



## Selecta Biosciences Announces Frontiers in Immunology Publication Showcasing the Enhanced Hepatic Tolerogenic Potential of ImmTOR™

June 1, 2021

*– Data demonstrate that ImmTOR enhances the tolerogenic environment in the liver–*

*– ImmTOR data show induction of a tolerogenic phenotype in all major hepatic antigen presenting cell populations and is protective in an acute model of autoimmune hepatitis*

*–Publication further supports development of Selecta’s ImmTOR platform for the treatment of liver-specific autoimmune diseases, including primary biliary cholangitis, Selecta’s first autoimmune indication–*

WATERTOWN, Mass., June 01, 2021 (GLOBE NEWSWIRE) -- Selecta Biosciences, Inc. (NASDAQ: SELB, "Selecta"), a biotechnology company leveraging its clinically validated ImmTOR™ platform to develop tolerogenic therapies that selectively mitigate unwanted immune responses, today announced the peer-reviewed publication of a study investigating the effects of ImmTOR nanoparticles in generating a tolerogenic environment in the liver. The data, published in a *Frontiers in Immunology* paper titled "[Enhancement of the Tolerogenic Phenotype in the Liver by ImmTOR Nanoparticles](#)," demonstrate that ImmTOR induces a tolerogenic phenotype in all major resident antigen-presenting cell populations in the liver, resulting in modulation of hepatic T cell populations. These findings demonstrate the capability of Selecta’s ImmTOR platform in promoting hepatic immune tolerance, providing support for the potential of ImmTOR for the treatment of autoimmune diseases affecting the liver.

"Liver specific autoimmune diseases result from the loss of natural immunological tolerance to hepatic autoantigens," said Carsten Brunn, Ph.D., president and chief executive officer of Selecta. "The data outlined in this publication demonstrate that ImmTOR could effectively enhance the tolerogenic environment of the liver by inducing tolerogenic antigen-presenting cells and was observed to be protective in an acute mouse model of autoimmune hepatitis. These data are of particular relevance to our primary biliary cholangitis program, and we look forward to building on these findings as we advance our first autoimmune program towards the clinic."

In the study, researchers evaluated the uptake of ImmTOR in the liver and the downstream effects of ImmTOR on the immune landscape within the liver environment. Flow cytometry indicated that all resident antigen-presenting cell (APCs) populations in the liver successfully took up ImmTOR upon intravenous administration, which was associated with down-regulation of co-stimulatory molecules and upregulation of the PD-L1 checkpoint molecule that promotes tolerogenic immune responses. Notably, ImmTOR-treated liver sinusoidal endothelial cells (LSECs), which are involved in scavenging antigens from the bloodstream and are key hepatic APCs involved in immune tolerance, inhibited activation of antigen-specific T cells.

The researchers also observed that ImmTOR administration led to a substantial increase in PD-1 checkpoint molecule expression on T cells and the emergence of a double-negative (DN) T cell population that have been previously shown to play a role in suppressing the immune response. Additionally, ImmTOR treatment appeared to significantly decrease systemic inflammatory cytokine production, hepatic neutrophil infiltration and liver necrosis in a concanavalin A-mediated model of acute autoimmune hepatitis. Altogether, this publication supports the use of ImmTOR in generating a tolerogenic hepatic environment that can combat unwanted inflammatory responses in the liver.

Selecta is currently evaluating ImmTOR co-administered with PDC-E2, the autoantigen implicated in primary biliary cholangitis (PBC), for the treatment of PBC. PBC is an autoimmune disorder where the body mistakenly attacks tissue in the liver, leading to inflammation, damage and scarring of the small bile ducts. The program is currently in preclinical development.

### **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](http://www.selectabio.com).

### **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, and the unique proprietary platform of its partners, the potential of ImmTOR to treat autoimmune disease indications, the potential of ImmTOR to promote a tolerogenic environment in the liver, the timing of any clinical trials in the field of autoimmune disease, the potential treatment applications of product candidates utilizing the ImmTOR platform in areas such as autoimmune disease, the ability of the company to develop products using the ImmTOR technology, the novelty of treatment paradigms that the Company is able to develop, whether the observations made in pre-clinical study subjects will translate to studies performed with human beings, the potential of any therapies developed by the company to fulfill unmet medical needs, the company’s plan to apply its ImmTOR technology platform to a range of biologics for rare and orphan genetic diseases, 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 uncertainties inherent in the initiation, completion and cost of clinical trials including proof of concept trials, including the 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 ability to predict results of studies performed on human beings based on results of studies performed on mice or other animals, the unproven approach of the company's ImmTOR 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, 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, the company's recurring losses from operations and negative cash flows from operations raise substantial doubt regarding its ability to continue as a going concern, 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 Quarterly Report on Form 10-Q, 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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