Orchestra BioMed Announces Late-Breaking Clinical Results Showing BackBeat Cardiac Neuromodulation Therapy™ Drives Significant Reduction in Systolic Blood Pressure

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Double-blind, randomized trial data demonstrates clinically meaningful and statistically significant difference of 8.1 mmHg in reduction of 24-hour ambulatory systolic blood pressure at 6 months vs. control

High responder rate despite 88.5% of treated patients having isolated systolic hypertension (ISH)

Primary safety endpoint achieved with no difference in major cardiac adverse events (MACE) or other cardiac parameters between the two groups at 6 months

New Hope, PA – Orchestra BioMed ™,Inc., ("Orchestra BioMed" or the "Company"), a biomedical innovation company providing high-impact solutions for large unmet needs in procedure-based medicine, today announced that late-breaking results from its MODERATO II double-blind, randomized study of BackBeat Cardiac Neuromodulation Therapy ™ (CNT ™) demonstrated statistically significant and clinically meaningful reductions in systolic blood pressure in hypertensive patients also indicated for a pacemaker. The results, which were presented as late-breaking science at the Transcatheter Cardiovascular Therapeutics (TCT) 2019 annual conference, showed the study met its primary efficacy endpoint, with patients randomized to BackBeat CNT experiencing an 11.1 mmHg ($p<0.001$) reduction in mean 24-hour ambulatory systolic blood pressure (ASBP) at 6 months follow-up, resulting in a significant difference of 8.1 mmHg compared to control patients who were managed only with antihypertensive medications ($p=0.01$). The study also met its primary safety endpoint with no statistical difference in rate of major cardiac adverse events (MACE) between the two groups at 6 months follow-up.

"Achieving a statistically significant blood pressure reduction with BackBeat CNT in this patient population is particularly exciting given that over 70% of pacemaker patients have high blood pressure as well as other known co-morbidities," said Karl-Heinz Kuck, M.D., Ph.D., director of cardiology at the Lans Medicum, Hamburg, Germany and study principal investigator who presented the results at TCT. "This is a particularly challenging at-risk population with a very high rate of isolated systolic hypertension and persistently elevated blood pressure despite multi-drug therapy. BackBeat CNT appears to be a promising treatment to significantly reduce systolic blood pressure and has a favorable risk benefit profile as the device is already required for rhythm management."

All patients enrolled in the MODERATO II study, a European prospective, multi-center, double-blind, randomized study of BackBeat CNT vs. control in 47 patients with persistent hypertension (ASBP ≥130 mmHg and office systolic blood pressure (OSBP) ≥ 140 mmHg) despite one or more anti-hypertensive medications and a pacemaker indication, were implanted with Orchestra BioMed's Moderato® System, an implantable pulse generator that delivers BackBeat CNT as well as standard rhythm management functions that recently received CE mark approval. Following a 30-day run-in period during which patients received only standard pacing along with anti-hypertensive medications, patients who met follow-up screening criteria for daytime ASBP, were randomized to BackBeat CNT or control groups. Prior to randomization, mean ASBP for both groups were 136.3 mmHg with patients, on average, treated with over 3 prescribed anti-hypertensive drugs. After 6 months, mean ASBP was reduced by 11.1 mmHg ($p<0.001$) in the BackBeat CNT group as compared to a reduction of 3.1 mmHg in the control group ($p=0.17$). The treatment group saw a high (85%) overall response rate, with approximately 54% of the BackBeat CNT-treated patients experiencing ASBP reduction at 6 months of greater than 10 mmHg, an amount associated with a clinically meaningful reduction in risk of heart attack and stroke. The BackBeat CNT group also experienced significantly greater reduction, 12.4 mmHg, in OSBP over the control group ($p=0.02$). There were no MACE events in the BackBeat CNT group and 3 events in 2 patients in the control group. Additionally, there were no notable differences in echo parameters between the two arms. Diastolic blood pressure and heart rate did not change between groups during the study period.

"Achieving an 11.1 mmHg reduction in mean 24-hour ambulatory systolic blood pressure in the BackBeat CNT arm is a remarkable result, and clinically significant," said David E. Kandzari, MD, FACC, FSCAI, chief scientific officer and director, Interventional Cardiology, Piedmont Heart Institute, Atlanta, GA. "This data offers compelling preliminary evidence that this therapy may provide a safe and effective means to help the pacemaker population achieve target blood pressure levels and reduce cardiovascular risk."

Over 1.1 million pacemakers are implanted annually worldwide.[1] Patients indicated for a pacemaker have a particularly high rate of elevated blood pressure, with more than 70% of these patients suffering from hypertension.[2] Based on 2017 American College of Cardiology/American Heart Association high blood pressure guidelines, it is estimated that over 60% of pacemaker patients have uncontrolled hypertension despite medical therapy.Over 1.1 million pacemakers are implanted annually worldwide. Patients indicated for a pacemaker have a particularly high rate of elevated blood pressure, with more than 70% of these patients suffering from hypertension. Based on 2017 American College of Cardiology/American Heart Association high blood pressure guidelines, it is estimated that over 60% of pacemaker patients have uncontrolled hypertension despite medical therapy.

"We are highly encouraged by these promising double-blind, randomized results with BackBeat CNT in the MODERATO II study," said David Hochman, chairman and CEO of Orchestra BioMed. "We plan to use these results to help design registrational studies to support FDA and other global regulatory approvals for devices delivering BackBeat CNT and will be working to forge strategic collaborations to accelerate making this potentially high-impact therapy available to patients with known unmet needs."

About BackBeat CNT ™

BackBeat CNT, a flagship therapy of Orchestra BioMed, is a bioelectronic treatment that immediately, substantially and chronically lowers blood pressure (BP) while simultaneously modulating the Autonomic Nervous System (ANS). Orchestra BioMed's CE Mark-approved Moderato® implantable pulse generator system delivers BackBeat CNT while also providing standard pacemaker functions. BackBeat CNT mimics the effects of multi-drug hypertension therapy by targeting preload, afterload and sympathetic tone. BackBeat CNT's initial target are patients with uncontrolled hypertension who are also indicated for a pacemaker.

About Orchestra BioMed ™

Orchestra BioMed is a biomedical innovation company providing high-impact solutions for large unmet needs in procedure-based medicine. The Company partners with established market leaders to drive global commercialization of its products, establishing multiple long-term potential revenue streams and supporting further product development. Its current product pipeline was organically developed and features Virtue® Sirolimus-Eluting Balloon (SEB) for the treatment of artery disease, the leading cause of death worldwide, and BackBeat Cardiac Neuromodulation Therapy (CNT) for the treatment of hypertension, the leading contributing risk factor for death worldwide. The company has a global strategic partnership with Terumo Corporation, one of the world's largest medical device companies, for the development and commercialization of Virtue SEB. Orchestra BioMed's business model optimizes capital efficiency and cash flow by developing therapies with a high probability of success that fulfill a specific need, fit within current clinical workflow and deliver health-economic value. Orchestra BioMed is led by a multi-disciplinary team with a long track record of successful product development.

Forward-Looking Statements

Some of the statements made herein constitute forward-looking statements. These statements relate to future financial and other performance or anticipated plans and are identified by words such as "may," "will," "should," "expect," "could," "scheduled," "plan," "intend," "anticipate," "believe," "estimate," "potential," "propose" and "continue" or negative variants of such terms. These and similar forward-looking statements discuss the Company's future expectations and plans. The Company operates in a very competitive and rapidly changing environment. New risks emerge from time to time. Given these risks and uncertainties, the Company cautions against placing undue reliance on these forward-looking statements. These statements are only estimates of future performance. Actual performance or events may not meet such expectations or estimates and may, in fact, differ materially.

Although the Company believes that the expectations reflected in the forward-looking statements made herein are reasonable, the Company cannot and does not guarantee future results, levels of activity, performance or achievements. Moreover, the Company does not assume any responsibility for the accuracy and completeness of such forward-looking statements in the future. The Company does not plan and, subject to applicable law, undertakes no obligation to update any of the forward-looking statements made herein.

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[1] BIS Research, 2017, Global Pacemaker and Implantable Cardioverter Defibrillators (ICDs) Market

[2] Guha A, Xiang X, Haddad D, et al. Eleven-year trends of inpatient pacemaker implantation in patients diagnosed with sick sinus syndrome. J Cardiovasc Electrophysiol. 2017;28(8):933–943. doi:10.1111/jce.13248