MBX Biosciences Provides Obesity Portfolio Update Including Initial Phase 1 Data for MBX 4291 Supporting Potential for Once-Monthly Dosing

May 11, 2026

Preliminary blinded data from ongoing Phase 1 trial demonstrated mean weight loss of 7% (range 0-16%) at 8 weeks in first MAD Part B cohort (n=8, including 2 placebo)

MBX 4291 generally well tolerated, only one event of diarrhea, nausea or vomiting through 8 weeks in first MAD Part B cohort

MBX 4291 12-week Phase 1 MAD Part C data remain on track for Q4 2026

MBX 5765 nominated as amycretin prodrug development candidate, a novel GLP-1 / GIP / glucagon / DACRA agonist designed for once-monthly dosing, superior efficacy and improved tolerability

Imapextide Phase 2a STEADI™ trial results demonstrate positive proof of concept in post-bariatric hypoglycemia (PBH)

Company to host in-person and virtual Obesity Day today at 10:30 a.m. ET

CARMEL, Ind. and BURLINGTON, Mass., May 11, 2026 (GLOBE NEWSWIRE) -- MBX Biosciences, Inc. (Nasdaq: MBX), a clinical-stage biopharmaceutical company focused on the discovery, development and commercialization of novel precision peptide therapies for the treatment of endocrine and metabolic disorders, today announced multiple updates on its obesity portfolio. Preliminary blinded Phase 1 data for MBX 4291, a GLP-1/GIP co-agonist prodrug for obesity, demonstrate a pharmacokinetic profile supporting the potential for once-monthly dosing and competitive weight loss in the first multiple ascending dose (MAD) cohort. These results, along with additional pipeline updates, will be discussed at the Company's Obesity Day presentation today at 10:30 a.m. ET.

"We are proud to share preliminary blinded data from the ongoing Phase 1 clinical trial of our GLP-1/GIP co-agonist prodrug in obesity," said Sam Azoulay, MD, Chief Medical Officer of MBX Biosciences. "The unique pharmacokinetic profile of MBX 4291 has the potential to support a self-titrating weekly induction regimen and the potential for true once-monthly dosing. Moreover, preliminary blinded data from the first MAD cohort following four weekly titration doses and a single once-monthly dose demonstrated gradual accumulation of active peptide, leading to competitive weight loss and tolerability after eight weeks. These results will inform the upcoming 12-week MAD portion of our Phase 1 trial, and we remain on track to share data from the MAD Part C in Q4."

"These initial MBX 4291 clinical data illustrate the potential of our PEP™ platform to create differentiated, long-acting and more tolerable peptide therapies for patients with endocrine and metabolic disorders," said Kent Hawryluk, President and Chief Executive Officer of MBX Biosciences. "Building on this platform, we are pleased to introduce MBX 5765, our novel GLP-1 / GIP / glucagon / DACRA agonist designed for once-monthly dosing, superior efficacy and improved tolerability, as our next obesity development candidate. Given our growing number of novel peptide-based drug candidates, including our most advanced candidate, canvuparatide for the treatment of hypoparathyroidism, and our expanding obesity pipeline, we will not be committing further investment toward a Phase 2b trial of imapextide in PBH. We believe prioritizing our resources and capital allocation represents the strongest opportunity to deliver long-term value and help people with endocrine and metabolic disorders live fuller, healthier lives."

MBX 4291 Initial Phase 1 Data Summary

MBX 4291 is a dual GLP-1/GIP receptor agonist peptide prodrug specifically engineered using the Precision Endocrine Peptide (PEP^{TM}) platform for a more gradual release of active peptide and extended exposure. The gradual release, with a delayed time to maximum concentration (T_{max}), is designed to enable a smooth, self-titrating pharmacokinetic (PK) profile utilizing once-weekly administration of starting doses during the titration phase to optimize tolerability. The extended duration of exposure has the potential to enable true once-monthly administration. Based on data from the first MAD Part B cohort, the combination of gradual release and extended duration of exposure has the potential to shorten the titration phase and achieve sustained accumulation of active peptide while still improving tolerability compared to currently approved incretin therapies.

Phase 1 Study Design and Current Status

The ongoing Phase 1, randomized, double-blind, placebo-controlled study is evaluating MBX 4291 in adults with obesity (BMI ≥30 kg/m^2). The study includes three distinct parts: single ascending dose (SAD; Part A), MAD Part B, and 12-week MAD Part C. The overall Phase 1 program is designed to assess safety, tolerability, pharmacokinetics and exploratory effects on body weight.

SAD Part A includes five dose cohorts ranging from 15 mg to 180 mg, with 8 subjects in each cohort randomized to active treatment (6) or placebo (2); four of the five planned SAD cohorts have been completed.

MAD Part B includes three cohorts evaluating a regimen of four weekly doses, potentially followed by a single monthly dose. There are 8 subjects in each cohort randomized to active treatment (6) or placebo (2), and the first cohort of Part B (30 mg qw x 4 + 120 mg) has been completed.

MAD Part C includes two cohorts, beginning with a regimen of four identical weekly doses followed by once-monthly dosing for a total of 12 weeks. There are 30 subjects in each cohort randomized to active treatment (20) or placebo (10).

The preliminary blinded data presented today are from the first four cohorts of SAD Part A and the first cohort of MAD Part B. The trial will remain blinded until the Phase 1 study is completed.

SAD (Part A)

- **Pharmacokinetics:** MBX 4291 demonstrated dose-proportional PK across the four dose cohorts following a single administration: 15 mg, 60 mg, 90 mg and 180 mg. The 120 mg dose cohort is ongoing.

- **Exposure profile:** A slow accumulation and gradually increasing concentrations of active peptide were demonstrated, with a T_{max} of approximately 13-14 days and sustained exposure which is supportive of once-monthly dosing potential.

- **Safety:** MBX 4291 was generally well tolerated in the first three cohorts of the ongoing blinded study, with a clear dose-dependent rate of predominantly mild gastrointestinal-related adverse events; the maximum tolerated dose (MTD) was reached with the 180 mg single dose.

MAD Cohort 1 (Part B)

- **Pharmacokinetics**: A titration regimen of four weekly 30 mg doses followed by a single 120 mg monthly administration resulted in gradual accumulation and sustained concentrations of active peptide. The $T_{1/2Cmax}$[1] was approximately 26 days, which is supportive of true once-monthly dosing.

- **Weight loss:** Preliminary blinded data demonstrated mean weight loss of 7% (range 0-16%) at eight weeks (n=8, including 2 placebo).

- **Safety:** MBX 4291 was generally well tolerated with no serious adverse events. Only one subject experienced an event of diarrhea, nausea or vomiting through eight weeks; the subject experienced mild diarrhea following the first administration. There were no reported events of nausea or vomiting in the first MAD cohort.

12-Week MAD (Part C)

- Data from the 12-week MAD Part C cohort remain on track for Q4 2026.

Expanding Obesity Pipeline

- **Amycretin candidate**: MBX announced the nomination of MBX 5765 as its lead amycretin prodrug candidate. Enabled by the Company's clinically validated PEP ^{TM} platform, MBX 5765 combines GLP-1, GIP, glucagon (GCG), and dual amylin and calcitonin receptor agonist (DACRA) activity in a single construct. The differentiated mechanism of MBX 5765 is designed for once-monthly dosing, superior efficacy and improved tolerability. IND-enabling studies for MBX 5765 are expected to begin in Q2 2026.

- **Triple agonist candidate**: The Company is on track to nominate its GLP-1/GIP/GCG receptor prodrug candidate in Q3 2026, further expanding its obesity pipeline to potentially address the full spectrum of patient needs.

POC Achieved for Imapextide in PBH

- MBX also announced that once-weekly imapextide achieved proof of concept (POC) in PBH. Preliminary results from the Phase 2a STEADI™ trial demonstrated average increases from baseline in glucose nadir of 17% (45 mg), 28% (100 mg), and 34% (200 mg), as well as average decreases from baseline in insulin peak of 11% (45 mg), 33% (100 mg), and 45% (200 mg).

Obesity Day Webcast

MBX Biosciences is hosting Obesity Day today, May 11, 2026, at 10:30 a.m. ET. The live webcast can be accessed in the Events section of the MBX Biosciences website at https://investors.mbxbio.com/news-events/events. A replay of the webcast will be archived on the Company's website for approximately 90 days. A copy of the data presentation from the May 11 Obesity Day event can be found at https://investors.mbxbio.com/news-events/presentations.

About MBX Biosciences

MBX Biosciences is a biopharmaceutical company focused on the discovery, development and commercialization of novel precision peptide therapies based on its proprietary PEP™ platform, for the treatment of endocrine and metabolic disorders. The Company is advancing a pipeline of novel candidates for endocrine and metabolic disorders with clinically validated targets, established endpoints for regulatory approval, significant unmet medical needs and large potential market opportunities. The Company's pipeline includes canvuparatide (MBX 2109) for the treatment of chronic hypoparathyroidism preparing for Phase 3 development; and an obesity portfolio that includes MBX 4291 in Phase 1 development and MBX 5765 in preclinical development, as well as additional discovery candidates. The Company is based in Carmel, Indiana and Burlington, Massachusetts. To learn more, please visit the Company website at www.mbxbio.com and follow it on LinkedIn.

About MBX's Proprietary Precision Endocrine Peptide (PEP™) Platform

MBX was founded by global leaders with a transformative approach to peptide drug design and development. Leveraging this expertise, the Company designed its proprietary Precision Endocrine Peptide™ (PEP™) platform to overcome the key limitations of unmodified and modified peptide therapies and to improve clinical outcomes and simplify disease management for patients. PEPs are selectively engineered to have optimized pharmaceutical properties, including extended time-action profiles and consistent drug concentrations with low peak-to-trough concentration ratios, consistent exposure to target tissues, and less frequent dosing.

Forward-Looking Statements

This press release contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, each as amended. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements include, but are not limited to, express or implied statements regarding: MBX Biosciences’ expectations regarding the further advancement of its pipeline of programs in endocrine and metabolic disorders, including timing of results of the 12-week MAD portion of the Phase 1 trial for MBX 4291 in Q4 2026, the initiation of IND-enabling studies for MBX 5765 in Q2 2026 and nomination of the Company’s GLP-1/GIP/glucagon receptor (GCGR) prodrug candidate in Q3 2026; statements regarding the potential of MBX Biosciences’ delivery of differentiated endocrine and metabolic compounds; the potential for canvuparatide to be a once-weekly PTH replacement therapy; the expected timing of the additional Phase 1 readout for MBX 4291 and candidate nominations; the potential for MBX Biosciences to develop therapies for obesity dosed once monthly; and the ability of MBX 4291 to be a treatment of obesity and have a compelling tolerability profile.

Forward-looking statements are based on management’s current expectations and are subject to risks and uncertainties that could negatively affect MBX Biosciences’ business, operating results, financial condition and stock value. Factors that could cause actual results to differ materially from those currently anticipated include: risks relating to the Company’s research and development activities; MBX Biosciences’ ability to execute on its strategy including obtaining the requisite regulatory approvals on the expected timeline, if at all; uncertainties relating to preclinical and clinical development activities, including the risk for differences between interim data and final data from the Company’s ongoing clinical trials; the Company’s dependence on third parties to conduct clinical trials, manufacture its product candidates and develop and commercialize its product candidates, if approved; MBX Biosciences’ ability to attract, integrate and retain key personnel; risks related to the Company’s financial condition and need for substantial additional funds in order to complete development activities and commercialize a product candidate, if approved; risks related to regulatory developments and approval processes of the U.S. Food and Drug Administration and comparable foreign regulatory authorities; risks related to establishing and maintaining MBX Biosciences’ intellectual property protections; and risks related to the competitive landscape for MBX Biosciences’ product candidates; as well as other risks described in “Risk Factors,” in MBX Biosciences’ Annual Report on Form 10-K for the year ended December 31, 2025, Quarterly Report on Form 10-Q for the three months ended March 31, 2026, as well as subsequent filings filed with the Securities and Exchange Commission (SEC). MBX Biosciences expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in its expectations or any changes in events, conditions or circumstances on which any such statement is based, except as required by law, and claims the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

MBX Biosciences uses and intends to continue to use its Investor Relations website as a means of disclosing material nonpublic information and for complying with its disclosure obligations under Regulation FD. Accordingly, investors should monitor the Company's Investor Relations website, in addition to following the Company's press releases, SEC filings, public conference calls, presentations, and webcasts.

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[1] $T_{1/2Cmax}$ is calculated as the time required for drug concentrations to fall to 50% of the maximum concentration (C_{max}) and informs the dosing interval.