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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

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**FORM 8-K**

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

**Date of Report (Date of earliest event reported): October 1, 2015**

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**Sarepta Therapeutics, Inc.**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction  
of incorporation)

**001-14895**  
(Commission  
File Number)

**93-0797222**  
(IRS Employer  
Identification No.)

**215 First Street  
Suite 415  
Cambridge, MA 02142**  
(Address of principal executive offices, including zip code)

**(617) 274-4000**  
(Registrant's telephone number, including area code)

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

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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 (see General Instruction A.2. below):

- 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))
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**Item 7.01 Regulation FD Disclosure.**

On October 1, 2015, Sarepta Therapeutics, Inc. (the “Company”) hosted a conference call to provide an update regarding its leading product candidate, eteplirsen. A copy of the presentation is attached as Exhibit 99.1 hereto.

Also on October 1, 2015, the Company issued a press release regarding the conference call described above. A copy of the press release is attached as Exhibit 99.2 hereto.

*The information in this report furnished pursuant to Item 7.01, including Exhibits 99.1 and 99.2 attached hereto, shall not be deemed “filed” for the purposes of Section 18 of the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities of that section. It may only be incorporated by reference in another filing under the Exchange Act or the Securities Act of 1933, as amended, if such subsequent filing specifically references the information furnished pursuant to Item 7.01 of this report.*

**Item 9.01 Financial Statements and Exhibits.**

**(d) Exhibits.**

<b>Exhibit Number</b>	<b>Description</b>
99.1	Sarepta Therapeutics Investor Update Slide Deck
99.2	Press release dated October 1, 2015

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**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 hereunto duly authorized.

**Sarepta Therapeutics, Inc.**

By: /s/ Edward Kaye

Edward Kaye  
Interim Chief Executive Officer, Senior  
Vice President and Chief Medical Officer

Date: October 1, 2015

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**EXHIBIT INDEX**

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99.1	Sarepta Therapeutics Investor Update Slide Deck
99.2	Press release dated October 1, 2015



## **Sarepta Therapeutics Investor Update**

**October 1, 2015**

# Presenter

## **Edward Kaye, MD**

SVP, Chief Medical Officer  
Interim Chief Executive Officer  
Sarepta Therapeutics  
Cambridge, Massachusetts, USA



# Forward-Looking Statement

- *This presentation, contains forward-looking statements. These forward-looking statements generally can be identified by the use of words such as “believes” or belief,” “anticipates,” “plans,” “expects,” “will,” “intends,” “potential,” “possible,” “advance” and similar expressions. These forward-looking statements include statements about the safety and efficacy of eteplirsen, analysis of eteplirsen and control cohort data and their implications, and eteplirsen’s potential as treatment for Duchenne Muscular Dystrophy, the potential market for our exon skipping product candidates and Sarepta’s mission, commitments and business plans and strategies. Forward-looking statements also include those made during the presentation regarding future business developments and actions and the timing of the same.*
- *Each forward-looking statement contained in this presentation is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statement. Applicable risks and uncertainties include, among others: the results of our ongoing research and development efforts and clinical trials for eteplirsen and our other product candidates may not be positive or consistent with prior results or demonstrate a safe treatment benefit; there may be delays in our projected timelines or our product candidates, chemistries or technologies may never become commercially available for regulatory or other reasons including a negative decision on our NDA for eteplirsen by an advisory committee or the FDA; agency or court decisions with respect to our patents or those of third parties may negatively impact our business; our product candidates and or the use of or application of our chemistries and technology may fail in the research, development or commercialization process for various other reasons including the possibility that we may not be able to comply with all regulatory requests and requirements for the research, development and commercialization of our product candidates; and those risks identified under the heading “Risk Factors” in Sarepta’s Annual Report on Form 10-K for the year ended December 31, 2014 filed with the Securities and Exchange Commission (SEC), Sarepta’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2015 and Sarepta’s other filings with the SEC, which we encourage investors to review at [www.sec.gov](http://www.sec.gov), for a more detailed discussion on risks and uncertainties relating to our business.*
- *Any of the foregoing risks could materially and adversely affect Sarepta’s business, results of operations and the trading price of Sarepta’s common stock. We caution investors not to place considerable reliance on the forward-looking statements contained in this presentation. Sarepta does not undertake any obligation to publicly update its forward-looking statements based on events or circumstances after the date hereof.*

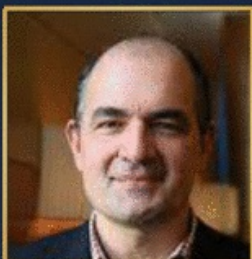
# Panelists



**Anne Connolly, MD**  
Professor, Neurology and Pediatrics  
Neuromuscular Division  
Washington University in St Louis  
St. Louis, Missouri, USA



**Jerry R Mendell, MD**  
The Ohio State University College of Medicine  
Nationwide Children's Hospital  
Columbus, Ohio, USA



**Eugenio Mercuri, MD, PhD**  
Professor of Pediatric Neurology  
Università Cattolica del Sacro Cuore  
Rome, Italy



## Panelists (cont'd)



**Perry Shieh, MD, PhD**

Associate Professor, Department of Neurology  
Director, Neuromuscular Division  
David Geffen School of Medicine, University of California, Los Angeles  
Los Angeles, California, USA



**Steve Wilton, PhD, BSc**

Professor  
Foundation Chair in Molecular Therapy  
Centre for Comparative Genomics  
Murdoch University  
Perth, Australia

All panel members either advise or consult for Sarepta Therapeutics.

# Summary of Accomplishments

- Confirmed clinical activity of eteplirsen in an intention-to-treat (ITT) analysis of 6-minute walk test (6MWT) for Study 201/202 vs external control
- Dystrophin production confirmed by each methodology:
  - 4<sup>th</sup> biopsy
    - Reverse-transcription–polymerase chain reaction (RT-PCR)
    - Dystrophin intensity
    - % dystrophin-positive fibers
    - Western blot
- Expanded clinical program
- Expanded safety database
- Eteplirsen New Drug Application (NDA) filed for accelerated approval

## Key Data Included in NDA Filing

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- ITT analysis of 6MWT or Study 201/202 vs external control
  - Intermediate clinical endpoint upon which the eteplirsen NDA filed with FDA
- Pulmonary function
- 4<sup>th</sup> biopsy
- Rescore of % dystrophin-positive fibers
- Safety

# ITT Analysis of 6MWT for Study 201/202 vs External Control

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# Establishing an Appropriate External Control Cohort Per FDA Request

- Only two Duchenne muscular dystrophy (DMD) registries contained longitudinal 6MWT data up to 36 months and included:
  - Genetic mutation data
  - Equivalent care standards including steroids
- Prospectively defined filters were used to identify external controls from these registries
  - Age, steroid use, and mutation type
  - External control patients would have been eligible for eteplirsen 201 trial based on baseline characteristics

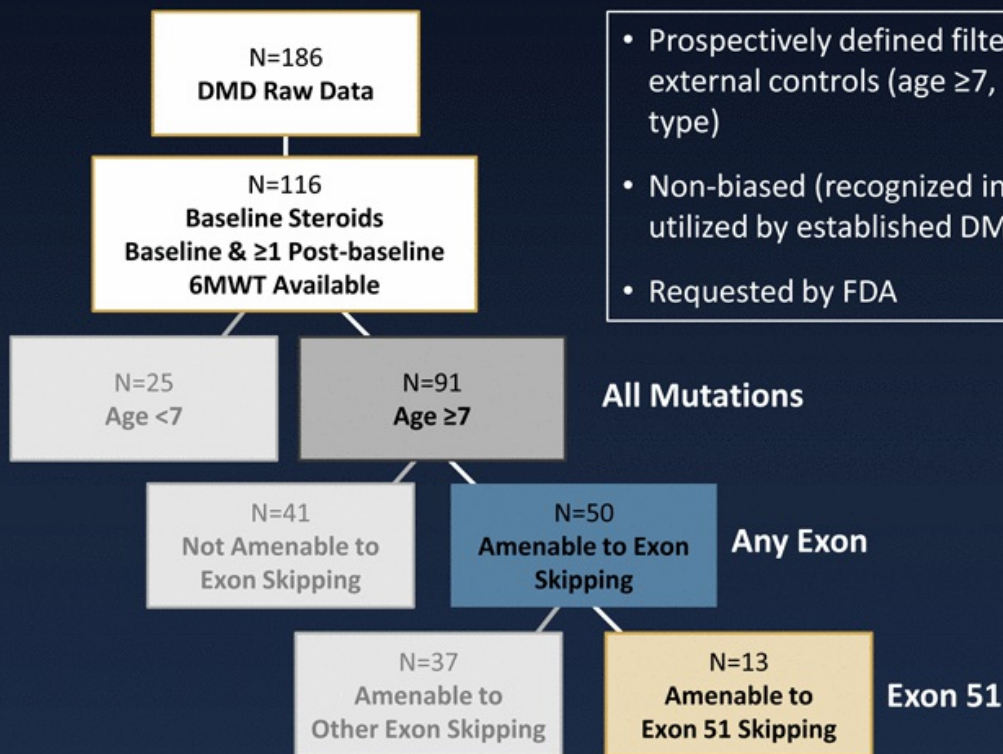
	Italian DMD Telethon N=97	Leuven Neuromuscular Research Center (NMRC), Belgium N=89	Eteplirsen N=12 (ITT)
<b>Clinical Outcomes</b>	<b>6MWT</b>	<b>6MWT</b>	<b>6MWT, PFT</b>

6MWT, 6-minute walk test; NSAA, North Star Ambulation Assessment; PFT, pulmonary function tests.

# Italian Telethon & Leuven NMRC DMD Natural History Registries

- Investigator-initiated studies, independent of sponsor
- Patients treated according to CDC/TREAT-NMD care standards
  - Steroid use recorded
- Enrolled all patients who met eligibility criteria
  - Attending a participating neuromuscular clinic
  - Genetically confirmed diagnosis of DMD
  - No cognitive impairment that could affect 6MWT performance
- 6MWT administered by trained physical therapists according to modified American Thoracic Society procedure
- Published data in peer-reviewed articles

# Derivation of External Control Groups by Prospectively Defined Filters



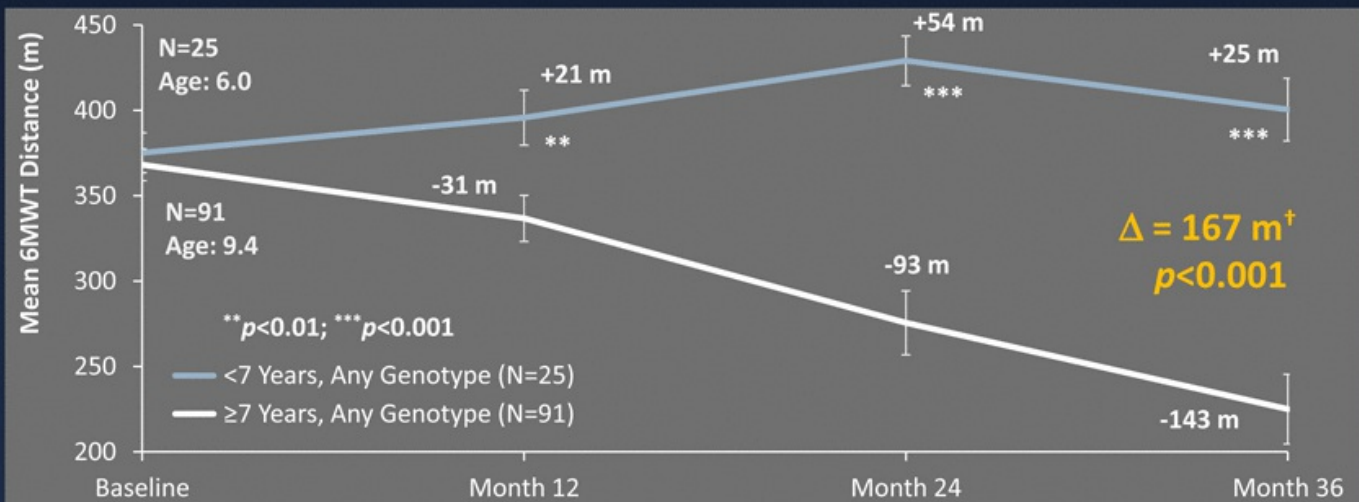
- Prospectively defined filters applied to identify external controls (age ≥7, steroids, mutation type)
- Non-biased (recognized institutions, databases utilized by established DMD companies)
- Requested by FDA

N indicates participants at baseline; some patients did not contribute data through 36 months.

# Impact of Baseline Age (<7 or ≥7) on 6MWT Trends for Any Genotype

## PATIENTS <7 SHOW IMPROVED 6MWT PERFORMANCE WHILE PATIENTS ≥7 SHOW DECLINE

- Patients <7 initially improve in walking ability through 24 months and maintain 6MWT above baseline through 36 months
  - 54-meter increase observed in the first 24 months
- It is challenging to show a benefit in 6MWT in ages <7 as patients are improving due to growth & development where growth outpaces the disease

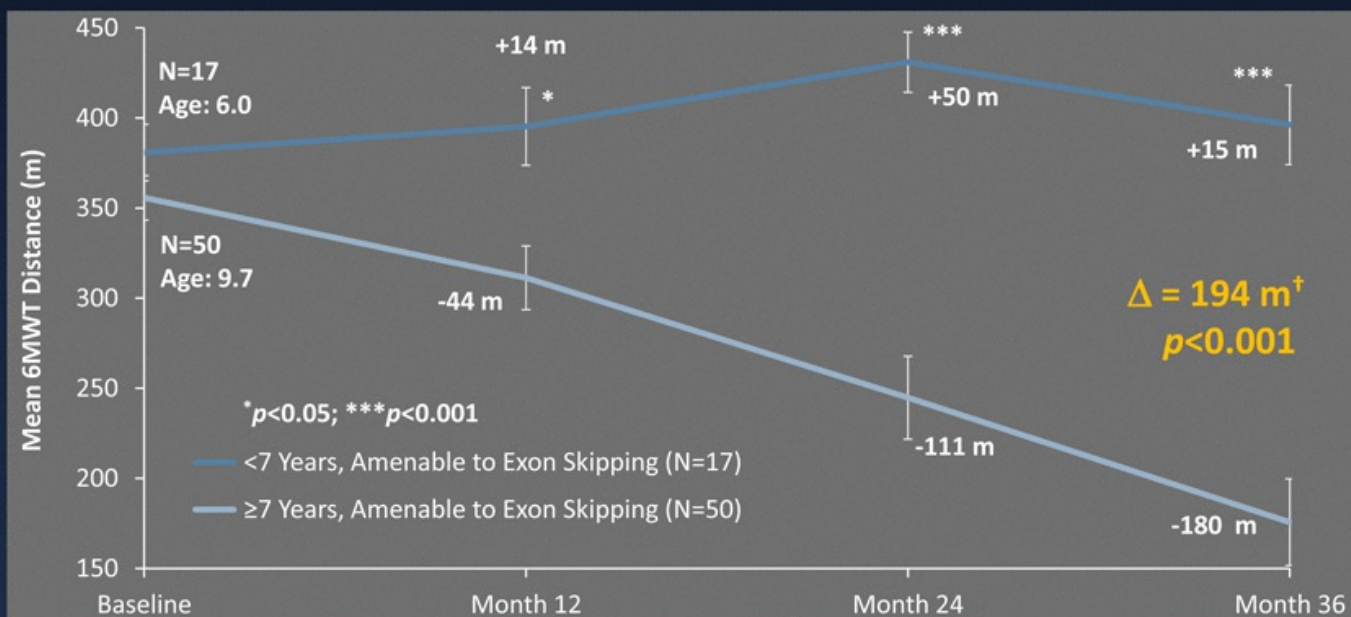




# Impact of Baseline Age (<7 or ≥7) on 6MWT Trends in Patients Amenable to Exon Skipping

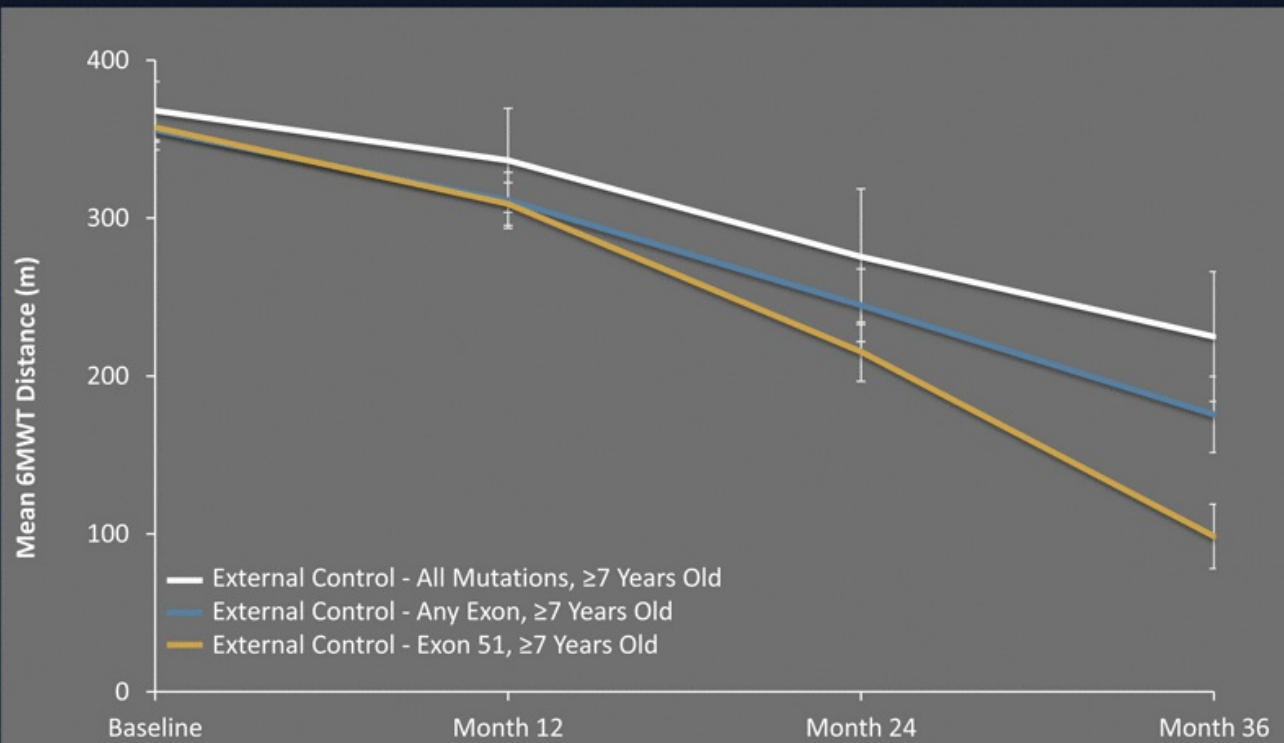
## SIMILAR TREND OBSERVED IN EXON SKIP AMENABLE PATIENTS

- Patients <7 initially improve in walking ability through 24 months and maintain 6MWT above baseline through 36 months



<sup>†</sup>Difference in mean change from baseline.

# Exon 51 Declines More Rapidly Than Other Genotypes



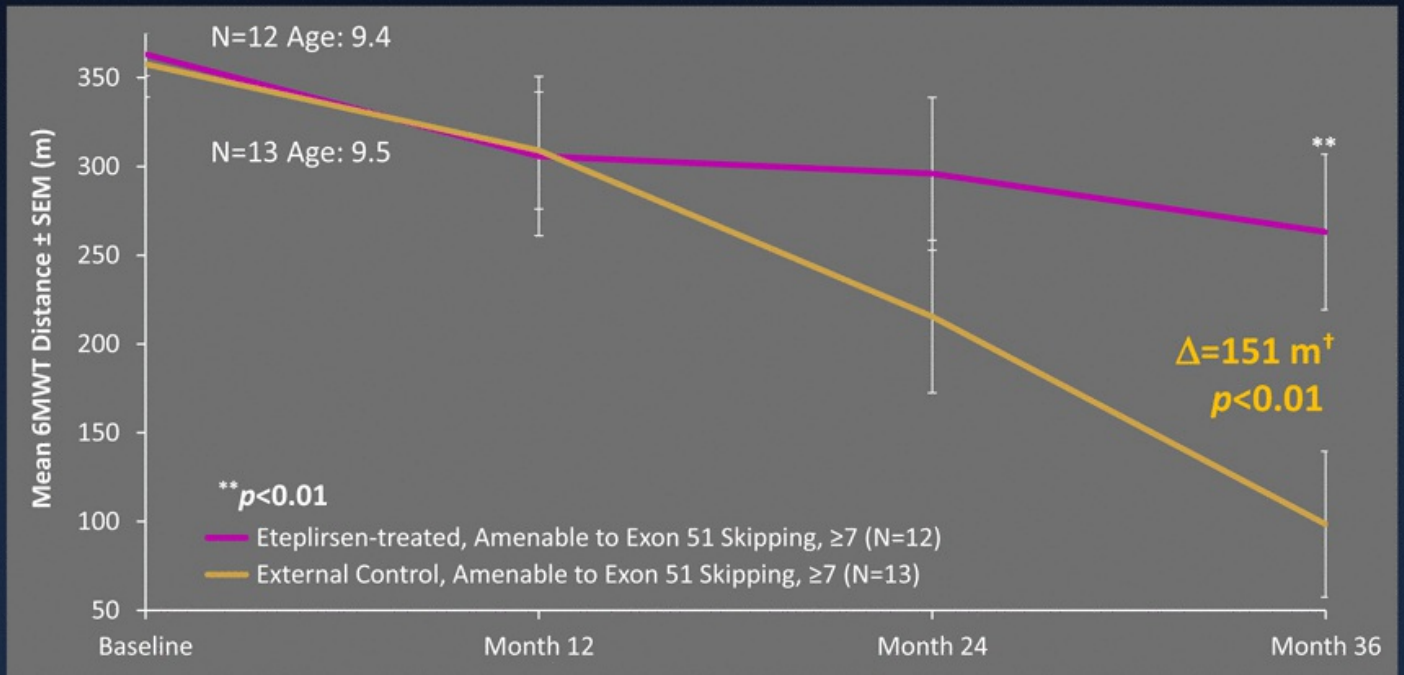
## Patient Characteristics at Baseline: Eteplirsen and External Control Groups Were Well Matched

Parameter	Pivotal Study	6MWT External Control Groups	
		Exon 51	Any Exon
Number of patients	Study 201/202 N=12	Exon 51 N=13	Any Exon N=50
Age, years Mean (SD)	9.4 (1.18)	9.5 (1.45)	9.7 (1.52)
6MWT distance, m Mean (SD)	363.2 (42.19)	357.6 (66.75)	355.7 (87.28)
Deletion mutations represented:	45-50, 48-50, 49-50, 50, 52	45-50, 48-50, 49-50, 50, 52	Skippable mutations
Steroid use	100%	100%	100%

# 151-Meter Difference Between Eteplirsen-treated vs Matched External Controls at 3 Years

ITT ANALYSIS, N=12 FOR ETEPLIRSEN-TREATED PATIENTS AT BASELINE, 12, 24, AND 36 MONTHS

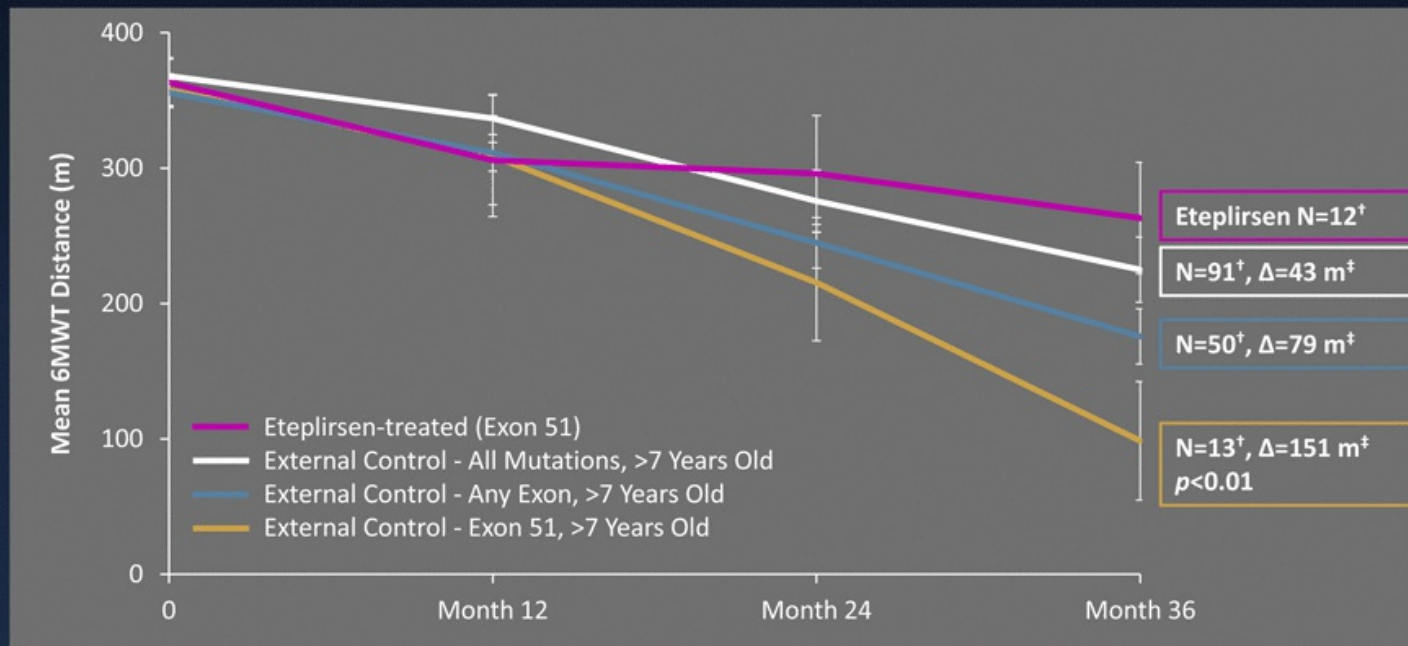
- External controls were steroid-treated, aged  $\geq 7$ , and amenable to exon 51 skipping



- 2 patients in the historical group did not contribute data to the Month 36 timepoint

<sup>†</sup>Difference in mean change from baseline.

# Analysis Shows Slower Rate of 6 MWT Decline in Eteplirsen Treated Patients Compared to Multiple Controls

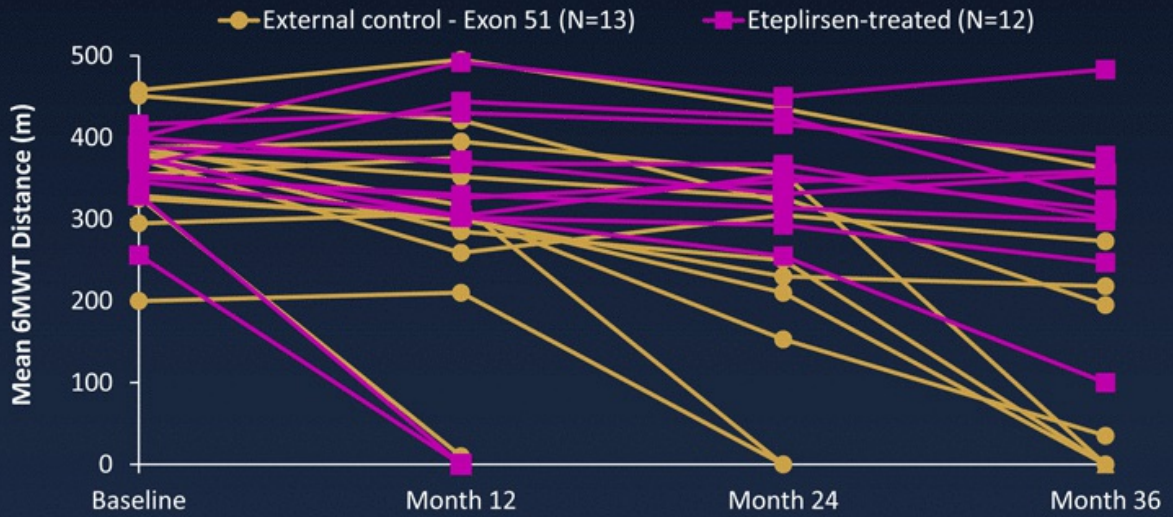


<sup>†</sup>Sample size at baseline.

<sup>‡</sup>Difference at 36 months in mean change from baseline.

# Individual Patient Data for Eteplirsen (N=12) vs External Control (EC)

DIFFERENCE IN RATE OF DECLINE OBSERVED IN THE MAJORITY OF PATIENTS

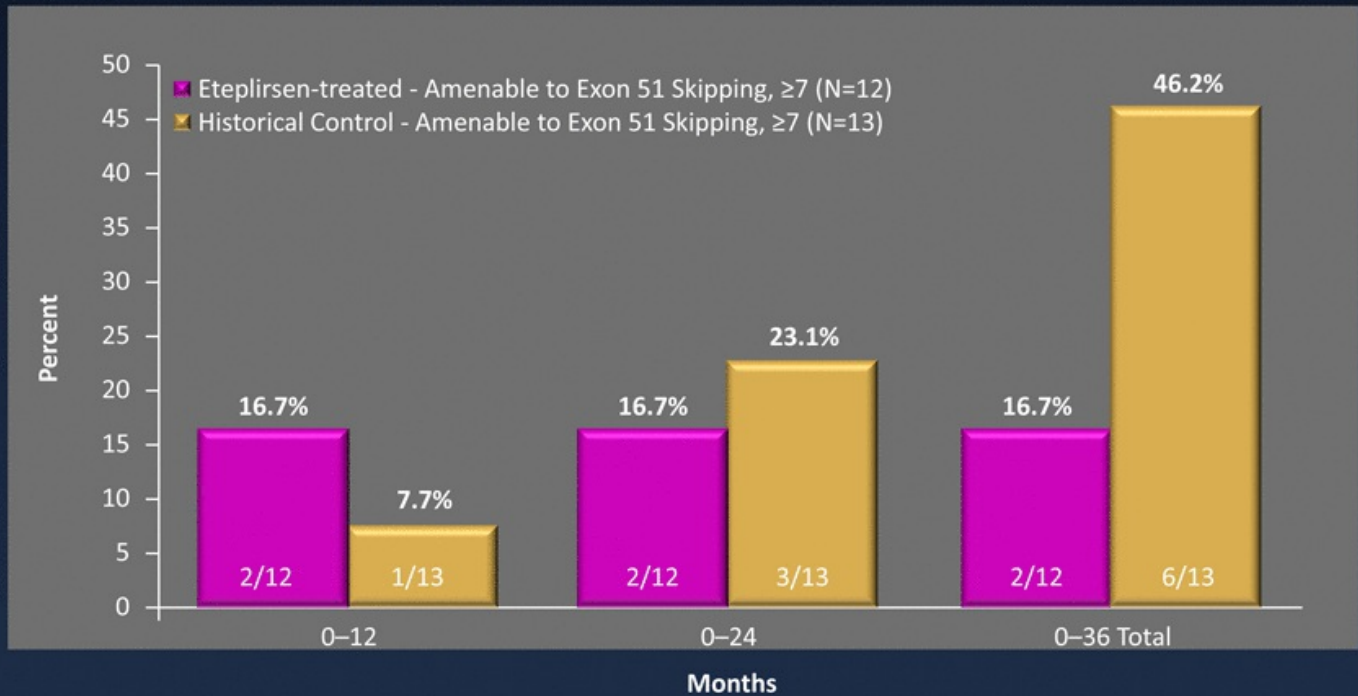


	Baseline		12 Months		24 Months		36 Months	
	EC	Etep	EC	Etep	EC	Etep	EC	Etep
% Walking >300 m	85%	92%	62%	83%	46%	67%	23%	58%
% Walking >150 m	100%	100%	92%	83%	77%	83%	46%	75%
% Non-ambulant	0%	0%	8%	17%	23%	17%	46%	17%

External control (age ≥7, on steroids, amenable to exon 51 skipping)

## Eteplirsen-treated Patients (N=12) Showed a Lower Rate of Loss of Ambulation Than External Control

- 6/13 (46%) untreated external controls lost ambulation over 3 years
- 2/12 (17%; all in year 1) eteplirsen patients lost ambulation over 3 years



# Eteplirsen-treated Cohort Maintains Benefit Through Week 192

10/12 ETEPLIRSEN-TREATED BOYS REMAIN AMBULANT AT WEEK 192 (MEAN AGE 12.9) – ~160 WEEKS SINCE AN ETEPLIRSEN-TREATED BOY LOST AMBULATION



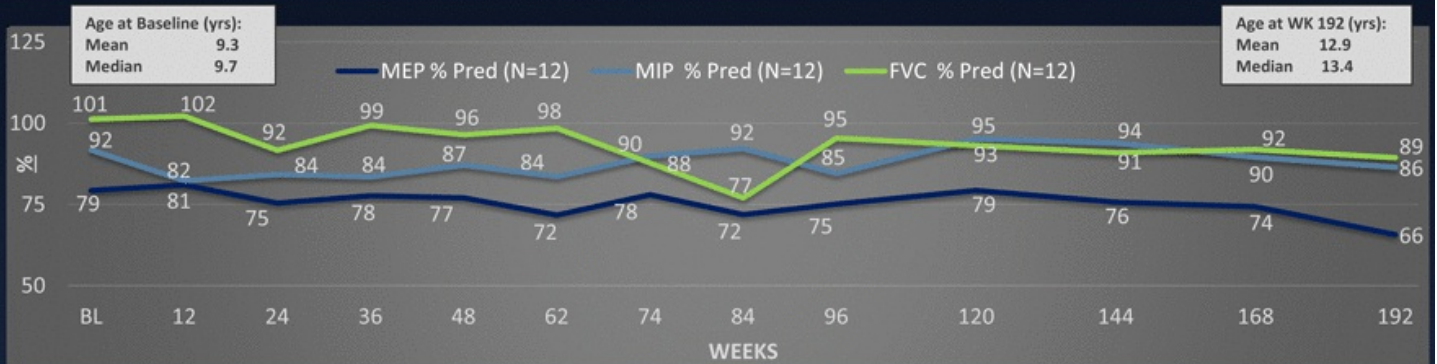
- N=8 at month 48 as the placebo crossover patients (N=4) began treatment at week 25 (wk 25-192) and have not reached 48 months of treatment as other subjects did (wk 1-192) and have only completed 168 weeks of treatment included above. All patients are included (N=12) above in the eteplirsen values from when they started therapy. No new non-ambulant patients or discontinuations.



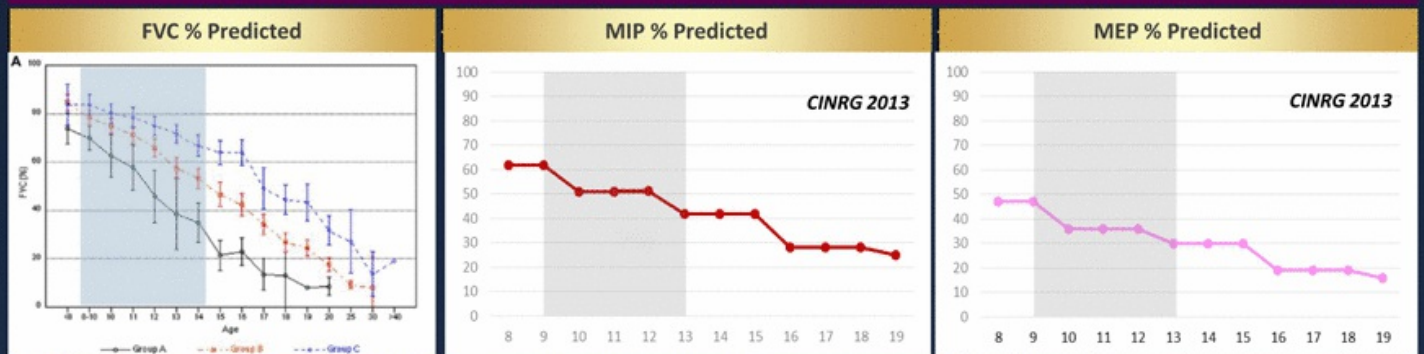
# Pulmonary Function

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# Pulmonary Function: Eteplirsen-treated Patients (N=12) Remain Relatively Stable through Week 192



## NATURAL HISTORY SHOWS STEADY DECLINES OVER TIME IN PULMONARY FUNCTION IN DMD PATIENTS



MEP, maximum expiratory pressure; MIP, maximum inspiratory pressure; FVC, forced vital capacity; BL, baseline.

\*Wilson et al. 1984 equations.

# Efficacy Summary

## SLOWER RATE OF DMD PROGRESSION AT 3 YEARS OBSERVED IN STUDY 201/202 ETEPLIRSEN TREATED PATIENTS AS MEASURED BY MULTIPLE FUNCTIONAL ENDPOINTS

- Slowed disease progression at 3 years compared to external controls amenable to exon 51 skipping
  - At 3 years 6MWT  $\Delta = 151$  m,  $p < 0.01$
  - Decrease in proportion losing ambulation (17% vs 46%)
- Relative stability in % predicted MIP and MEP over 3 years compared to data from the scientific literature

## FOURTH BIOPSY

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# Background on Fourth Biopsy

- 11/12 patients volunteered for surgical biopsy
  - All protocols designed in collaboration with FDA
- Measurements of mechanism of action
  - RT-PCR
- Measurements of dystrophin expression
  - Percent dystrophin-positive fibers
  - Dystrophin signal intensity
  - Western blot
- Measurements were blinded, randomized, and analyzed by 4 independent pathologists

# Demonstration of Exon Skipping by RT-PCR and Confirmed by Sequencing

- 4<sup>th</sup> Biopsy: All (100%) patients (N=11\*) demonstrated exon 51 skipped mRNA product after 180 weeks of treatment was present
- In-frame mRNA transcripts as a result of exon 51 skipping confirmed by sequencing in all patients



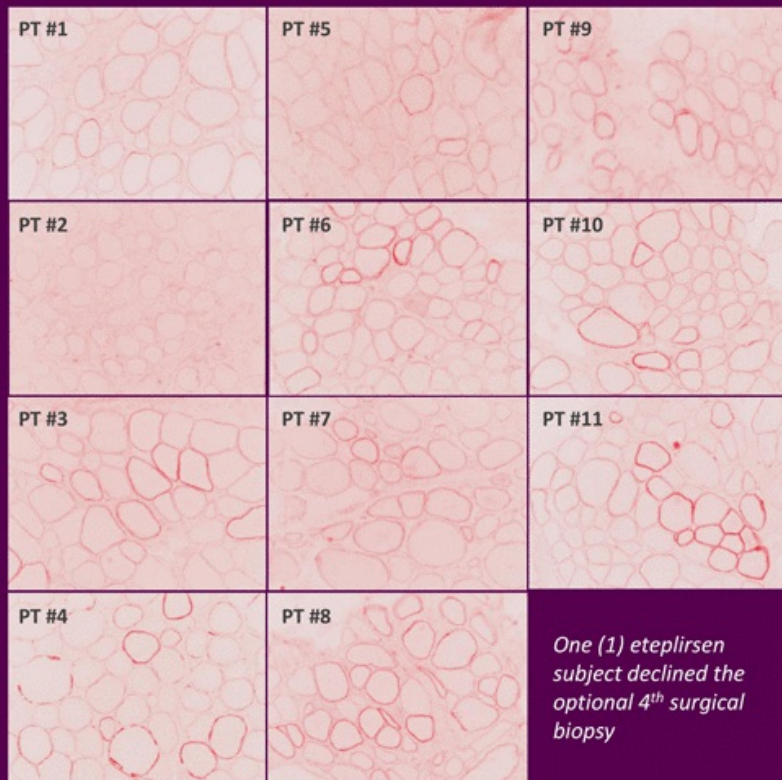
**100% of patients dosed with eteplirsen in completed clinical studies to date demonstrated exon skipping (N=36)**

\*1 boy opted out of the voluntary surgical biopsy.

# Dystrophin-positive Fibers Visibly Present in Eteplirsen-treated Patients' 4<sup>th</sup> Biopsies Compared to DMD Exon 51 Skip Amenable Control Biopsies

DYSTROPHIN DETECTED IN 10/11 BIOPSIES vs NO DYSTROPHIN-POSITIVE FIBERS IN ANY DMD 51 CONTROLS

## Eteplirsen-Treated Week 180



## Untreated Exon 51 DMD Controls

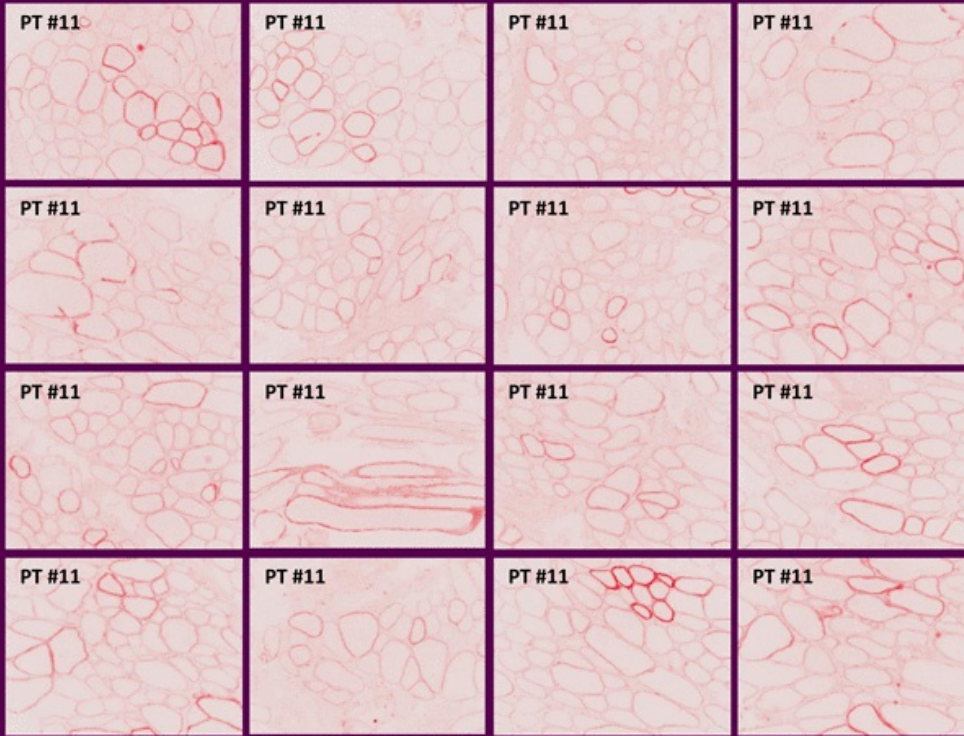


# Patient #11: All 4<sup>th</sup> Biopsy Images Compared to Exon 51 DMD

## Skip Amenable Controls at Week 180

SUBJECT 11: EVERY IMAGE OF 4<sup>TH</sup> BIOPSY SHOWN BELOW TO SHOW MULTIPLE LAYERS OF BIOPSY

### Eteplirsen-Treated Week 180: Every Biopsy Image Patient #11



### Untreated DMD 51 Controls

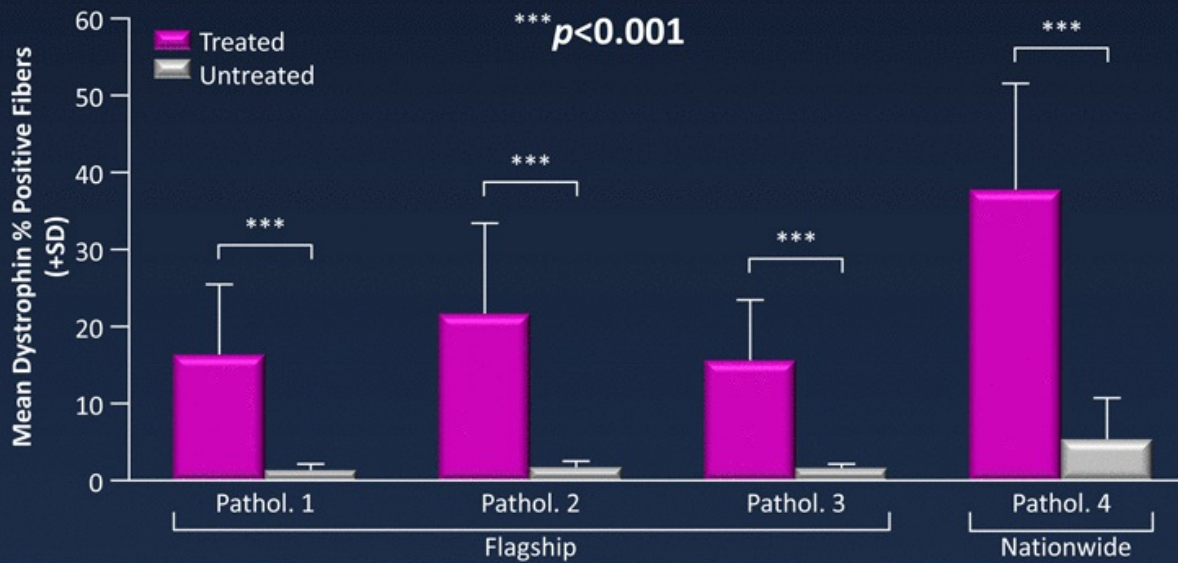




# Statistically Significant Increase in Percent Positive Fibers Observed in Treated vs. Control

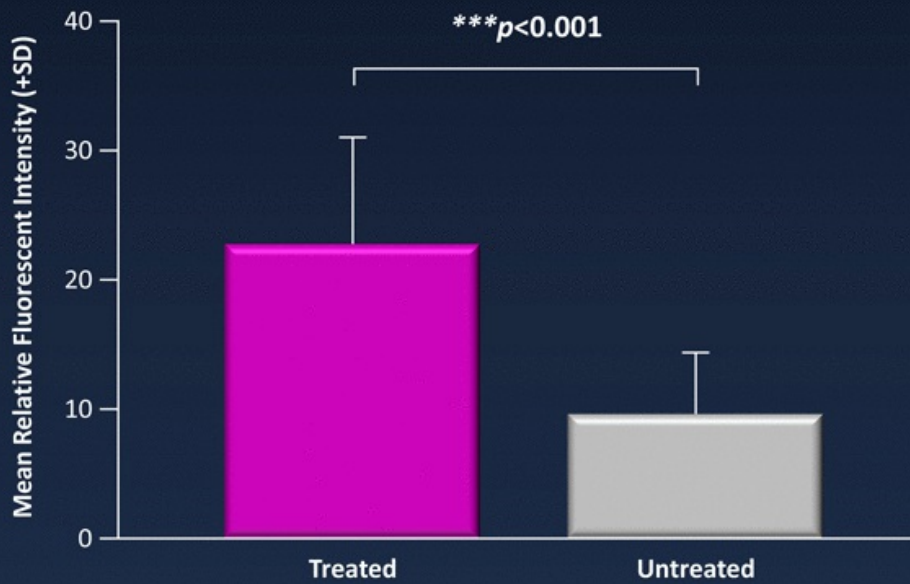
PROTOCOL REVIEWED BY FDA PRIOR TO EVALUATION OF TISSUE BY 4 BLINDED PATHOLOGISTS

	Flagship	Nationwide
Increase in Detected Dystrophin Positive Fibers Treated vs Untreated	1453%	641%



# Mean Fluorescence Intensity Demonstrated a Statistically Significant Increase in Treated vs Controls

Increase in Detected Dystrophin Treated vs Untreated 140%



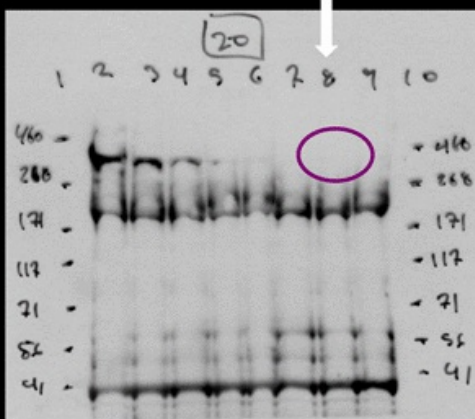
# Role of Western Blot

- Primary diagnostic tool prior to the introduction of genetic testing
  - Absence of band confirmed DMD
  - Presence of band confirmed BMD
- Nine of 11 eteplirsen-treated patients had an observable dystrophin band
- Nine untreated DMD controls amenable to skipping exon 51 used as comparator group
- One out of 9 controls had an observable band

# Western Blot Results vs Baseline Patient A

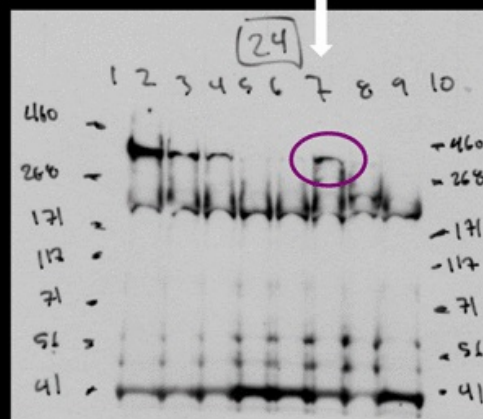
## WESTERN BLOT

Patient A Baseline (Untreated)



Dystrophin Band (DYS1): Absent

Patient A Week 180 (Treated)

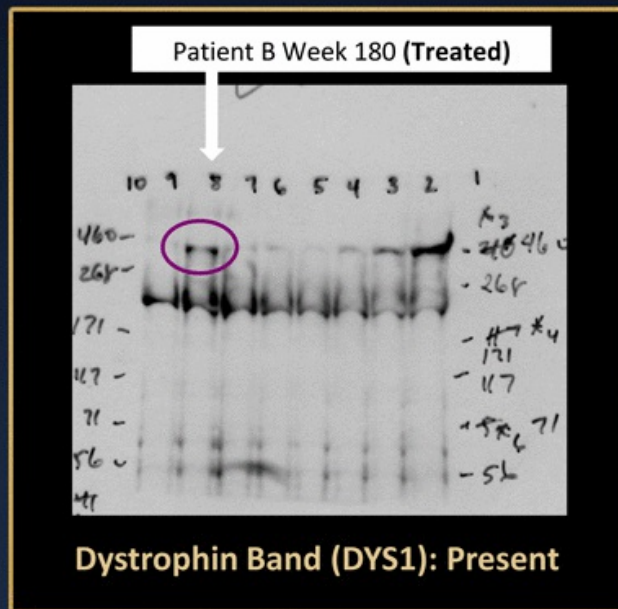
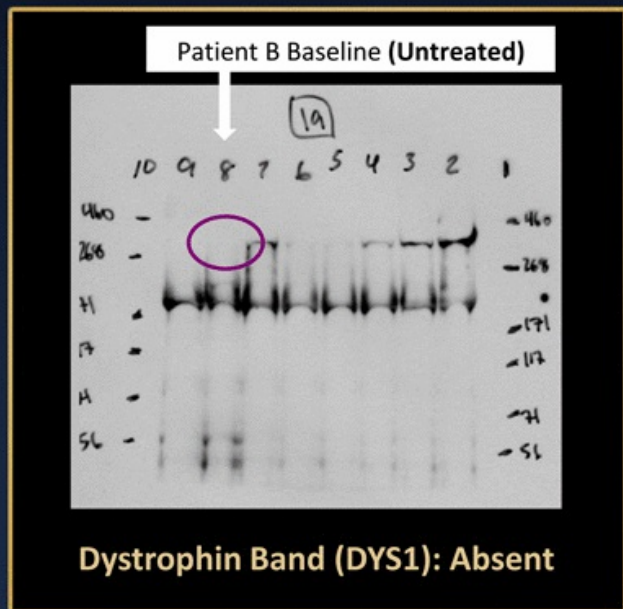


Dystrophin Band (DYS1): Present

Consistent 50  $\mu$ g total protein per lane loaded  
Exposure time 30 minutes per gel

# Western Blot Results vs Baseline Patient B

## WESTERN BLOT



Consistent 50  $\mu$ g total protein per lane loaded  
Exposure time 30 minutes per gel

## Fourth Biopsy Summary: Following Eteplirsen Treatment, Increased Dystrophin Expression Confirmed by All Quantification Methods

- RT-PCR - Exon skipping in 100% of patients and all confirmed by sequencing

### Eteplirsen-treated vs Untreated Exon 51-amenable DMD Controls:

- Dystrophin Intensity ( $p < 0.001$ )
  - Automated quantification of dystrophin intensity at the sarcolemma using BIOQUANT® software confirmed statistical significant increases
- % Dystrophin-positive Fibers ( $p < 0.001$ )
  - 4 blinded pathologists independently scored and confirmed statistically significant increases in dystrophin-positive fibers compared to DMD control biopsies
- Western Blot
  - Presence of dystrophin protein confirmed in 9 of 11 (82%) of eteplirsen patients at Week 180 vs 1 of 9 (11%) in the DMD control biopsies

## **Rescore of Percent Dystrophin-positive Fibers in Study 201**

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# Background on Rescore

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## **Original assessment of dystrophin-positive fibers in Study 4658-201:**

- Scored by one blinded pathologist
- Met primary endpoint
  - Statistically significant increase in % dystrophin-positive fibers of eteplirsen-treated patients at Week 24 compared to baseline

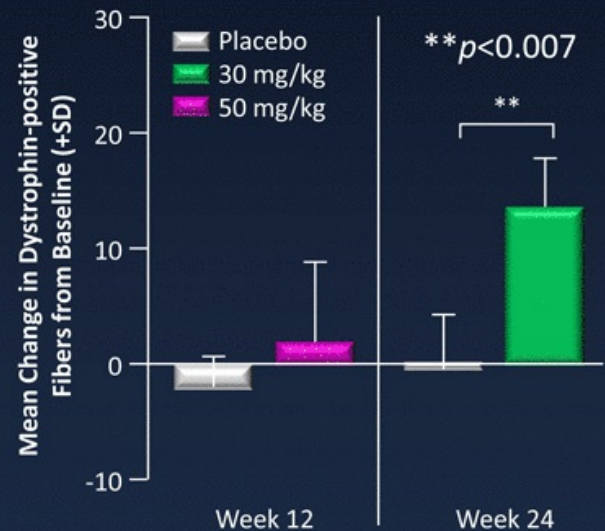
## **Re-assessment of dystrophin-positive fibers in Study 4658-201:**

- Scored by 3 independent blinded pathologists, plus blinded nationwide pathologist (total 4)



### 3 Independent Pathologists Confirmed Statistically Significant Change in Dystrophin-positive Fibers From Baseline

- 30 mg/kg: Statistically significant increase of dystrophin-positive fibers from baseline at Week 24, which confirms previously announced result
- 50 mg/kg: No significant change from baseline at Week 12, which demonstrates a delay in production as expected
- Placebo: No significant change from baseline at Weeks 12 and 24, which confirms previously announced result



Inter-rater reliability (ICC = 0.793) and intra-rater reliability (ICC = 0.944) showed excellent level of concordance among 3 independent pathologists for all treatment groups

# Safety

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## Eteplirsen Safety Database in the NDA (N=72)

Study & Description	Dose (mg/kg)	Route	Duration of Dosing	N
<b>Study 33</b> <i>Proof-of-concept</i>	0.09, 0.9	IM	Single dose	7
<b>Study 28</b> <i>Dose ranging</i>	0.5, 1, 2, 4, 10, 20	IV <sup>†</sup>	12 weeks	19
<b>Study 201/202</b> <i>Double-blind, placebo-controlled/ open-label extension</i>	30, 50	IV <sup>†</sup>	~3 years	12
<b>Studies 301 &amp; 204</b> <i>Recently initiated</i>	30	IV <sup>†</sup>	12-24 weeks	12
	30	IV <sup>†</sup>	<12 weeks	22
<b>ALL ETEPLIRSEN TREATED PATIENTS</b>				<b>72</b>

- 46 patients (46 patient-years) exposed to ≥30 mg/kg proposed clinical dose

<sup>†</sup>Dose administered once weekly

## Enhanced Safety Database Submitted in the NDA

- NDA submitted with 72 total patients with 46 patient years of experience at  $\geq 30\text{mg/kg}$  with >2600 doses provided in the NDA
  - 12 patients treated for over 3 years
  - 12 patients treated for 3–6 months
  - 114 patients to be included in next safety data cut (120-day update)
- Most common adverse events were mild and unrelated to study drug similar to 201/202
- Adverse drug reactions include flushing, erythema, and mild temperature elevation
- No drug-related serious adverse events
  - No evidence of drug-related renal, hepatic, coagulation, or severe cutaneous AESIs\*
    - No elevated GGT, glomerular nephritis, hepatocellular injuries
    - No clinically significant infusion-site reactions with associated ulcers
    - No thrombocytopenia, intra cranial venous sinus thrombosis, intracranial hypertension
    - No drug related alopecia

\*AESI, adverse event of special interest observed with phosphorothioate anti-sense oligonucleotides

## Week 192 Safety Update: No Missed Doses Due to Drug-related Adverse Events Through Week 192

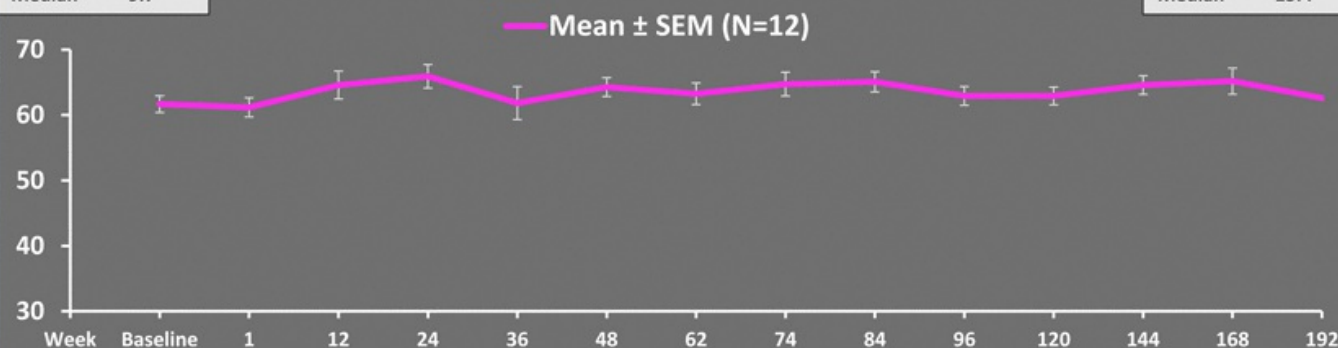
- Total doses administered >2300 at Week 192
- Majority of missed doses due to planned family vacations
- No missed doses due to eteplirsen-related adverse events (AEs)
- No eteplirsen-related serious AEs
- No intermittent dosing needed
- No drug holidays, no dose reductions, no discontinuations
- No hospitalizations due to drug-related AEs
- Most common AEs were mild and unrelated to study drug (201/202)
- Adverse drug reactions to Eteplirsen include flushing, erythema, and mild temperature elevation

# Mean Ejection Fraction Through 192 Weeks (ITT; N=12)

Age at Baseline (yrs):  
 Mean 9.3  
 Median 9.7

## Ejection Fraction (%) Over 192 Weeks

Age at WK 192 (yrs):  
 Mean 12.9  
 Median 13.4



**NATURAL HISTORY SHOWS CARDIAC HEALTH DECREASES OVER TIME AS BOY AGES AND DISEASE PROGRESSES**

Mean Change From Baseline to Week 192

Mean All Groups 1.49%

No evidence of declining left ventricular ejection fraction at Week 192 of eteplirsen treatment

# Summary of Key Results: Totality of the Data

## Clinical Efficacy

- 151-meter advantage in 6MWT of eteplirsen-treated patients compared to external control at 3 yrs ( $p < 0.01$ )
- Pulmonary stability

## Biochemical Efficacy (Supportive Efficacy)

- 4<sup>th</sup> Biopsy (Voluntary: 11 patients) at week 180
  - RT-PCR: 100% of patients demonstrated exon skipping, mechanism of action confirmed
  - Dystrophin intensity:  $p < 0.001$  compared to DMD controls
  - % dystrophin-positive fibers:  $p < 0.001$  vs DMD controls
  - Western blot: protein production confirmed in 9 of 11 patients
- Rescore of Weeks 12 & 24
  - 30 mg/kg: Statistically significant increase of dystrophin-positive fibers from baseline at Week 24, which confirms previously announced result  $p < 0.007$

## Safety

- Drug continues to remain well tolerated after >2300 doses in 201/202
- No injection-site reactions, thrombocytopenia, coagulation, pulmonary embolisms, or renal and hepatic impairment
- No hospitalizations due to drug-related adverse events
- No decrease in ejection fraction

# Sarepta's Vision

## OUR MISSION IS TO FIND A TREATMENT FOR EVERY BOY WITH DMD: EVERY MINUTE MATTERS

- We are committed to developing therapies for patients with DMD regardless of underlying mutation
  - Eteplirsen for exon 51 skipping under FDA review and is the key for PMO exon skipping in DMD
    - Four clinical trials ongoing, over 100 patients will be receiving eteplirsen once trials fully enroll
      - Meeting with EMA and hiring key personnel in 2016 for EU strategy
- Exons 53 & 45
  - Clinical trials underway in US and EU, will enroll over 100 patients
- Our goal is to develop treatments for 8 exons by 2018
  - Working collaboratively with the FDA & EMA to determine an approval path in rarer mutations
  - Working internally on exons 55, 52, 50, 35, 8, and beginning collaboration on exon-2 duplication
- Evaluating approaches beyond exon skipping to bring disease-modifying treatments to all patients with DMD



# Panel Discussion

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**Thank you**

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*Line open for questions*



**Sarepta Therapeutics Announces Additional Long-Term Efficacy and Safety Data from Pivotal Phase IIb Program of Eteplirsen for Treatment of Duchenne Muscular Dystrophy**

*— Eteplirsen provided a statistically significant 6 minute walk test advantage of 151 meters at three years compared to an external control —*

*— Fourth muscle biopsy results confirm increased dystrophin production in nearly all eteplirsen-treated patients and exon skipping in 100 percent of patients —*

*— Eteplirsen safety profile remains consistent with prior results —*

Cambridge, Mass.—October 1, 2015—Sarepta Therapeutics, Inc. (NASDAQ: SRPT), a developer of innovative RNA-targeted therapeutics, today announced additional clinical efficacy and safety data from the Company’s Phase IIb program of eteplirsen in patients with Duchenne muscular dystrophy (DMD). The data demonstrated that eteplirsen provided a statistically significant advantage of 151 meters in the ability of study participants to walk at three years, compared with external controls. Further, the fourth biopsy data confirmed the mechanism of action of eteplirsen, demonstrating exon skipping in all patients and dystrophin production in nearly all patients. Safety data remained consistent with prior results.

Eteplirsen, Sarepta’s lead drug candidate, is designed to target the underlying cause of DMD by enabling the production of a functional dystrophin protein in patients with mutations amenable to exon 51 skipping. Approximately 13 percent of people with DMD are estimated to have a mutation targeted by eteplirsen/exon 51 skipping.

“We are encouraged by the positive clinical outcomes, such as the statistically significant difference in the 6MWT in eteplirsen-treated patients compared to a control, especially since we see them accompanied by data that continues to demonstrate exon skipping and dystrophin production in most patients,” said Edward Kaye, M.D., Sarepta’s interim chief executive officer and chief medical officer. “We are committed to bringing eteplirsen and our other investigational exon skipping therapies to patients with DMD and will continue to work with all stakeholders to advance these programs as quickly as possible so we can better address the unmet need for treatments in the DMD community.”

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Results of Sarepta's Phase IIb program were included in the New Drug Application (NDA) that Sarepta submitted to the U.S. Food and Drug Administration (FDA) for eteplirsen for the treatment of DMD amenable to exon 51 skipping. The primary clinical endpoint in the NDA was the comparison of the 6MWT ITT analysis of the eteplirsen-treated group compared to an external control with similar inclusion criteria. The FDA granted eteplirsen Priority Review status and assigned a Prescription Drug User Fee Act (PDUFA) action date of February 26, 2016. Previously, the FDA granted Rare Pediatric Disease Designation to eteplirsen, as well as Orphan Drug Designation and Fast Track Status.

#### **New Long-Term Efficacy Data**

- Patients who were treated with eteplirsen experienced a statistically significant 151 meter difference in the 6-minute walk test (6MWT) at three years compared with external DMD controls. The 6MWT is a well-accepted measure of ambulation and clinical function in patients with DMD. ( $p < 0.01$ ).
- Eteplirsen-treated patients had a lower rate of loss of ambulation than external DMD controls over three years.
- Eteplirsen-treated patients experienced a slower rate of decline through Week 192 than external DMD controls.
- Pulmonary function remained relatively stable through approximately four years in eteplirsen-treated patients.

New results from a fourth biopsy performed on 11 patients demonstrated that exon skipping occurred in 100 percent of patients after 180 weeks of treatment, confirming the mechanism of action of eteplirsen. In addition, biochemical evidence from three quantification methods, analysis of dystrophin positive fibers, dystrophin intensity and Western Blot testing, confirmed that dystrophin was present in most patients following eteplirsen treatment.

#### **Fourth Biopsy Results**

- Confirmed exon skipping in 100% of patients
- Percent dystrophin-positive fibers increased ( $p < 0.001$ ) in comparison to untreated controls
- Dystrophin intensity increased ( $p < 0.001$ ) in comparison to untreated controls
- Western Blot confirmed presence of dystrophin protein in 9 of 11 (82%) of eteplirsen-treated patients at Week 180 vs 1 of 9 (11%) in the DMD control biopsies

#### **New Long-Term Safety Data**

New results from Sarepta's safety database, which includes approximately 100 patients exposed to eteplirsen, showed that the eteplirsen safety profile remained consistent with prior results. Common adverse drug reactions included flushing, erythema, and mild temperature elevation. No pulmonary embolisms, hospitalizations, injection site reactions or thrombocytopenia have been observed.

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### **Webcast & Conference Call**

Sarepta will provide a corporate update and report on recent data from the Phase IIb study of eteplirsen for Duchenne muscular dystrophy via a live webcast and conference call on October 1, 2015 at 7:00 AM EST. The update will be followed by a panel discussion with Duchenne muscular dystrophy experts Anne Connolly, MD; Eugenio Mercuri, MD, PhD; Jerry Mendell, MD; Perry Shieh, MD, PhD; and Steve Wilton, PhD, BSc.

The presentation will be webcast live under the investor relations section of Sarepta's website at [www.sarepta.com](http://www.sarepta.com) and will be archived there for 90 days. Please connect to Sarepta's website several minutes prior to the start of the broadcast to ensure adequate time for any software download that may be necessary.

The conference call may be accessed by dialing 877-727-3245 for US domestic callers and 530-379-4673 for international callers. The passcode for the call is 48471076. Please specify to the operator that you would like to join the "Sarepta Corporate Update and Report on Recent Data."

### **About the 6-Minute Walk Test (6MWT)**

The 6MWT was developed as an integrated assessment of cardiac, respiratory, circulatory, and muscular capacity for use in clinical trials of various cardiac and pulmonary conditions. In recent years, the 6MWT has been adapted to evaluate functional capacity in neuromuscular diseases and has served as the basis for regulatory approval of a number of drugs for rare diseases, with mean changes in the 6MWT ranging from 28 to 44 meters. Additionally, published data from longitudinal natural history studies assessing dystrophinopathy, a disease continuum comprised of DMD and Becker muscular dystrophy, support the utility of the 6MWT as a clinically meaningful endpoint in DMD. These data show that boys with DMD experience a significant decline in walking ability compared to healthy boys over one year, suggesting that slowing the loss of walking ability is a major treatment goal.

### **About Duchenne Muscular Dystrophy**

Duchenne muscular dystrophy (DMD) is an X-linked rare degenerative neuromuscular disorder causing severe progressive muscle loss and premature death. One of the most common fatal genetic disorders, DMD affects approximately one in every 3,500 boys born worldwide. A devastating and incurable muscle-wasting disease, DMD is associated with specific errors in the gene that codes for dystrophin, a protein that plays a key structural role in muscle fiber function. Progressive muscle weakness in the lower limbs spreads to the arms, neck and other areas. Eventually, increasing difficulty in breathing due to respiratory muscle dysfunction requires ventilation support, and cardiac dysfunction can lead to heart failure. The condition is universally fatal, and death usually occurs before the age of 30.

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## **About Eteplirsen**

Eteplirsen is designed to address the underlying cause of DMD by enabling the production of a functional dystrophin protein. Eteplirsen uses Sarepta's novel phosphorodiamidate morpholino oligomer (PMO)-based chemistry and proprietary exon-skipping technology to skip exon 51 of the dystrophin gene. This enables the repair of specific genetic mutations that affect approximately 13 percent of people with DMD. By skipping exon 51, eteplirsen may restore the gene's ability to make a shorter, but still functional, form of dystrophin from messenger RNA (mRNA). Promoting the synthesis of a truncated dystrophin protein is intended to stabilize or significantly slow the disease process and prolong and improve the quality of life for patients with DMD. Eteplirsen has not been approved by the FDA or any regulatory authority for the treatment of DMD.

Data from clinical studies of eteplirsen in DMD patients have demonstrated a broadly favorable safety and tolerability profile and restoration of dystrophin protein expression.

## **About Sarepta Therapeutics**

Sarepta Therapeutics is a biopharmaceutical company focused on the discovery and development of unique RNA-targeted therapeutics for the treatment of rare, infectious and other diseases. The Company is primarily focused on rapidly advancing the development of its potentially disease-modifying DMD drug candidates, including its lead DMD product candidate, eteplirsen, designed to skip exon 51. Sarepta is also developing therapeutics for the treatment of infectious diseases, such as drug-resistant bacteria and other rare human diseases. For more information, please visit us at [www.sarepta.com](http://www.sarepta.com).

## **Forward Looking Statements**

*This press release contains "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Any statements contained in this press release that are not statements of historical fact may be deemed to be forward-looking statements. Words such as "believes," "anticipates," "plans," "expects," "will," "intends," "potential," "possible" and similar expressions are intended to identify forward-looking statements. These forward-looking statements include statements regarding the safety and efficacy of eteplirsen, analysis of eteplirsen and external control data and their implications, eteplirsen's potential as a treatment for Duchenne Muscular Dystrophy and its potential market size and Sarepta's commitment to bringing eteplirsen and its other exon skipping investigational therapies to patients with DMD and plans to continue working with all stakeholders to advance these programs as quickly as possible. Forward-looking statements also include those regarding Sarepta's future business developments and actions and the timing of the same.*

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*These forward-looking statements involve risks and uncertainties, many of which are beyond Sarepta's control. Known risk factors include, among others: the results of our ongoing research and development efforts and clinical trials for eteplirsen and our other product candidates may not be positive or consistent with prior results or demonstrate a safe treatment benefit there may be delays in Sarepta's projected regulatory and development timelines relating to the eteplirsen NDA and plans for commercializing eteplirsen and developing Sarepta's other product candidates for various reasons including possible limitations of Sarepta's financial and other resources; Sarepta may not be able to successfully complete its planned commercialization of eteplirsen or continue developing its product candidates as planned for a variety of reasons including due to regulatory, court or agency decisions, such as decisions by the USPTO with respect to patents that cover Sarepta's product candidates, scale-up of manufacturing may not be successful, and any or all of Sarepta's product candidates may fail in development or may not receive required regulatory approvals for commercialization (including potentially under an accelerated pathway); and those risks identified under the heading "Risk Factors" in Sarepta's 2014 Annual Report on Form 10-K or and most recent Quarterly Report on Form 10-Q for the quarter ended June 30, 2015 filed with the Securities and Exchange Commission (SEC) as well as other SEC filings made by the Company which you are encouraged to review.*

*Any of the foregoing risks could materially and adversely affect Sarepta's business, results of operations and the trading price of Sarepta's common stock. For a detailed description of risks and uncertainties Sarepta faces, you are encouraged to review the Company's filings with the SEC. We caution investors not to place considerable reliance on the forward-looking statements contained in this press release. Sarepta does not undertake any obligation to publicly update its forward-looking statements based on events or circumstances after the date hereof.*

**Internet Posting of Information**

*We routinely post information that may be important to investors in the 'For Investors' section of our website at [www.sarepta.com](http://www.sarepta.com). We encourage investors and potential investors to consult our website regularly for important information about us.*

Source: Sarepta Therapeutics, Inc.

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