MBX Biosciences Announces First Patient Dosed in Pivotal Phase 3 oPTimize Trial of Once-Weekly Canvuparatide in Adults with Hypoparathyroidism

August 27, 2026

Pivotal Phase 3 oPTimize trial design builds on positive Phase 2 Avail™ results and durable one-year clinical benefit

Global registrational trial to enroll approximately 160 adults with HP to support once-weekly canvuparatide's potential as a best-in-class PTH replacement therapy

CARMEL, Ind., and BURLINGTON, Mass., Aug. 27, 2026 (GLOBE NEWSWIRE) -- MBX Biosciences, Inc. (Nasdaq: MBX), a clinical-stage biopharmaceutical company focused on the discovery and development of novel precision peptide therapies for the treatment of endocrine and metabolic disorders, today announced that the first patient has been dosed in its pivotal Phase 3 oPTimize clinical trial evaluating once-weekly canvuparatide for the treatment of chronic hypoparathyroidism (HP).

"The initiation of our pivotal Phase 3 program marks an important milestone for MBX as we advance once-weekly canvuparatide toward potential registration," said Steve Hoerter, Chairman and Chief Executive Officer of MBX Biosciences. "The promising efficacy observed in the Phase 2 Avail™ trial and the sustained clinical effect demonstrated through one year of treatment reinforce our confidence in canvuparatide's potential to become a new standard of care in the treatment of HP. We look forward to advancing the Phase 3 oPTimize trial and bringing once-weekly canvuparatide one step closer to patients living with chronic HP."

Phase 3 oPTimize Trial Design

The Phase 3 oPTimize trial (NCT07699471) is a global, multicenter, randomized, double-blind, placebo-controlled study evaluating the efficacy and safety of once-weekly canvuparatide in adults with chronic hypoparathyroidism, followed by a 78-week open-label extension. Approximately 160 patients will be enrolled and randomized 3:1 to receive canvuparatide or placebo during the 26-week double-blind treatment period. Canvuparatide will be administered once weekly using the same device intended for commercial use. More information on the Phase 3 oPTimize trial is available at https://www.optimize-study.com/.

The 26-week double-blind treatment period consists of:

- A four-week fixed-dose period at 600 micrograms or placebo once weekly
- An 18-week individualized dose-titration period (up to 1,600 micrograms once weekly)
- A four-week dose-maintenance period through Week 26 without increases in study drug, active vitamin D, or calcium supplementation.

The primary endpoint will evaluate the proportion of patients achieving a composite responder endpoint at Week 26, defined as meeting all the following criteria:

- Maintenance of normal albumin-adjusted serum calcium levels
- Independence from active vitamin D
- Reduction of calcium supplementation to ≤600 milligrams per day
- No increases in study drug dose during the four weeks preceding the Week 26 assessment

Key secondary endpoints include normalization of urinary calcium excretion while maintaining normal serum calcium in patients with elevated baseline urinary calcium excretion, and improvement of physical functioning and hypocalcemia-related symptoms. The trial will also evaluate additional measures of bone mineral metabolism, kidney health, bone biomarkers, patient-reported outcomes and long-term safety.

The Phase 3 oPTimize trial builds on positive results from the Phase 2 Avail™ trial and ongoing open-label extension study, which demonstrated results consistent with restoration of systemic PTH activity, including normalization of serum calcium, reduction of urinary calcium excretion, restoration of bone metabolism and increase of eGFR. Together, these findings support once-weekly canvuparatide's potential to become a best-in-class PTH replacement therapy for people living with chronic hypoparathyroidism.

About Hypoparathyroidism

Hypoparathyroidism is a rare endocrine disorder characterized by deficient or absent PTH production, resulting in hypocalcemia and disruptions in mineral homeostasis. Current first line standard-of-care treatment consists of calcium supplements and active vitamin D, which do not replace the missing hormone or restore physiologic homeostasis and may be associated with significant treatment burden and long-term complications. Chronic HP affects over 250,000 patients in the US and EU along, with an annual incidence estimated at over 7,000 patients per year.

About Once-Weekly Canvuparatide

Canvuparatide is an investigational long-acting parathyroid hormone peptide prodrug being developed as a once-weekly PTH replacement therapy for adults with hypoparathyroidism. Canvuparatide is designed to provide continuous, infusion-like exposure to active PTH through a convenient weekly subcutaneous injection. Canvuparatide has received Orphan Drug Designation from the U.S. Food and Drug Administration and Orphan Designation from the European Medicines Agency for the treatment of hypoparathyroidism.

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 in Phase 3; and an obesity portfolio that includes MBX 4291 in Phase 1, and MBX 5765 and MBX 6180 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; the potential for canvuparatide to be a once-weekly PTH replacement therapy and standard of care; the advancement of canvuparatide toward potential registration; the design, conduct and anticipated enrollment of the Phase 3 oPTimize trial; the intended use of the commercial device in the trial; and MBX Biosciences' uses of capital, expenses and financial results, including the anticipated cash runway timing.

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; 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; risks related to the competitive landscape for MBX Biosciences' product candidates; and final audit adjustments and other developments that may arise that would cause MBX Biosciences' expectations with respect to the estimate of cash, cash equivalents and marketable securities as of December 31, 2025 to differ, perhaps materially, from the financial results that will be reflected in MBX Biosciences' audited consolidated financial statements for the fiscal year ended December 31, 2025; as well as other risks described in "Risk Factors," in MBX Biosciences' Quarterly Report on Form 10-Q for the three months ended June 30, 2026, Annual Report on Form 10-K for the year ended December 31, 2025, 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.

Media Contact:

George Shea
We. Communications
gshea@wecommunications.com

Investor Contact:

Pete De Spain
MBX Biosciences
pdespain@mbxbio.com