PepGen to Focus on Development of Promising DM1 Program Following 10 mg/kg PGN-EDO51 Update

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– PGN-EDO51 did not achieve target dystrophin levels in CONNECT1-EDO51 trial; Company to discontinue development of DMD programs –

– PGN-EDO51 at 10 mg/kg was generally well tolerated; all treatment-related adverse events were mild –

– DM1 program on track to read out FREEDOM-DM1 15 mg/kg cohort in second half of 2025 and FREEDOM2-DM1 5 mg/kg cohort in Q1 2026 –

BOSTON--(BUSINESS WIRE)--May 28, 2025-- PepGen Inc. (Nasdaq: PEPG), a clinical-stage biotechnology company advancing the next generation of oligonucleotide therapies, today announced that based on the levels of dystrophin protein measured in the 10 mg/kg cohort of its CONNECT1-EDO51 study investigating PGN-EDO51 in Duchenne muscular dystrophy (DMD) patients amenable to exon 51 skipping, the Company will focus on advancing its promising myotonic dystrophy type 1 (DM1) program currently in Phase 2 clinical development. The Company is voluntarily discontinuing development of PGN-EDO51 and intends to wind down all DMD-related research and development activities.

In the 10 mg/kg cohort (n=4) of the CONNECT1 study, PGN-EDO51 increased exon 51 skipped transcripts to 4.26% (a mean increase of 3.5%); however, total dystrophin only increased to 0.59% of normal levels (a mean increase of 0.36%). The safety profile of PGN-EDO51 continued to be generally favorable and all treatment-related adverse events were mild in nature. No serious adverse events were reported in the study.

“We are disappointed by the dystrophin results observed in the 10 mg/kg dose cohort in CONNECT1, as it was our hope that we could improve upon existing therapies for patients in a more profound way,” said James McArthur, PhD, President and CEO of PepGen. “As we wind down our DMD program, we would like to thank the patients, families, caregivers, investigators and study staff for their support and participation in this research. I also want to acknowledge our team’s hard work and commitment to advancing new potential treatments for DMD patients.”

Paul Streck, MD, MBA, Executive Vice President, Head of R&D of PepGen continued, “PGN-EDODM1, PepGen’s investigational drug in development for DM1, has already demonstrated robust target engagement after a single 10 mg/kg dose in patients that resulted in mean mis-splicing correction of 29% with a favorable emerging safety profile as of February 24, 2025, the most recent safety update. Mis-splicing is the primary driver of DM1 pathology and currently patients have no approved treatment options for this disabling, life-shortening disorder. Going forward, we will focus our resources on advancing the Company’s ongoing DM1 clinical program along with our research pipeline.”

PepGen continues to expect to report data from its FREEDOM-DM1 15 mg/kg cohort in patients with DM1 during the second half of 2025. FREEDOM is a Phase 1 single ascending dose, randomized, placebo-controlled clinical trial, with endpoints including safety, 28-day splicing correction and functional benefit measures. The Company also continues to expect to report data from the 5 mg/kg cohort of its FREEDOM2-DM1 study in DM1 patients in the first quarter of 2026. FREEDOM2 is a Phase 2 multiple ascending dose, randomized, placebo-controlled clinical trial, with endpoints following four doses that include safety, splicing correction and functional benefit measures.

About PGN-EDODM1

PGN-EDODM1, PepGen's investigational candidate in development for the treatment of myotonic dystrophy Type 1 (DM1), utilizes the Company's proprietary Enhanced Delivery Oligonucleotide (EDO) technology to restore the normal splicing function of MBNL1, a key RNA splicing protein. PGN-EDODM1 is designed to directly address the deleterious effects of cytosine-uracil-guanine (CUG) repeat expansion in the dystrophia myotonic protein kinase (*DMPK)* transcripts which sequester MBNL1, by binding to the pathogenic CUG trinucleotide repeat expansion present in the *DMPK* transcripts, disrupting the binding between the CUG repeat expansion and MBNL1. DM1 is a progressively disabling, life-shortening genetic disorder. DM1 is estimated to affect 40,000 people in the United States, and over 74,000 people in Europe. The U.S. Food and Drug Administration has granted PGN-EDODM1 both Orphan Drug and Fast Track Designations for the treatment of patients with DM1.

About PepGen

PepGen is a clinical-stage biotechnology company advancing the next generation of oligonucleotide therapies with the goal of transforming the treatment of severe neuromuscular and neurological diseases. PepGen’s EDO platform is founded on over a decade of research and development and leverages cell-penetrating peptides to improve the uptake and activity of conjugated oligonucleotide therapeutics. Using these EDO peptides, we are generating a pipeline of oligonucleotide therapeutic candidates designed to target the root cause of serious diseases.

For more information, please visit *PepGen.com*. Follow PepGen on *LinkedIn* and *X*.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. These statements may be identified by words such as “aims,” “anticipates,” “believes,” “could,” “estimates,” “expects,” “forecasts,” “goal,” “intends,” “may,” “plans,” “possible,” “potential,” “seeks,” “will,” and variations of these words or similar expressions that are intended to identify forward-looking statements. Any such statements in this press release that are not statements of historical fact may be deemed to be forward-looking statements. These forward-looking statements include, without limitation, statements regarding the therapeutic potential and safety profile of our product candidates, including PGN-EDO51 and PGN-EDODM1, our plans to discontinue our DMD-related research and development activities, including our CONNECT1-EDO51 and CONNECT2-EDO51 Phase 2 clinical trials, based on results from the CONNECT1 trial, the design and conduct of clinical trials, including our FREEDOM-DM1 Phase 1 trial and FREEDOM2-DM1 Phase 2 trial, and the expected timing for additional data from our FREEDOM Phase 1 trial and initial data from our FREEDOM2 Phase 2 trial.

Any forward-looking statements in this press release are based on current expectations, estimates and projections only as of the date of this release and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to risks related to: delays or failure to successfully initiate or complete our ongoing and planned development activities for our product candidates, including PGN-EDODM1; our ability to

enroll patients in our clinical trials, including FREEDOM and FREEDOM2; that our interpretation of clinical and preclinical study results may be incorrect, or that we may not observe the levels of therapeutic activity in clinical testing that we anticipate based on prior clinical or preclinical results, including for PGN-EDODM1; our product candidates, including PGN-EDODM1, may not be safe and effective or otherwise demonstrate safety and efficacy in our clinical trials; adverse outcomes from our regulatory interactions, including delays in regulatory review, clearance to proceed or approval by regulatory authorities with respect to our programs, including clearance to commence planned clinical studies of our product candidates, or other regulatory feedback requiring modifications to our development programs, including in each case with respect to our FREEDOM and FREEDOM2 clinical trials; changes in regulatory framework that are out of our control; unexpected increases in the expenses associated with our development activities or other events that adversely impact our financial resources and cash runway; and our dependence on third parties for some or all aspects of our product manufacturing, research and preclinical and clinical testing. Additional risks concerning PepGen's programs and operations are described in our most recent annual report on Form 10-K and quarterly report on Form 10-Q that are filed with the SEC. PepGen explicitly disclaims any obligation to update any forward-looking statements except to the extent required by law.

This release discusses PGN-EDO51 and PGN-EDODM1, investigational therapies that have not been approved for use in any country and is not intended to convey conclusions about their efficacy or safety. There is no guarantee that PGN-EDODM1 or any other investigational therapy will successfully complete clinical development or gain regulatory authority approval.

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