Orchestra BioMed Receives FDA Breakthrough Device Designation for AVIM Therapy

April 22, 2025

- *Breakthrough Device Designation ("BDD") applies to an estimated U.S. population of over 7.7 million patients with uncontrolled hypertension and increased cardiovascular risk*
- *BDD also encompasses pacemaker-indicated patients with uncontrolled hypertension who are the focus of the BACKBEAT global pivotal study Orchestra BioMed is currently enrolling in strategic collaboration with Medtronic, plc (NYSE: MDT)*
- *BDD status provides accelerated FDA engagement and reviews for AVIM therapy; it also supports potential pathways to secure higher reimbursement for AVIM-enabled devices in the future*

NEW HOPE, Pa., April 22, 2025 (GLOBE NEWSWIRE) -- Orchestra BioMed Holdings, Inc. (Nasdaq: OBIO) ("Orchestra BioMed" or the "Company"), a biomedical company accelerating high-impact technologies to patients through risk-reward sharing partnerships, today announced that the U.S. Food and Drug Administration ("FDA") has granted Breakthrough Device Designation ("BDD") for atrioventricular interval modulation ("AVIM") therapy.

Specifically, the BDD is for an implantable system (i.e., a pacemaker) to deliver AVIM therapy using conduction system pacing to reduce blood pressure in patients with increased ten-year atherosclerotic cardiovascular disease ("ASCVD") risk, preserved left ventricular systolic function, and uncontrolled hypertension, despite the use of anti-hypertensive medications or in patients who may have intolerance to anti-hypertensive medications. Orchestra BioMed estimates that there are over 7.7 million patients in the U.S. that meet the criteria for the BDD for AVIM therapy. AVIM therapy is currently being evaluated under an FDA investigational device exemption ("IDE") in the BACKBEAT global pivotal study which is being conducted by Orchestra BioMed in collaboration with Medtronic. The BACKBEAT pivotal study is enrolling pacemaker-indicated patients with uncontrolled hypertension despite the use of anti-hypertensive medication, a key subpopulation under the BDD for which Orchestra BioMed believes AVIM therapy may offer optimal clinical benefit.

"We are delighted to have received FDA Breakthrough Device Designation for AVIM therapy which has the potential to offer a differentiated, advantageous solution for hypertension management in a broad population," commented David Hochman, Chairman and Chief Executive Officer of Orchestra BioMed. "Patients at higher risk for mortality and morbidity associated with high blood pressure are the core of the population we are actively enrolling in the BACKBEAT global pivotal study of hypertensive pacemaker-indicated patients in collaboration with Medtronic. The FDA Breakthrough Device Designation recognizes the potential of this unique therapy to benefit a significantly expanded number of patients who are not indicated for a pacemaker but who also have uncontrolled hypertension and increased cardiovascular risk. We are committed to working closely with the FDA, Medtronic and the clinical community to maximize the impact of AVIM therapy."

The FDA *Breakthrough Devices Program,* which reflects the FDA's commitment to device innovation and protecting public health, is designed to expedite the development and provide priority review of innovative medical technologies that have the potential to significantly improve outcomes for patients with serious or life-threatening conditions. To be eligible for this designation, a device must demonstrate the potential to provide more effective treatment or diagnosis of a life-threatening or irreversibly debilitating condition. In addition, the device must meet at least one of the following criteria: it must represent breakthrough technology, have no approved or cleared alternatives, offer significant advantages over existing options, or be determined by the FDA to be in the best interest of patients.

Beyond regulatory acceleration, the Breakthrough designation may also support favorable reimbursement pathways, including eligibility for incremental inpatient reimbursement through the New Technology Add-on Payment ("NTAP") and outpatient Transitional Pass-Through payments ("TPT") under the Center for Medicare & Medicaid Services ("CMS") programs. These mechanisms may help facilitate more timely access to breakthrough technologies while supporting provider adoption and patient access.

"We are very pleased that AVIM therapy received Breakthrough Device Designation, a recognition of the potential of AVIM therapy to address unmet needs in hypertension management," said Robert C. Kowal, M.D., Ph.D., Vice President and General Manager of Cardiac Pacing Therapies within the Medtronic Cardiac Rhythm Management operating unit. "Hypertension remains a significant global public health challenge that is especially relevant to the pacemaker population as the most common comorbidity in these patients. Medtronic is committed to collaborating with Orchestra BioMed to advance this innovative, investigational therapy through the BACKBEAT global pivotal study."

Orchestra BioMed has a strategic collaboration with Medtronic, the global market leader in cardiac pacing therapies, for development and commercialization of AVIM therapy for the treatment of uncontrolled hypertension in pacemaker-indicated patients. Under the terms of the existing collaboration agreement, Medtronic holds the right of first negotiation to expand its licensing agreement with Orchestra BioMed to obtain global rights to commercialize AVIM therapy for the treatment of uncontrolled hypertension in patients that do not have an indication for a pacemaker.

About Orchestra BioMed

Orchestra BioMed (Nasdaq: OBIO) is a biomedical innovation company accelerating high-impact technologies to patients through risk-reward sharing partnerships with leading medical device companies. Orchestra BioMed's partnership-enabled business model focuses on forging strategic collaborations with leading medical device companies to drive successful global commercialization of products it develops. Orchestra BioMed's lead product candidate is atrioventricular interval modulation (AVIM) therapy for the treatment of hypertension, a significant risk factor for death worldwide. Orchestra BioMed is also developing the Virtue® Sirolimus AngioInfusion™ Balloon (SAB) for the treatment of atherosclerotic artery disease, the leading cause of mortality worldwide. Orchestra BioMed has a strategic collaboration with Medtronic, one of the largest medical device companies in the world, for development and commercialization of AVIM therapy for the treatment of hypertension in pacemaker-indicated patients, and a strategic partnership with Terumo, a global leader in medical technology, for development and commercialization of Virtue SAB for the treatment of artery disease. For further information about Orchestra BioMed, please visit www.orchestrabiomed.com, and follow us on LinkedIn.

References to Websites and Social Media Platforms

References to information included on, or accessible through, websites and social media platforms do not constitute incorporation by reference of the information contained at or available through such websites or social media platforms, and you should not consider such information to be part of this press release.

About AVIM Therapy

AVIM therapy is an investigational therapy compatible with standard dual-chamber pacemakers designed to substantially and persistently lower blood pressure. It has been evaluated in pilot studies in patients with hypertension who are also indicated for a pacemaker. MODERATO II, a double-blind, randomized pilot study, showed that patients treated with AVIM therapy experienced net reductions of 8.1 mmHg in 24-hour ambulatory systolic blood pressure (aSBP) and 12.3 mmHg in office systolic blood pressure (oSBP) at six months when compared to control patients. In addition to reducing blood pressure, clinical results using AVIM therapy demonstrate improvements in cardiac function and hemodynamics. The BACKBEAT (BradycArdia paCemaKer with atrioventricular interval modulation for Blood prEssure treAtmenT) global pivotal study will further evaluate the safety and efficacy of AVIM therapy in lowering blood pressure in patients who have systolic blood pressure above target despite anti-hypertensive medication and who are indicated for or have recently received a dual-chamber cardiac pacemaker.

About the FDA Breakthrough Device Program

The FDA Breakthrough Device Program, established in 2015, is designed to expedite the development, review, and potential market access of medical devices that may offer more effective treatment or diagnosis for life-threatening or irreversibly debilitating conditions. The designation provides manufacturers with prioritized FDA review and early, frequent interactions with agency experts to efficiently address development and regulatory considerations. Breakthrough status may also support streamlined reimbursement pathways, including eligibility for New Technology Add-on Payments (NTAP) and Transitional Pass-Through Payments (TPT), by helping to demonstrate substantial clinical improvement.

Forward-Looking Statements

Certain statements included in this press release that are not historical facts are forward-looking statements for purposes of the safe harbor provisions under the United States Private Securities Litigation Reform Act of 1995. Forward-looking statements generally are accompanied by words such as "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect," "should," "would," "plan," "predict," "potential," "seem," "seek," "future," "outlook" and similar expressions that predict or indicate future events or trends or that are not statements of historical matters. These forward-looking statements include, but are not limited to, statements relating to the potential efficacy, safety and commercial value of the Company's commercial product candidates, including the ability of AVIM therapy to favorably influence ventricular function, implementation of the Company's ongoing BACKBEAT global pivotal study, the potential benefits of BDD, including its ability to expedite FDA reviews and streamline reimbursement pathways, the ability of the Company's partnerships to accelerate clinical development, the nature and speed of the FDA's review and regulatory process with respect to AVIM therapy, the ability to secure Medicare incremental payment programs, and the Company's late-stage development programs and strategic partnerships. These statements are based on various assumptions, whether or not identified in this press release, and on the current expectations of the Company's management and are not predictions of actual performance. These forward-looking statements are provided for illustrative purposes only and are not intended to serve as and must not be relied on as a guarantee, an assurance, a prediction, or a definitive statement of fact or probability. Actual events and circumstances are difficult or impossible to predict and may differ from assumptions. Many actual events and circumstances are beyond the control of the Company. These forward-looking statements are subject to a number of risks and uncertainties, including changes in domestic and foreign business, market, financial, political, and legal conditions; risks related to regulatory approval of the Company's product candidates and ongoing regulation of the Company's product candidates, if approved; the timing of, and the Company's ability to achieve, expected regulatory and business

milestones; the impact of competitive products and product candidates; and the risk factors discussed under the heading "Item 1A. Risk Factors" in the Company's annual report on Form 10-K for the year ended December 31, 2024, which was filed with the U.S. Securities and Exchange Commission on March 31, 2025, as updated by any risk factors disclosed under the heading "Item 1A. Risk Factors" in Part II of the Company's subsequently filed quarterly reports on Form 10-Q.

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, which only speak as of the date of this press release. The Company does not plan and undertakes no obligation to update any of the forward-looking statements made herein, except as required by law.

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