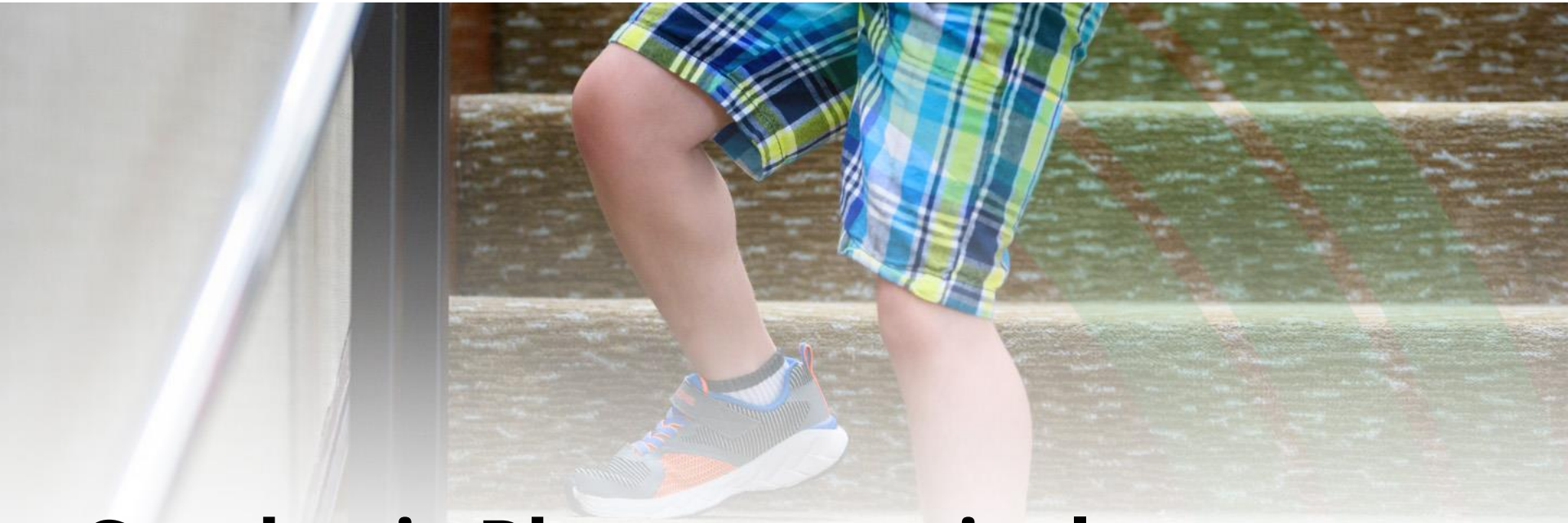


Catabasis Pharmaceuticals Q1 2018

May 2018

Forward Looking Statements

This presentation contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995, including statements regarding our expectations and beliefs about our business, future financial and operating performance, clinical trial plans, product development plans and prospects, including statements about future clinical trial plans including, among other things, statements about our plans to commence a single global Phase 3 trial in Duchenne muscular dystrophy, or DMD, to evaluate the efficacy and safety of edasalonexent for registration purposes, and our plans to continue to evaluate data from the open-label extension of our MoveDMD® clinical trial of edasalonexent for the treatment of DMD. The words "believe", "anticipate", "plans," "expect", "could", "should", "will", "would", "may", "intend" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

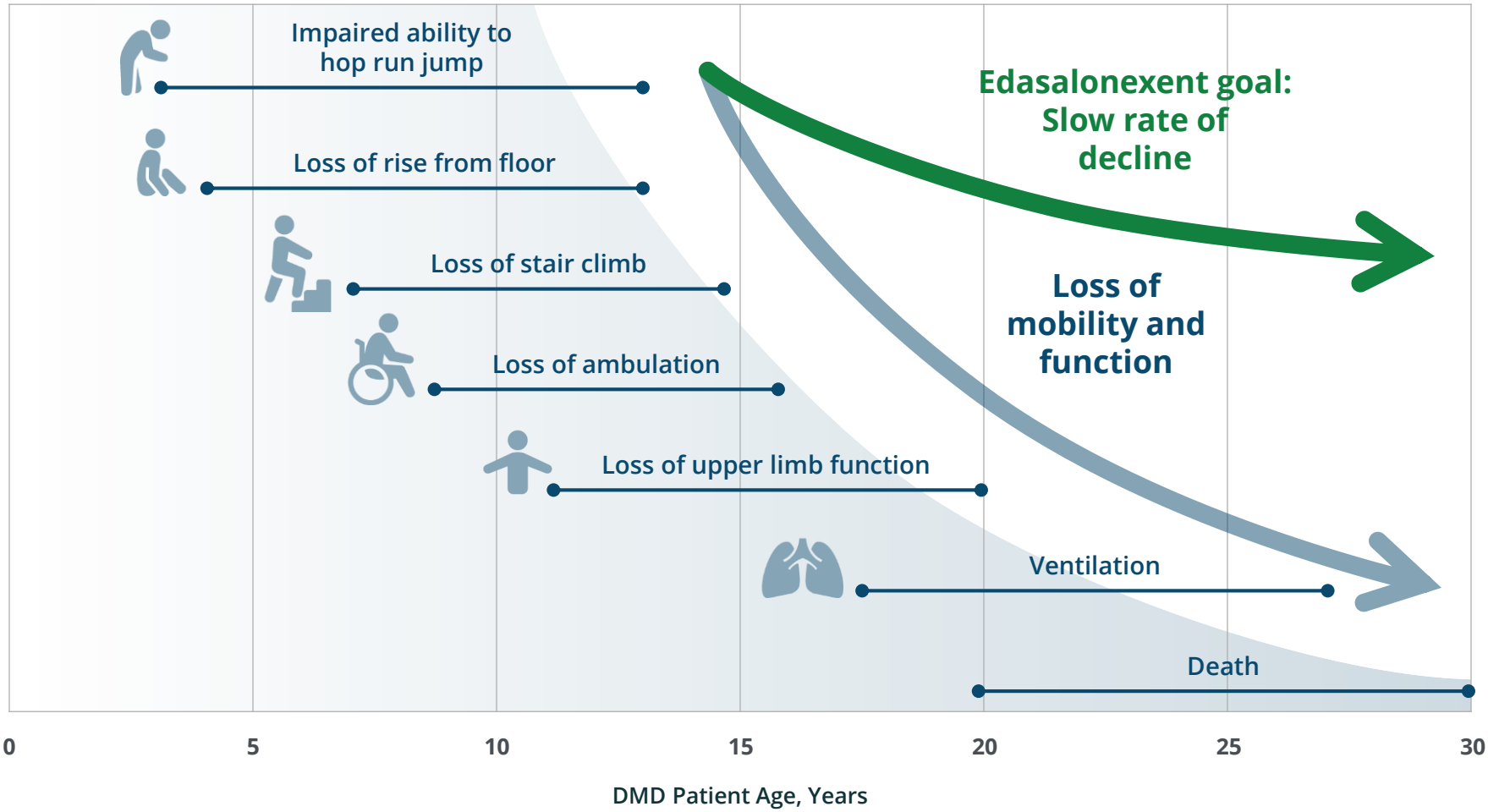
The forward-looking statements contained in this presentation and in remarks made during this presentation and the following Q&A session are subject to important risks and uncertainties that may cause actual events or results to differ materially from our current expectations and beliefs, including: uncertainties inherent in the initiation and completion of preclinical studies and clinical trials and clinical development of our product candidates, including the final trial design of our planned Phase 3 trial in DMD; availability and timing of results from preclinical studies and clinical trials; whether interim results from a clinical trial will be predictive of the final results of the trial or the results of future trials; expectations for regulatory approvals to conduct trials or to market products, including our expected target product profile for edasalonexent in DMD; our ability to obtain financing on acceptable terms and in a timely manner to fund our planned Phase 3 trial in DMD to evaluate the efficacy and safety of edasalonexent for registration purposes; availability of funding sufficient for our foreseeable and unforeseeable operating expenses and capital expenditure requirements; other matters that could affect the availability or commercial potential of our product candidates; and general economic and market conditions and other factors discussed in the "Risk Factors" section of our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2018, which is on file with the Securities and Exchange Commission, and in other filings that we may make with the Securities and Exchange Commission in the future. In addition, the forward-looking statements included in this presentation represent our views as of the date of this presentation. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we specifically disclaim any obligation to do so. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date of this presentation.

Catabasis: Building a Premier Rare Disease Company

- **MoveDMD® trial data through 1 year of treatment reinforces edasalonexent potential as a disease-modifying therapy for DMD**
- **2018 priorities focused on advancing edasalonexent and improving the lives of boys affected by DMD**

DMD Progresses Through a Predictable Cascade of Discrete Losses of Function and Mobility Milestones to Disablement and Death

Typical DMD Disease Progression



Adapted from presentation by Dr. Craig McDonald, UC Davis NeuroNEXT Program Director, University of California

Edasalonexent: Translation from Target Engagement to Functional Improvements in DMD

NF-κB Target Engagement

Phase 1 Normal Healthy Volunteers

- Decrease in activated NF-κB
- Decrease in NF-κB gene expression

MoveDMD Phase 1

- Decrease in NF-κB gene expression

Biomarker Improvements

MoveDMD Phase 2 / OLE

- Decrease in C-reactive protein
- Decrease in muscle enzymes

Muscle Improvements

MoveDMD Phase 2 / OLE

- Improvement in rate of change in MRI T2 compared to control
- Decrease in soleus and vastus lateralis fat accumulation compared to control

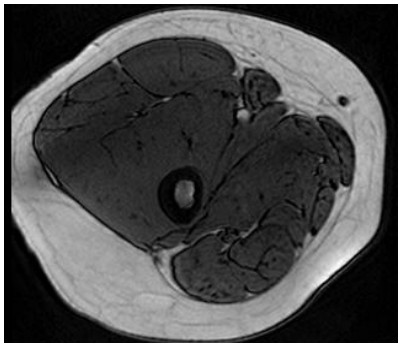
Functional Improvements

MoveDMD Phase 2 / OLE

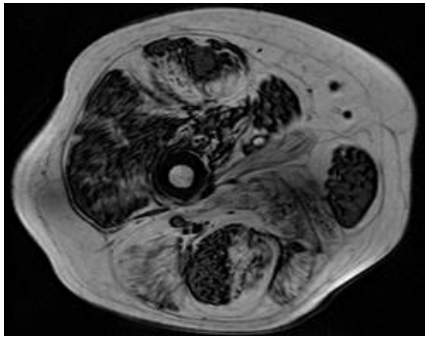
- Slowing of decline in function as assessed by NSAA and Timed Function Tests compared to control

MRI Is a Non-Invasive Approach to Assess Disease Progression in DMD

Unaffected



DMD

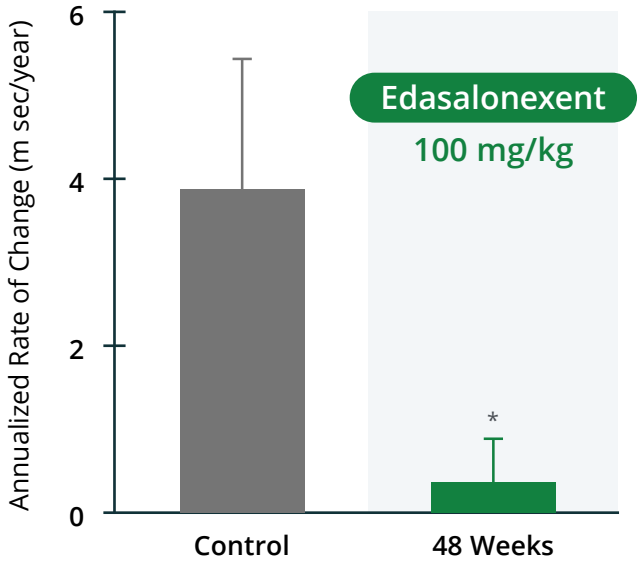


- **Changes in MRI T2 and MRS fat fraction correlate with changes in function**
  - Increases in both measures strongly correlate with worse performance on timed function tests$^{\phi}$ and predict future loss of functional abilities*
  - MRI T2 and fat fraction both increase with age
- **MoveDMD incorporated both MRI and MRS**
  - Composite MRI T2 of 5 lower leg muscles was the primary MRI assessment
  - Fat fraction and MRS T2 also measured in lower (soleus) and upper leg (vastus lateralis)

$^{\phi}$Willcocks et al, 2016, Ann. Neurol., Willcocks et al, 2014, Ann. Neurol *Barnard et al, 2018, PLOS ONE

Edasalonexent Produced Statistically Significant Improvement in Rate of Change of MRI T2

MRI T2: Composite of 5 Lower Leg Muscles



- On edasalonexent, the rate of change for the MRI T2 composite of the 5 lower leg muscles improved significantly compared to the rate of change during the off-treatment control period ($p<0.05$ for 12, 24, 36 and 48 weeks)
- Stabilization of MRI T2 is consistent with slowing of disease progression also observed in function assessments

Means ± SEM shown; * $p<0.05$ for mixed model comparison with off-treatment period

Changes in Fat Fraction On Edasalonexent Consistent with Slowing of Disease Progression

MR Spectroscopy
Change in Fat Fraction from Baseline

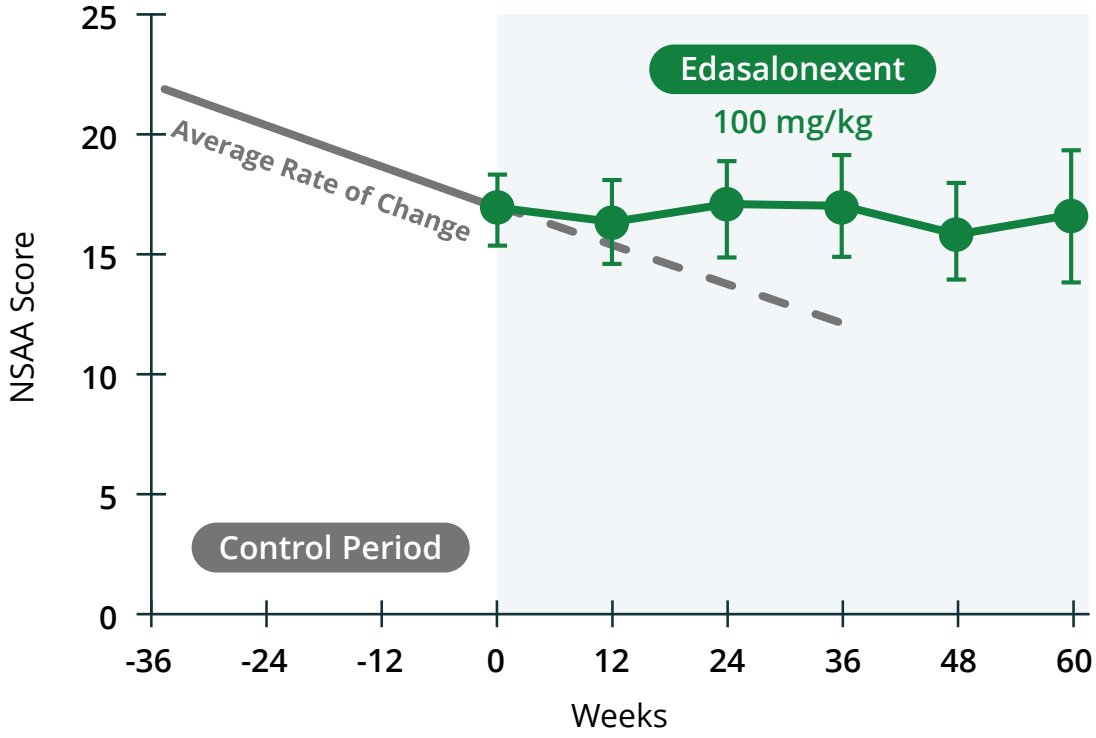
Muscle	MoveDMD Off-Treatment Control Period Annualized Rate	MoveDMD 48 weeks on Edasalonexent	ImagingDMD Natural History Study* 1 Year Change
Soleus	2.6%	0.85%	3%
Vastus lateralis	10.4%	5.9%	7%

- Following 48 weeks of edasalonexent the rate of increase in fat fraction of the soleus and vastus lateralis was substantially decreased as compared to the off-treatment control period
- In ImagingDMD natural history study, boys were largely on chronic corticosteroids

Baseline fat fraction in the soleus was 9.3% and in the VL 13.1%
At 48 weeks, MRS T2, reflecting inflammation only, decreased by -1.1 and -1.2 msec for the soleus and VL, respectively.
*Willcocks et al, 2016, Ann. Neurol., Willcocks et al, 2014, Ann. Neurol

North Star Ambulatory Assessment Score, a Measure of Overall Function in Young Boys, Was Stabilized with Edasalonexent Treatment

North Star Ambulatory Assessment

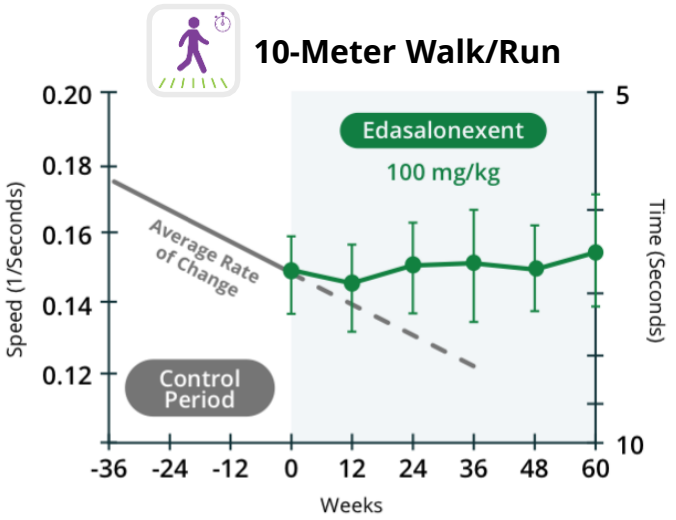


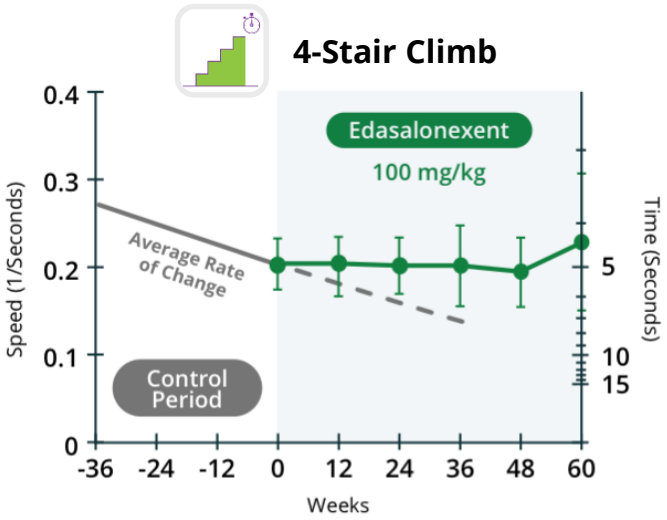
- Disease progression on edasalonexent improved compared with rate of change during off-treatment control period

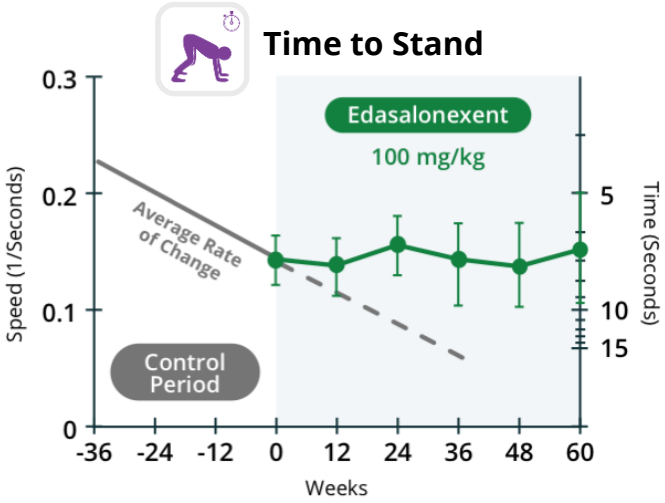
Means ± SEM shown

Includes data of all boys initially started on 100 mg/kg dose (n=16)

All Timed Function Tests Speed Stabilized with Edasalonexent Treatment, Consistent with Effect on NSAA







- Disease progression on edasalonexent improved compared with rate of change during off-treatment control period

Means ± SEM shown

Includes data of all boys initially started on 100 mg/kg dose (n=16)

Advancing a Premier Rare Disease Pipeline

Product Candidate (Pathway)	Discovery	Preclin	Phase 1	Phase 2	Phase 3
Edasalonexent CAT-1004 (NF-κB)	**Duchenne muscular dystrophy (4-7 yo)**				• Phase 2 complete • Preparing for Phase 3
Edasalonexent CAT-1004 (NF-κB)	**Non-Ambulatory DMD**			• Designing Phase 2	
Edasalonexent CAT-1004 (NF-κB)	**Becker Muscular Dystrophy**			• Exploring potential in BMD	
CAT-5571 (Autophagy)	**Cystic fibrosis**	• IND-enabled			

Edasalonexent Is a Potential Disease-Modifying Foundational Therapy in DMD

- **Disease-modifying non-steroid oral therapy**
  - Intended for all patients, regardless of mutation type
  - Inhibit muscle degeneration, enhance regeneration
  - Benefits in skeletal muscle, diaphragm and heart
- **Preparing for single Phase 3 trial for registration**
  - In MoveDMD® trial, edasalonexent preserved muscle function and slowed disease progression
- **Potential foundational therapy**
  - Initiate upon diagnosis
  - Potential as monotherapy and may enhance efficacy of dystrophin upregulation approaches

Developing a potential NEW Standard of Care in Duchenne

- **Favorably differentiated tolerability profile from standard of care**
- **Strong IP position and wholly owned**