UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): July 30, 2024

PepGen Inc.
(Exact name of Registrant as Specified in Its Charter)

Delaware	**001-41374**	**85-3819886**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

321 Harrison Avenue
8th Floor
Boston, MA 02118
(Address of principal executive offices, including zip code)

(781) 797-0979
(Telephone number, including area code, of agent for service)

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	PEPG	Nasdaq Global Select Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 7.01 Regulation FD Disclosure.

PepGen Inc. (the "Company") will host a conference call on July 30, 2024 at 4:30 p.m. Eastern time, during which the Company expects to announce the positive data from its ongoing CONNECT1-EDO51 Phase 2 clinical trial for the treatment of Duchenne muscular dystrophy ("DMD"). Directions on how to access the conference call and a summary of the initial data are included in the Company's press release titled "PepGen Announces Positive Data from Low-Dose Cohort of PGN-EDO51 in Ongoing CONNECT1-EDO51 Phase 2 Clinical Trial for Treatment of Duchenne Muscular Dystrophy" furnished as Exhibit 99.1 hereto. A copy of the slide deck that will be presented during the conference call is furnished as Exhibit 99.2 hereto.

The information in this Item 7.01 of this Current Report on Form 8-K (this "Form 8-K"), including Exhibits 99.1 and 99.2, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing. This Form 8-K (including the exhibits hereto) will not be deemed an admission as to the materiality of any information required to be disclosed solely to satisfy the requirements of Regulation FD.

Item 8.01 Other Events.

On July 30, 2024, the Company announced clinical data from the first dose cohort (5 mg/kg) of PGN-EDO51, its lead investigational candidate for patients with DMD whose mutations are amenable to an exon 51-skipping approach.

CONNECT1 Results for the 5 mg/kg Starting Dose Cohort (n=3)

Exon 51 Skipping and Dystrophin Production Data

- **Exon 51 Skipping**: PGN-EDO51 produced mean exon skipping in biceps tissue of 2.15% at week 13 compared to baseline.
- **Dystrophin Production**
    - PGN-EDO51 achieved a mean muscle-adjusted dystrophin level of 1.49% of normal and a 0.70% change from baseline after 4 doses, measured at week 13.
    - PGN-EDO51 achieved a mean absolute dystrophin level of 0.61% of normal and a 0.26% change from baseline after 4 doses, measured at week 13 by Western blot analysis.

Safety and Tolerability Data

The 5 mg/kg dose of PGN-EDO51 was well tolerated by all study cohort participants through week 13. There were no discontinuations, dose interruptions or dose reductions.

- The one related treatment-emergent adverse event was mild and resolved.
- There was no sustained elevation in kidney biomarkers. There were no cases of hypomagnesemia or hypokalemia. There were also no changes in electrolytes or hepatic function and no cases of anemia or thrombocytopenia.
- All three patients in this cohort are continuing to be dosed with PGN-EDO51 at 5 mg/kg in the long-term extension (LTE) phase of the clinical trial. PGN-EDO51 continues to be well tolerated during the LTE as of July 29, 2024.

The Company plans to present additional results from the 5 mg/kg cohort at a medical meeting later in the year.

Update on PGN-EDO51 10 mg/kg Cohort

As of July 29, 2024, two participants have received a total of four doses at 10 mg/kg in the ongoing CONNECT1 study. To date, PGN-EDO51 has been generally well tolerated at this dose level and the Company expects to report initial results from the 10 mg/kg cohort in early 2025.

Update on CONNECT2-EDO51 Clinical Trial

Based on the data from CONNECT1, including PGN-EDO51's emerging safety profile to date, the Company is working to optimize the design of the CONNECT2 Phase 2 double-blind, placebo-controlled 25-week multinational trial. The CONNECT2 clinical trial is open in the United Kingdom. The Company continues to engage with regulators in the European Union and expects to open the clinical trial in the United States by year-end.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

Exhibit No.	Description
99.1	Press Release, dated July 30, 2024, issued by PepGen Inc.
99.2	Corporate Presentation by PepGen Inc. relating to the CONNECT1-EDO51 5 mg/kg Clinical Data
104	Cover page interactive data file (embedded within Inline XBRL document)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

PEPGEN INC.

Date: July 30, 2024

By: /s/ Noel Donnelly
Name: Noel Donnelly
Title: Chief Financial Officer

PepGen Announces Positive Data from Low-Dose Cohort of

PGN-EDO51 in Ongoing CONNECT1-EDO51 Phase 2 Clinical Trial for Treatment of Duchenne Muscular Dystrophy

– PGN-EDO51 at 5 mg/kg was well tolerated, and all patients continued to long-term extension portion of trial. Dosing of second cohort at 10 mg/kg is ongoing –

– Four doses of PGN-EDO51 at 5 mg/kg achieved mean exon skipping levels of 2.15% after three months of dosing –

– PGN-EDO51 at 5 mg/kg showed mean muscle-adjusted dystrophin level of 1.49%, a 0.70% increase from baseline, after three months of dosing –

– PGN-EDO51 at 5 mg/kg showed mean absolute dystrophin level of 0.61%, a 0.26% increase from baseline, after three months of dosing –

– Conference call scheduled for 4:30 p.m. ET –

BOSTON, July 30, 2024 — 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 positive clinical data from the first dose cohort (5 mg/kg) of PGN-EDO51, its lead investigational candidate for patients with Duchenne muscular dystrophy (DMD) whose mutations are amenable to an exon 51-skipping approach. In the ongoing CONNECT1-EDO51 Phase 2 open-label trial, PGN-EDO51 demonstrated higher levels of exon skipping than previously reported studies with other oligonucleotide therapies at similar PMO dose levels in DMD patients. The Company also reported that change from baseline in total dystrophin production and muscle-adjusted dystrophin production was comparable to, or higher than, previously reported studies with other oligonucleotide therapies at similar PMO dose levels in DMD patients. Today at 4:30 p.m. ET, the Company will host a conference call with the CONNECT1 lead investigator Dr. Hugh McMillan to discuss the data being presented.

“We are encouraged by the early data from our CONNECT1 clinical trial of PGN-EDO51 in people with DMD. In three months, the starting monthly dose of 5 mg/kg achieved high levels of exon skipping and all patients showed increases in dystrophin. PGN-EDO51 produced meaningfully higher levels of exon skipped transcript at lower doses and in a shorter time period compared to other exon 51 therapies, approved and in development, indicating that our Enhanced Delivery Oligonucleotide technology is delivering higher levels of oligonucleotide to the nuclei,” said James McArthur, Ph.D., President and CEO of PepGen. “Importantly, PGN-EDO51 has demonstrated a favorable safety profile, supporting our ongoing evaluation of the 10 mg/kg monthly dose cohort in CONNECT1. We intend to leverage the early observations from CONNECT1 to optimize our CONNECT2-EDO51 Phase 2 trial. Based on these initial results, we are optimistic about the possibility that higher levels of dystrophin production will be observed in the 10 mg/kg cohort of CONNECT1. We also look forward to reporting data from the first cohort of our placebo-controlled multinational study CONNECT2.”

"People with DMD and their families constantly hope for effective therapies with the potential to change the course of this relentlessly progressive neuromuscular disease. I was pleased to see that the 5 mg/kg dose was well tolerated and that all three participants demonstrated an increase in dystrophin production and exon skipping after only three months of treatment with PGN-EDO51. I look forward to seeing the results of exon skipping and dystrophin production at 10 mg/kg in both CONNECT1 and CONNECT2," said Dr. Hugh McMillan, Pediatric Neurologist at the Children's Hospital of Eastern Ontario, and Professor in the Department of Pediatrics at the University of Ottawa.

CONNECT1 Results for the 5 mg/kg Starting Dose Cohort (n=3)

Exon 51 Skipping and Dystrophin Production Data

- **Exon 51 Skipping**: PGN-EDO51 produced mean exon skipping in biceps tissue of 2.15% at week 13 compared to baseline. Compared to a receptor mediated delivery technology which delivered comparable levels, on a per-dose basis, of oligonucleotide to muscle tissue, we believe the levels of exon skipping generated by PGN-EDO51 at 5 mg/kg suggest PGN-EDO51 has the potential to be considerably more potent.[1]
- Dystrophin Production
  - PGN-EDO51 achieved a mean muscle-adjusted dystrophin level of 1.49% of normal and a 0.70% change from baseline after 4 doses, measured at week 13.
  - PGN-EDO51 achieved a mean absolute dystrophin level of 0.61% of normal and a 0.26% change from baseline after 4 doses, measured at week 13 by Western blot analysis.

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- All three patients in this cohort are continuing to be dosed with PGN-EDO51 at 5 mg/kg in the long-term extension (LTE) phase of the clinical trial. PGN-EDO51 continues to be well tolerated during the LTE as of July 29, 2024.

The Company plans to present additional results from the 5 mg/kg cohort at a medical meeting later in the year.

Update on PGN-EDO51 10 mg/kg Cohort

As of July 29, 2024, two participants have received a total of four doses at 10 mg/kg in the ongoing CONNECT1 study. To date, PGN-EDO51 has been generally well tolerated at this dose level and the Company expects to report initial results from the 10 mg/kg cohort in early 2025.

Update on CONNECT2-EDO51 Clinical Trial

Based on the data from CONNECT1, including PGN-EDO51's emerging safety profile to date, the Company is working to optimize the design of the CONNECT2 Phase 2 double-blind, placebo-controlled 25-week multinational trial. The CONNECT2 clinical trial is open in the United Kingdom. The Company continues to engage with regulators in the European Union and expects to open the clinical trial in the United States by year-end.

Conference Call Details

PepGen will host a conference call and webcast today at 4:30 p.m. ET to review the data being presented. To access the call, please dial (866) 400-0049 and provide the Conference ID 9666330. A live webcast of the presentation will be available on the Events & Presentations section of the PepGen investor website, investors.pepgen.com.

About PGN-EDO51

PGN-EDO51, PepGen's lead clinical candidate for the treatment of Duchenne muscular dystrophy (DMD), utilizes the Company's proprietary Enhanced Delivery Oligonucleotide (EDO) technology to deliver a therapeutic phosphorodiamidate morpholino oligomer (PMO) 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. The U.S. Food and Drug Administration has granted PGN-EDO51 both Orphan Drug and Rare Pediatric Disease Designations for the treatment of patients with DMD amenable to an exon-51 skipping approach.

About the CONNECT Clinical Program

CONNECT1-EDO51 is an open-label, multiple ascending dose Phase 2 trial designed to evaluate PGN-EDO51 at up to three different dose levels starting with 5 mg/kg administered intravenously once every four weeks for 12 weeks in patients with DMD amenable to an exon 51-skipping approach. The key endpoints for this trial are safety, dystrophin production and exon skipping. Multiple pharmacokinetic parameters are also being assessed as part of the trial protocol.

CONNECT2-EDO51 is a double-blind, placebo-controlled, multiple ascending dose, multinational Phase 2 trial designed to evaluate PGN-EDO51 at up to three different dose levels intravenously once every four weeks for 24 weeks in patients with DMD amenable to an exon 51-skipping approach. Endpoints included in this trial are safety, dystrophin production, exon skipping and clinical assessments of mobility, pulmonary function and quality of life.

About Duchenne Muscular Dystrophy (DMD)

DMD is an X-linked recessive muscle-wasting disease that predominantly affects males. This progressively debilitating and fatal 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 nuclei 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 (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 www.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 PGN-EDO51 based on early data, the potential of our EDO platform to deliver higher levels of oligonucleotide to the nuclei, our expectations regarding the potential for increased levels of exon skipping and dystrophin production following dosing at 10 mg/kg with a longer treatment period, the design, initiation and conduct of clinical trials, including expected timelines for our CONNECT2 Phase 2 trial, the expected timing for additional data reports from our CONNECT1 trial, and ongoing and planned regulatory interactions.

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 our clinical trials, including CONNECT1-EDO51 and CONNECT2-EDO51; 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; our product candidates, including PGN-EDO51, 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 CONNECT1-EDO51 and CONNECT2-EDO51 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.

1. DYNE-251 DELIVER clinical data update, May 20, 2024

Investor Contact
Dave Borah, CFA
SVP, Investor Relations and Corporate Communications
dborah@pepgen.com

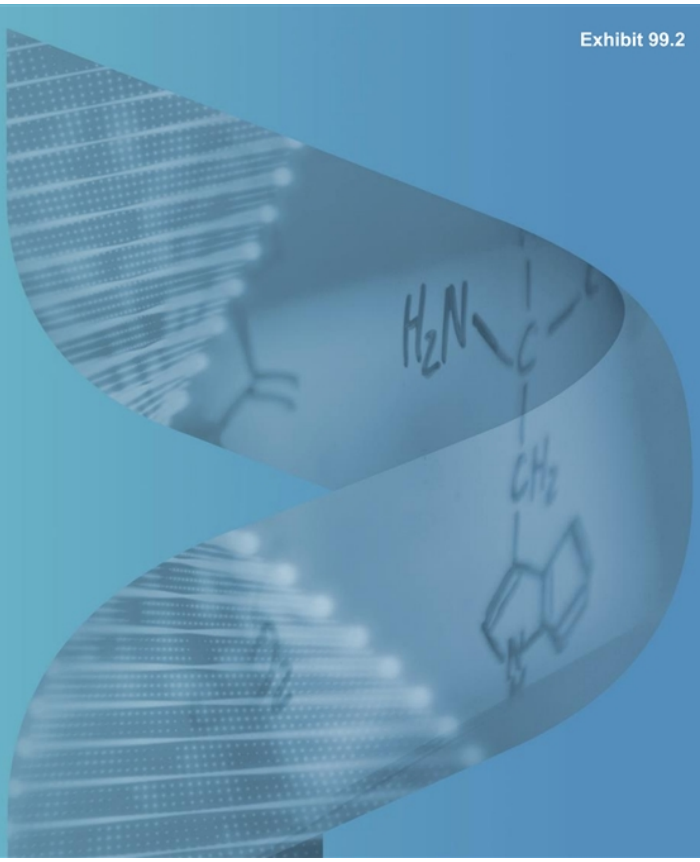
Media Contact
Julia Deutsch
Lyra Strategic Advisory
Jdeutsch@lyraadvisory.com

Exhibit 99.2

PepGen™

CONNECT1-EDO51
5 mg/kg Clinical Data

July 30, 2024



Disclaimers

This presentation 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 presentation 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 PGN-EDO51 based on early data, the potential of our EDO platform to deliver higher levels of oligonucleotide to the nuclei, our expectations regarding the potential for increased levels of exon skipping and dystrophin production following dosing at 10 mg/kg with a longer treatment period, the design, initiation and conduct of clinical trials, including expected timelines for our CONNECT2 Phase 2 trial, the expected timing for additional data reports from our CONNECT1 trial, ongoing and planned regulatory interactions regarding the CONNECT2 trial, and expectations regarding our FREEDOM-DM1 and FREEDOM2-DM1 clinical trials.

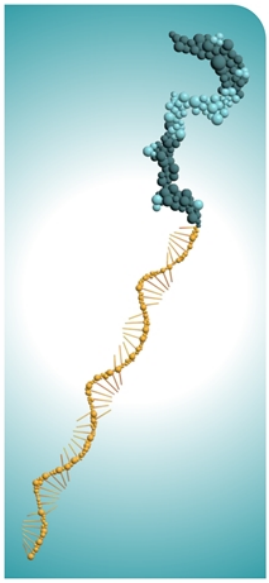
Any forward-looking statements in this presentation are based on current expectations, estimates and projections only as of the date of this presentation and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to: delays or failure to successfully initiate or complete our ongoing and planned development activities for our product candidates, including PGN-EDO51 and PGN-EDODM1; our ability to enroll patients in our clinical trials, including CONNECT1-EDO51, CONNECT2-EDO51 and FREEDOM-DM1; 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; our product candidates, including PGN-EDO51 and PGN-EDODMI, 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 CONNECT2-EDO51, or other regulatory feedback requiring modifications to our development programs; changes in regulatory framework that are out of our control; our ability to obtain, maintain and protect our intellectual property; our ability to enforce our patents against infringers and defend our patent portfolio against challenges from third parties; competition from others developing therapies for the indications we are pursuing; 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.

Agenda

James McArthur, PhD
President and Chief Executive Officer
Platform, Key Takeaways, and Closing Remarks

Michelle Mellion, MD
Chief Medical Officer
DMD Landscape and CONNECT1 Clinical Trial Design

Hugh McMillan, MD, MSc
Pediatric Neurologist, CHEO[1] and CONNECT1 Lead Investigator
CONNECT1 5mg/kg Clinical Data and Potential Clinical Utility

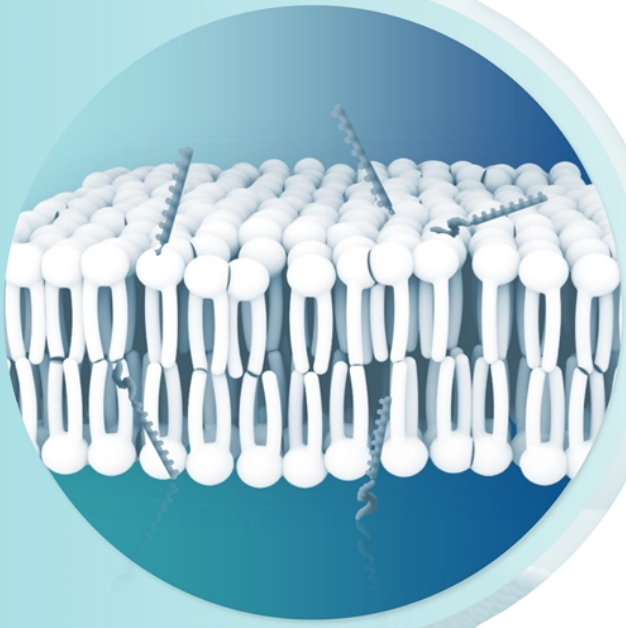


1. Children's Hospital of Eastern Ontario

PepGen™

Platform and Key Takeaways

James McArthur, PhD
President and Chief Executive Officer

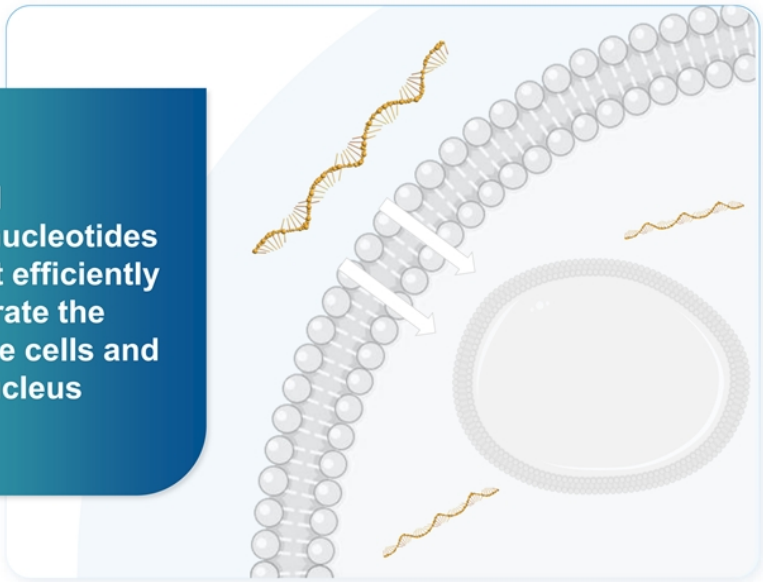


Driven by our proprietary Enhanced Delivery Oligonucleotide (EDO) platform, PepGen is creating a pipeline of disease-modifying therapeutics with the potential to safely and effectively target the underlying cause of serious genetic neuromuscular and neurological disorders.

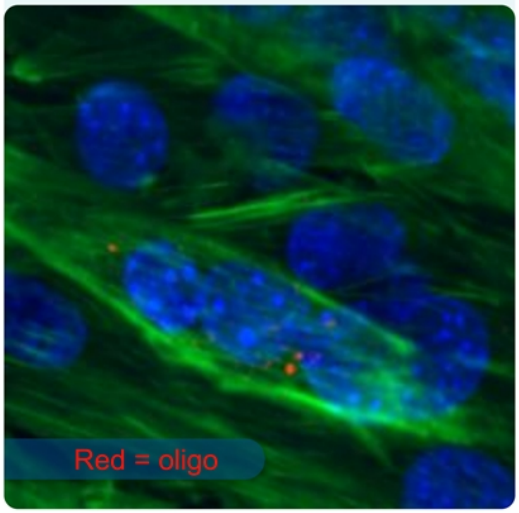
PepGen™

The Challenge of Oligonucleotides

Naked oligonucleotides do not efficiently penetrate the muscle cells and the nucleus



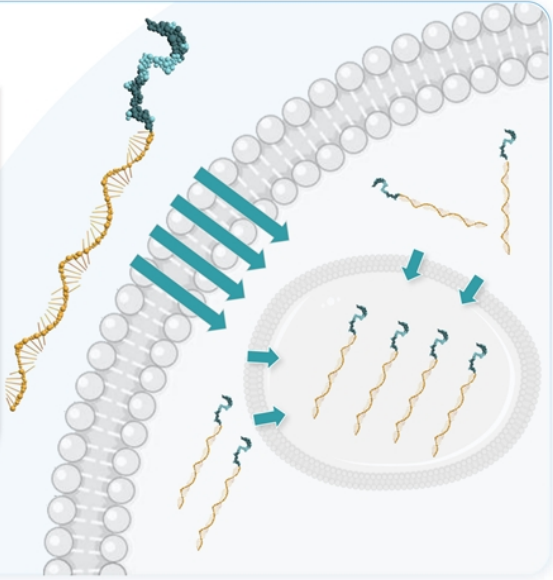
Naked Oligonucleotide (PMO)



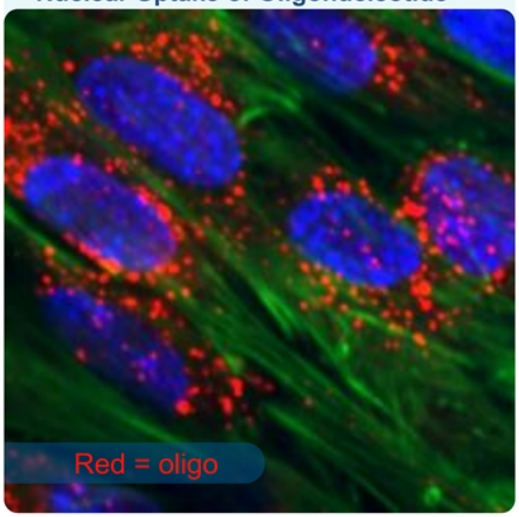
Note: 1. In vitro staining image is shown with 10μM conc. of PMO23 (naked oligonucleotide); 2. C2C12 mouse cells were differentiated for 4 days into myotubes and treated with fluorescently tagged compounds for 24h. PMO: phosphorodiamidate morpholino oligonucleotide

PepGen's EDO Platform Has Been Designed and Developed to Solve this Decades Long Problem

EDO platform results in nuclear delivery of oligonucleotide therapeutics



PepGen's EDO: Up to 25X Higher Nuclear Uptake of Oligonucleotide



Note: 1. In vitro staining image is shown with 10μM conc. of EDO23; 2. C2C12 mouse cells were differentiated for 4 days into myotubes and treated with fluorescently tagged compounds for 24h.

CONNECT1 Key Takeaways

- PGN-EDO51 was well tolerated at 5 mg/kg, currently dosing at 10 mg/kg
- All patients demonstrated increased exon skipping and dystrophin production and have continued into the long-term extension study
- PGN-EDO51 generated the highest levels of mean exon 51 skipping (2.15%) seen to date at 5 mg/kg versus all other exon 51-skipping therapies given at even 2x higher doses and 2x treatment period[1]
- Dystrophin production encouraging at just 3 months and 4 doses at 5 mg/kg[1]
  - Increase from baseline of 0.70% in muscle content adjusted dystrophin and 0.26% unadjusted
  - DYNE-251 (5 mg/kg at 6 months and 6 doses): Increase from baseline of 0.44% in muscle content adjusted dystrophin and 0.28% unadjusted
- Initial results support that our EDO technology delivers high levels of oligonucleotides to the nucleus

1. No head-to-head trials have been conducted comparing PGN-EDO51 to DYNE-251, eteplirsen or SRP-5051. Data from studies of these clinical candidates may not be directly comparable due to differences in molecule composition, trial protocols, methodologies for calculating muscle content adjusted dystrophin, dosing regimens, and patient populations and characteristics. Accordingly, cross-trial comparisons may not be reliable.DYNE-251 DELIVER clinical data update, May 20 2024; *Journal of Neuromuscular Diseases*. 2021; 8(6): 989–1001; SRP-5051 MOMENTUM clinical data update, December 7, 2020.

Based on These Results, Dystrophin Production Expected to Increase with Higher Dystrophin Transcript

PGN-EDO51 generated the highest levels of mean exon 51 skipping seen to date versus all other exon 51 skipping therapies at even 2-fold higher doses[1]

PGN-EDO51	DYNE-251	
5 mg/kg (4 doses/3 mos)	5 mg/kg (6 doses/6 mos)	10 mg/kg (6 doses/6 mos)
2.15%	0.80%	1.89%

With higher doses and a longer treatment period

We believe PGN-EDO51 has the potential to result in significant increases in dystrophin

1. No head-to-head trials have been conducted comparing PGN-EDO51 to DYNE-251, eteplirsen or SRP-5051. Data from studies of these clinical candidates may not be directly comparable due to differences in molecule composition, trial protocols, methodologies for calculating muscle content adjusted dystrophin, dosing regimens, and patient populations and characteristics. Accordingly, cross-trial comparisons may not be reliable.DYNE-251 DELIVER clinical data update, May 20 2024; *Journal of Neuromuscular Diseases*. 2021; 8(6): 989–1001; SRP-5051 MOMENTUM clinical data update, December 7, 2020.

PepGen™

DMD Overview and CONNECT1 Trial Design

Michelle Mellion, MD
Chief Medical Officer

More Effective Therapies are Urgently Needed to Treat DMD

Living with Duchenne puts you in front of your own mortality. You're kind of given a list of things that become impossible. Not that they necessarily do, but that's the way it seems."

- Mallory, living with DMD

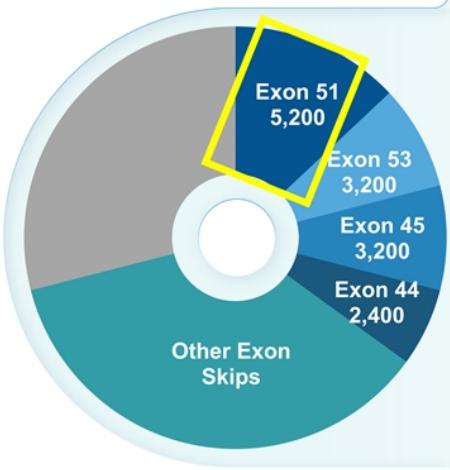
PepGen: Developing Potentially Transformative DMD Therapies

Unmet Need

- Current treatments produce negligible amount of dystrophin or severely truncated dystrophin
- More effective therapies needed to restore functional dystrophin and prevent loss of muscle function and early mortality

Potential Addressable US and EU Patient Populations

- US and EU ~40,000 patients
- ~21% patients amenable to:
  - PGN-EDO51: Phase 2 (exon 51)
  - PGN-EDO53: CTA/IND enabling studies advancing (exon 53)

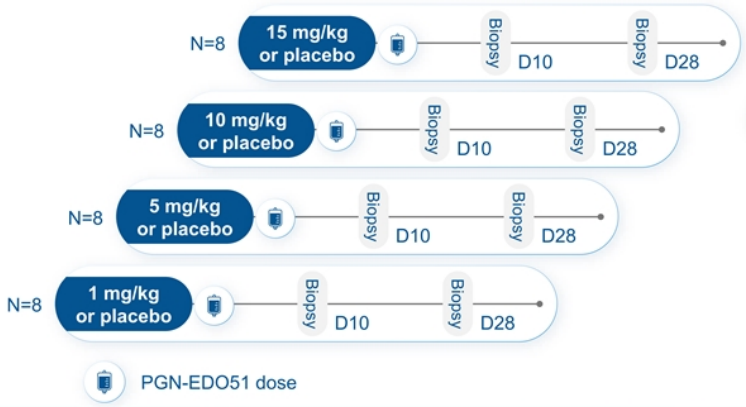


Source: https://www.cureduchenne.org/cure/exon-skipping/.

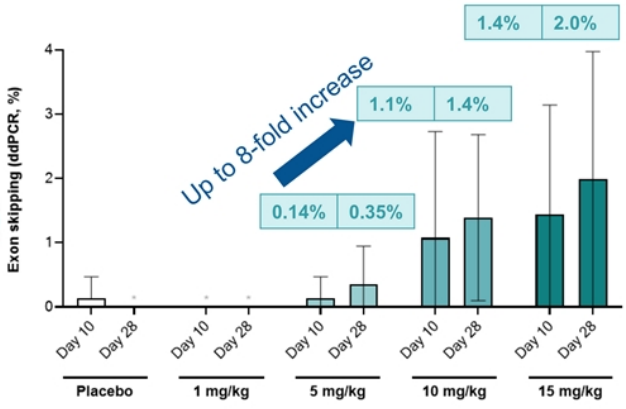
Healthy Volunteer Study Results Led to CONNECT1: Highest Levels of Exon 51 Skipping in Humans Following Single Dose of PGN-EDO51[1]

Phase 1 Healthy Volunteer (HV) Trial Design

- Study population: Healthy adult males (n = 32; 8 per cohort, 3:1 PGN-EDO51:placebo)
- Dosing: Single dose, IV administration
- Biceps biopsies conducted on Day 10 and Day 28



Trial Results: Exon Skipping (Biceps)



Protocol PGN-EDO51-101: Phase 1, first in human, randomized double blind, placebo controlled single ascending dose study in healthy adult volunteers. Single dose of either PGN-EDO51 or placebo administered by IV infusion at doses indicated. Participants were followed for 28-day period following dose administration to evaluate safety, tolerability, pharmacokinetics, and pharmacodynamics. Needle biopsies of biceps muscle were taken on Days 10 and 28. Exon skipping measured by ddPCR. Shown as mean ± SD; n = 6 PGN-EDO51: 2 placebo per cohort (n = 5 for D10 at 15 mg/kg). Asterisk indicates values that were under the lower level of quantification

1.Comparative statement based on cross-trial comparison of Phase 1 HV data of single dose administration of EDO51 with publicly available Phase 1 HV data following a single dose of other exon skipping approaches (vesleteplirsen and eteplirsen).

CONNECT1: Designed to Establish Proof-of-Concept and Inform CONNECT2-EDO51 Clinical Trial

Connect 1
EDO51

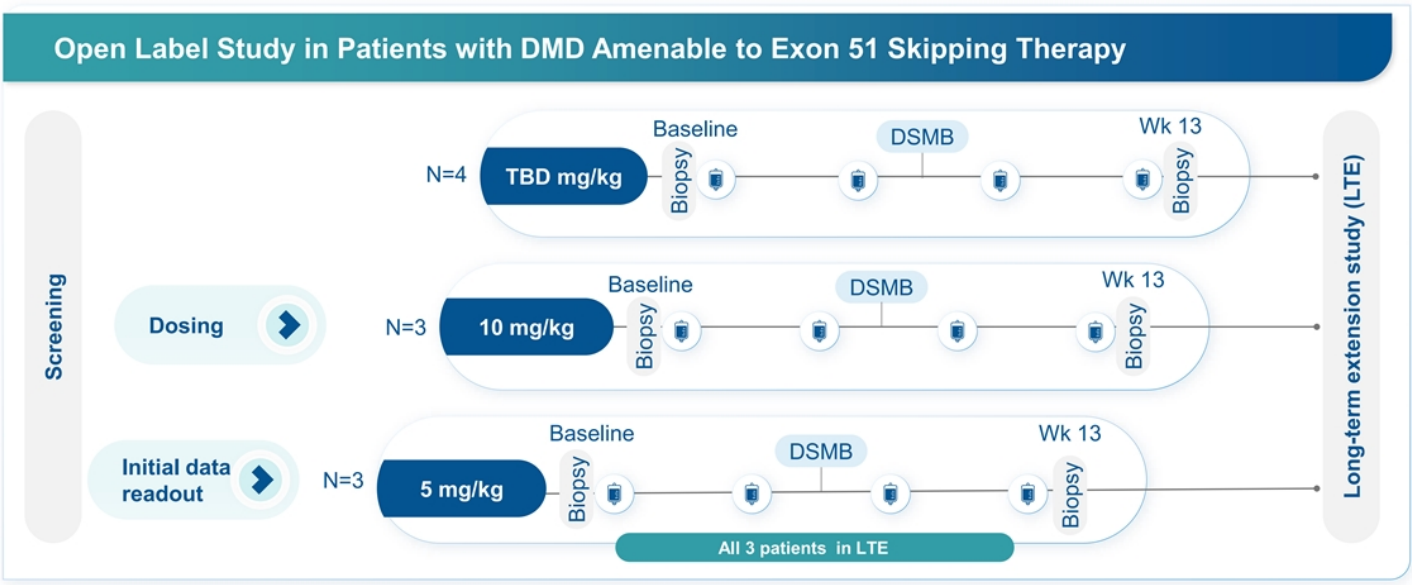
Study Design and Population

- Open label clinical trial in Canada
- DMD patients (n=10) with exon 51 skippable mutation
- Ages ≥ 8 years
- Ambulatory and non-ambulatory

Endpoints

- Safety and tolerability
- Dystrophin
- Muscle tissue concentration of PGN-EDO51
- Exon skipping

CONNECT1 Trial Design



PGN-EDO51 Development Path to Support Registration

Ongoing

Phase 2: Open-label MAD trial in patients

Open in Canada

Fast path to proof-of-concept: Exon skipping and dystrophin expression at 13 weeks

Open

Phase 2: Randomized, double-blind, placebo-controlled MAD trial in patients

Multinational trial; open in United Kingdom

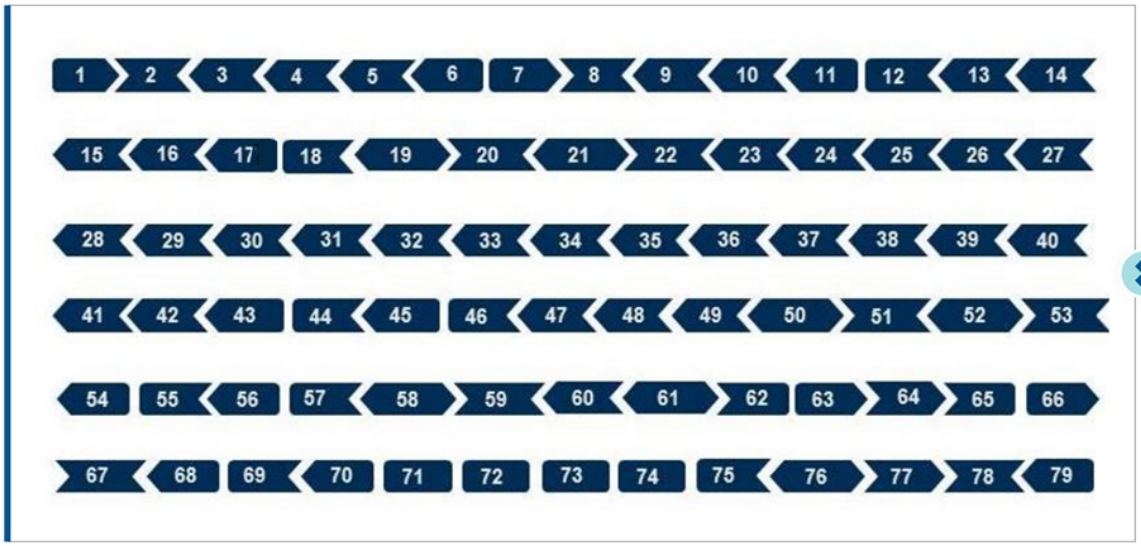
Potential to support accelerated approval[1]: Exon skipping and dystrophin expression at 25 weeks

1. Subject to regulatory authority feedback; MAD: multiple ascending dose

CONNECT1
5 mg/kg Clinical Data

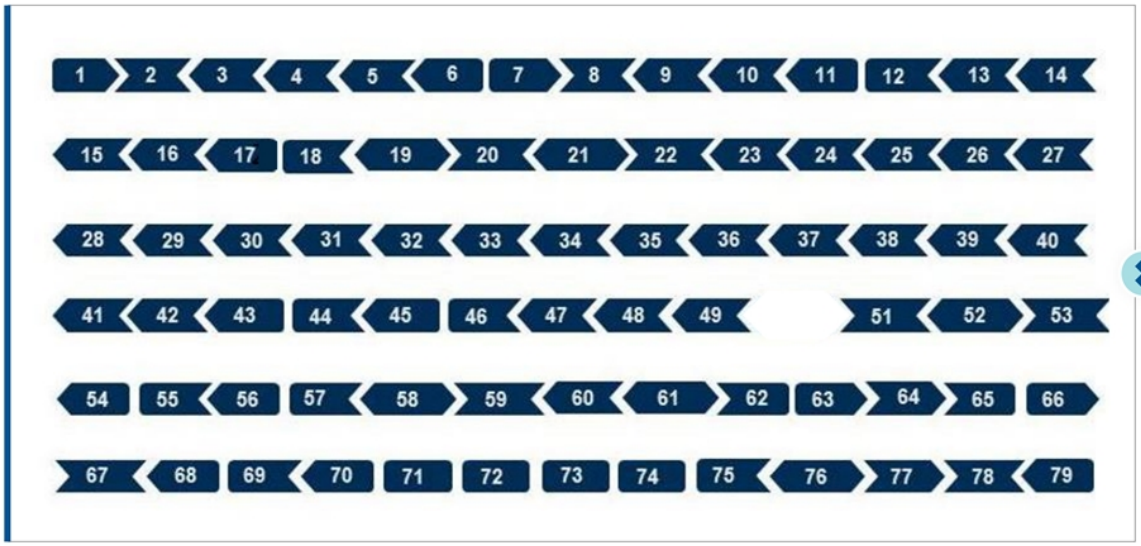
Hugh McMillan, MD, MSc
Pediatric Neurologist, Children's Hospital of Eastern Ontario, and CONNECT1 Lead Investigator

Dystrophin Gene is One of the Largest Genes (~2.6 Mb, 79 exons)



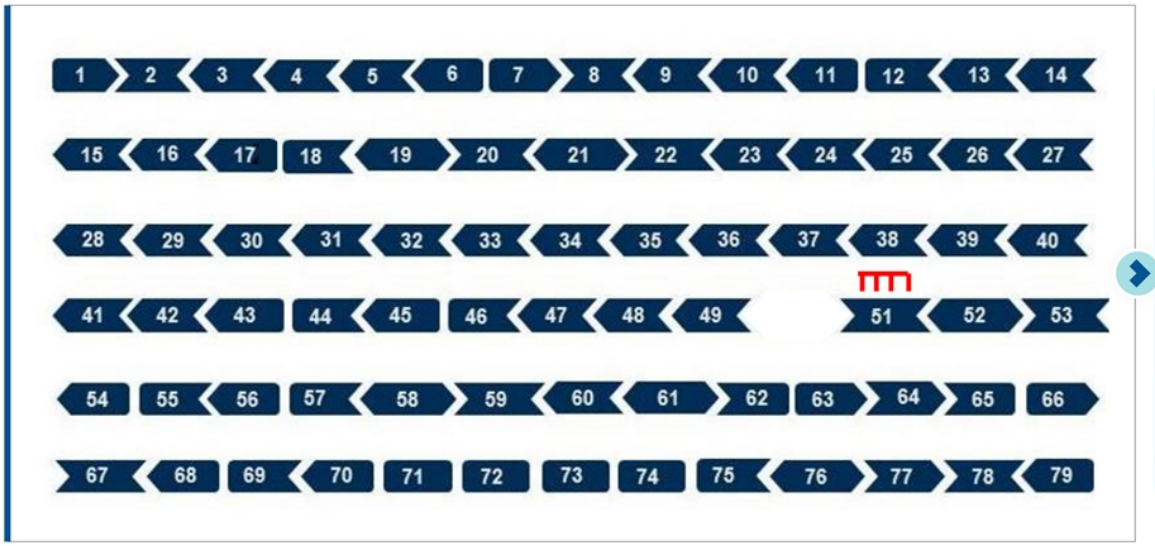
Full length dystrophin produced

Dystrophin Gene with “Out of Frame” Mutation



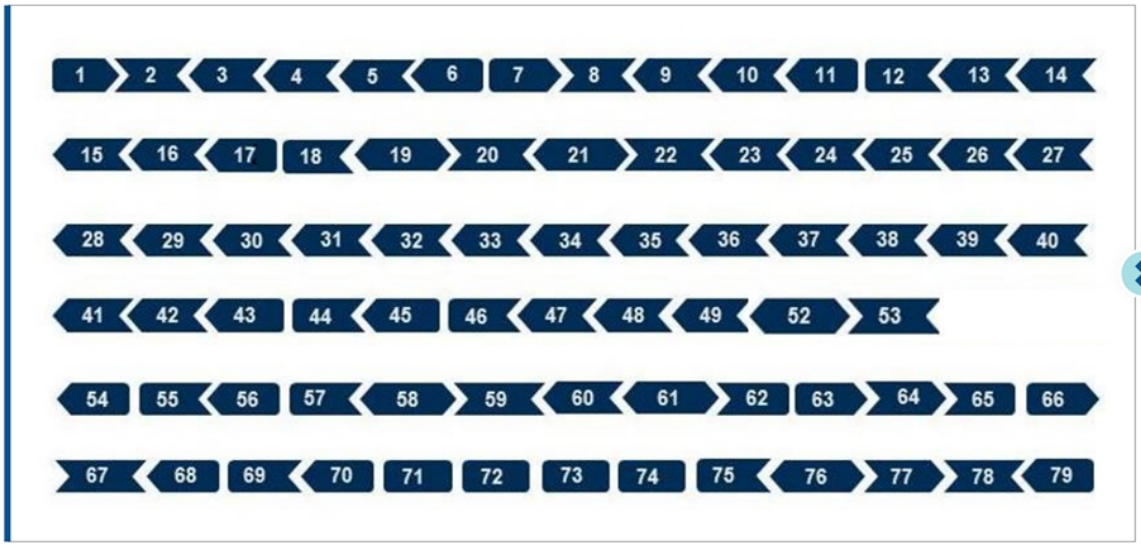
No functional dystrophin produced

Mutated Dystrophin Sequence Results in Mutated Transcript



Exon 51 skipping therapies bind to exon 51 allowing its exclusion

Dystrophin Gene After Converting Deletion to “In Frame”



Restores partial-length dystrophin expression

DMD Disease Progression

- Symptom onset <6 yo

- Loss of muscle
- Loss of ambulation
  - 8 – 11 yo w/o corticosteroids
  - 10 – 14 yo w/ corticosteroids

- Progressive respiratory muscle weakness
- Cardiomyopathy: Risk increases with age

- Death from cardiorespiratory complications (late 20's)

Asher D et al, Expert Opinion Biol Therapy 2020. 20;263-7. yo: year old

CONNECT1 5 mg/kg: Baseline Characteristics of Participants (n=3)

	Mean (SD)
Age (years)	11.7 (1.5)
BMI (kg/m^2)	19.8 (2.7)
Height (cm)	132.0 (9.9)
Weight (kg)	34.4 (3.9)
Age of DMD genetic diagnosis (years)	6.3 (1.5)
Number of patients on daily corticosteroid dosing regimen	3
Number of ambulatory patients	3
Number of patients previously on DMD therapy	0

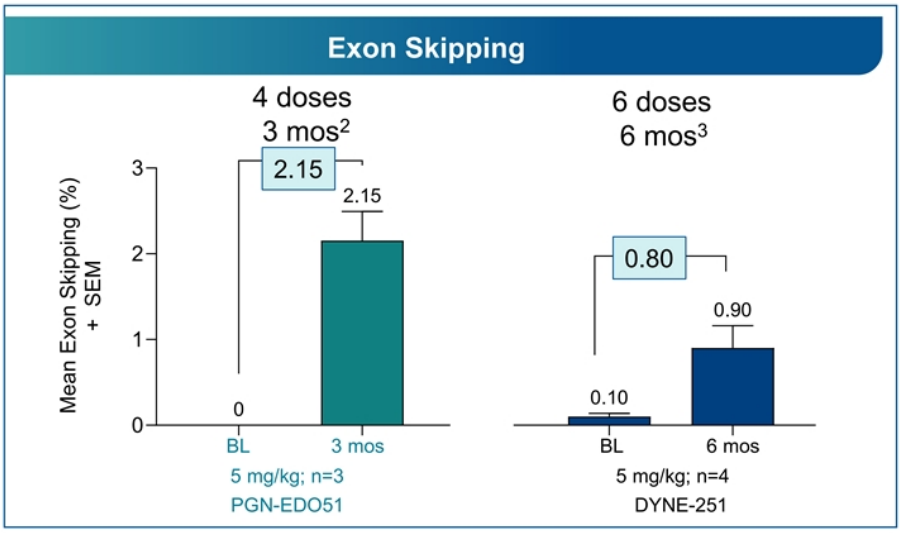
CONNECT1 5 mg/kg: PGN-EDO51 Was Well Tolerated[1]

	n (%)
Any TEAEs, n (%)	3 (100)
Related to study drug	1 (33.3)
• Mild • Moderate • Severe	1 (33.3) 0 0
Serious Adverse Events (AEs)	0
AEs leading to dose modification/ discontinuation/interruption	0
AEs leading to death	0

- All treatment emergent adverse events (TEAEs) were mild and resolved
- Related TEAE was mild (abdominal pain, flatulence)
- No discontinuations, dose modifications or dose interruptions
  - All participants rolled over to the long-term extension study
- No sustained elevation in kidney biomarkers
- No changes in electrolytes
  - No hypomagnesemia or hypokalemia
- No changes in hepatic function
- No anemia or thrombocytopenia

1. As of May 31, 2024

PGN-EDO51 Showed >2.5-Fold Mean Exon Skipping With Fewer Doses and Shorter Treatment Duration[1]

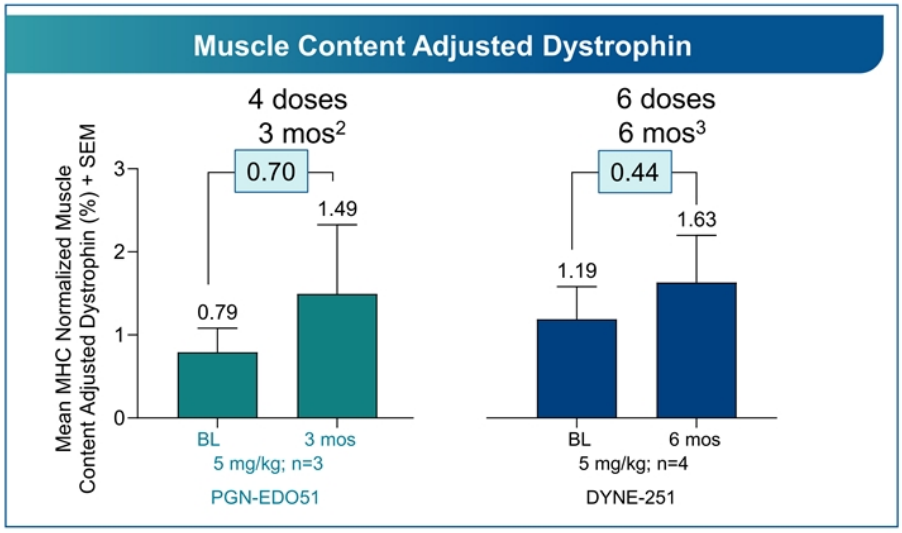


2. PGN-EDO51 muscle biopsy taken approximately 7 days after last dose. 3. DYNE-251 muscle biopsy taken approximately 28 days after last dose.

1. No head-to-head trials have been conducted comparing PGN-EDO51 to DYNE-251. Data from studies of these clinical candidates may not be directly comparable due to differences in molecule composition, trial protocols, dosing regimens, and patient populations and characteristics. Accordingly, cross-trial comparisons may not be reliable.DYNE-251 DELIVER clinical Data update, May 20 2024.

Note: Dyne-251 error bars estimated based on public presentations.

PGN-EDO51 Produced 59% Greater Muscle Content Adjusted Dystrophin Increase With Fewer Doses and Shorter Treatment Duration[1]



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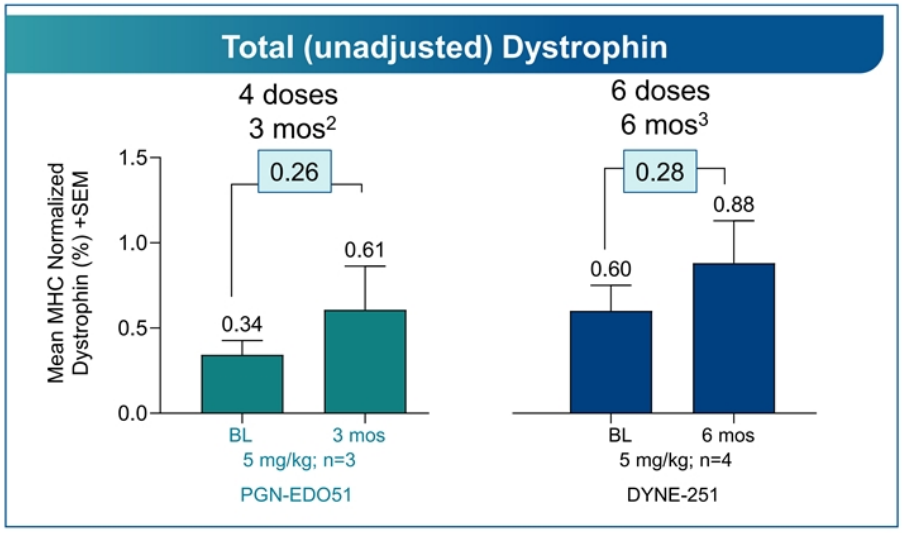
1. No head-to-head trials have been conducted comparing PGN-EDO51 to DYNE-251. Data from studies of these clinical candidates may not be directly comparable due to differences in molecule composition, trial protocols, dosing regimens, and patient populations and characteristics. Accordingly, cross-trial comparisons may not be reliable.DYNE-251 DELIVER clinical Data update, May 20 2024.

Note: Dyne-251 error bars estimated based on public presentations.

PGN-EDO51 Produced Similar Dystrophin Increase With Fewer Doses and Shorter Treatment Duration[1]



2. PGN-EDO51 muscle biopsy taken approximately 7 days after last dose. 3. DYNE-251 muscle biopsy taken approximately 28 days after last dose.

1. No head-to-head trials have been conducted comparing PGN-EDO51 to DYNE-251. Data from studies of these clinical candidates may not be directly comparable due to differences in molecule composition, trial protocols, dosing regimens, and patient populations and characteristics. Accordingly, cross-trial comparisons may not be reliable.DYNE-251 DELIVER clinical Data update, May 20 2024.

Note: Dyne-251 error bars estimated based on public presentations.

CONNECT1 Initial 5 mg/kg Data Demonstrated Encouraging Results

Given its tolerability profile to date and promising early dystrophin production, PGN-EDO51 has the potential to improve on current treatment options for DMD patients

PepGen™

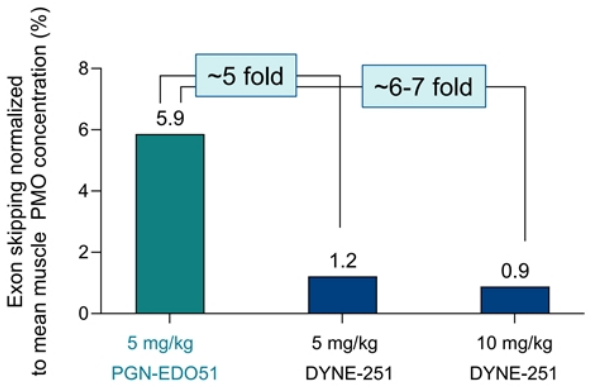
Closing Remarks

James McArthur, PhD
President and Chief Executive Officer

CONNECT1 5 mg/kg Data Suggests PGN-EDO51 Has the Potential to Be Considerably More Potent[1]

	Doses and duration	Mean exon skipping over baseline	Mean muscle PMO conc (µg/g)	Mean muscle PMO conc (µg/g) per dose	Mean age (yrs)
PGN-EDO51 5 mg/kg[2]	**4 doses; 3 months**	**2.15%**	**0.367**	**0.092**	**11.7**
DYNE-251 5 mg/kg[3]	6 doses; 6 months	0.80%	0.657	0.110	8.3
DYNE-251 10 mg/kg[3]	6 doses; 6 months	1.89%	2.156	0.359	6.6

Exon Skipping Relative to PMO Concentration



2. PGN-EDO51 muscle biopsy taken approximately 7 days after last dose. 3. DYNE-251 muscle biopsy taken approximately 28 days after last dose.

1. No head-to-head trials have been conducted comparing PGN-EDO51 to DYNE-251. Data from studies of these clinical candidates may not be directly comparable due to differences in molecule composition, trial protocols, dosing regimens, and patient populations and characteristics. Accordingly, cross-trial comparisons may not be reliable.DYNE-251 DELIVER clinical Data update, May 20 2024.

CONNECT1 Key Takeaways

- PGN-EDO51 was well tolerated at 5 mg/kg, currently dosing at 10 mg/kg
- All patients dosed at 5 mg/kg demonstrated increased exon skipping and dystrophin production and have continued into the long-term extension study
- PGN-EDO51 generated the highest levels of mean exon 51 skipping (2.15%) seen to date at 5 mg/kg versus all other exon 51-skipping therapies given at even 2x higher doses and 2x treatment period[1]
- Dystrophin production encouraging at just 3 months and 4 doses of 5 mg/kg
- Initial results support that our EDO technology delivers high levels of oligonucleotides to the nucleus

Potentially higher levels of dystrophin production are expected with higher doses of PGN-EDO51 over longer treatment periods

1. No head-to-head trials have been conducted comparing PGN-EDO51 to DYNE-251, eteplirsen or SRP-5051. Data from studies of these clinical candidates may not be directly comparable due to differences in molecule composition, trial protocols, methodologies for calculating muscle content adjusted dystrophin, dosing regimens, and patient populations and characteristics. Accordingly, cross-trial comparisons may not be reliable.DYNE-251 DELIVER clinical data update, May 20 2024; Journal of Neuromuscular Diseases. 2021; 8(6): 989–1001; SRP-5051 MOMENTUM clinical data update, December 7, 2020.

PepGen's Pipeline Enabled by EDO Technology

INVESTIGATIONAL CANDIDATES	CLINICAL PROGRAMS	INDICATIONS	PRECLINICAL	PHASE 1	PHASE 2	PIVOTAL
PGN-EDO51	Connect	DMD – *Exon 51*				
PGN-EDODM1	Freedom	DM1 – *DMPK*				
PGN-EDO53		DMD – *Exon 53*				

Research

- DMD *Exon 45, Exon 44*
- Additional neuromuscular diseases
- Neurological diseases

Note: Clinical plans are subject to alignment with regulatory authorities.

Key Milestones Ahead

EDO51

- **CONNECT1 10 mg/kg initial clinical data readout expected in early 2025**
- **CONNECT2**
  - Currently open in UK
  - Engaging with EU regulators
  - Expect to open clinical trial in US by year-end

EDODM1

- Update on FREEDOM-DM1 clinical trial expected in Q4 2024
- Initiate dosing of FREEDOM2-DM1 clinical trial in 2H:2024

Thank you!

- We sincerely thank patients, families and clinical investigators!
- We now look forward to answering your questions