Presented at the Muscular Dystrophy Association (MDA) Clinical and Scientific Conference, Dallas, TX, USA, March 19−22, 2023
Corresponding author: Elizabeth S Smith (medinfo@sarepta.com)

Analysis of vector shedding following treatment with delandistrogene moxeparvovec, an investigational rAAVrh74-based gene therapy for DMD

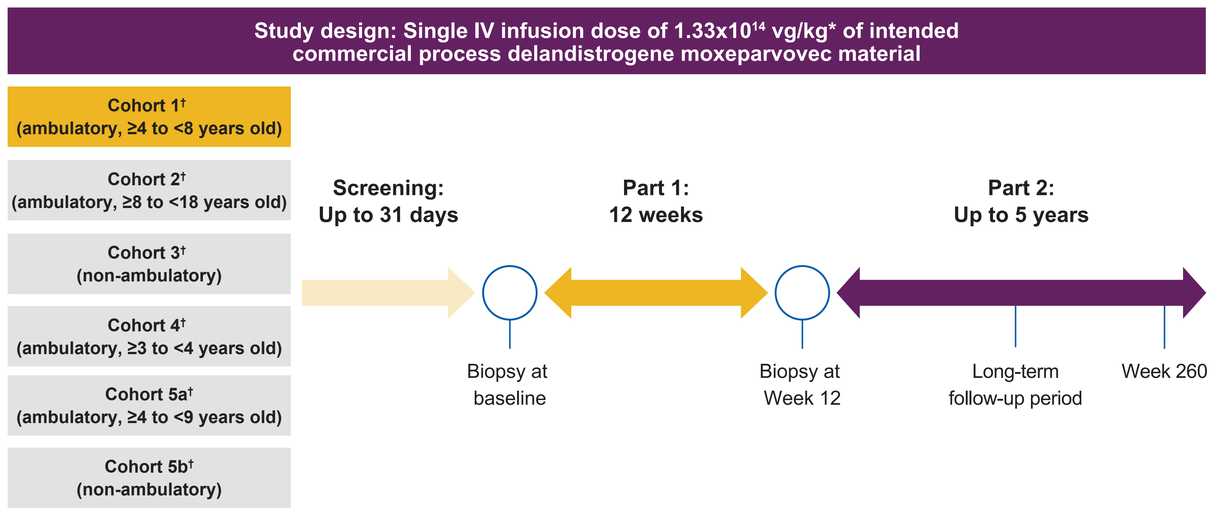
ES Smith,[1]* J Malhotra,[1] S Lewis,[1] X Zhang,[1] D Asher,[1] S Wang,[1] L East,[1] RA Potter,[1] LR Rodino-Klapac[1]

[1]Sarepta Therapeutics, Inc., Cambridge, MA, USA
*Presenter

SUPPLEMENTARY MATERIALS

Clinical

Clinical assessment of delandistrogene moxeparvovec vector shedding in participants from ENDEAVOR



*Linear qPCR. †Only 1-year data for Cohort 1 are presented in this poster; 1-year data for other cohorts are not yet available; genetic mutation criteria varied by cohort.

- ENDEAVOR is an ongoing, open-label, single-arm, single-dose, Phase 1b study with five cohorts and a two-part follow-up period conducted at four sites in the USA using the intended commercial process material. Samples from different clinical biomaterials at predefined time points over the course of the study (260 weeks) were collected from subjects across the five cohorts.

Baseline clinical characteristics of Cohort 1 in ENDEAVOR

Characteristic	Total for Cohort 1 (N=20) Mean (SD)
Age, years*	5.8 (1.1)
Height, cm	108.8 (7.7)
Dosing weight, kg	21.2 (4.2)
Years since DMD diagnosis	2.4 (1.4)

*Age distribution: 11 (55.0%) patients in the age category 4–5 years and nine (45.0%) patients in the age category 6–7 years.

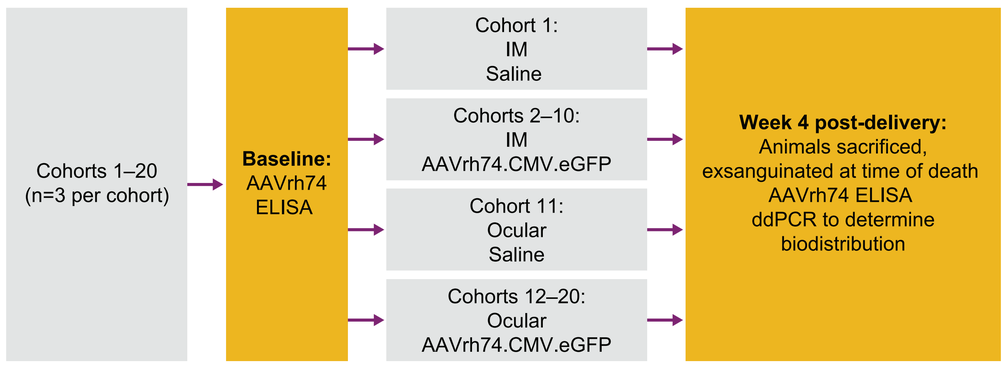
Pre-clinical

Experimental treatment groups

Strain	Cohort	Number of animals/sex	Test/Control article	Route*	Dose (vg)	Volume (µL)†
C57BL/6J	1	3/Male	Saline	IM	N/A	30
C57BL/6J	2	3/Male	AAVrh74.CMV.eGFP	IM	1.0×10^{2}	30
C57BL/6J	3	3/Male	AAVrh74.CMV.eGFP	IM	1.0×10^{3}	30
C57BL/6J	4	3/Male	AAVrh74.CMV.eGFP	IM	1.0×10^{4}	30
C57BL/6J	5	3/Male	AAVrh74.CMV.eGFP	IM	1.0×10^{5}	30
C57BL/6J	6	3/Male	AAVrh74.CMV.eGFP	IM	1.0×10^{6}	30
C57BL/6J	7	3/Male	AAVrh74.CMV.eGFP	IM	1.0×10^{7}	30
C57BL/6J	8	3/Male	AAVrh74.CMV.eGFP	IM	1.0×10^{8}	30
C57BL/6J	9	3/Male	AAVrh74.CMV.eGFP	IM	1.0×10^{9}	30
C57BL/6J	10	3/Male	AAVrh74.CMV.eGFP	IM	1.0×10^{10}	30
C57BL/6J	11	3/Male	Saline	Ocular	N/A	4
C57BL/6J	12	3/Male	AAVrh74.CMV.eGFP	Ocular	1.0×10^{2}	4
C57BL/6J	13	3/Male	AAVrh74.CMV.eGFP	Ocular	1.0×10^{3}	4
C57BL/6J	14	3/Male	AAVrh74.CMV.eGFP	Ocular	1.0×10^{4}	4
C57BL/6J	15	3/Male	AAVrh74.CMV.eGFP	Ocular	1.0×10^{5}	4
C57BL/6J	16	3/Male	AAVrh74.CMV.eGFP	Ocular	1.0×10^{6}	4
C57BL/6J	17	3/Male	AAVrh74.CMV.eGFP	Ocular	1.0×10^{7}	4
C57BL/6J	18	3/Male	AAVrh74.CMV.eGFP	Ocular	1.0×10^{8}	4
C57BL/6J	19	3/Male	AAVrh74.CMV.eGFP	Ocular	1.0×10^{9}	4
C57BL/6J	20	3/Male	AAVrh74.CMV.eGFP	Ocular	1.0×10^{10}	4

IM = intramuscular injection into the LTA muscle. *Test article delivery into the TA occurred on the left side, while ocular delivery occurred on the right side of the animal (i.e. left TA and right eye). †Doses were Q.S. up to total desired volume with saline.

Non-clinical study design



ABBREVIATIONS

AAVrh74, adeno-associated virus rhesus isolate serotype 74; CMV, cytomegalovirus promoter; ddPCR, droplet digital polymerase chain reaction; DMD, Duchenne muscular dystrophy; eGFP, enhanced green fluorescent protein; ELISA, enzyme-linked immunosorbent assay; IM, intramuscular; IV, intravenous; LTA, left tibialis anterior; qPCR, quantitative polymerase chain reaction; Q.S., quantum satis; rAAVrh74, recombinant AAV rhesus isolate serotype 74; SD, standard deviation; TA, tibialis anterior; vg, vector genome.

ACKNOWLEDGMENTS AND DISCLOSURES

This research was funded by Sarepta Therapeutics, Inc., Cambridge, MA, USA. Writing and editorial assistance was provided by Marketta Kachemov, PhD, of Nucleus Global, in accordance with Good Publication Practice (GPP) 2022 guidelines (https://www.ismpp.org/gpp2022) and funded by Sarepta Therapeutics, Inc. ESS, JM, SL, XZ, DA, SW, LE, RAP, and LRRK are employees of Sarepta Therapeutics and may have stock options. LRRK has received grant support from Sarepta Therapeutics and the Parent Project Muscular Dystrophy, as well as financial consideration from Sarepta Therapeutics and Myonexus Therapeutics (now acquired by Sarepta Therapeutics). In addition, she is a co-inventor of AAVrh74.MHCK7.micro-dys technology.