PepGen Announces First Patient Dosed in CONNECT1-EDO51 Phase 2 Clinical Trial of PGN-EDO51 for Duchenne Muscular Dystrophy Patients Amenable to Exon 51 Skipping

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- Preliminary data from the 5 mg/kg PGN-EDO51 dose level in the CONNECT1-EDO51 Phase 2 trial are expected mid-2024: including initial safety, exon 51 skipping and dystrophin protein production data -

- Phase 1 results following a single dose of 10 mg/kg of PGN-EDO51 in healthy volunteers demonstrated peak exon 51 skipping of 3.8% with 100% of subjects demonstrating exon skipping -

BOSTON, Jan. 08, 2024 (GLOBE NEWSWIRE) -- PepGen Inc. (Nasdaq: PEPG), 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, today announced that the first patient has been dosed in its CONNECT1-EDO51 Phase 2, open-label multiple ascending dose (MAD) clinical trial evaluating PGN-EDO51 for the treatment of Duchenne muscular dystrophy (DMD) patients amendable to an exon 51 skipping therapy.

“We are pleased to have dosed the first patient in our CONNECT1-EDO51 clinical trial, which marks another milestone in our commitment to developing therapies with the potential to truly improve the lives of people living with DMD,” said James McArthur, Ph.D., President and CEO of PepGen. “Based on the levels of exon skipping achieved following a single dose of PGN-EDO51 in our Phase 1 healthy volunteer trial, we are looking forward to our initial planned data readout in DMD patients at the 5 mg/kg PGN-EDO51 dose level for CONNECT1-EDO51 in the middle of 2024.”

PepGen previously reported data from a Phase 1 trial evaluating PGN-EDO51 in 32 healthy adult volunteers. In the Phase 1 trial, PGN-EDO51 was generally well-tolerated through 15 mg/kg. PGN-EDO51 also produced the highest levels of exon 51 skipping in healthy volunteers following a single dose when compared to publicly available clinical data for other exon 51 skipping approaches. Following a single dose of 10 mg/kg, PGN-EDO51 achieved an average level of 1.4% exon 51 skipping on day 28 with all healthy volunteers demonstrating exon skipping. The peak level of exon 51 skipping observed in this 10mg/kg dose cohort at day 28 was 3.8%.

The CONNECT1-EDO51 Phase 2 clinical trial is an open-label, MAD study, enrolling approximately 10 male patients of at least 8 years of age with DMD amenable to an exon 51 skipping approach to evaluate the safety and tolerability of PGN-EDO51. In addition to safety, oligonucleotide muscle concentrations, exon skipping and dystrophin protein production in muscle will be assessed at week 12 following 4 monthly doses of PGN-EDO51. Per the protocol, the starting dose will escalate from 5 mg/kg to 10 mg/kg. Further dose escalation will be determined based on evaluation of safety data from prior dose cohorts. (ClinicalTrials.gov identifier: NCT06079736)

About PGN-EDO51

PGN-EDO51, PepGen’s lead clinical candidate for the treatment of DMD, utilizes the Company’s proprietary Enhanced Delivery Oligonucleotide (EDO) technology to deliver a therapeutic oligonucleotide that is designed to target the root cause of this devastating disease. PGN-EDO51 is designed to skip exon 51 of the dystrophin transcript, an established therapeutic target for approximately 13% of DMD patients, thereby aiming to restore the open reading frame and enabling the production of a truncated, yet functional dystrophin protein. In preclinical studies, PepGen observed that treatment of non-human primates with PGN-EDO51 resulted in greater levels of exon 51 skipping when compared in head-to-head studies against a molecule that we believe is structurally equivalent to the most clinically advanced peptide-conjugated oligonucleotide therapeutic candidate, which we believe could translate to higher levels of dystrophin production in patients. PGN-EDO51 also exhibited the highest level of exon 51 skipping in primate skeletal muscles, including the diaphragm, reported for any approved therapeutic or known development candidate, based on cross-trial comparisons of publicly available data with preclinical PGN-EDO51 data. In humans, in a Phase 1 single ascending dose study in healthy volunteers, PGN-EDO51 also exhibited a 20-fold higher exon 51 skipping as compared to a naked oligonucleotide following a single dose, based on cross-trial comparisons of publicly available data.

About Duchenne Muscular Dystrophy (DMD)

Duchenne muscular dystrophy (DMD) is an X-linked recessive muscle-wasting disease that predominantly affects males. This debilitating disease is caused by genetic mutations in the gene encoding dystrophin, a protein critical for healthy muscle function, and is one of the most prevalent rare genetic diseases, with an incidence rate of approximately one in every 3,500 to 5,000 male births. DMD is characterized by progressive muscle weakness, which leads to patients losing the ability to walk, a loss of upper body function, cardiac issues and difficulties breathing. DMD is invariably fatal by young adulthood. Despite significant advances in treatments for this devastating disease, current exon skipping therapies are limited by poor delivery to muscle tissue and have yet to establish meaningful clinical benefit for DMD patients.

About PepGen

PepGen Inc. 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 Enhanced Delivery Oligonucleotide, or 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 that are designed to target the root cause of serious diseases.

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, our technology, including our EDO platform, the design, initiation and conduct of clinical trials, including the CONNECT1-EDO51 clinical trial, including expected timelines, dose levels, regulatory interactions, including development pathway for our product

candidates, and our financial resources and cash runway.

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-EDO51; our ability to enroll patients in and complete our clinical trials, including the CONNECT1-EDO51 clinical trials; 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; our product candidates 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, including PGN-EDO51, or other regulatory feedback requiring modifications to our development programs; 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.

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