



ReShape Lifesciences® to Present Data on its Proprietary Diabetes Bloc-Stim Neuromodulation™ Device at the Keystone Symposia on Type 2 Diabetes

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SAN CLEMENTE, Calif., April 27, 2023 (GLOBE NEWSWIRE) -- [ReShape Lifesciences™ \(Nasdaq: RSL\)](#) the premier physician-led weight loss and metabolic health solutions company, today announced it will present data on its proprietary Diabetes Bloc-Stim Neuromodulation™ (DBSN™) device in a poster at the Keystone Symposia on Type 2 Diabetes: Understanding its Early Drivers and the Road to Therapeutics, being held in Palm Springs, CA, May 1 – 4, 2023.

“Neuromodulation has demonstrated utility for the treatment of multiple diseases, representing a potential, unique treatment option for type 2 diabetes mellitus (T2DM), and we have demonstrated increased glycemic control in Zucker rodent and swine models of T2DM by utilizing sub-diaphragmatic vagus nerve neuromodulation with our DBSN™ device,” stated Jonathan Waataja, Director of Research at ReShape Lifesciences. “That said, there remains a need for treatments for T2DM in early- or pre-stage diabetes, a time that offers greater potential for strategies to delay or reverse diabetic progression. While lifestyle changes are often recommended to patients at this stage, there is a high degree of non-compliance. To this end, we tested two groups of swine that had attributes consistent of pre- and early-stage diabetes and determined that DBSN™ increased glycemic control in both groups. Hypothesizing that a barrier to utilizing this therapy, for diabetic patients, would be the willingness to have a device implanted. We surveyed 182 type 2 diabetics and found that 82% pursuing lifestyle modification would consider a device such as the DBSN.”

Poster Details:

- **Poster Title:** *Targeted Dual Sub-Diaphragmatic Vagus Nerve Neuromodulation Increased Performance on Oral Glucose Tolerance Tests and Reversed Fasting Plasma Glucose from Pre-Diabetic to Non-Diabetic Levels in Alloxan Treated Swine with Mild Glucose Intolerance*
- **Poster Number:** 2004
- **Authors:** Jonathan J Waataja, ReShape Lifesciences Inc.; Maneesh Shrivastav, Medtronic, Inc.; Charles J Billington, Veterans' Administration Medical Center, Minneapolis, MN
- **Session:** Poster Session 2
- **Date:** Wednesday, May 3, 2023
- **Time:** 7:30 pm PT

Increased glycemic control was demonstrated in a Zucker rodent model of T2DM by utilizing sub-diaphragmatic vagus nerve dual neuromodulation, utilizing reversible high frequency alternating current (at 5000 Hz) induced conduction block of the hepatic branch of the vagus nerve (innervating the liver), with simultaneous stimulation of the celiac branch of the vagus nerve (innervating the pancreas). The dual neuromodulation was found to be superior to standalone block or stimulation. These results were replicated in a chronic study in glucose intolerant alloxan treated swine. In both experiments, the animals demonstrated high fasting plasma glucose (FPG) and significant glucose intolerance, characteristics of an overt diabetic state. Subsequently, dual neuromodulation was tested on swine that had attributes consistent of pre- and early-stage diabetes, including non-alloxan and alloxan treated with mild glucose intolerance. Dual neuromodulation increased glycemic control in both groups which was demonstrated by increased performance on oral glucose tolerance tests (OGTTs) and also induced long lasting decreases in FPG. Following applications of block and stimulation (two days of separation), FPG decreased from an average of 102 ± 8 mg/dL (considered prediabetic) to 74 ± 2 mg/dL (considered non-diabetic).

“The compelling data on our proprietary DBSN™ device, presented at the Keystone Symposia on Type 2 Diabetes, further validates the market potential of this technology,” stated Paul F. Hickey, President and Chief Executive Officer of ReShape Lifesciences. “Backed by a strong intellectual property portfolio, the DBSN™ device’s dual vagus nerve neuromodulation selectively modulates vagal block and stimulation to the liver and pancreas, respectively, to manage insulin and blood glucose levels, which may be able to reduce patients’ dependence on medications in a very individualized manner. We will continue to collaborate with leading researchers and industry-leading strategic corporate partners, all while seeking additional NIH grant support for this program. If approved for commercial use, the DBSN™ device will further enhance our differentiated medical device offerings.”

About Diabetes Bloc-Stim Neuromodulation™ Device

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 electrically blocking the hepatic vagal branch, innervating the liver, to decrease glucose release and decrease insulin resistance following nerve blockade. 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® System 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 investigational Diabetes Bloc-Stim Neuromodulation™ (DBSN™) system utilizes a proprietary vagus nerve block and stimulation technology platform for the treatment of Type 2 diabetes and metabolic disorders. The Obalon® balloon technology is a non-surgical, swallowable, gas-filled intra-gastric balloon that is designed to provide long-lasting weight loss. 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 the DBSN™ system's potential treatment of T2DM. 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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