RGX-202, an Investigational Gene Therapy for the Treatment of Duchenne Muscular Dystrophy: Interim Clinical Data

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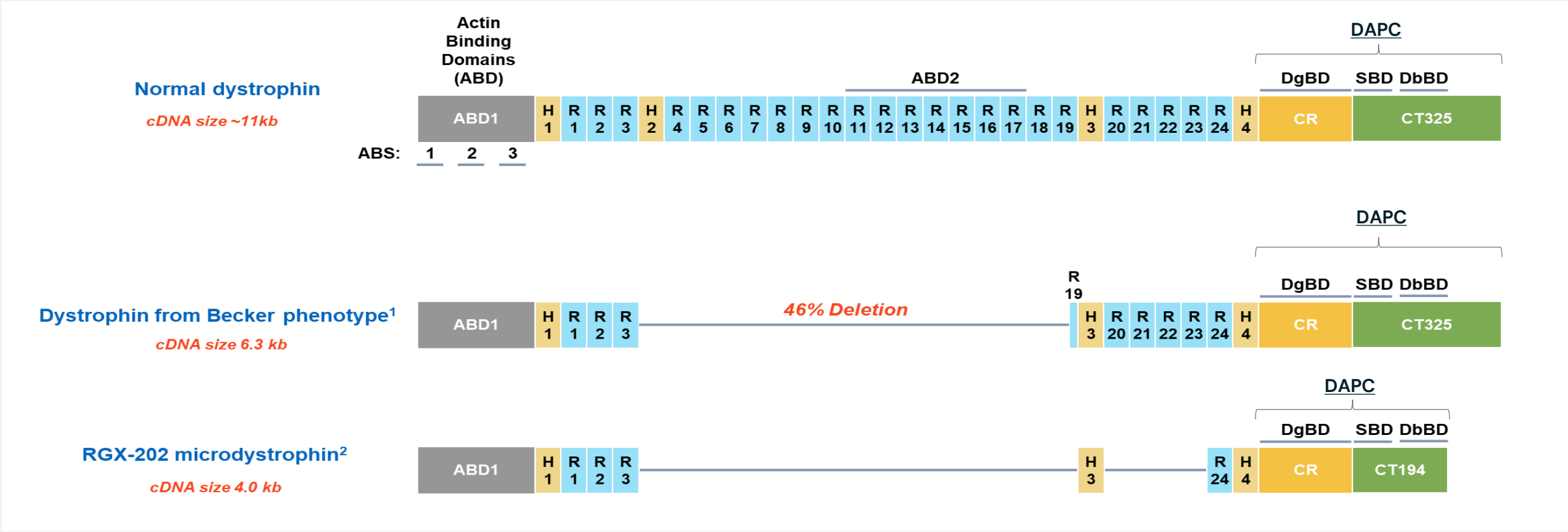
RGX-202 Transgene is Designed to Encode Key Elements of Naturally Occurring Dystrophin



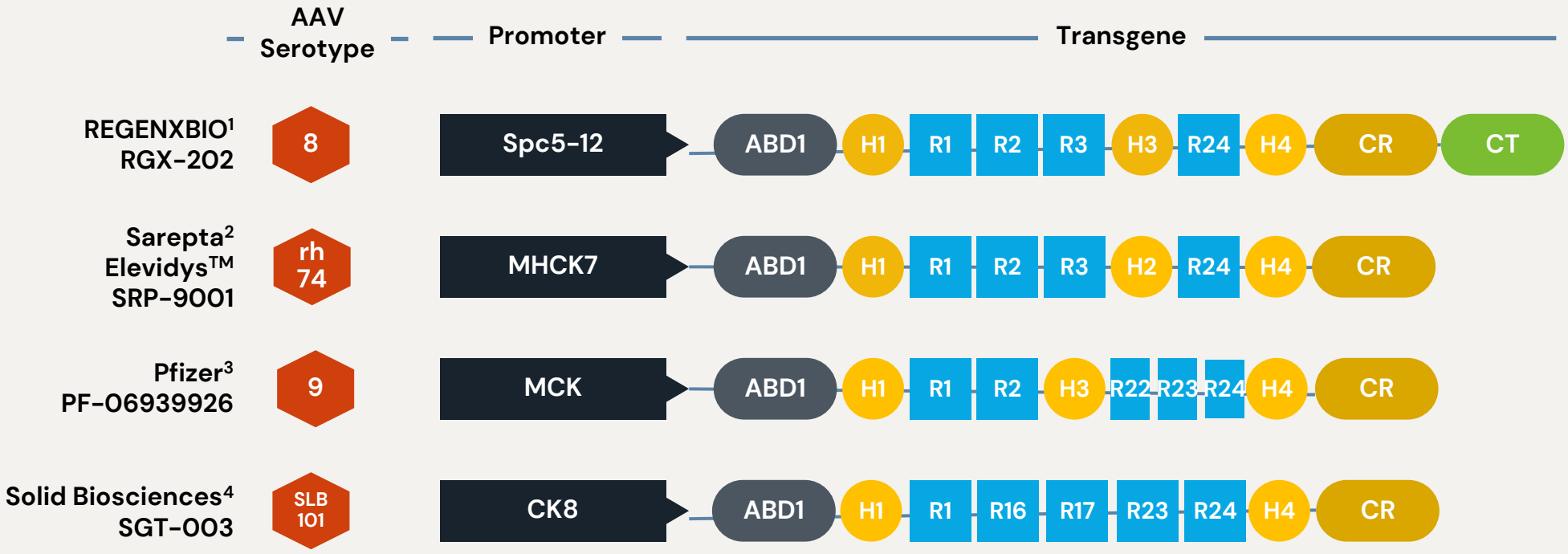
RGX-202 expresses a new, differentiated microdystrophin with important biology that is the most similar to a natural shortened dystrophin that protects muscles from degenerating

1. England (1990) Nature
2. Qiao (2021) ASGCT Virtual

Abbreviations: ABD: actin binding domain; DgBD: Dystroglycan binding domain; SBD: Syntrophin binding domain; DbBD: Dystrobrevin binding domain; CR: Cysteine rich domain'; CT: carboxyl terminus; H: hinge; R: rod; DAPC: Dystrophin associated protein complex

RGX-202 is Novel Among Current Class of AAV- microdystrophins

RGX-202 is the only gene therapy designed to deliver a transgene for a microdystrophin with the functional elements of the C-Terminal (CT) domain found in naturally occurring dystrophin



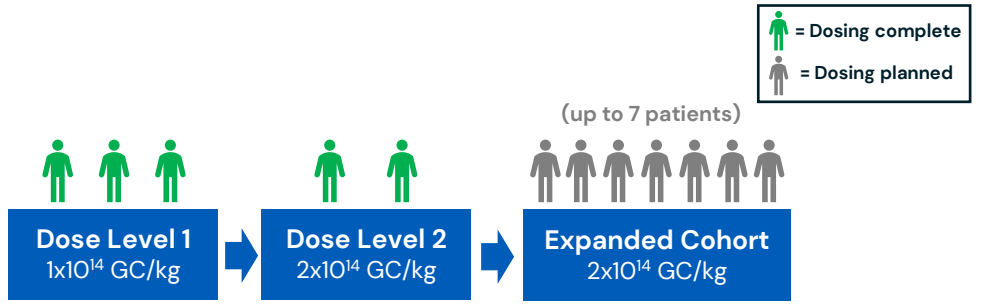
1. Accessed November 1, 2023: REGENXBIO Investor Day, July 11, 2023
2. Harper (2002) Nat Med
3. Wang (2000) PNAS
4. https://investors.solidbio.com/Corporate Presentation, January 2024

RGX-202 Study Overview

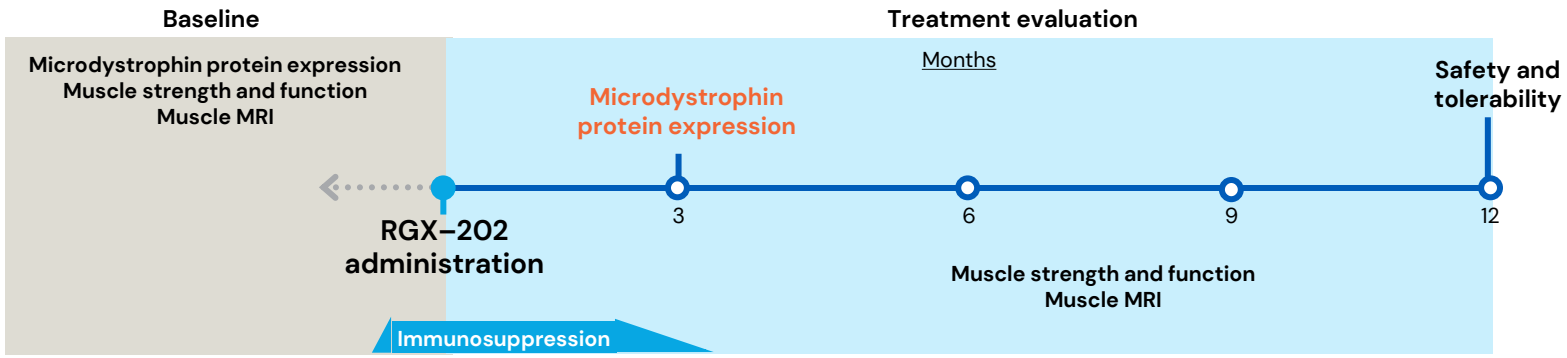
Key Eligibility Criteria

- **Boys aged 4 to 11 years** at screening
- **Genetically confirmed DMD** (mutations in exons 18 and above)
- **100-meter walk:** able to perform without assistive devices
- **No pre-existing antibodies** to the gene therapy (AAV8 capsid)

Study Plan



Administration and Assessments Timeline



Key Baseline Characteristics & Safety

RGX-202 was well-tolerated with no serious adverse events

Patient	Age at Dosing	Weight at Dosing (kg)	Post-administration follow up (months)
Dose Level 1 $1x10^{14}$ GC/kg			
1	4 yrs 4 mos	17.8	11
2	10 yrs 5 mos	28.3	9
3	6 yrs 6 mos	26.8	6
Dose Level 2 $2x10^{14}$ GC/kg			
1	12 yrs 0 mos	24.3	4
2	8 yrs 1 mos	31.2	1

Data cut date of February 23,, 2024

Interim Data: Dose Level 1

Dose Level 1

- Robust RGX-202 microdystrophin expression observed
- Serum CK levels meaningfully decreased, representative of improvement in muscle disease

Patient	Age at Dosing (years)	RGX-202 Microdystrophin Western blot (Jess method) (% Normal Control)	CK Levels, week 10 (% reduction from baseline)
Dose Level 1 $1x10^{14}$ GC/kg			
1	4 yrs 4 mos	38.8	-43
2	10 yrs 5 mos	11.1	-44
3	6 yrs 6 mos	83.4	-93

Microdystrophin expression adjusted for muscle content
Control was level of wild-type (normal) dystrophin in normal muscle
Muscle biopsies are collected from bicep at baseline and 3 months post RGX-202 administration
Elevated CK levels are correlated with muscle injury and are uniformly elevated in patients with Duchenne
Data cut date of February 23, 2024

Interim Data: Dose Level 2, 1st Patient

- Robust RGX-202 microdystrophin expression was observed at three months, with comparable results obtained via Western Blot and LC-MS
- Decrease in creatinine kinase (CK) levels at 10 weeks

RGX-202 Microdystrophin Expression

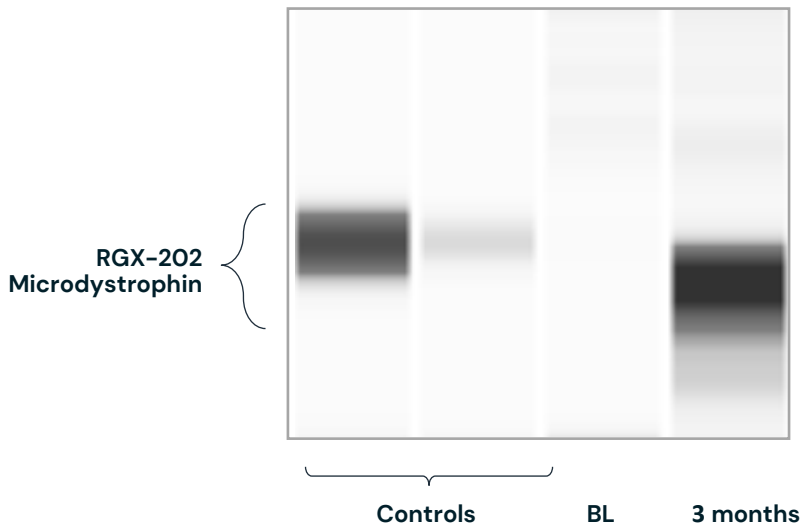
RGX-202 Microdystrophin (% Normal Control)	Patient 4 (12 yrs 0 mo 24.3 kg)
Western blot (Jess method)	75.7

CK levels

	Avg Baseline	Week 10
CK Levels (U/L)	13,131	2,983
% Reduction	77	

Elevated CK levels are associated with muscle injury and are uniformly elevated in patients with Duchenne

Western Blot (Jess)



LC-MS

Microdystrophin expression adjusted for muscle content
Control was level of wild-type (normal) dystrophin in normal muscle
Muscle biopsies are collected from bicep at baseline and 3 months post RGX-202 administration
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RGX-202 Microdystrophin Expression at 3 months

Robust RGX-202 microdystrophin expression was demonstrated at both dose levels

Age range at screening	Dose Level 1 % RGX-202 microdystrophin (n = 3)	Dose Level 2 % RGX-202 microdystrophin (n = 2[1])
4 to 5 years	38.8	
6 to 7 years	83.4	
8 to 11 years	11.1	**75.7**

1. Data not shown for patient with limited follow-up
Microdystrophin expression adjusted for muscle content
Control was level of wild-type (normal) dystrophin in normal muscle
Muscle biopsies are collected from bicep at baseline and 3 months post RGX-202 administration
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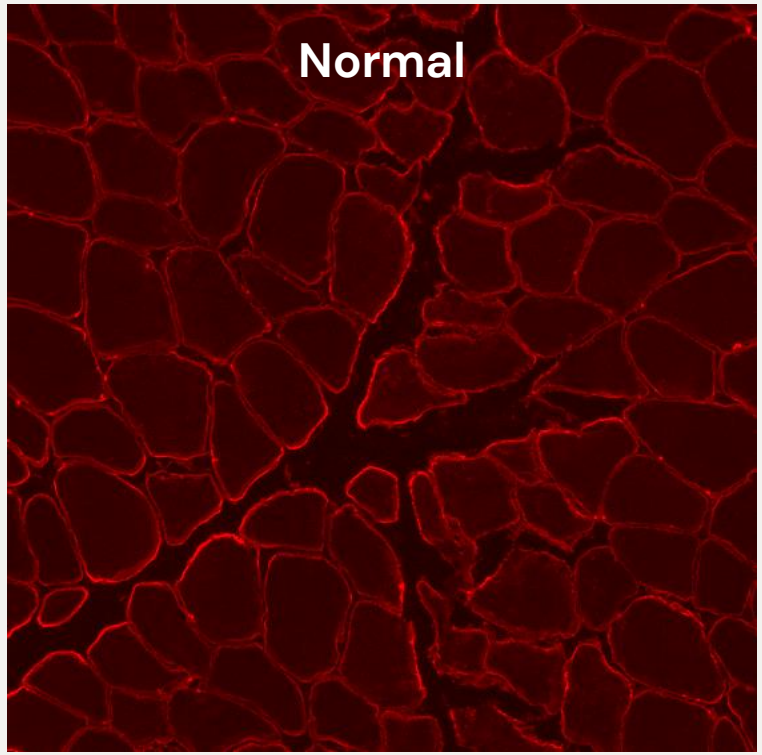
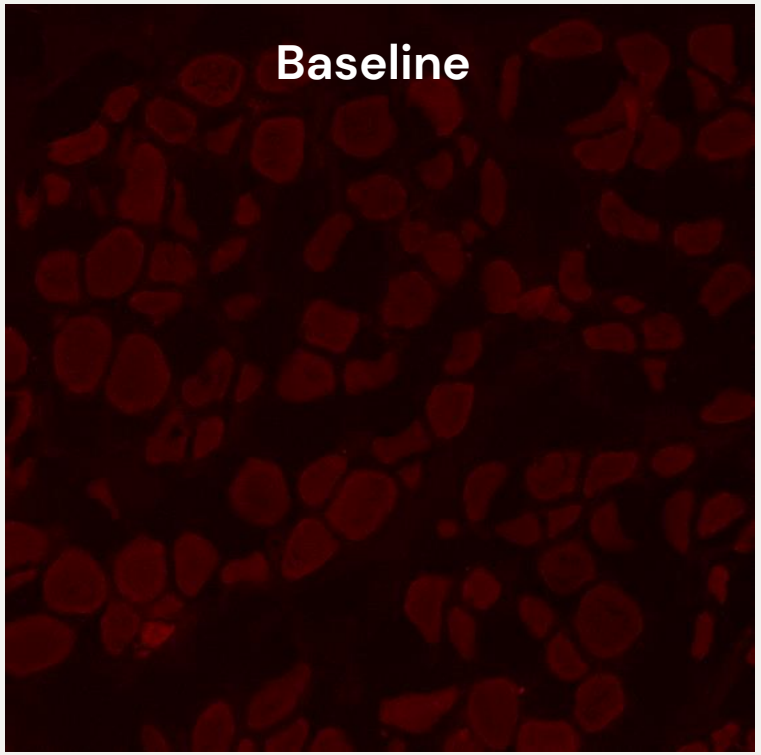
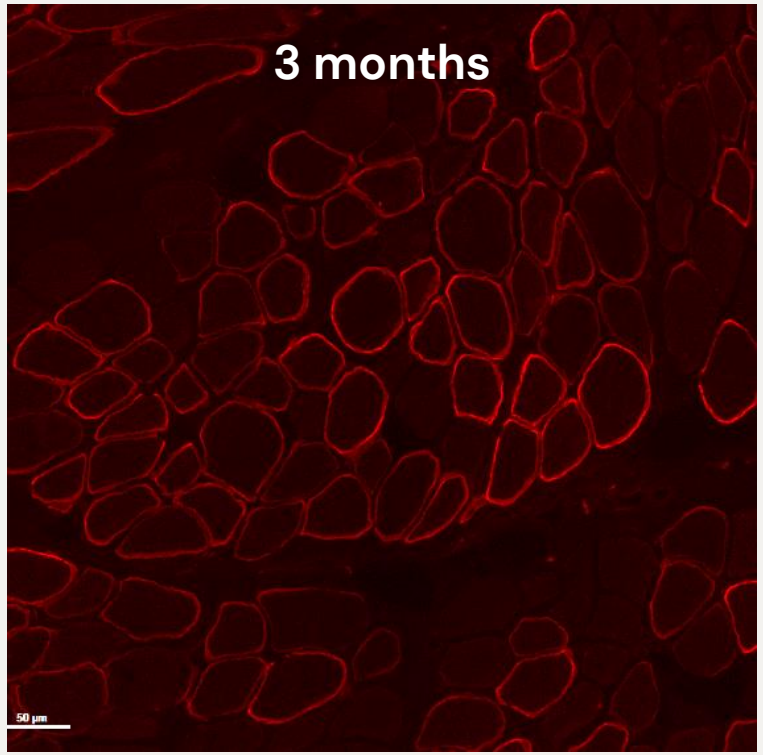
RGX-202 microdystrophin is localized to the sarcolemma







Muscle biopsies are collected from biceps at baseline and 3 months post RGX-202 administration
Representative IF images from healthy control, patient 1 at baseline, and participant 1 three months post RGX-202 administration stained with antibody against dystrophin and RGX-202 microdystrophin

AFFINITY DUCHENNE: Summary

- RGX-202 has been well-tolerated at both dose levels with no SAEs
- Robust RGX-202 microdystrophin expression was observed at both dose levels in all ages
- Early evidence of strength and functional improvement from videos
- REGENXBIO to initiate pivotal trial in second half of 2024 using RGX-202 microdystrophin expression as a surrogate endpoint likely to predict clinical benefit

Data cut date of February 23, 2024

Acknowledgements

AFFINITY DUCHENNE Participants and their Families

The AFFINITY DUCHENNE Investigators

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