



ReShape Lifesciences™ Announces Publication of Data on Proprietary Diabetes Bloc-Stim Neuromodulation™ (DBSN™) System in Peer Reviewed, *Frontiers in NeuroScience*

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Data Shows ReShape's DBSN™ System has Promise as a Novel, Adjustable and Localized Approach to Treat Type 2 Diabetes

SAN CLEMENTE, Calif., Oct. 25, 2022 (GLOBE NEWSWIRE) -- [ReShape Lifesciences™ \(Nasdaq: RSL\)](#), the premier physician-led weight loss and metabolic health solutions company, today announced that data on the Company's proprietary Diabetes Bloc-Stim Neuromodulation™ (DBSN™) system has been published in the Neural Technology Section of the peer reviewed journal *Frontiers in NeuroScience*.

The paper, authored by Jonathan Waataja, Ph.D., Director of Research at ReShape Lifesciences, among others, and entitled, "*Use of a Bio-electronic Device Comprising of Targeted Dual Neuromodulation of the Hepatic and Celiac Vagal Branches Demonstrated Glycemic Control in a Type 2 Diabetic Rat Model as well as in an Alloxan Treated Swine Model*," can be accessed through the following link <https://www.frontiersin.org/articles/10.3389/fnins.2022.1005932/full>.

"Type 2 diabetes remains challenging to effectively treat for the over 30 million Americans who suffer from the disease, especially considering an estimated 50% of type 2 diabetics do not take medications as prescribed¹," stated Charles Billington, M.D., co-author and Chief of Endocrinology at the Minnesota Veteran's Administration Medical Center and Professor of Medicine at the University of Minnesota. "Further, progression of type 2 diabetes significantly increases risks of stroke, myocardial infarction, microvascular events, and mortality². When this translates to humans and clinical use, it may greatly impact the standard of care for type 2 diabetes."

"Our innovative DBSN™ system may hold significant promise, as it is designed to address type 2 diabetes by electrically blocking the vagus nerve signals to the liver, which has been shown to decrease insulin resistance, while concurrently stimulating the vagus nerve feeding into the pancreas, which has been shown to release insulin," stated Jonathan Waataja, Director of Research at ReShape Lifesciences. "This study specifically tested the ability of the system to increase glycemic control in a rat model of type 2 diabetes and Alloxan treated swine. Based on the data generated, the study concluded that our proprietary DBSN™ system may be an adjustable and localized approach for treating type 2 diabetes."

The paper detailed that with blocking and stimulation of these vagus nerve branches, type 2 diabetic rats and swine experienced lowered blood glucose as measured by glucose tolerance tests. Further, fasting plasma glucose was suppressed for days in the swine, following the cessation block and stimulation signals, adding to the therapeutic effect. Additionally, pancreatic insulin response of the swine was not negatively affected by multiple applications of block and stimulation, indicating no beta cell (or insulin producing cell) exhaustion due to the procedure.

"The publication of the data in a well-regarded, peer reviewed journal is a clear indication of the strength of the evidence supporting our proprietary DBSN™ system and its potential to address the significant, global type 2 diabetes market," stated Paul F. Hickey, President and Chief Executive Officer of ReShape Lifesciences. "The compelling data generated thus far was funded by an NIH Small Business Innovation Research (SBIR) grant, and the company has received subsequent SBIR grant funding to focus on the development of this technology to treat hypoglycemia experienced by diabetics requiring insulin. This strong SBIR support further validates our belief that addressing type 2 diabetes in this manner has tremendous potential advantages over current treatment options. Specifically, our extremely novel vagus nerve block technology platform, combined with vagus nerve stimulation, may be able to reduce patients' dependence on medications in a very individualized manner. We believe that the device may have the ability to address the clear unmet need for a new non-pharmacological and patient-specific treatment providing improved efficacy and durability for type 2 diabetes."

About Diabetes Bloc-Stim Neuromodulation™ System

The Diabetes Bloc-Stim Neuromodulation™ (DBSN™) system is a novel therapeutic concept that is implanted minimally invasively and delivers bio-electronic neuromodulation of vagus nerve branches that are innervating organs which regulate plasma glucose. The DBSN™ system stimulates vagus celiac fibers of the pancreas to release insulin during stimulation, while blocking the hepatic vagal branch, innervating the liver, to decrease glucose release and decrease insulin resistance following ligation. The DBSN™ system utilizes a proprietary, reversible and adjustable electrical blockade felt to be key to the future of personalized medicine. The DBSN™ system is superior to both standalone stimulation of the vagus nerve that has shown mixed results, and vagus nerve ligation that has undesirable effects.

About ReShape Lifesciences™

ReShape Lifesciences™ is America's premier weight loss and metabolic health-solutions company, offering an integrated portfolio of proven products and services that manage and treat obesity and metabolic disease. The FDA-approved Lap-Band® Program provides minimally invasive, long-term treatment of obesity and is an alternative to more invasive surgical stapling procedures such as the gastric bypass or sleeve gastrectomy. Reshapecare™ is a virtual weight-management program that supports lifestyle changes for all weight-loss patients led by board certified health coaches to help them keep the weight off over time. The recently launched ReShape Marketplace™ is an online collection of quality wellness products curated for all consumers to help them achieve their health goals. The ReShape Vest™ System is an investigational (outside the U.S.) minimally invasive, laparoscopically implanted medical device that wraps around the stomach, emulating the gastric volume reduction effect of conventional weight-loss surgery. It helps enable rapid weight loss in obese and morbidly obese patients without permanently changing patient anatomy. For more information, please visit www.reshapelifesciences.com.

Forward-Looking Safe Harbor Statement

This press release may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Actual results

could differ materially from those discussed due to known and unknown risks, uncertainties, and other factors. These forward-looking statements generally can be identified by the use of words such as "expect," "plan," "anticipate," "could," "may," "intend," "will," "continue," "future," other words of similar meaning and the use of future dates. Forward-looking statements in this press release include statements about our expectation that the marketing campaign should continue to promote increased demand for Lap-Band® procedures and, thus, potentially a significant increase in revenues for ReShape. These and additional risks and uncertainties are described more fully in the company's filings with the Securities and Exchange Commission, including those factors identified as "risk factors" in our most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q. We are providing this information as of the date of this press release and do not undertake any obligation to update any forward-looking statements contained in this document as a result of new information, future events or otherwise, except as required by law.

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1. Nichols GA, Hillier TA, Brown JB. Progression from newly acquired impaired fasting glucose to type 2 diabetes. *Diabetes Care*. 2007;30(2):228-233.
2. Stratton IM, Adler AI, Neil HA, Matthews DR, Manley SE, Cull CA, Hadden D, Turner RC, Holman RR. Association of glycaemia with macrovascular and microvascular complications of type 2 diabetes (UKPDS 35): prospective observational study. *Bmj*. 2000;321(7258):405-412.



Source: ReShape Lifesciences Inc