a clinical-stage biopharmaceutical company focused on unlocking the full potential of biologic therapies by avoiding unwanted immune responses, today announced that the first patient has been dosed in a Phase 1 clinical trial of SEL-403, Selecta's product candidate consisting of SVP-Rapamycin in combination with LMB-100. The trial (ClinicalTrials.gov Identifier# NCT03436732), is enrolling patients with malignant pleural or peritoneal mesothelioma who have undergone at least one regimen of chemotherapy, and it is being conducted under a Cooperative Research and Development Agreement (CRADA) with the National Cancer Institute (NCI), part of the National Institutes of Health.

SVP-Rapamycin is Selecta's proprietary, clinical-stage anti-drug antibody (ADA) prevention and immune tolerance technology. LMB-100 is a recombinant immunotoxin that targets mesothelin, a protein expressed in nearly all mesotheliomas and pancreatic adenocarcinomas, and a high percentage of other malignancies, including lung, breast and ovarian cancers. A paper co-authored by Selecta and researchers at the NCI discussing preclinical work completed with this combination therapy candidate was recently published in *Proceedings of the National Academies of Sciences (PNAS, 2018 Jan 23;115(4): E733-E742)*.

"Mesothelioma remains one of the deadliest and most challenging-to-treat forms of cancer," stated Raffit Hassan, M.D., Senior Investigator, Thoracic and GI Oncology Branch in NCI's Center for Cancer Research and Principal investigator of the trial. "Recombinant immunotoxins hold the potential to induce marked anti-tumor activity if anti-drug antibodies are prevented and sufficient cycles of therapy can be administered. We are pleased to get this clinical investigation underway to determine if patients may indeed benefit from a combination therapy consisting of LMB-100 and SVP-Rapamycin."

Patients in this open-label dose-escalation trial will receive up to four treatment cycles, each treatment cycle consisting of an initial dose of the combination of SVP-Rapamycin and LMB-100 on day 1 followed by two doses of LMB-100 alone on days 3 and 5. The study, which is expected to enroll up to 18 patients, is designed to evaluate the safety and tolerability of this treatment and provide data on pharmacokinetics, anti-drug antibody (ADA) levels, as well as an objective response rate assessment.

For Patients

Patients interested in enrolling please contact NCI's toll-free number 1-800-4-Cancer (1-800-422-6237) (TTY: 1-800-332-8615) and/or the Web site: https://trials.cancer.gov

About Mesothelioma

Mesothelioma is a mesothelin-expressing cancer predominantly affecting the layer of tissue lining the lungs and chest wall. This type of cancer has been linked to asbestos exposure. According to the American Cancer Society, approximately 3,000 people are diagnosed with this disease each year in the United States. The prognosis for mesothelioma is very poor, with an average life expectancy of 12-18 months following diagnosis.

About Selecta Biosciences, Inc.
Selecta Biosciences, Inc. is a clinical-stage biopharmaceutical company that is focused on unlocking the full potential of biologic therapies by avoiding unwanted immune responses. Selecta plans to combine its tolerogenic Synthetic Vaccine Particles (SVP™) to a range of biologics for rare and serious diseases that require new treatment options. The company's current proprietary pipeline includes SVP-enabled enzyme, oncology and gene therapies. SEL-212, the company's lead candidate in Phase 2, is being developed to treat severe gout patients and resolve their debilitating symptoms, including flares and gouty arthritis. Selecta's SEL-403 product candidate, a combination therapy consisting of SVP-Rapamycin and LMB-100, recently entered a Phase 1 trial in 2018 for the treatment of patients with malignant pleural or peritoneal mesothelioma. Selecta's proprietary gene therapy product candidates are being developed for rare inborn errors of metabolism and have the potential to enable repeat administration. The use of SVP also holds potential in the development of vaccines and treatments for allergies and autoimmune diseases. Selecta is based in Watertown, Massachusetts. For more information, please visit http://selectabio.com and follow @SelectaBio on Twitter.

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 progress of the Phase 1 trial for SEL-403, whether recombinant immunotoxins hold the potential to induce marked anti-tumor activity if ADA's are prevented and sufficient cycles of therapy can be administered, whether mesothelioma patients would benefit from a combination therapy consisting of LMB-100 and SVP-Rapamycin, the company's ability to locate and enroll a sufficient number of eligible patients to participate in this trial, the potential of SEL-212 to treat severe gout patients and resolve their debilitating symptoms, the company's ability to unlock the full potential of biologic therapies, the company's plan to apply its SVP platform to a range of biologics for rare and serious diseases, the potential applications for products utilizing the SVP platform in areas such as enzyme therapy, gene therapy, oncology therapy, vaccines and treatments for allergies and autoimmune diseases, the potential of the company's two gene therapy product candidates to enable repeat administration 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 unproven approach of the company's SVP technology, 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, licenses or contractual relationships, 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 have recently become eligible to be sold into the market, 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 November 7, 2017, 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 its publication 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.

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