Statistical Analysis Plan

Sponsor:	aTyr Pharma, Inc.
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1.0 Introduction

This statistical analysis plan (SAP) describes the statistical methods to be used during the reporting and analyses of data collected under aTyr Pharma, Inc. Protocol ATYR1940-C-006.

This SAP should be read in conjunction with the study protocol and case report form (CRF). This version of the plan has been developed using the Protocol version 1.0 dated 22-Mar-2016 and CRF version 1.0 dated 10-June-2016.

The SAP is to be developed in two stages (SAP1 and SAP2). The purpose is to "finalize" a SAP so that programming can start earlier in the process. Versions of the SAP up to initial aTyr approval will be known as SAP1. Changes following approval of SAP1 will be tracked in the SAP change log and a final version of the SAP, known as SAP2, will be issued for aTyr approval prior to database lock.

1.1 Changes from Protocol

The ATYR1940-C-006 Protocol dated 22-Mar-2016 defines baseline as the following: For patients who received ATYR1940 ≤4 weeks previously in the parent study, baseline refers to the baseline in the parent study (i.e., the most recent assessment obtained before the first study drug dose). For patients who received ATYR1940 >4 weeks previously in the parent study, baseline refers to assessment obtained before the first ATYR1940 dose at Week 1 in the current study.

However, the SAP defines baseline as the baseline in the parent study (ATYR1940-C-003 or ATYR1940-C-004) for all subjects enrolled in study ATYR1940-C-006.

The following changes/clarifications were provided for the schedule of events in Table 1 of the protocol:

- Plasma Biomarkers- Time points for Plasma Biomarkers were not specified in the protocol: During all dosing visits Plasma Biomarkers should be collected at infusion pre dose and 4 hours after the start of the infusion.
- Muscle Biomarker- Muscle Biomarkers are being completed at Week 14 in the 004 parent study; however, the 006 protocol says that these procedures will be completed in addition to Week 14 procedures. Muscle biomarkers are not completed in the 003 study: Muscle Biomarker should be drawn during the Week 1 visit in the 006 study for 003 patients only as patients in the 004 study will have muscle biomarkers collected at the Week 14 visit in the parent study, which occurs on the same day.
- Plasma Complement Factors- Plasma Complement Factors are requested to be collected during Week 1 in the 006 study; however, plasma complement factors are already being collected during the Week 14 visit in the parent study, which occurs on the same day: Collection of plasma complement factors is not required to be repeated during the Week 1 extension visit as noted in the Schedule of Events.
- Serum Complement & Tryptase Levels- Serum Complement & Tryptase Levels are requested to be collected during Week 1 in the 006 study; however, Serum Complement & Tryptase Levels are already being collected during the Week 14 visit in the parent study, which occurs on the same day: Collection of Serum Complement & Tryptase Levels is not required to be repeated during the Week 1 extension visit as noted in the Schedule of Events.
- Jo-1 (IRR)-The schedule of events calls for Jo-1 sample collection during an IRR; however, section 8.5.9.4 does not specify collection time points for Jo-1 samples during an IRR: In the event of an IRR, a Jo-1 sample should be collected 1.5 -2 hours after the onset of symptoms.
- ADA (IRR) -The schedule of events calls for ADA sample collection during an IRR; however, section 8.5.9.4 does not specify collection time points for ADA samples during an IRR: In the event of an IRR, an ADA sample should be collected 1.5 -2 hours after the onset of symptoms.

- Visual Acuity (003)- Visual Acuity is requested to be collected during Week 1 in the 006 study; however, visual acuity is already being collected during the 003 Week 13 visit, which is only 1 Week prior to Week 14/Week 1 of the extension study: Visual Acuity is not required to be repeated during the Week 1 extension visit as noted in the Schedule of Events.
- Audiometry (003)- Audiometry is requested to be collected during Week 1 in the 006 study; however, audiometry is already being collected during the 003 Week 13 visit, which is only 1 Week prior to Week 14/Week 1 of the extension study: Audiometry is not required to be repeated during the Week 1 extension visit as noted in the Schedule of Events.
- Age Range- The 006 protocol does not specify the age range from the parent studies; however, the protocol does specify that only patients from Stage 1 in the 003 study can be enrolled; therefore, the subject age range for this study will be between 16- 75 years of age per entry criteria in the 003 (Stage I, 16-25 years) and 004 (18-75 years) parent studies.

2.0 Study Objectives

The objectives of the study are:

- To evaluate the safety, tolerability, and immunogenicity of long-term treatment with intravenous (IV) ATYR1940 in patients with limb girdle muscular dystrophy 2B (LGMD2B) or fascioscapulohumeral muscular dystrophy (FSHD) previously enrolled in clinical study ATYR1940-C-003 (Stage 1 only) or ATYR1940-C-004.
- To explore the biological and pharmacodynamic (PD) activity of ATYR1940 in patients with LGMD2B and FSHD, based on changes in:
    - Serum-based muscle biomarkers
    - Inflammatory immune state in peripheral blood
    - Muscle disease and muscle disease burden based on skeletal muscle magnetic resonance imaging (MRI)
    - Skeletal muscle strength
    - Upper and lower extremity muscle function
    - Quality of life (QoL) measures

3.0 Study Design

3.1 General Description

This is a multinational, multicenter, open-label extenstion study designed to evaluate the long-term safety, effects on muscle, and pharmacodynamic (PD) of ATYR1940 in patients with LGMD2B or FSHD previously treated in the Protocol ATYR1940-C-003 (Stage 1 only) or ATYR1940-C-004 (i.e., the parent studies). This study will be conducted at the same study centers at which patients were enrolled in the parent studies.

Patients who have completed the treatment period in the parent study, and in the Investigator's opinion, demonstrated acceptable tolerability of ATYR1940, are considered by the Investigator to be compliant with ATYR1940 and the study procedures, and do not meet any criterion for ATYR1940 discontinuation are eligible for participation in the current study, contingent upon Investigator and patient agreement to continue ATYR1940 treatment.

Ideally, when a patient transfers from the parent study to this extension study, the duration between the last ATYR1940 dose in the parent study and first ATYR1940 dose in this extension study is 1 week; however, a maximum duration of 3 weeks is permissible. A window >3 weeks may be permissible on a case-by-case basis, if required due to administrative reasons, after consultation with the Medical Monitor.

For the first 12 weeks in this extension study, patients will receive ATYR1940 at the highest tolerated dose received in the parent study; no dose adjustments are allowed during this 12-week period. After 12 weeks, if the patient is demonstrating good tolerability, the ATYR1940 dose may be increased on a patient-specific basis at the Investigator's discretion, in consultation with the Sponsor and Medical Monitor. ATYR1940 dose increases to >3.0 mg/kg are not permissible.

All patients will receive ATYR1940 on a weekly basis in this study, regardless of the frequency of dosing in the parent study. Patients may be treated with ATYR1940 under protocol ATYR1940-C-006 until this treatment is approved or its development is discontinued, the study is closed by the Sponsor, or a criterion for study drug discontinuation is met.

ATYR1940 will be administered via IV infusion over 90 minutes. If medically indicated, the infusion duration and volume may be adjusted at the Investigator's discretion in consultation with the Medical Monitor and Sponsor.

The Schedule of Events is presented in Table 1.

TABLE 1. SCHEDULE OF EVENTS

Assessment	Study Period / Frequency of Assessments								
	Treatment Period						Follow-up		
	Week 14 in Parent Study/ Week 1 in Current Study[1,2,3]	Weekly (W2, W3, etc)	Monthly (Q4W) (Week 4, 8, etc)	Every 6 weeks (Q6W) (Week 6, 12, etc)	Every 3 Months (Q12W) (Week 12, 24, etc)	Every 6 Months (Q24W) Week 24, 48, etc.	1-week F/U	4-week F/U	12-week F/U
Visit Window (days)	-	±3D[4]	±3D[4]	±3D[4]	±5D[4]	±5D[4]	±3D	±3D	±5D
Informed consent/assent	X[1]								
Confirm inclusion/exclusion criteria	X[1]								
Weight[5]	X				X		X	X	
Vital signs[6]	X[3]	X					X	X	X
Complete physical examination	X			X				X	
Surveillance skeletal muscle MRI	X				X[7]				X
ATYR1940 administration[8]	X[1]	X							
12-lead ECG[9]	X[3]		X				X	X	
Pulse oximetry[10]	X[1]	X					X	X	X
Pulmonary function tests[11]									
FEV_1, FVC, and FEV_1/FVC ratio	X[1]			X				X	
Total lung capacity and DLCO	X[1]				X			X	
Adverse events	X[3]	X					X	X	X
Prior/concomitant medications	X[3]	X					X	X	X
Manual muscle testing	X				X		X		

Assessment	Study Period / Frequency of Assessments								
	Treatment Period						Follow-up		
	Week 14 in Parent Study/ Week 1 in Current Study[1,2,3]	Weekly (W2, W3, etc)	Monthly (Q4W) (Week 4, 8, etc)	Every 6 weeks (Q6W) (Week 6, 12, etc)	Every 3 Months (Q12W) (Week 12, 24, etc)	Every 6 Months (Q24W) Week 24, 48, etc.	1-week F/U	4-week F/U	12-week F/U
Visit Window (days)	-	±3D[4]	±3D[4]	±3D[4]	±5D[4]	±5D[4]	±3D	±3D	±5D
Upper and lower extremity function[12]	X				X		X		
INQoL	X				X		X		X
FSHD-HI[13]	X[1]				X		X		X
Laboratory Assessments									
Pregnancy test[14]	X[3]		X					X	
Hematology, serum chemistries, and urine analysis with microscopy[15]	X		X				X	X	X
Plasma complement factors[16]	X[1]				X		X		
Serum complement and tryptase levels[17]	X[1]				X		X		
Jo-1 antibodies[18]	X	X					X	X	X
ADA[19]	X			X			X	X	X
HARS (human histidyl-tRNA synthetase; serum)	X							X	
Serum ATYR1940 concentrations[20]	X			X			X		
Muscle biomarkers	X[1]				X		X	X	
Biomarkers in blood	X				X		X	X	

Assessment	Study Period / Frequency of Assessments								
	Treatment Period						Follow-up		
	Week 14 in Parent Study/ Week 1 in Current Study[1,2,3]	**Weekly (W2, W3, etc)**	**Monthly (Q4W) (Week 4, 8, etc)**	**Every 6 weeks (Q6W) (Week 6, 12, etc)**	**Every 3 Months (Q12W) (Week 12, 24, etc)**	**Every 6 Months (Q24W) Week 24, 48, etc.**	**1-week F/U**	**4-week F/U**	**12-week F/U**
Visit Window (days)	**-**	**±3D[4]**	**±3D[4]**	**±3D[4]**	**±5D[4]**	**±5D[4]**	**±3D**	**±3D**	**±5D**
PBMCs for immunophenotyping (general and disease-related) and culture for immune protein release	X				X		X	X	
Assessments for Patients in Parent Study ATYR1940-C-003 Only									
Visual acuity	X[1]					X	X		X
Pure Tone Audiometry	X[1]					X	X		X

Note: On ATYR1940 administration days, laboratory samples are to be collected and assessments performed pre-infusion, unless otherwise specified.

1. Week 1 in the current study (ESW1) is equivalent to Week 14 in the parent study (PSW14). The Week 1 column in this table reflects assessments that are to be performed at ESW1 (cells with heavy weight borders) in addition to those performed at PSW14 (cells with regular weight borders), as indicated in the parent study protocol. All PSWeek 14/ESWeek 1 assessments are to be completed and eligibility is to be confirmed before the first ATYR1940 dose in the current study at ESW1.
2. A maximum duration of 3 weeks is permissible between the last ATYR1940 dose in the parent study (i.e., at Week 13) and the first ATYR1940 dose in the current study (at ESW1). A window >3 weeks may be permissible on a case-by-case basis, if required due to administrative reasons, after consultation with the Medical Monitor.
3. If there is >1 week (+3 days) between the last ATYR1940 dose in the parent study and the first ATYR1940 dose in the current study, the assessments indicated are to be repeated within 7 days before ESW1.
4. For scheduling purposes, a ±3-day window is permissible around ATYR1940 infusion; however, each ATYR1940 dose must be separated by at least 5 days and no more than 9 days and only 1 dose may be administered within a given study week; if a patient's scheduled visit day is changed in a given week (e.g., changed from Tuesday to Thursday), then subsequent weekly visits may be accordingly adjusted (e.g., Thursdays) or may revert back to the original schedule (e.g., Tuesdays), provided ATYR1940 is administered according to the timeframes specified. For the every 12-week and 6-month visits, a ±5-day window is permissible.

5. Weight is to be re-measured any time the Investigator suspects the patient has experienced a notable change in weight (±10%) and the ATYR1940 dose recalculated.
6. Xxx Vital signs are to be measured on weekly dosing days pre-infusion; every 30 minutes (±5 minutes) during the infusion; at the end of the infusion (±5 minutes); at 30 minutes (±5 minutes) after the end of infusion; and at additional time points as clinically indicated. Vital signs also must be measured within 7 days before ATYR1940 administration at ESW1. (On weekly dosing days, post-infusion vital sign measurements also will be collected before blood sample collection.) In addition, vital signs are to be measured in the event of a generalized IRR (see Section 8.5.9.4 of the protocol).
7. To be performed every 3 months (±1 week).
8. ATYR1940 will be administered via IV infusion over 90 minutes (-5 minutes, +15 minutes), unless it is determined by the Investigator in consultation with the Medical Monitor and Sponsor that a patient should receive a different dosing duration, as medically indicated.
9. A 12-lead ECG is to be performed on the designated dosing days prior to and 30 minutes (±15 minutes) following the end of infusion and once at the additional designated follow-up visits. A 12-lead ECG must be performed within 7 days before ATYR1940 administration at ESW1. In addition, ECGs are to be performed in the event of a generalized IRR (see Section 8.5.9.4 of the protocol).
10. Pulse oximetry is to be performed on weekly dosing days from 5 minutes prior to the start of infusion through 30 minutes (-5 minutes, +15 minutes) after the end of infusion; at the additional designated follow-up visits; and as clinically indicated if the patient experiences pulmonary signs or symptoms (e.g., chest tightness, increased respiratory rate). In addition, pulse oximetry is to be performed in the event of a generalized IRR (see Section 8.5.9.4 of the protocol).
11. Pulmonary function tests, including forced expiratory volume in 1 second (FEV1), forced vital capacity (FVC), and FEV1/FVC ratio are to be measured prior to infusion at Week 1; then on the designated dosing days (every 6 weeks) at 2.5 hours (±30 minutes) after the end of infusion; and at the designated follow-up visit. Total lung capacity and diffusion capacity of the lung for carbon monoxide (DLCO), are to be measured at Week 1; then on the designated dosing days (every 12 weeks); and at the designated follow-up visit. In addition, pulmonary function tests are to be conducted in the event of a generalized IRR (see Section 8.5.9.4 of the protocol).
12. Upper extremity function to be measured using the Brooke scale; lower extremity function to be measured using the Vignos scale.
13. The FSHD HI should be completed at the same time of day and before other assessments scheduled for that day, including the InQoL. The order of assessments should remain consistent throughout the study.
14. Urine pregnancy testing is required for females of childbearing potential (i.e., premenopausal and not surgically sterile) only. Pregnancy testing must be performed within 7 days before ATYR1940 administration at ESW1. Testing is to be performed using the local laboratory and before study drug infusion.
15. Clinical safety laboratory tests include clinical chemistry, hematology, and urine analysis with microscopy. On the designated dosing days, blood samples for safety laboratory tests are to be collected pre-infusion. Patients with evidence of a generalized IRR are to have additional safety laboratory tests performed, as described in Section 8.5.9.4 of the protocol.
16. Blood samples for complement factors in plasma (including C3a, C4a, C5a, Bb, and SC5b-9) will be collected on the designated dosing days prior to and 1.5 hours (±15 minutes) after the end of infusion and at the designated follow-up visit. In addition, samples for complement factors in plasma are to be collected in the event of a generalized IRR (see Section 8.5.9.4 of the protocol).
17. Blood samples for tryptase, C3, C4, and CH50 will be collected on the designated dosing days prior to and 1.5 hours (±15 minutes) after the end of infusion on the designated dosing days and at the designated follow-up visit. In addition, samples for assessment of tryptase, C3, C4, and CH50 are to be collected in the event of a generalized IRR (see Section 8.5.9.4 of the protocol).

18. Blood samples for assessment of Jo-1 Ab are to be collected on dosing days prior to initiation of infusion, and at the additional time points indicated. The Week 1 Jo-1 Ab sample must be obtained and result reviewed within 2 weeks prior to the first ATYR1940 dose. In addition, samples for assessment of Jo-1 Ab are to be collected in the event of a generalized IRR (see Section 8.5.9.4 of the protocol).
19. Blood samples for analysis of antidrug antibodies (ADA) are to be collected on the designated dosing days prior to initiation of infusion and at the additional time points indicated. Blood samples for assessment of ADA are to be collected in the event of a generalized IRR (see Section 8.5.9.4 of the protocol). For patients with elevated ADA at the 12-week F/U visit, additional ADA testing should be performed every 1 to 3 months until level returns to baseline.
20. Blood samples for assessment of ATYR1940 concentrations are to be collected on the designated dosing days at end of infusion and 4 hours after the start of infusion. ATYR1940 serum concentrations also are to be collected in the event of a generalized IRR (see Section 8.5.9.4 of the protocol).

3.2 Sample Size Considerations

No formal sample size calculation was performed. Based on the design of the parent studies, it is estimated that up to 24 patients will be enrolled in this study.

3.3 Randomization

Randomization is not applicable to this study. All patients will be treated with ATYR1940 under identical dosing guidelines.

4.0 Study Endpoints and Covariates

4.1 Safety, Tolerability, and Immunogenicity Variables

4.1.1 Safety and Tolerability

The safety and tolerability of ATYR1940 will be evaluated based on the following variables:

- Treatment-emergent adverse events (AEs)
- Serious adverse events (SAEs)
- Clinical laboratory tests:
  - Hematology, serum chemistry, and urinalysis
  - Complement and tryptase
- Electrocardiogram (ECG) results
- Vital signs
- Physical and neurological examinations
- Pulmonary evaluations
  - Pulmonary function tests (PFTs)
    - Forced expiratory volume in 1 second (FEV_1)
    - Forced vital capacity (FVC)
    - FEV_1/FVC ratio
    - Total lung capacity
    - Diffusion capacity of carbon monoxide (DLCO)
  - Pulse oximetry
    - Oxygen saturation (SpO_2) measurements
    - SpO_2 measurements below 95%

4.1.2 Immunogenicity Variables

Immunogenicity will be evaluated based on the following variables:

- Anti-drug antibody (ADA) titers
- Jo-1 antibody (Ab) seroconversion

4.2 Pharmacodynamic Variables

4.2.1 Muscle Surveillance Magnetic Resonance Imaging (MRI)

Magnetic resonance imaging (MRI) will be performed during the study to evaluate changes in lower extremity muscle disease burden following treatment with ATYR1940. Patients without contraindications for MRI will undergo a lower extremity skeletal muscle surveillance MRI examination at Week 1, every 3 months (Week 12, 24, etc), and 12-Week post-treatment follow-up or early termination. Images will be reviewed and interpreted by a central reader. Central readers will perform the following:

- Review the surveillance scan of the lower extremity muscles
- Determine the short tau inversion recovery (STIR) positive muscles and indicate:
  - STIR signal status (Yes for baseline, and Yes/No for follow-up)
  - Side of the body (right or left)
  - Name of the muscle (various)
  - Region of the muscle (proximal, middle, or distal)
- Use T1 image scores from the STIR positive muscles to determine presence of fatty infiltration using the Fischer score for scoring:

Fischer Scale	Description
• Grade 0	Normal appearance
• Grade 1 (mild)	Presence of traces of increased signal intensity on the T1-weighted MR sequences
• Grade 2 (moderate)	Presence of increased T1-weighted signal intensity with beginning confluence in less than 50% of the muscle
• Grade 3 (severe)	Presence of increased T1-weighted signal intensity with beginning confluence in more than 50% of the muscle
• Grade 4	End-stage appearance; entire muscle replaced by increased density of connective tissue and fat
• NA	Not a STIR positive muscle

- Prioritize the STIR positive muscles found in the baseline scan for each patient based on both the STIR hyperintensity and Fischer score (must be 3 or less).

4.2.2 Manual Muscle Testing (MMT)

Muscle strength will be assessed using Manual Muscle Testing (MMT) at Week 1, every 3 months (Week 12, 24, etc), and 1-Week Post-treatment Follow-up. Muscles are to be tested in the order specified in Section 8.3.1.3 of the study protocol. The muscle groups to be tested are provided below and, with the exception of neck flexors and extensors, will be tested bilaterally (i.e., left and right side) so that there are two measurements for each muscle group. Both neck flexors and extensors will be tested once and the single result will be utilized for both right and left sides in calculation of overall score

- Trapezius
- Deltoid middle
- Biceps brachii
- Wrist extensors
- Wrist flexors
- Iliopsoas
- Quadriceps femoris
- Ankle dorsiflexors
- Neck flexors
- Gluteus medius
- Neck extensors
- Gluteus maximus
- Hamstrings
- Ankle plantar flexors

Results for each muscle tested will be graded using a modified Medical Research Council scale. Scores will be converted to 13-point scale as shown below. An overall total score will be calculated by summing all scores for a total possible score of 336. An overall total score will be calculated as long as 24 of the 28 individual scores are non-missing. An upper extremity score will be calculated by summing all scores from the upper area of the body (i.e., trapezius, deltoid middle, biceps brachii, wrist extensors, wrist flexors, neck flexors, and neck extensors). Additionally, a lower extremity score will be calculated by summing all scores from the lower area of the body (i.e., iliopsoas, quadriceps femoris, ankle dorsiflexors, gluteus medius, gluteus maximus, and ankle plantar flexors). A total possible score for the upper and lower scores will be 168. Upper or lower scores will be calculated if 12 of the 14 scores are non-missing. Grades used in the scoring of results are presented below:

Grade	Converted Score	Description
• 5	12	Normal strength
• 5-	11	Uncertain muscle weakness
• 4+	10	Inability to resist against maximal pressure throughout range of motion
• 4	9	Ability to resist against moderate pressure throughout range of motion
• 4-	8	Ability to resist against minimal pressure throughout range of motion
• 3+	7	Ability to move through full range of motion against gravity and to resist against minimal pressure through partial range of motion, then contraction breaks
• 3	6	Ability to move through full range of motion against gravity
• 3-	5	Ability to move through greater than one half range of motion against gravity
• 2+	4	Ability to move through less than one half range of motion against gravity
• 2	3	Ability to move through full range of motion with gravity eliminated
• 2-	2	Ability to move in any arc of motion with gravity eliminated
• 1	1	A flicker of movement is seen or felt in the muscle
• 0	0	No contraction palpable

4.2.3 Functional Assessment of Upper and Lower Limbs

Functional assessment of both the upper and lower extremities will be assessed at at Week 1, every 3 months (Week 12, 24, etc), and 1-Week Post-treatment Follow-up. Upper extremity muscle function will be measured using the Brooke scale. The grading for the Brooke scale is provided below:

Brooke Scale	Description
• 1	Starting with arms at the sides, the patient can abduct the arms in a full circle until they touch above the head
• 2	Can raise arms above head only by flexing the elbow (shortening the circumference of the movement) or using accessory muscles
• 3	Cannot raise hands above head, but can raise an 8-oz glass of water to the mouth
• 4	Can raise hands to the mouth, but cannot raise an 8-oz glass of water to the mouth
• 5	Cannot raise hands to the mouth, but can use hands to hold a pen or pick up pennies from the table
• 6	Cannot raise hands to the mouth and has no useful function of hands

Lower extremity muscle function will be measured using the Vignos scale. The grading for the Vignos scale is provided below:

Vignos Scale	Description
• 1	Walks and climbs stairs without assistance
• 2	Walks and climbs stair with aid of railing
• 3	Walks and climbs stairs slowly with aid of railing (over 25 seconds for eight standard steps)

- 4 Walks unassisted and rises from chair but cannot climb stairs
- 5 Walks unassisted but cannot rise from chair or climb stairs
- 6 Walks only with assistance or walks independently with long leg braces
- 7 Walks in long leg braces but requires assistance for balance
- 8 Stands in long leg braces but unable to walk even with assistance
- 9 Is in a wheelchair
- 10 Is confined to a bed

Scores for both the upper and lower extremity muscle function assessments will be considered as an ordinal variable.

4.2.4 Individualized Neuromuscular Quality of Life (INQoL)

The Individualized Neuromuscular Quality of Life (INQoL) is a validated, muscle disease specific measure of quality of life (QoL). The self-administered questionnaire consists of 45 items divided into 14 domains: 7 symptom impact domains (weakness, pain, fatigue, locking [i.e., myotonia], droopy eyelids, double vision, and swallowing difficulties); 5 life domains (activities, independence, relationships, emotions, and body image); and 2 treatment impact domains. All responses for individual questions are measured using a 7-point Likert scale. The 7 symptom impact domains and the 5 life domains are calculated as a percentage of the maximum detrimental impact with a higher percentage indicating a greater symptom impact or worse QoL. There are 2 scores calculated for the treatment impact domain, the perceived treatment effect and the expected treatment effect. The INQoL domains calculated are provided below:

Symptom Impact Domains
- Weakness
- Pain
- Fatigue
- Locking
- Droopy eyelids
- Double vision
- Swallowing difficulties

Life Domains
- Activities
- Independence
- Social relationships
- Emotions
- Body image

Treatment Impact Domains
- Perceived treatment
- Expected treatment

Additionally, a QoL score is calculated from questions 5, 6, and 7 from Section 1 and questions 1 and 2 from Section 2. Scoring of the domains is provided below:

Domain	**Scoring Procedure**	**Missing Data Rules**
Section 1 Questions (Symptom Impact Domains)		
Weakness	[(1a+1b+1c)/19]*100	If Part A (Yes/No Question) and Part B is missing, then score = 0. Part B missing: If a missing, then score = 1 If b missing, then impute previous value (a) If c missing, then score = 0
Pain	[(2a+2b+2c)/19]*100	
Fatigue	[(3a+3b+3c)/19]*100	
Locking	[(4a+4b+4c)/19]*100	
Droopy eyelids	[(5a+5b+5c)/19]*100	
Double vision	[(6a+6b+6c)/19]*100	
Swallowing difficulties	[(7a+7b+7c)/19]*100	

Domain	Scoring Procedure	Missing Data Rules
Section 2 Questions (Life Domains)		
Activities	Question 1: ([4*(AI+AII+AIII)]+[3*(BI+BII)]/108)*100 Note: If not working due to condition AIII=6 Note: If retired/unemployed/work in home not due to condition, then ([6*(AI+AII)]+[3*(BI+BII)]/108)*100	If an A item is missing, sum completed items and multiply by 6 if two items completed and 12 if only one item has been completed (to get score out of 72) AIII = 6 if not working due to your condition = ”YES” If BI missing, then impute average of completed activity items from A If BII missing, then score = 0
Independence	Question 2: ([12*A]+[3*(BI+BII)]/108*100	If A missing, then score = 0 If BI missing, then impute value from A If BII missing, then score = 0
Social relationships	Question 3: ([3*(AI+AII+AIII+AIV)]+ [BI+BII+BIII+BIV+BV+BVI]/108)*100 Note: If AI not applicable, then ([4*(AII+AIII+AIV)]+ [BI+BII+BIII+BIV+BV+BVI]/108)*100	If A missing, sum completed items and multiply by 4 if three completed items, 6 if two completed items, and 12 if one completed item If BI missing, impute average of A items (Relationship with spouse/partner AI and Relationship with other family members AII) If BII missing, then score = 0 If BIII missing, then impute value from Friends item (AIII) If BIV missing, then score = 0 If BV missing, then impute value from Other People (AIV) item If BVI missing, then score = 0
Emotions	Question 4: ([3*(AI+AII+AIII+AIV)]+[3*(BI+BII)]/108)*100	If A item missing, sum the completed items and multiply by 4 if three completed items, 6 if two completed items, and 12 if one completed item

Domain	Scoring Procedure	Missing Data Rules
		If BI missing, then impute average of items completed in A If BII missing, then score = 0
Body image	Question 5: ([12*A]+[3*(BI+BII)]/108)*100	If A missing, then score = 0 If BI missing, then impute value from A If BII missing, then score = 0
QoL	Add scores of items in Part B for Questions 1 through 5 in Section 2 with the following corrections: 3*(BI+BII) for Questions 1, 2, 4, and 5 BI+BII+BIII+BIV+BV+BVI for Question 3 Divide the total score by 180 and multiply by 100	
Section 3 Questions (Treatment Impact Domains)		
Perceived treatment effects	([AI+AIII)-(BI+BIII)]/12)*100	If AI missing, then score = 0 If AIII missing, then score = 0 If BI missing, then score = 0 If BIII missing, then score = 0
Expected treatment effects	([AII+AIII)-(BII+BIII)]/12)*100	If AII missing, then score = 0 If AIII missing, then score = 0 If BII missing, then score = 0 If BIII missing, then score = 0

The INQoL will be collected at at Week 1, every 3 months (Week 12, 24, etc), 1-Week Post-treatment Follow-up, and 12-Week Post-treatment Follow-up. The domains and total score will be considered as continuous data.

4.2.5 Facioscapulohumeral Muscular Dystrophy Health Index (FSHD-HI)

The FSHD-HI data will be collected at at Week 1, every 3 months (Week 12, 24, etc), 1-Week Post-treatment Follow-up, and 12-Week Post-treatment Follow-up. The subscales and total score will be considered as continuous data. There are 14 subscales: Shoulder and Arm Function, Mobility, Fatigue, Cognitive Function, Activity Limitation, Core Strength and Function, Gastrointestinal Function, Social Performance, Body Image, Hand and Finger Function, Social Satisfaction, Pain, Emotional Health, and Communication. Each subscale contains a set number of questions. Some subscales have more questions than others. Each question within a specific FSHD-HI subscale measures a similar concept.

The scoring of FSHD-HI data will be managed by aTyr. Upon completion, the scores will be transferred to PRA for analysis and display. For each subject, fifteen scores are generated: the total FSHD-HI score and a score for each of the 14 subscales. The total FSHD-HI score is a composite of the 14-subscale scores weighted based on the average importance of the subscale. The average importance is based on patient input from a prior large-scale survey study of FSHD participants. The score for each subscale and the total FSHD-HI ranges from 0 to 100 with 100 representing the highest disease burden and 0 representing no disease burden.

4.3 Pharmacokinetic, Biomarker, and Genetic Data

Blood samples will be collected throughout the study for PK, biomarker, and genetic analysis. The analysis of these variables will be managed by aTyr. Specificially, variables that will not be summarized or listed as part of this SAP include the following:

- Serum ATYR1940 concentrations and pharmacokinetic variables
- Serum human histidyl-tRNA synthetase (HARS)
- Biomarkers listed in the protocol and any additional biomarkers from future analysis
- Immunophenotyping in peripheral blood mononuclear cells (PBMCs)
- *Ex vivo* culturing for FSHD-related immune protein release in PBMCs

5.0 Analysis Populations

Two Safety populations will be used: Safety Population 006 and Safety Population Cumulative.

5.1 Safety Population 006

The Safety population 006 will include all patients who have received at least 1 full or partial dose of ATYR1940 in the 006 study and have a postinfusion safety observation since enrolled in parent studies. The Safety population 006 will include data from the 006 study only.

5.2 Safety Population Cumulative

The Safety population cumulative will include the same patients as above, but it will include cumulative data from both the parent studies and the 006 study.

6.0 Definitions

Age
Age will be recorded on the CRF and not derived for this study.

Baseline
Baseline is defined as the baseline in the parent study.

Analyses of changes from pre-infusion to post-infusion (i.e., vital signs, and ECG) will use pre-infusion as well, when applicable. Post baseline values for tabulations will exclude unscheduled visit values; however, unscheduled visit values will be included in listings.

Change from Baseline
Change from baseline (CFB) will be calculated as (post-baseline – baseline). CFB will be calculated for patients with both a baseline and post-baseline value as applicable. Percent CFB will be calculated as (CFB/baseline)*100, where applicable.

If a baseline value has not been recorded for a parameter, then CFB will not be calculated for that parameter. Patients with missing CFB values will be excluded from analyses in which CFB is the endpoint.

Change from pre-infusion
Change from pre-infusion will be calculated as (post-infusion – pre-infusion). Change from pre-infusion will be calculated for patients with both pre-infusion and post-infusion values, as applicable. No imputation will be done for missing values.

Completion of study
A patient will be considered completed in the study when an End of Study CRF page indicates a completion date.

Concomitant medications
Concomitant medications are defined as any medications taken on or after the date of first date of infusion in the parent study. This includes medications that are ongoing at the time of first infusion.

Discontinuation of study
A patient will be considered discontinued from the study when an End of Study CRF page is completed indicating primary reason for discontinuation.

Prior medication
Prior medications are defined as any medications with start and stop dates prior to the date of first date of infusion in the parent study or an ongoing medications with a start date prior to first date of infusion in the parent study.

Protocol deviation
Potential planned or unplanned protocol deviations noted during clinical monitoring will be documented by category (i.e., inclusion criteria, exclusion criteria, study drug, safety assessment, lab/endpoint data, visit window, informed consent, prohibited co-medication, overdose/misuse, and other). All deviations will be reviewed, categorized, designated important or not important, and finalized prior to database lock according to the Protocol Deviation Guidance document. Important protocol deviations will be defined as those potentially impacting safety, immunogenicity, or PK/PD assessments.

Relationship to study treatment
AEs related to study treatment will be defined as those entered as possibly, likely, or definitely. None and unlikely will be considered not related to study treatment. If relationship is missing, then the AE will be considered as related to study treatment.

Study day
Study day is defined relative to the date of the first infusion (Week 1) in the current study. For assessments that occur after this visit date, study day is calculated as (assessment date – first infusion date + 1). For assessments that occur prior to first infusion date, study day will be calculated as (assessment date – first infusion date); there is no Study Day 0.

Treatment-emergent adverse event
An AE will be considered to be a treatment-emergent AE (TEAE) for the current study if the AE begins on or after parent study Week 13 visit (Week 13 Day 3 visit for study 004) through the 12-week post-treatment follow-up visit in the current study.

7.0 Interim Analyses
No interim analyses are planned for this study as the study is descriptive in nature and there are no inferential analyses. Data will be assessed at regular intervals by the sponsor, including planned safety evaluations performed by the ATYR1940 Data Monitoring Board (DMB) during the conduct of the study. Measures of PK, PD, and efficacy may also be assessed at regular intervals as appropriate.

8.0 Data Handling and Review

8.1 Visit Windows

Scheduled visits are as follows:

- Week 1, 2, 3, … (Treatment Period – ATYR1940 dosing)
- 1-Week Post-treatment Follow-up (or early termination)
- 4-Week Post-treatment Follow-up (or early termination)
- 12-Week Post-treatment Follow-up (or early termination)

All data will be reported according to the nominal visit date for which it was recorded (i.e., no visit windows will be applied).

8.2 Missing Data Conventions

Rules for partial dates are provided in Appendices 2 and 3. These rules will apply to adverse events and medications. Missing values for other variables will not be imputed.

8.3 Data Handling and Transfer

Data will be entered by investigational sites into a clinical database built with DataLabs version 5.0 and exported as SAS® version 9.4 or higher datasets (SAS Institute, Inc., Cary, NC). Converted datasets are created using SAS® and following Clinical Data Interchange Standards Consortium (CDISC) Standard Data Tabulation Model conventions (v3.1.2). Derived analysis datasets are generated using SAS® and following standard CDISC Analysis Dataset Model conventions (implementation guide v1.0). Data analyses including summary tables, figures, and listings (TFLs) are produced using SAS®.

Medical history and AEs will be coded using the Medical Dictionary for Regulatory Activities (MedDRA) version 18.1 to assign a system organ class (SOC) and preferred term (PT) to each AE. AE severity will be graded using Common Terminology Criteria for Adverse Events (CTCAE) version 4.03.

Prior and concomitant medications are coded to preferred drug names using the World Health Organization Drug Dictionary Enhanced (WHODRUG DDE, 2015SEP01).

8.4 Data Screening

The PRA programming of analysis datasets, tables, figures, and listings (TFL) provides additional data screening. Presumed data issues will be output into SAS logs identified by the word “Problem” and extracted from the logs by a SAS macro and sent to Data Management.

Review of a pre-freeze TFL run on clean patients and a post-freeze TFL run on the frozen database allow for further data screening prior to lock. The post-freeze TFLs will be discussed with aTyr in a data review meeting to identify any final data issues and seek corrections prior to database lock. The PRA statistician and aTyr must approve database lock.

8.5 Data Monitoring Board (DMB)

A Data Monitoring Board (DMB), consisting of at least 4 independent physicians and a statistician with expertise in clinical research, clinical immunology, and the clinical management of muscular dystrophies, has been assembled to review safety data and other pertinent data from all ongoing clinical studies of ATYR1940. The ATYR1940 DMB will meet on a quarterly basis to review available, interim clinical safety and other pertinent data as defined for each protocol, from all patients enrolled in studies of ATYR1940, including this study. Data listings will be provided to the DMB approximately every 3 months. The DMB will be managed by aTyr.

9.0 Overall Statistical Considerations

All analyses will use SAS® version 9.4 or higher. Summary tables will be organized overall and by disease group, if applicable, for the two Safety populations. All available data will be used in the analyses, and important data will be included in data listings, sorted by site, patient and by visit within patient.

Unless otherwise noted, categorical data will be presented using counts and percentages, with the number of patients in the corresponding Safety population as the denominator for percentages. Percentages will be rounded to one decimal place except 100% will be displayed without any decimal places and percentages will not be displayed for zero counts. Continuous data, unless otherwise noted, are summarized using the number of observations (n), mean, standard deviation (SD), median, minimum, and maximum. Minimum and maximum will be rounded to the precision of the original value. Mean and median will be rounded to 1 decimal place greater than the precision of the original value. The SD will be rounded to 2 decimal places greater than the precision of the original value, up to a maximum of 3 decimal places. No statistical hypothesis testing will be performed for this study.

9.1 Patient Disposition

The number and percentage of patients enrolled and treated in the study will be presented along with the number and percentage of patients in each analysis population. In addition, the number and percentage of patients who completed and discontinued treatment and the study and the reason for discontinuation will be summarized using the number and percentage of patients.

Patient disposition data will be listed. Inclusion and exclusion criteria will not be listed, but will be contained in datasets.

9.2 Protocol Deviations

Important protocol deviations will be summarized by category using the number and percentage of patients. Categories will include inclusion criteria, exclusion criteria, study drug, safety assessment, visit window, informed consent, prohibited medication, and other (lab/endpoint data, overdose/misuse, etc.).

Important protocol deviations will be listed.

9.3 Demographic and Baseline Characteristics

Demographic and baseline characteristics will be summarized for the following variables:

- Sex (female, male)
- Race (white, black or African American, Asian, American Indian or Alaska native, native Hawaiian or other Pacific Islander, other)
- Ethnicity (Hispanic or Latino, not Hispanic or Latino)
- Age (years)
- Height (cm)
- Weight (kg)
- Body mass index (kg/m^2: Weight (kg)/[Height (m)]^2)
- FSHD clinical severity score/LGMD2B disease severity score
- Age at first sign/symptom onset
- Disease duration (years: [enrollment date of parent study – date of first sign/symptom onset]/365.25; round to one decimal place)
- Years since genetic diagnosis ([enrollment date of parent study – date of genetic diagnosis]/365.25; round to one decimal place)
- Genetic diagnosis

Demographic and baseline characteristic data, including FSHD clinical severity score, LGMD2B disease severity score, FSHD-related history and LGMD2B-related history will be provided in listings. Data not collected in this extension study will be migrated from the parent study databases.

9.4 Medical History

General medical history ongoing from parent studies will be reported by MedDRA SOC and PT and will be listed.

9.5 Exposure to Treatment and Other Therapies

9.5.1 Extent of ATYR1940 Exposure

ATYR1940 exposure will be summarized using descriptive statistics for overall duration of treatment and for each dose level by 12-week increments. The following variables will be summarized:

- Overall (for both parent studies and the current study)
  - Duration of ATYR1940 treatment (days) = (last infusion date – first ATYR1940 infusion date) + 1
  - Number of doses received
- Dose Level by 12-Week increments (for the current study only)
  - Number and percentage of complete doses given
  - Percent of expected dose received = (actual dose given/planned dose)*100

Exposure data and infusion details will be listed together.

9.5.2 Medications and Therapies

Prior and concomitant medication data will be listed together. Prior and concomitant non-drug therapies and procedures will also be provided in a listing.

9.6 Safety, Tolerability, and Immunogenicity Analyses

9.6.1 Adverse Events, Serious Adverse Events, and Deaths

Adverse events will be collected beginning at informed consent until the end of the study. See Section 6 for definition of TEAE. Adverse events will be coded using MedDRA to assign an SOC and PT to each adverse event and TEAEs will be summarized.

An overall summary of TEAEs including the following categories will be presented for the Safety analysis set by disease group:

- Number of TEAEs reported
- Number and percentage of patients reporting at least one TEAE
- Number and percentage of patients with at least one related TEAE (see definition in Section 6)
- Number and percentage of patients with at least one TEAE leading to study medication withdrawal
- Number and percentage of patients with at least one serious TEAE
- Number of patients with at least one TEAE with fatal outcome

The number and percentage of patients reporting TEAEs will also be summarized for the categories below. Counts will be by patient, not event, and patients will only be counted once within each SOC or PT. Tabulations will be sorted by descending frequency of the number of patients reporting the TEAE for each SOC and by PT within each SOC. Additionally, patients with multiple events within a particular SOC or PT will be counted under the category of their most severe event within an SOC or PT for summaries by maximum grade. Summaries to be provided are the following:

- TEAEs by MedDRA PT
- TEAEs by MedDRA SOC and PT

- Related TEAEs by MedDRA SOC and PT
- TEAEs by MedDRA SOC, PT, and maximum CTCAE grade
- SAEs by MedDRA SOC and PT
- TEAEs leading to study medication withdrawal by MedDRA SOC and PT
- TEAEs with a fatal outcome by MedDRA SOC and PT

TEAEs and non-TEAEs will be listed together.

9.6.2 Laboratory Data

Laboratory data, including hematology, serum chemistry and urine analysis with microscopy, will be collected at Week 1 (if required) and monthly (Week 4, 8, etc) during the Treatment Period, and at 1-Week F/U, 4-Week F/U and 12-Week F/U during the Post-treatment Follow-up period. Additional safety lab assessments will be performed for patients with evidence of generalized IRR. These data will be listed, but not summarized. Table 2 details the parameters assessed.

TABLE 2. LABORATORY PARAMETERS

Hematology	Biochemistry	Urinalysis
Hematocrit	Aspartate aminotransferase (AST)	Color
Hemoglobin	Alanine aminotransferase (ALT)	Specific gravity
Red blood cell (RBC) count	Total bilirubin	Glucose
White blood cell (WBC) count	Insulin-like growth factor 1	Blood
Platelet count	Gamma-glutamyl transferase (GGT)	pH
Neutrophils	Alkaline phosphatase	Protein
Lymphocytes	Blood urea nitrogen	Ketones
Monocytes	Creatinine	Apprearance
Eosinophils	Lactate dehydrogenase	Bilirubin
Basophils	Creatine kinase (CK)	Leukocyte esterase (LE)
	CK Isozymes MM	Nitrites
	CK Isozymes MB	Urobilinogen
	CK Isozymes BB	Additional urine microscopic variables[a]
	Troponin I, T	
	Myoglobin	
	Erythrocyte sedimentation rate	
	C-reactive protein	
	Total protein	
	Cholesterol (non-fasting)	
	Sodium	
	Potassium	
	Chloride	
	Bicarbonate	
	Magnesium	
	Calcium	
	Inorganic phosphate	
	IL – 6	
	IL – 1 Beta	

a. Additional urine microscopic variables include: amorphous crystals, bacteria, calcium carbonate crystals, calcium oxalate crystals, calcium phosphate crystals, cysteine crystals, granular casts, hyaline casts, leucine crystals, mucous, RBC, RBC casts, renal epithelial cells, squamous epithelial cells, transitional epithelial cells, triple phosphate crystals, tyrosine crystals, uric acid crystals, waxy casts, WBC, WBC casts, yeast.

Hematology, serum chemistry, and urinalysis will be summarized using descriptive statistics for numeric variables and numbers and percentages for categorical variables at each scheduled assessment. Numeric hematology, chemistry, and urinalysis results will be summarized using CFB as well. Shifts from baseline for clinical laboratory results will be summarized using the number and percentage of patients in each shift category.

Summaries by visit will include data from scheduled assessments, and all data will be reported according to the nominal visit date for which it was recorded.

Laboratory data, including screening serology and pregnancy test results, will be listed. Additionally, sample collection dates and times for HARS, PBMCs, biomarkers, PK, and blood and urine sample for future analysis will not be listed, but will be included in datasets.

9.6.3 Electrocardiogram

Twelve-lead ECG will be performed at the following time points during the study:

- Week 1 (prior to and 30 minutes following end of infusion) (if required)
- Monthly (Week 4, Week 8, etc) (prior to and 30 minutes following end of infusion)
- 1-Week Post-treatment Follow-up
- 4-Week Post-treatment Follow-up

Additional ECG assessments will be performed for patients with evidence of generalized IRR. These data will be listed, but not summarized. The results of the 12-lead ECGs will be summarized using descriptive statistics for each assessment for actual and CFB values. Corrected QT intervals using Bazett's and Fridericia's correction will be provided. The following formulas will be used:

- QTcB = QT/([RR/1000]^1/2)
- QTcF = QT/([RR/1000]^1/3)

All ECG data will be listed, both for quantitative data and for overall interpretation.

9.6.4 Vital Signs

Vital signs, including systolic and diastolic blood pressure, heart rate, respiration rate, and body temperature will be assessed at every visit. On dosing days, vital signs will be measured prior to, every 30 minutes during the infusion, at the end of infusion, and 30 minutes after the end of infusion.

Additional vital sign assessments will be performed for patients with evidence of generalized IRR. These data will be listed, but not summarized. Vital sign results will be summarized using descriptive statistics for each assessment for actual and CFB values as well as for change from pre-infusion values.

All vital sign data will be listed together with body weight.

9.6.5 Physical and Neurological Examinations

Complete physical and neurological examinations will be performed at Week 1 (if required), every 6 weeks (Week 6, Week 12, etc), and 4-Week Post-treatment Follow-up. Additionally, physical examinations may be performed at any time during the study, as clinically indicated.

All physical and neurological examinations data will be listed.

9.6.6 Pulmonary Evaluations

9.6.6.1 Pulmonary Function Tests (PFTs)

The following PFTs will be measured at Week 1 (if required), every 6 weeks (Week 6, Week 12, etc), and 4-Week Post-treatment Follow-up:

- FEV_1

- FVC
- FEV_1/FVC ratio

The following PFTs will be measured at Week 1 (if required), every 3 months (Week 12, Week 24, etc), and 4-Week Post-treatment Follow-up:

- Total lung capacity
- DLCO

Additional PFT assessments will be performed for patients with evidence of generalized IRR. These data will be listed, but not summarized. PFT results will be summarized using descriptive statistics for each assessment for actual, CFB values, and percent CFB values.

All PFT data will be listed.

9.6.6.2 Pulse Oximetry

Oxygen saturation (SpO_2) will be monitored continuously via pulse oximetry from 5 minutes prior to infusion until 30 minutes after the end of infusion on all dosing days. Oxygen saturation pre-infusion will be summarized using descriptive statistics for each visit. The number and percentage of patients with post-infusion SpO_2 levels below 95% will be provided for each visit. Additional pulse oximetry assessments will be performed for patients with evidence of generalized IRR. These data will be listed, but not summarized.

Percent change from pre-infusion (CFB) will be calculated for SpO_2 values that fall below 95% as [(post-infusion SpO_2 – pre-infusion SpO_2)/pre-infusion SpO_2]*100.

Pulse oximetry data will be listed. Percent CFB for SpO_2 values that fall below 95% will be provided in the listing. Additionally, SpO_2 values that fall below 88% and/or have a > 5% in percent CFB will be flagged in the listing.

9.6.7 Immunogenicity Analyses

Samples for ADA titers will be collected at Week 1 (if required), every 6 weeks (Week 6, Week 12, etc), 1-Week Post-treatment Follow-up, 4-Week Post-treatment Follow-up, and 12-Week Post-treatment Follow-up. Samples for Jo-1 Ab will be collected weekly (Week 1, Week 2, Week 3, etc), 1-Week Post-treatment Follow-up), 4-Week Post-treatment Follow-up, and 12-Week Post-treatment Follow-up. Samples will also be collected for patients experiencing generalized IRRs. These data collected for IRRs will be listed, but not summarized. Only samples collected at the defined sample collection time points will be provided in summary tables. Tables will summarize the maximum ADA titer and Jo-1 Ab signal observed per individual. ADA titers and Jo-1 Ab qualitative results will be listed.

9.7 Pharmacodynamic Analyses

9.7.1 Surveillance MRI

Surveillance skeletal muscle MRI will be conducted at Week 1 (if required), every 3 months (Week 12, 24, etc), and 12-Week post-treatment follow-up.

A listing will be generated from the surveillance MRI data showing the STIR positive muscles, the name of the muscles, the side of the body, region of the muscle (proximal, middle, and distal), and the Fischer score for that same muscle region.

9.7.2 Other Pharmacodynamic Variables

Numeric pharmacodynamic variables will be summarized using descriptive statistics for actual, CFB, and percent CFB values. Numeric variables include the following:

- MMT composite score – all muscle groups, upper extremity muscle groups, and lower extremity muscle groups

- Upper extremity muscle function using the Brooke scale
- Lower extremity muscle function using the Vignos scale
- INQoL domains and QoL score
- FSHD-HI: subscale and total scores (do not include the short form score)

Listings will be provided for all of the additional pharmacodynamic variables.

10.0 Validation

PRA's goal is to ensure that each TFL delivery is submitted to the highest level of quality. Our quality control procedures will be documented separately in the study specific quality control plan.

Appendix 1 Glossary of Abbreviations

Glossary of Abbreviations:	
Ab	Antibody
ADA	Anti-drug antibody
AE	Adverse event
ALT	Alanine aminotransferase
AST	Aspartate aminotransferase
ATC	Anatomic therapeutic classification
CDISC	Clinical Data Interchange Standards Consortium
CFB	Change from baseline
CK	Creatine kinase
CRF	Case report form
CS	Clinically significant
CSA	Cross sectional area
CTCAE	Common Terminology Criteria for Adverse Events
DLCO	Diffusion capacity of carbon monoxide
DMB	Data monitoring board
ECG	Electrocardiogram
EO-FSHD	Early onset Facioscapulohumeral muscular dystrophy
FEV_1	Forced expiratory volume in 1 second
FSHD	Facioscapulohumeral muscular dystrophy
FVC	Forced vital capacity
GGT	Gamma-glutamyl transferase
HARS	Human histidyl-tRNA synthetase
HLA	Human leukocyte antigen
INQoL	Individualized Neuromuscular Quality of Life
IRR	Infusion-related reaction
IV	Intravenous
LGMD2B	Limb-girdle muscular dystrophy Type 2B
MedDRA	Medical Dictionary for Regulatory Activities
MMT	Manual muscle testing
MRI	Magnetic resonance imaging
MSME	Multi-spin multi echo
NCS	Not clinically significant

OCT	Optical coherence tomography
PBMC	Peripheral blood mononuclear cell
PD	Pharmacodynamic
PFT	Pulmonary function test
PK	Pharmacokinetic
PT	Preferred term
QoL	Quality of Life
RBC	Red blood cell
SAE	Serious adverse event
SAP	Statistical analysis plan
SD	Standard deviation
SOC	System organ class
SpO_2	Oxygen saturation
STIR	Short tau inversion recovery
TEAE	Treatment-emergent adverse event
TFLs	Tables, figures, and listings
WBC	White blood cells
WHO DDE	World Health Organization Drug Dictionary Enhanced

Appendix 2 Adverse Event Start/Stop Date Imputation

Imputation Rules for Partial Dates (D = day, M = month, Y = year)

Parameter	Missing	Additional Conditions	Imputation
Start date for AEs	D	M and Y same as M and Y of first dose of ATYR1940	Date of first dose of ATYR1940 in current study.
		M and/or Y not same as date of first dose of ATYR1940	First day of month
	D and M	Y same as Y of first dose of ATYR1940	Date of first dose of ATYR1940 in the current study.
		Y prior to Y of first dose of ATYR1940 but same as Y of screening date	Date of screening date
	D, M, Y	None - date completely missing	Date of first dose of ATYR1940 in the current study.
Stop date for AEs	D	M and Y same as M and Y of 12-Week Follow-up visit	Date of 12-Week Follow-up visit
		M and/or Y not same as date of 12-week Follow-up visit	Use last day of month
	D and M	Y same as Y of 12-Week Follow-up visit	Date of 12-Week Follow-up visit
		Y not same as Y of 12-Week Follow-up visit	Use Dec 31
	D, M, Y	None - date completely missing	No imputation, but assume ongoing

Note: In all cases, if an estimated start date is after a complete stop date, use the first day of the stop date month.
Similarly, if the estimated stop date is before a complete or imputed start date, use the last day of the start day month.

Appendix 3 Prior and Concomitant Medication Start/Stop Date Imputation

Imputation Rules for Partial Dates (D = day, M = month, Y = year)

Parameter	Missing	Additional Conditions	Imputation
Start date for con meds	D only	M and Y same as M and Y of first dose of ATYR1940	Date of first dose of ATYR1940 in the current study.
		M and/or Y not same as date of first dose of ATYR1940	First day of month
	M and D	Y same as Y of first dose of ATYR1940	Date of first dose of ATYR1940 in the current study.
		Y not same as Y of first dose of ATYR1940	Use Jan 01 of Y
	M, D, and Y	None - date completely missing	Day prior to date of first dose of ATYR1940 in the current study.
Stop date for con meds	D only	M and Y same as M and Y of 12-Week Follow-up visit	Date of 12-Week Follow-up visit
		M and/or Y not same as date of 12-Week Follow-up visit	Last day of month
	M and D	Y same as Y of 12-Week Follow-up visit	Date of 12-Week Follow-up visit
		Y not same as Y of 12-Week Follow-up visit	Use Dec 31 of Y
	M, D, and Y	None - date completely missing and NOT ongoing	Date of 12-Week Follow-up visit

Note: In all cases, if an estimated start date is after a complete stop date, use the first day of the stop date month.
Similarly, if the estimated stop date is before a complete or imputed start date, use the last day of the start day month.

Appendix 4 List of Post-Text Tables, Figures, Listings, and Supportive SAS Output Appendices

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Appendix 5 Shells for Post-Text Tables, Figures, and Listings

General Table Programming Instructions:

- Percentages should be rounded to one decimal, except for percentages that are 100% which are displayed without the decimal.
- If the percentage rounds to 0.0% (e.g., 0.02%), display as "(<0.1)". For categories that are 0, do not display percentage (i.e., 0 rather than 0 (0.0).
- SD will be rounded to 2 decimal places greater than the precision of the original value, up to a maximum of 3 decimal places.

14.1 BASELINE DEMOGRAPHIC DATA TABLES

14.1.1 Patient Analysis Sets

	EO-FSHD	FSHD	LGMD2B	Total
Patients enrolled [n]	xx	xx	xx	xx
Patients treated, Safety population 006 [n (%)[a]]	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Patients enrolled but not treated [n (%)[a]]	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
a. Percent of all enrolled patients.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_1_1_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Derive "Disease" based on the following: for FSHD patients from 003, Disease=EO-FSHD; for FSHD patients from 004, Disease=FSHD.

14.1.2 Patient Disposition (Safety Population 006)

	EO-FSHD (N = XX) n (%)	FSHD (N = XX) n (%)	LGMD2B (N = XX) n (%)	Total (N = XX) n (%)
Completed treatment	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Withdrew from treatment	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Primary reason for treatment withdrawal				
Adverse event	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Infusion-Related Reaction	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Lost to follow-up	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Other	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Pregnancy	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Progressive disease	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Protocol deviation	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Withdrawal by subject	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Completed the study	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Discontinued from study	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Primary reason for discontinuation from study				
Adverse event	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Infusion-Related Reaction	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Lost to follow-up	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Other	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Pregnancy	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Progressive disease	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Protocol deviation	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Withdrawal by subject	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Percentage based on the number of patients in the population.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_1_2_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Denominator based on the number in each disease group and total population for the Safety population 006.

14.1.3 Important Protocol Deviations (Safety Population 006)

	EO-FSHD (N = XX) n (%)	FSHD (N = XX) n (%)	LGMD2B (N = XX) n (%)	Total (N = XX) n (%)
Patients with any important protocol deviation	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Inclusion criteria	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Exclusion criteria	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Study drug	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Safety assessment	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Visit window	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Informed consent	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Prohibited medication	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Other	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Only important protocol deviations are tabulated.
Note: Percentage based on the number of patients in the Safety population 006.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_1_3_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Denominator based on the number in each treatment regimen and total population for the Enrolled population.

14.1.4 Demographic and Baseline Characteristics (Safety Population Cumulative)

	EO-FSHD (N = XX)	FSHD (N = XX)	LGMD2B (N = XX)	Total (N = XX)
Sex [n (%)]				
Female	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Male	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Race [n (%)]				
American Indian or Alaska Native White	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Asian	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Black or African American	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Native Hawaiian or other Pacific Islander	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
White	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Other	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Ethnicity [n (%)]				
Hispanic or Latino	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Not Hispanic or Latino	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Age (years)				
n	xx	xx	xx	Xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
Height (cm)				
n	xx	xx	xx	xx
Mean (SD)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Percentage based on the number of patients in the Safety population cumulative, except in cases of disease specific summaries for FSHD and LGMD2B where the percentage is based on the number of FSHD or LGMD2B patients.
a. (enrollment date of parent study – date of first sign/symptom onset) / 365.25; round to one decimal place.
b. (enrollment date of parent study – date of genetic diagnosis) / 365.25; round to one decimal place.
c. Pulled from the central lab data, rather than from the CRF.Source: Listing xx.x.xx, Dataset: [NAME],
Program: xxxxxx.sas, Output: T_14_1_4_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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14.1.4 Demographic and Baseline Characteristics (Safety Population Cumulative)

	EO-FSHD (N = XX)	FSHD (N = XX)	LGMD2B (N = XX)	Total (N = XX)
Weight (kg)	xx	xx	xx	xx
n	xx	xx	xx	xx
Mean (SD)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
Body mass index (kg/m^2)				
n	xx	xx	xx	xx
Mean (SD)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
Smoking history [n (%)]				
Current smoker	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Ex-smoker	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Never smoked	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
FSHD clinical severity score				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
LGMD2B disease severity score				
n	N/A	N/A	xx	xx
Mean (SD)			xx.x (xx.xx)	xx.x (xx.xx)
Median			xx.x	xx.x
Min, Max			xx, xx	xx, xx

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Percentage based on the number of patients in the Safety population cumulative, except in cases of disease specific summaries for FSHD and LGMD2B where the percentage is based on the number of FSHD or LGMD2B patients.
a. (enrollment date of parent study – date of first sign/symptom onset) / 365.25; round to one decimal place.
b. (enrollment date of parent study – date of genetic diagnosis) / 365.25; round to one decimal place.
c. Pulled from the central lab data, rather than from the CRF.Source: Listing xx.x.xx, Dataset: [NAME],
Program: xxxxxx.sas, Output: T_14_1_4_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

14.1.4 Demographic and Baseline Characteristics (Safety Population Cumulative)

	EO-FSHD (N = XX)	FSHD (N = XX)	LGMD2B (N = XX)	Total (N = XX)
Age at first sign/symptom (years)				
n	xx	xx	xx	xx
Mean (SD)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
Disease duration (years)[a]				
n	xx	xx	xx	xx
Mean (SD)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
Years since diagnosis[b]				
n	xx	xx	xx	xx
Mean (SD)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
FSHD				
Genetic diagnosis [n (%)]				
FSHD 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
FSHD 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Both FSHD 1 and FSHD 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Percentage based on the number of patients in the Safety population cumulative, except in cases of disease specific summaries for FSHD and LGMD2B where the percentage is based on the number of FSHD or LGMD2B patients.
a. (enrollment date of parent study – date of first sign/symptom onset) / 365.25; round to one decimal place.
b. (enrollment date of parent study – date of genetic diagnosis) / 365.25; round to one decimal place.
c. Pulled from the central lab data, rather than from the CRF.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_1_4_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

14.1.4 Demographic and Baseline Characteristics (Safety Population Cumulative)

	FSHD (N = XX)	EO-FSHD (N = XX)	LGMD2B (N = XX)	Total (N = XX)
D4Z4 repeat number[c]				
n	xx	xx	xx	xx
Mean (SD)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
EcoR1 fragment size (kb)[c]				
n	xx	xx	xx	xx
Mean (SD)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)	xx.xx (xx.xxx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
SCHMD1 mutation [n (%)]				
No	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Yes	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Unknown	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Missing	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
LGMD2B				
Clinical Phenotype [n (%)]				
LGMD2B	N/A	N/A	xx (xx.x)	xx (xx.x)
Myoshi myopathy	N/A	N/A	xx (xx.x)	xx (xx.x)
Distal anterior compartment neuropathy	N/A	N/A	xx (xx.x)	xx (xx.x)
Other	N/A	N/A	xx (xx.x)	xx (xx.x)

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Percentage based on the number of patients in the Safety population cumulative, except in cases of disease specific summaries for FSHD and LGMD2B where the percentage is based on the number of FSHD or LGMD2B patients.
a. (enrollment date of parent study – date of first sign/symptom onset) / 365.25; round to one decimal place.
b. (enrollment date of parent study – date of genetic diagnosis) / 365.25; round to one decimal place.
c. Pulled from the central lab data, rather than from the CRF.Source: Listing xx.x.xx, Dataset: [NAME],
Program: xxxxxx.sas, Output: T_14_1_4_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Rows for "missing" may need to be added for categorical variables. Denominator based on the number in each disease group and total population for the Safety population cumulative.

14.1.5 Exposure to ATYR1940 (Safety Population Cumulative)

	EO-FSHD (N = XX)	FSHD (N = XX)	LGMD2B (N = XX)	Total (N = XX)
Overall in Current Study				
Duration of treatment (days)				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
Number of doses received (number)				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
Overall - Parent + Current Studies				
Duration of treatment (days)				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
Number of doses received (number)				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx

a. Only reported for dose levels actually received during a particular week.
b. Percentages are based on the number of subjects with data available at that particular week.
Note: Percent of expected dose received (%) = (actual dose given/planned dose)*100.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_1_5_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

14.1.5 Exposure to ATYR1940 (Safety Population Cumulative)

	EO-FSHD (N = XX)	FSHD (N = XX)	LGMD2B (N = XX)	Total (N = XX)
Overall in Current Study - 0.3 mg/kg dose level[a]				
Duration of treatment (days)				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
Number of doses received (number)				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
Overall - Parent + Current Studies - 0.3 mg/kg dose level[a]				
Duration of treatment (days)				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
Number of doses received (number)				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
<repeat page for dose level>				
1.0 mg/kg dose level				
3.0 mg/kg dose level				

a. Only reported for dose levels actually received during a particular week.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_1_5_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Number of doses received is calculated for each patient. The "n" is the number of patients in which the number of doses received was calculated.

14.2 Safety, Tolerability, and Immunogenicity Data Tables

14.2.1 Adverse Event Data Tables

14.2.1.1 Summary of Treatment-Emergent Adverse Events (Safety Population Cumulative)

	EO-FSHD (N = XX) n (%)	FSHD (N = XX) n (%)	LGMD2B (N = XX) n (%)	Total (N = XX) n (%)
Parent and Current Studies: Overall				
Number of TEAEs	xxx	xxx	xxx	xxx
Patients with any TEAE	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Patients with any TEAE related[a]	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Patients with any TEAE leading to study medication withdrawal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Patients with any serious TEAE	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Patients with any TEAE with fatal outcome	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Current Study (ATYR1940-C-006) Overall				
Number of TEAEs	xxx	xxx	xxx	xxx
Patients with any TEAE	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Patients with any TEAE related[a]	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Patients with any TEAE leading to study medication withdrawal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Patients with any serious TEAE	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Patients with any TEAE with fatal outcome	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
a. “Related” defined as possibly, likely, or definitely.
Note: Percentage based on the number of patients in the Safety population cumulative.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_1_1_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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14.2.1.2 Treatment-Emergent Adverse Events by System Organ Class and Preferred Term (Safety Population Cumulative)

	EO-FSHD (N = XX) n (%)	FSHD (N = XX) n (%)	LGMD2B (N = XX) n (%)	Total (N = XX) n (%)
Parent and Current Studies Overall				
Any treatment-emergent adverse event	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
System Organ Class 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…				
System Organ Class 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…				
System Organ Class 3	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…				
Current Study (ATYR1940-C-006) Overall				
Any treatment-emergent adverse event	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
System Organ Class 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…				
System Organ Class 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…				
System Organ Class 3	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…				

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Adverse events are coded using MedDRA version 18.1. Only treatment-emergent adverse events are summarized. For each system organ class and preferred term, patients are included only once.
Note: Percentage based on the number of patients in the Safety population cumulative.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_1_2_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Sort by decreasing frequency of "Total" column for both SOC and preferred term.

14.2.1.3 Related Treatment-Emergent Adverse Events by System Organ Class and Preferred Term (Safety Population Cumulative)

Programming Note: Repeat previous table 14.2.1.2. Add footnote: Note: "Related" defined as possibly, likely, or definitely.

14.2.1.4 Treatment-Emergent Adverse Events by System Organ Class, Preferred Term, and Maximum CTCAE Grade (Safety Population Cumulative)

	EO-FSHD (N = XX)					
System Organ Class Preferred Term	**Grade 1 n (%)**	**Grade 2 n (%)**	**Grade 3 n (%)**	**Grade 4 n (%)**	**Grade 5 n (%)**	**Total n (%)**
Parent and Current Studies Overall						
Any treatment-emergent adverse event	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
System Organ Class 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 3	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 4	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 5	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…						
System Organ Class 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 3	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 4	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 5	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…						
System Organ Class 3	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…						

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Adverse events are coded using MedDRA version 18.1 and graded using CTCAE v4.03. For each system organ class and preferred term, patients are included only once at the maximum severity.
Note: Percentage based on the number of patients in the Safety population Cumulative.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_1_4_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Repeat page for each disease group (FSHD, EO-FSHD, and LGMD2B) and total. Sort by decreasing frequency of "Total" column for both SOC and preferred term. Preferred terms appearing in any group should be displayed in all groups (i.e., keep 0 rows in other groups).

14.2.1.5 Treatment-Emergent Adverse Events Leading to Study Medication Withdrawal by System Organ Class and Preferred Term (Safety Population Cumulative)

Programming Note: Repeat previous table 14.2.1.2, subsetting for TEAEs with action taken of study drug withdrawn. Replace first row header with: "Any TEAE with action taken of study drug withdrawn."

14.2.1.6 Serious Treatment-Emergent Adverse Events by System Organ Class and Preferred Term (Safety Population Cumulative)

Programming Note: Repeat previous table 14.2.1.2, subsetting for serious TEAEs. Replace first row header with: "Any serious TEAE."

14.2.1.7 Treatment-Emergent Adverse Events by Preferred Term (Safety Population Cumulative)

	EO-FSHD (N = XX) n (%)	FSHD (N = XX) n (%)	LGMD2B (N = XX) n (%)	Total (N = XX) n (%)
Parent and Current Studies Overall				
Any treatment-emergent adverse event	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 3	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 4	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 5	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…				
Current Study (ATYR1940-C-006) Overall				
Any treatment-emergent adverse event	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 1	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 2	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 3	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 4	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Preferred Term 5	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…				

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Adverse events are coded using MedDRA version 18.1. Only treatment-emergent adverse events are summarized. For each system organ class and preferred term, patients are included only once.
Note: Percentage based on the number of patients in the Safety population cumulative.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_1_7_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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14.2.2 LABORATORY DATA TABLES

14.2.2.1.1 Hematology Results by Visit (Safety Population Cumulative)

Parameter = *Parameter 1 (units, if applicable)*

Disease / Study / Visit	Actual N	Actual Mean (SD)	Actual Median (Min, Max)	Change from Baseline N	Change from Baseline Mean (SD)	Change from Baseline Median (Min, Max)
Total (N = xx)						
Parent Study						
Baseline	xx	xx.x (xx.xx)	xx.x (xx, xx)			
Week 14/1-Week Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Current Study (ATYR1940-C-006)						
Week 1	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 4	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 8	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
…						
1-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
4-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
12-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
…						
<repeat for>						
EO-FSHD (N = xx)						
FSHD (N = xx)						
LGMD2B (N = xx)						

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Baseline is defined as the baseline in the parent study.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_2_1_1_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Baseline will be the last value prior to 1st ATYR1940 dose at Week 2 in the parent study. Labs collected due to the result of an IRR will not be summarized, but will be provided in the data listing. Parameters are listed in Section 9.6.2 of SAP text. Parameters should be presented in the same order as the protocol.

14.2.2.1.2 Shift Summary of Hematology Results by Reference Range and Visit (Safety Population Cumulative)

Parameter Study Visit Baseline Value	EO-FSHD (N = XX) Post Baseline Value Low	Normal	High	Total	Missing
Laboratory parameter 1					
Parent Study					
Week 14/1-Week Follow-up					
Low	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
Normal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
High	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
Total	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
Missing	xx	xx	xx	xx	xx
Current Study (ATYR1940-C-006)					
Week 1					
Low	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
Normal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
High	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
Total	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
Missing	xx	xx	xx	xx	xx
Week 4					
Low	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
Normal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
High	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
Total	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx	xx
Missing	xx	xx	xx	xx	xx
…					

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Baseline is defined as the baseline in the parent study.
Note: Total column is the number of patients with at least one post baseline result.
Note: Percentages are based on the total number of patients with both a baseline and a post baseline result at that visit.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_2_1_2_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Repeat page for each disease type (FSHD, EO-FSHD, and LGMD2B) and total. Repeat for each visit. Continue for all hematology parameters listed in SAP text. Baseline will be the last value prior to 1st ATYR1940 dose at Week 2 in the parent study. Parameters should be presented in the same order as the protocol. Labs collected due to the result of an IRR will not be summarized, but will be provided in the data listing.

14.2.2.2.1 Serum Chemistry Results by Visit (Safety Population Cumulative)

Programming Note: Repeat table 14.2.2.1.1. Parameters are listed in Section 9.6.2 of SAP text.

14.2.2.2.2 Shift Summary of Serum Chemistry Results by Reference Range and Visit (Safety Population Cumulative)

Programming Note: Repeat table 14.2.2.1.2. Parameters are listed in Section 9.6.2 of SAP text.

14.2.2.3.1 Quantitative Urinalysis Results by Visit (Safety Population Cumulative)

Programming Note: Repeat table 14.2.2.1.1. Parameters are listed in Section 9.6.2 of SAP text; this table is for quantitative parameters only.

14.2.2.3.2 Qualitative Urinalysis Results by Visit (Safety Population Cumulative)

Parameter Study Visit Category	EO-FSHD (N = XX) n (%)	FSHD (N = XX) n (%)	LGMD2B (N = XX) n (%)	Total (N = XX) n (%)
Laboratory parameter 1 (unit)				
Parent Study				
Baseline	xx	xx	xx	xx
Normal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Abnormal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Week 14/1-Week Follow-up	xx	xx	xx	xx
Normal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Abnormal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Current Study (ATYR1940-C-006)				
Week 1	xx	xx	xx	xx
Normal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Abnormal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Week 4	xx	xx	xx	xx
Normal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
Abnormal	xx (xx.x)	xx (xx.x)	xx (xx.x)	xx (xx.x)
…				
12-Week Post-treatment Follow-up				
…				

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Percentage based on the number of non-missing evaluations for each parameter and time point.
Note: Abnormal is defined as values beyond the normal ranges.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_2_3_2_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Parameters are listed in Section 9.6.2 of SAP text. Baseline will be the last value prior to 1st ATYR1940 dose at Week 2 in the parent study. Parameters should be presented in the same order as the protocol. Labs collected due to the result of an IRR will not be summarized, but will be provided in the data listing.

14.2.3 ELECTROCARDIOGRAM DATA TABLES

14.2.3.1 Electrocardiogram Results by Visit (Safety Population Cumulative)

Parameter = *Parameter 1 (units, if applicable)*

Disease / Study / Visit	Actual			Change From Baseline			Change from Pre-infusion		
	N	Mean (SD)	Median (Min, Max)	N	Mean (SD)	Median (Min, Max)	N	Mean (SD)	Median (Min, Max)
Total (N = xx)									
Parent Study									
Baseline	xx	xx.x (xx.xx)	xx.x (xx, xx)						
Week 14/1-Week Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
Current Study (ATYR1940-C-006)									
Week 1 (pre-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
Week 1 (30 min post-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 4 (pre-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
Week 4 (30 min post-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 8 (pre-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
Week 8 (30 min post-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 12 (pre-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
Week 12 (30 min post-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
…									
1-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
4-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
…									
<repeat for>									
EO-FSHD (N = xx)									
FSHD (N = xx)									
LGMD2B (N = xx)									

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Baseline is defined as the baseline in the parent study.
Note: Change from Pre-infusion = post-infusion time point – pre-infusion.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_3_1_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Baseline will be the last value prior to 1st ATYR1940 dose at Week 2 in the parent study (pre-infustion at Week 2). Assessments collected due to the result of an IRR will not be summarized, but will be provided in the data listing. Parameters are heart rate (beats/min), P-R interval (msec), QRS interval (msec), QT interval (msec), QTcB, QTcF, R-R interval (msec).

14.2.4 VITAL SIGN DATA TABLES

14.2.4.1 Vital Sign Results by Visit (Safety Population Cumulative)

Parameter = *Parameter 1 (units, if applicable)*

Disease / Study / Visit	Actual			Change From Baseline			Change from Pre-infusion		
	N	Mean (SD)	Median (Min, Max)	N	Mean (SD)	Median (Min, Max)	N	Mean (SD)	Median (Min, Max)
Total (N = xx)									
Parent Study									
Baseline	xx	xx.x (xx.xx)	xx.x (xx, xx)						
Week 14/1-Week Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
Current Study (ATYR1940-C-006)									
Week 1 (pre-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
Week 1 (30 min post-infusion start)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 1 (60 min post-infusion start)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 1 (end of infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 1 (30 min post-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 2 (pre-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
Week 2 (30 min post-infusion start)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 2 (60 min post-infusion start)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 2 (end of infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 2 (30 min post-infusion)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
…									
1-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
4-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
12-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)			
…									
EO–FSHD (N = xx)									
FSHD (N = xx)									
LGMD2B (N = xx)									

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Baseline is defined as the baseline in the parent study.
Note: Change from Pre-infusion = post-infusion time point – pre-infusion.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_4_1_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Baseline will be the last value prior to 1st ATYR1940 dose at Week 2 in the parent study (pre-infustion at Week 2). Parameters are pulse rate (beats/min), respiration rate (breaths/min), systolic blood pressure (mmHg), diastolic blood pressure (mmHg), and temperature (degrees C). Assessments collected due to the result of an IRR will not be summarized, but will be provided in the data listing.

14.2.5 OTHER SAFETY DATA TABLES

14.2.5.1 Pulmonary Function Tests by Visit (Safety Population Cumulative)

Parameter = *Parameter 1 (units, if applicable)*

Disease / Study / Visit	Actual N	Actual Mean (SD)	Actual Median (Min, Max)	Change From Baseline N	Change From Baseline Mean (SD)	Change From Baseline Median (Min, Max)	Percent Change from Baseline N	Percent Change from Baseline Mean (SD)	Percent Change from Baseline Median (Min, Max)
Total (N = xx)									
Parent Study									
Baseline	xx	xx.x (xx.xx)	xx.x (xx, xx)						
Week 14/1-Week Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Current Study (ATYR1940-C-006)									
Week 1	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 6	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 12	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
…									
4-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
<repeat for>									
EO–FSHD (N = xx)									
FSHD (N = xx)									
LGMD2B (N = xx)									

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Baseline is defined as the baseline in the parent study.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_5_1_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Parameters collected are FEV1, FVC, FEV1/FVC ratio, Total lung capacity and DLCO. FEV1, FVC, FEV1/FVC ratio will be collected at Week 1, every 6 weeks (Week 6, Week 12, etc), and 4-Week Post-treatment Follow-up. Total lung capacity and DLCO will be collected at Week 1, every 3 months (Week 12, Week 24, etc), and 4-Week Post-treatment Follow-up.

14.2.5.2 Oxygen Saturation by Visit (Safety Population 006)

Visit	FSHD (N = XX)	EO-FSHD (N = XX)	LGMD2B (N = XX)	Total (N = XX)
Week 1				
Pre-infusion SpO_2 Values				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
Post-infusion Values Below 95% [n/N (%)]	xx/xx (xx.x)	xx/xx (xx.x)	xx/xx (xx.x)	xx/xx (xx.x)
Week 2				
Pre-infusion SpO_2 Values				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
Post-infusion Values Below 95% [n/N (%)]	xx/xx (xx.x)	xx/xx (xx.x)	xx/xx (xx.x)	xx/xx (xx.x)
Week 3				
Pre-infusion SpO_2 Values				
n	xx	xx	xx	xx
Mean (SD)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)	xx.x (xx.xx)
Median	xx.x	xx.x	xx.x	xx.x
Min, Max	xx, xx	xx, xx	xx, xx	xx, xx
Post-infusion Values Below 95% [n/N (%)]	xx/xx (xx.x)	xx/xx (xx.x)	xx/xx (xx.x)	xx/xx (xx.x)
…				

Note: Percentage based on the number of non-missing evaluations for each time point.
Note: If a patient has more than one measurement below the reference at a particular time point, then they are only counted once.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_5_2_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Visits presented will be visits during the treatment period. Assessments collected due to the result of an IRR and post-treament follow-up periods will not be summarized, but will be provided in the data listing.

14.2.6 IMMUNOGENICITY DATA TABLES

14.2.6.1 Maximum Individual Anti-drug Antibody (ADA) Titers (Safety Population 006)

Disease	Number Screened Positive	Confirmed Positive Overall	Confirmed Positive 41≤Titer≤328	Confirmed Positive 656≤Titer≤2,624	Confirmed Positive Titer>2,624
Total (N = xx)	x	x	x	x	x
EO-FSHD (N = xx)	x	x	x	x	x
FSHD (N = xx)	x	x	x	x	x
LGMD2B (N = xx)	x	x	x	x	x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_6_1_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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14.2.6.2 Maximum Individual Anti-drug Antibody (ADA) Titers (Safety Population Cumulative)

Disease	Number Screened Positive	Confirmed Positive Overall	Confirmed Positive 41≤Titer≤328	Confirmed Positive 656≤Titer≤2,624	Confirmed Positive Titer>2,624
Total (N = xx)	x	x	x	x	x
EO-FSHD (N = xx)	x	x	x	x	x
FSHD (N = xx)	x	x	x	x	x
LGMD2B (N = xx)	x	x	x	x	x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_6_2_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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14.2.6.3 Maximum Individual Jo-1 Ab Levels (Safety Population 006)

	Jo-1 (U/ml)			
Disease	**0≤Jo-1≤0.5**	**0.5<Jo-1<1.5**	**1.5≤Jo-1<5**	**Jo-1≥5**
Total (N = xx)	x	x	x	x
EO-FSHD (N = xx)	x	x	x	x
FSHD (N = xx)	x	x	x	x
LGMD2B (N = xx)	x	x	x	x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_6_3_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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14.2.6.4 Maximum Individual Jo-1 Ab Levels (Safety Population Cumulative)

	Jo-1 (U/ml)			
Disease	**0≤Jo-1≤0.5**	**0.5<Jo-1<1.5**	**1.5≤Jo-1<5**	**Jo-1≥5**
Total (N = xx)	x	x	x	x
EO-FSHD (N = xx)	x	x	x	x
FSHD (N = xx)	x	x	x	x
LGMD2B (N = xx)	x	x	x	x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_2_6_4_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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14.3 PHARMACODYNAMIC DATA TABLES

14.3.1 Manual Muscle Testing Composite Scores by Visit (Safety population Cumulative)

Score = Overall Total Score

Disease / Study Visit	Actual N	Actual Mean (SD)	Actual Median (Min, Max)	Change From Baseline N	Change From Baseline Mean (SD)	Change From Baseline Median (Min, Max)	Percent Change from Baseline N	Percent Change from Baseline Mean (SD)	Percent Change from Baseline Median (Min, Max)
Total (N = xx)									
Parent Study									
Baseline	xx	xx.x (xx.xx)	xx.x (xx, xx)						
Week 14/1-Week Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Current Study (ATYR1940-C-006)									
Week 1	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 12	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 24	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
…									
1-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
<repeat for>									
EO-FSHD (N = xx)									
FSHD (N = xx)									
LGMD2B (N = xx)									

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Baseline is defined as the baseline in the parent study.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_3_1_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Include Overall Total Score, Upper Extremity Score, and Lower Extremity Score in the table. See SAP Section 4.2.2 for rules regarding score calculations.

14.3.2 Upper and Lower Extremity Muscle Function by Visit (Safety population Cumulative)

Score = Brooke Scale

Disease / Study Visit	Actual N	Actual Mean (SD)	Actual Median (Min, Max)	Change From Baseline N	Change From Baseline Mean (SD)	Change From Baseline Median (Min, Max)	Percent Change from Baseline N	Percent Change from Baseline Mean (SD)	Percent Change from Baseline Median (Min, Max)
Total (N = xx)									
Parent Study									
Baseline	xx	xx.x (xx.xx)	xx.x (xx, xx)						
Week 14/1-Week Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Current Study (ATYR1940-C-006)									
Week 1	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 12	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
…									
1-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
<repeat for>									
EO–FSHD (N = xx)									
FSHD (N = xx)									
LGMD2B (N = xx)									

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Baseline is defined as the baseline in the parent study.
Note: Brooke scale ranges from 1 to 6 with a lower actual score indicating a better response.
Note: Vignos scale ranges from 1 to 10 with a lower actual score indicating a better response.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_3_2_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Include Brooke Scale and Vignos Scale. Assessements will be collected at Week 1, every months (Week 12, Week 24, etc), and 1-Week Post-treatment Follow-up.

14.3.3 INQoL Domains and QoL Score by Visit (Safety population Cumulative)

Score = QoL

Disease / Study Visit	Actual N	Actual Mean (SD)	Actual Median (Min, Max)	Change From Baseline N	Change From Baseline Mean (SD)	Change From Baseline Median (Min, Max)	Percent Change from Baseline N	Percent Change from Baseline Mean (SD)	Percent Change from Baseline Median (Min, Max)
Total (N = xx)									
Parent Study									
Baseline	xx	xx.x (xx.xx)	xx.x (xx, xx)						
Week 14/1-Week Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Current Study (ATYR1940-C-006)									
Week 1	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 12	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
…									
1-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
12-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
…									
<repeat for>									
EO-FSHD (N = xx)									
FSHD (N = xx)									
LGMD2B (N = xx)									

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Baseline is defined as the baseline in the parent study.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_3_3_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Include all domains in the following order: QoL, Weakness, Pain, Fatigue, Muscle Locking, Droopy eyelids, Double vision, Swallowing difficulties, Activities, Independence, Social Relationships, Emotions, Body Image, Perceived Treatment Score, and Expected Treatment Score.

14.3.4 FSHD-HI Score by Visit (Safety population 006)

Score = FSHD-HI Total

Disease / Study Visit	Actual N	Actual Mean (SD)	Actual Median (Min, Max)	Change From Baseline N	Change From Baseline Mean (SD)	Change From Baseline Median (Min, Max)	Percent Change from Baseline N	Percent Change from Baseline Mean (SD)	Percent Change from Baseline Median (Min, Max)
Total (N = xx)									
Current Study (ATYR1940-C-006)									
Week 1	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
Week 12	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
…									
1-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
12-Week Post-treatment Follow-up	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)	xx	xx.x (xx.xx)	xx.x (xx, xx)
…									
<repeat for>									
EO-FSHD (N = xx)									
FSHD (N = xx)									
LGMD2B (N = xx)									

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Baseline is defined as Week 1 of the current study ATYR1940-C-006.
Source: Listing xx.x.xx, Dataset: [NAME], Program: xxxxxx.sas, Output: T_14_3_5_XXXXX.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Include FSHD HI Scales/Subscales in the following order: FSHD-HI Total Score, Shoulder and Arm Function, Mobility, Fatigue, Cognitive Function, Activity Limitation, Core Strength and Function, Gastrointestinal Function, Social Performance, Body Image, Hand and Finger Function, Social Satisfaction, Pain, Emotional Health, Communication (do not include short form score).

16.2 LISTINGS

16.2.1 Final Status (Safety Population 006)

Patient ID/ Age/Race/ Ethnicity/Sex	Disease	Completed Treatment?	Completed Study?	Date of Last Dose of ATYR1940	Primary Reason for Treatment Withdrawal	Date of Study Completion/ Discontinuation	Primary Reason for Study Discontinuation
'xxxxxxxxxx/xx/x/x/x	FSHD	Yes/No	Yes/No	DDMMMYYYY	xxxxxxxxxxxxx	DDMMMYYYY	xxxxxxxxxxxxx

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: If primary reason for discontinuation is Other, then concatenate specify text (i.e., Other: xxxxxxxxxx). Sort by disease (EO-FSHD, FSHD or LGMD2B), and patient.
Programming Note: Derive "Disease" based on the following: for FSHD patients from 003, Disease=EO-FSHD; for FSHD patients from 004, Disease=FSHD.

16.2.2 Important Protocol Deviations (Safety Population 006)

Patient ID/ Age/Race/Ethnicity/Sex	Disease	Category	Protocol Deviation
xxxxxxxxxx/xx/x/x/x	FSHD	xxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Include all Safety population 006 patients with an important PD. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, and category.

16.2.3.1 Demographic and Baseline Data (Safety Population Cumulative)

Patient ID/ Age/Race/Ethnicity /Sex	Disease	Date of Birth	Race (specify if other)	Screening Weight (kg)	Height (cm)	Body Mass Index (kg/m^2)	Childbearing Potential?	Clinical Severity Score or Disease Severity Score	Date of Informed Consent/ Assent
xxxxxxxxxx/xx/x/x/x	FSHD	DDMMMYYYY	xxxxxxxxxx xxxxx	xxx.x	xxx.x	xxx.x	Yes/No	0.5 – Facial Weakness	DDMMMYYYY/ DDMMMYYYY
xxxxxxxxxx/xx/x/x/x	LGMD2B	DDMMMYYYY	xxxxxxxxxx xxxxx	xxx.x	xxx.x	xxx.x	Yes/No	8 - Unable to walk without assistance	DDMMMYYYY/ DDMMMYYYY

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Concatenate numeric score and description for FSHD clinical severity score or LGMD2B disease severity score. Sort by disease (EO-FSHD, FSHD or LGMD2B) and patient.

16.2.3.2 FSHD and LGMD2B Diagnosis, Genetic Information, and Disease Characteristics (Safety Population Cumulative)

				EO-FSHD			
Patient ID/ Age/Race/Ethnicity /Sex	**Date of 1st Sign/Symptom /Disease Duration (yrs**	**Age (Years) at 1st Sign/ Symptom**	**Date Physician Diagnosis/ Genetic Diagnosis**	**Verification of Genetic Test Available?**	**Genetic Information**	**CRF FSHD/ LGMD2B Diagnosis**	**Central Lab FSHD/LGMD2B Diagnosis**
xxxxxxxxxx/xx/x/x/x	DDMMMYYYY/ (xx.x)	xx	DDMMMYYYY/ DDMMMYYYY	Yes/No	Genetic Diagnosis	xxxxxxxx	xxxxxxxx
					D4Z4 Repeat Known	Yes	Yes
					D4Z4 Repeat Number (RU)	xx	xx
					EcoRI Fragment Size Known	Yes	Yes
					EcoRI Fragment Size (kb)	xx	xx
					SHMD1 Mutation Present	Yes	Yes
					SHMD1 Mutation, Specify	xxxxxxx	xxxxxxx
					%Methylation CpG		
					DR1		xxx
					5P		xxx
					MID		xxx
					3P		xxx
xxxxxxxxxx/xx/x/x/x	DDMMMYYYY	xx	DDMMMYYYY/ DDMMMYYYY	Yes/No	Genetic Diagnosis	xxxxxxxx	xxxxxxxx
					Clinical Phenotype Other	xxxxxxxx	xxxxxxxx
					Ever had a Muscle Biopsy	Yes	Yes
					Date of Muscle Biopsy	DDMMMYYYY	DDMMMYYYY
					Dysferlin Level Measured	Yes	Yes
					Dysferlin Level	xx	xx
					Amino Acid RefGene		xxxxxxxx
					ACMG Classification		xxxxxxxx

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Note: Disease duration (yrs) = (enrollment date of parent study – date of first sign/symptom onset) / 365.25; round to one decimal place.Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Include both eCRF and central lab data. Sort by patient and genetic information as presented in shell.

16.2.4 General Medical History (Safety Population Cumulative)

Patient ID/ Age/Race/Ethnicity/ Sex	Disease/Parent Study	System Organ Class Preferred Term Verbatim Term	Resolved or Ongoing
xxxxxxxxxx/xx/x/x/x	FSHD/004	xxxxxxxxx xxxxxxxxxx xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxx

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Include all safety analysis set patients with medical history from the beginning of parent studies. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, SOC and preferred term.

16.2.5 Smoking History (Safety Population Cumulative)

Patient ID/ Age/Race/Ethnicity/Sex	Disease	Smoking History	Start Date	Stop Date
xxxxxxxxxx/xx/x/x/x	FSHD	xxxxxxxxxxx	DDMMMYYYY	DDMMMYYYY

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Sort by disease (EO-FSHD, FSHD or LGMD2B), and patient.

16.2.6 Prior/Concomitant Non-Drug Therapies/Procedures (Safety Population 006)

Patient ID/ Age/Race/Ethnicity/ Sex	Disease	Concomitant Flag[a]	Therapy Procedure	FSHD Treatment/ LGMD2B Treatment	Other Indication	Frequency	Start Date (Day)/ Stop Date (Day)	Ongoing?
xxxxxxxxxx/xx/x/x/x	EO-FSHD	P	xxxxxxxxxxx	Yes/No/ Yes/No	xxxxxxxxxxxxxx	xxx	DDMMMYYYY (xx)/ DDMMYYYY (xx)	Yes/No
xxxxxxxxxx/xx/x/x/x	FSHD	C	xxxxxxxxxxx	Yes/No/ Yes/No	xxxxxxxxxxxxxx	xxx	DDMMMYYYY (xx)/ DDMMYYYY (xx)	Yes/No
xxxxxxxxxx/xx/x/x/x	LGMD2B	P/C	xxxxxxxxxxx	Yes/No/ Yes/No	xxxxxxxxxxxxxx	xxx	DDMMMYYYY (xx)/ DDMMYYYY (xx)	Yes/No

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
a. P=Prior; C=Concomitant.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Present Actual Date/Times rather than Derived Date/Time. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, start date, and therapy procedure.

16.2.7 Prior and Concomitant Medications (Safety Population Cumulative)

Patient ID/ Age/Race/ Ethnicity/Sex	Disease/ Parent Study	Concomitant Flag[a]	Verbatim Medication Name Coded Medication Name	Start Date (Day)/ Stop Date (Day)	Indication	Total Daily Dose/ Units/ Frequency/ Route	FSHD Treatment/ LGMD2B Treatment
xxxxxxxxx/xx/			xxxxxxxxxxxxxxxxxxx	DDMMMYYYY (xx)/			Yes/No/
x/x/x	FSHD/004	P	xxxxxxxxxxxxxxxxxxxx	DDMMYYYY (xx)	xxxxxxxxxxx	xx/xx/xx/xxxxx	
			xxxxxxxxxxxxxxxxxxx	DDMMMYYYY (xx)/			Yes/No/
		C	xxxxxxxxxxxxxxxxxxxx	DDMMYYYY (xx)	xxxxxxxxxxx	xx/xx/xx/xxxxx	
xxxxxxxxxx/xx/			xxxxxxxxxxxxxxxxxxx	DDMMMYYYY (xx)/			Yes/No/
x/x/x	LGMD2B/004	P/C	xxxxxxxxxxxxxxxxxxxx	DDMMYYYY (xx)	xxxxxxxxxxx	xx/xx/xx/xxxxx	

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
a. P=Prior; C=Concomitant.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Present Actual Date/Times rather than Derived Date/Time. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, start date, and coded medication name.

16.2.8 Exposure and Infusion Details (Safety Population Cumulative)

Patient ID/ Age/Race/ Ethnicity/ Sex	Disease	Duration of Treatment (Days) Current Study/ Parent Study	Date Performed/ Visit	Start Time/ Stop Time	Infusion Duration	Dose Escalated at this Visit?	Planned Dose (mg/kg)/ Actual Dose Given (mg/kg)	Volume Administered (mL)/ Complete Dose Given?/ % of Expected Dose	Reason Complete Dose Not Given	IRR
xxxxxxxxxx/ xx/x/x/x	FSHD	xx/xx	DDMMMYYYY Y/Week 1	HH:MM/ HH:MM	HH:MM	Yes/No	x.x/ x.x	xx/ Yes or No/ xx.x%	xxxxxxxxxx	Yes/No

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Note: Duration of treatment in current study = (date of last dose - first dose +1)
Note: Duration of treatment in parent study = (date of final dose in parent study - first dose in parent study +1)
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, visit, and start time. IRR = Yes if IRR eCRF has been completed. No, otherwise.

16.2.9 All Adverse Events (Safety Population Cumulative)

			EO-FSHD							
Patient ID/ Age/Race/Ethnicity/ Sex	**System Organ Class Preferred Term Verbatim Term**	**Start Date/Time (Day)/ Stop Date/Time (Day)/ Study**	**Start on Dosing Day?**	**TEAE?**	**SAE/ Reason[a]**	**Severity Grade**	**Out-come[b]**	**Relation-ship[c]**	**Ac-tion[d]**	**Action with Subject[e]**
xxxxxxxxxx/xx/x/x/x	xxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx	DDMMMYYYY/HH:MM (xx)/ DDMMMYYYY/HH:MM (xx)/ 003	Yes/ No	Yes/No	Yes/x	xx	xx	xx	xx	xx

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Note: Adverse events coded with MedDRA version 18.1.
a. Reason for SAE: 1 = Results in death; 2 = Life threatening; 3 = Results in persistent or significant disability/incapacity; 4 = Requires or prolongs hospitalization; 5 = Congenital abnormality/birth defect; 6 = Other medically important event.
b. Outcome: 1 = Fatal; 2 = Not recovered/not resolved; 3 = Recovered/resolved; 4 = Recovered/resolved with sequelae; 5 = Recovering/resolving; 97 = Unknown.
c. Relationship: 1 = None; 2 = Unlikely; 3 = Possibly; 4 = Likely; 5 = Definitely.
d. Action: 0 = None; 1 = Drug withdrawn; 2 = Drug interrupted; 3 = Dose reduced; 4 = Dose increased; 5 = Unknown.
e. Action with subject: 1 = None; 2 = Medication; 3 = Therapy; 4 = Discontinue from Study; 5 = Other.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Include all AEs from both parent and current studies. Present Actual Date/Times rather than Derived Date/Time. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, start date, and preferred term.

16.2.9.1 Adverse Events Occurred on Infusion Day (Safety Population Cumulative)

EO-FSHD

Patient ID/ Age/Race/ Ethnicity/Sex	System Organ Class Preferred Term Verbatim Term	Start Date/Time (Day)/ Stop Date/Time (Day)/ Study	Start on Dosing Day?	Infusion Start Time/ Stop Time	TEAE?	SAE/ Reason[a]	Severity Grade	Out-come[b]	Relation-ship[c]	Ac-tion[d]	Action with Subject[e]
xxxxxxxx/xx/x/x/x	xxxxxxxxxx xxxxxxxxxx xxxxxxxxxx	DDMMMYYYY/HH:MM (xx)/ DDMMMYYYY/HH:MM (xx)/ 003	Yes	HH:MM/ HH:MM	Yes/No	Yes/x	xx	xx	xx	xx	xx

Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Note: Adverse events coded with MedDRA v18.1.
a. Reason for SAE: 1 = Results in death; 2 = Life threatening; 3 = Results in persistent or significant disability/incapacity; 4 = Requires or prolongs hospitalization; 5 = Congenital abnormality/birth defect; 6 = Other medically important event.
b. Outcome: 1 = Fatal; 2 = Not recovered/not resolved; 3 = Recovered/resolved; 4 = Recovered/resolved with sequelae; 5 = Recovering/resolving; 97 = Unknown.
c. Relationship: 1 = None; 2 = Unlikely; 3 = Possibly; 4 = Likely; 5 = Definitely.
d. Action: 0 = None; 1 = Drug withdrawn; 2 = Drug interrupted; 3 = Dose reduced; 4 = Dose increased; 5 = Unknown.
e. Action with Subject: 1 = None; 2 = Medication; 3 = Therapy; 4 = Discontinue from Study; 5 = Other.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

16.2.9.2 Infusion-Related Reaction Symptoms (Safety Population Cumulative)

EO-FSHD

Patient ID/ Age/Race/Ethnicity/Sex	Infusion-Related Reaction AE Date	Signs/Symptoms	Start Date/Time/ End Date/Time/ Parent Study	Infusion Start Time/Stop Time	Intensity Grade	Outcome[a]
xxxxxxxx/xx/x/x/x	DDMMMYYYY					
			DDMMMYYYY/HH:MM/ DDMMMYYYY/HH:MM/			
		xxxxxxxxxxxxx	003	HH:MM/HH:MM	xx	xx

Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Note: Adverse events coded with MedDRA v18.1.
a. Outcome: 1 = Fatal; 2 = Not recovered/not resolved; 3 = Recovered/resolved; 4 = Recovered/resolved with sequelae; 5 = Recovering/resolving; 97 = Unknown.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

16.2.10 Laboratory Data (Safety Population Cumulative)

EO-FSHD

Patient ID/ Age/Race/Ethnicity/Sex	Category	Laboratory Parameter (unit)	Visit	Sample Date	Result	Change from Baseline	Normal Range	Flag
xxxxxxxxxx/xx/x/x/x	xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxx	DDMMMYYYY	xxx.xx		xxx.xx – xxx.xx	High
			xxxxxxxx	DDMMMYYYY	xxx.xx	xx.xx	xxx.xx – xxx.xx	High

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Include all lab data, complement, tryptase, screening serology, and pregnancy data in this listing. Category = Hematology, Serum Chemistry, Urinalysis, Complement, Tryptase, Serology, Pregnancy results. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, visit, sample date, category (hematology, serum chemistry, urinalysis, complement, tryptase, serology, and pregnancy results), and lab parameter (same order as protocol).

16.2.11 Electrocardiogram Results Part 1 (Safety Population Cumulative)

EO-FSHD

Patient ID/ Age/Race/Ethnicity/Sex	Visit	Time Point	IRR?	Assessment Date	Overall Interpretation	Comment
xxxxxxxxxx/xx/x/x/x	xxxxxxxxx	xxxxxxxxxxxxx	Y	DDMMMYYYY	Abnormal CS	xxxxxxxxxxxxxxxxxxxxx
	xxxxxxxxx	xxxxxxxxxxxxx		DDMMMYYYY	Abnormal CS	xxxxxxxxxxxxxxxxxxxxx

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, visit, and time point.

16.2.12 Electrocardiogram Results Part 2 (Safety Population Cumulative)

EO-FSHD

Patient ID/ Age/Race/Ethnicity/Sex	Parameter (unit)	Visit	Time Point	IRR?	Date	Result	Change from Baseline	Change from Pre-infusion
xxxxxxxxxx/xx/x/x/x	*Parameter 1 (units)*	xxxxxxxxxx		Y	DDMMMYYYY	xxx		
		xxxxxxxxxx	Pre-infusion		DDMMMYYYY	xxx		
			xxxxxxxxxx		DDMMMYYYY	xxx	xxx	xxx
		…	…		…	…	…	…

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: Baseline is defined as the baseline in the parent study (i.e. at Week 2 pre-infustion in the parent study for ECGs).
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, visit, time point, and parameter (same order as CRF – heart rate, PR, QRS, QT, and RR).

16.2.13 Vital Signs and Body Weight (Safety Population Cumulative)

EO-FSHD

Patient ID/ Age/Race/Ethnicity/ Sex	Parameter (unit)	Visit	Time Point	IRR?	Date	Result	Change from Baseline	Change from Pre-infusion
xxxxxxxxxx/xx/x/x/x	*Parameter 1 (units)*	xxxxxxx		Y	DDMMMYYYY	xxx		
		xxxxxxx	Pre-infusion		DDMMMYYYY	xxx		
			xxxxxxxxxx		DDMMMYYYY	xxx	xxx	xxx
			…		…	…	…	…

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, parameter (same order as CRF - pulse, respiration, SBP, DBP, temperature, and weight).visit, and time point.

16.2.14 Physical and Neurological Examinations (Safety Population 006)

EO-FSHD

Patient ID/ Age/Race/Ethnicity /Sex	Date Performed	Visit	Time Point	Exam	Body System	Result	Other, specify
xxxxxxxxxx/xx/x/x/x	DDMMMYYYY	xxxxxxxxxx		Physical	xxxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxxxxxxxxxxxxxx

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Present results for physical and neurological examinations in this listing. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, visit, time point, exam (physical, neurological), and body system.

16.2.15 Pulmonary Function Tests (Safety Population Cumulative)

				EO-FSHD				
Patient ID/ Age/Race/Ethnicity/Sex	**Parameter (unit)**	**Visit**	**IRR?**	**Date/Time Performed**	**Result**	**CFB/ Percent CFB**	**Result Interpretation**	**Other, specify**
xxxxxxxxxx/xx/x/x/x	xxxxxxxxxxxxx	xxxxxxxx	Y	DDMMMYYYY/ xx:xx	xxx.xx		Abnormal CS	xxxxxxxxxxxxxxx
		xxxxxxxx		DDMMMYYYY/ xx:xx	xxx.xx	xx.xx/xx.x%	Normal	

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Include all PFTs listed in SAP. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, visit, and parameter (same order as CRF – FVC, FEV1, FEV1/FVC ratio, TLC, and DLCO).

16.2.16.1 Pulse Oximetry (Safety Population 006)

EO-FSHD

Patient ID/ Age/Race/Ethnicity/Sex	Visit	IRR?	Date Performed	Pulse Oximetry Start Time/ Stop Time	SpO_2 (%)	Oxygen Saturation Below 95%?[a]
xxxxxxxxxx/xx/x/x/x	Week 1	Y	DDMMMYYYY	HH:MM/ HH:MM	xxx	Yes/No
	Week 2		DDMMMYYYY	HH:MM/ HH:MM	xxx	Yes/No

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
a. For high altitude sites 93% is used as the reference.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Sort by disease (EO-FSHD, FSHD or LGMD2B), patient and visit.

16.2.16.2 Oxygen Saturation Measurements Falling Below Reference (Safety Population 006)

EO-FSHD

Patient ID/ Age/Race/ Ethnicity/Sex	Visit	IRR?	Date Performed	Infusion Start Time/ Stop Time	Lowest SpO_2 Level Reached (%)/ % CFB	SpO_2 Below 88%?	CFB > 5% Decrease?	Start Time/ Stop Time for SpO_2 < 95%[a]	Time at Lowest SpO_2 Level	Clinical Significance
xxxxxxx/xx/x/x/x	Week 1	Y	DDMMMYYYY	HH:MM/ HH:MM	xx.x/x.x	Yes/No	Yes/No	HH:MM/ HH:MM	xx:xx	xxxxxxxxxxx
	Week 2		DDMMMYYYY	HH:MM/ HH:MM	xx.x/x.x	Yes/No	Yes/No	HH:MM/ HH:MM	xx:xx	xxxxxxxxxxx

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Note: CFB = Change from pre-infusion.
Note: % CFB calculated as [(post-infusion SpO_2 – pre-infusion SpO_2)/pre-infusion SpO_2]*100.
a. For high altitude sites 93% is used as the reference.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, visit, and start time for SpO_2 < 95%.

16.2.17.1 Anti-drug Antibody (ADA) Titers (Safety Population Cumulative)

EO-FSHD

Patient ID/ Age/Race/Ethnicity/Sex	Visit	IRR?	Sample Date/Time	Result	Confirmed (Y/N)?
xxxxxxxxxx/xx/x/x/x	xxxxxxxx	Y	DDMMMYYYY/xx:xx		
	xxxxxxxx		DDMMMYYYY/xx:xx		

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Note: The following mapping was used to get the results; <1=41; 1=82; 2=164; 3=328; 4=656; 5=1312; 6=2624; 7=5248.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Include continuous and categorical ADA data in this listing. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, visit, sample date, and lab parameter (same order as protocol).

16.2.17.2 Jo-1 Antibody (Ab) Seroconversion (Safety Population Cumulative)

EO-FSHD

Patient ID/ Age/Race/Ethnicity/Sex	Visit	IRR?	Sample Date/Time	Result	Change from Baseline
xxxxxxxxxx/xx/x/x/x	xxxxxxxx	Y	DDMMMYYYY/xx:xx	xxx.xx	
	xxxxxxxx		DDMMMYYYY/xx:xx	xxx.xx	xx.xx

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Include continuous and categorical Jo-1 Ab data in this listing. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, visit, sample date, and lab parameter (same order as protocol).

16.2.18 Surveillance MRI (Safety Population 006)

EO-FSHD

Patient ID/ Age/Race/ Ethnicity/Sex	Muscle Name	Body Side	Region	Scan Date (Day)	Visit	STIR Signal Status	Fischer Score
xxxxxxxxxx/xx/x/x/x	xxxxxxxxxxxxx*	xxxxx	xxxxxxxx	DDMMMYYYY (xx)	xxxxxx	Yes	x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Note: * = targeted muscle in the targeted scan
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Sort by disease (EO-FSHD, FSHD or LGMD2B), patient and visit.

16.2.19 Manual Muscle Testing (Safety Population Cumulative)

EO-FSHD

Patient ID/ Age/Race/ Ethnicity/Sex	Visit	Date Performed	Muscle Group	Position	Side	Reported Score	Converted Score	CFB/Percent CFB
xxxxxxxxxx/xx/x/x/x	xxxxxxxx	DDMMMYYYY	xxxxxxxxxxxx	xxxxxxxx	xxxxx	x	x.xx	xx/xx

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Tabulate code and description for "Reported Score" (0-5) and "Converted Score" (0-12) on the first page per SAP section 4.2.2 and display only code for these columns in the listing. Total scores should be included in the listing as well as the change from baseline for the total scores. Position will be blank for the total scores. Place description of score (Overall Total Score, Upper Extremity Score, Lower Extremity Score) under Muscle Group column. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, visit, and muscle group (same order as CRF, with upper extremity score, lower extremity score, and overall total score at the end).

16.2.20 Functional Assessment of Upper and Lower Limbs (Safety Population Cumulative)

EO-FSHD

Patient ID/ Age/Race/Ethnicity/Sex	Visit	Date Performed	Scale	Result	CFB/Percent CFB
xxxxxxxxxx/xx/x/x/x	xxxxxxxx	DDMMMYYYY	Brooke	x	x/xx.x%

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
Page x of y

Programming Note: Present both Brooke and Vignos results. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, visit, and scale (Brooke and Vignos).

16.2.21 Individualized Neuromuscular Quality of Life (INQoL) (Safety Population Cumulative)

Part 1

Patient ID/ Age/Race/Ethnicity/Sex	Disease	Visit	Overall QoL Score (%)	CFB/Percent CFB of Overall QoL Score	Weakness					Pain					Fatigue				
					1	1a	1b	1c	Score (%)	2	2a	2b	2c	Score (%)	3	3a	3b	3c	Score (%)
xxxxxxxxxx/xx/x/x/x	FSHD	xxxxxxxx	xx.x	xx.x/xx.xx%	xxx	x	x	x	xx.x	xxx	x	x	x	xx.x	xxx	x	x	x	xx.x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Note: Baseline is defined as the baseline in the parent study.
Note: CFB = Change from Baseline.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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16.2.21 Individualized Neuromuscular Quality of Life (INQoL) (Safety Population Cumulative)

Part 2

Patient ID/ Age/Race/Ethnicity/Sex	Disease	Visit	Locking					Droopy Eyelids					Double Vision				
			4	4a	4b	4c	Score (%)	5	5a	5b	5c	Score (%)	6	6a	6b	6c	Score (%)
xxxxxxxxxx/xx/x/x/x	FSHD	xxxxxxxx	xxx	x	x	x	xx.x	xxx	x	x	x	xx.x	xxx	x	x	x	xx.x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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16.2.21 Individualized Neuromuscular Quality of Life (INQoL) (Safety Population Cumulative)

Part 3

			Swallowing Difficulties					**Activities**								
Patient ID/ Age/Race/Ethnicity/Sex	**Disease**	**Visit**	**7**	**7a**	**7b**	**7c**	**Score (%)**	**1A.I**	**1A.II**	**1A.III**	**No aid employment**	**Not working due to condition**	**1B.I**	**1B.II**	**Ability as would like**	**Score (%)**
xxxxxxxxxx/xx/x/x/x	FSHD	xxxxxxxx	xxx	x	x	x	xx.x	xxx	x	x	xxx	xxx	xxx	x		xx.x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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16.2.21 Individualized Neuromuscular Quality of Life (INQoL) (Safety Population Cumulative)

Part 4

Patient ID/ Age/Race/Ethnicity/Sex	Disease	Visit	Independence				Score (%)
			2A	2B.II	2B.II	Ind. as would like	
xxxxxxxxxx/xx/x/x/x	FSHD	xxxxxxxx	x	x	x	xxx	xx.x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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16.2.21 Individualized Neuromuscular Quality of Life (INQoL) (Safety Population Cumulative)

Part 5

			Social Relationships														
Patient ID/ Age/Race/Ethnicity/Sex	**Disease**	**Visit**	**3A.I**	**Not married / widow**	**3A.II**	**3A.III**	**3A.IV**	**3B.I**	**3B.II**	**Rel. as would like**	**3B.III**	**3B.IV**	**Friend as would like**	**3B.V**	**3B.VI**	**Re. w/ others as would like**	**Score (%)**
xxxxxxxxxx/xx/x/x/x	FSHD	xxxxxxx	x		x	x	x	x	x		x	xx		x	x		xx.x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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16.2.21 Individualized Neuromuscular Quality of Life (INQoL) (Safety Population Cumulative)

Part 6

			Emotions								Body Image				
Patient ID/ Age/Race/Ethnicity/Sex	**Disease**	**Visit**	**4A.I**	**4A.II**	**4A.III**	**4A.IV**	**4B.I**	**4B.II**	**Emotional as would like**	**Score (%)**	**5A**	**5B.I**	**5B.II**	**Look as would like**	**Score (%)**
xxxxxxxxxx/xx/x/x/x	FSHD	xxxxxxxx	xxx	x	x	x	xx.x	xxx	xxx	xx.x	x	x	x		xx.x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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16.2.21 Individualized Neuromuscular Quality of Life (INQoL) (Safety Population Cumulative)

Part 7

			Perceived Treatment Score									
Patient ID/ Age/Race/Ethnicity/Sex	**Disease**	**Visit**	**1A**	**1A.I**	**Not yet receive treatment**	**Unsure**	**1A.III**	**1B.I**	**Not yet receive treatment**	**Unsure**	**1B.III**	**Score (%)**
xxxxxxxxxx/xx/x/x/x	FSHD	xxxxxxxx	xxx	x	xxx	xxx	xx.x	xxx	xxx			xx.x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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16.2.21 Individualized Neuromuscular Quality of Life (INQoL) (Safety Population Cumulative)

Part 8

Patient ID/ Age/Race/Ethnicity/Sex	Disease	Visit	Expected Treatment Score				Score (%)
			1A.II	Unsure	1B.II	Unsure	
xxxxxxxxxx/xx/x/x/x	FSHD	xxxxxxxx	x	xxx	x	xxx	xx.x

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Present all domains and QoL score. Present one patient per page. Sort by disease (EO-FSHD, FSHD or LGMD2B), patient, and visit.

16.2.22 FSHD-HI Questionnaire (Safety Population 006)

EO-FSHD

Patient ID/ Age/Race/Ethnicity/Sex	FSHD Scale/Subscale	Visit	Date Performed	Result	CFB/Percent CFB
xxxxxxxxxx/xx/x/x/x	Total FSHD-HI Score	Week 1	DDMMMYYYY	xx	
		Week 12	DDMMMYYYY	xx	xx/xx.x%
		Week 24	DDMMMYYYY	xx	xx/xx.x%
		…			
	Shoulder and Arm Function	Week 1	DDMMMYYYY	xx	
		Week 12	DDMMMYYYY	xx	xx/xx.x%
		Week 24	DDMMMYYYY	xx	xx/xx.x%
		…			
	…				

Note: FSHD=Facioscapulohumeral muscular dystrophy; LGMD2B=Limb-girdle muscular dystrophy 2B; EO-FSHD=Early Onset Facioscapulohumeral muscular dystrophy
Note: W = white; B = black, African American or of African heritage; P = native Hawaiian or other Pacific islander; A = Asian; I = American Indian or Alaska native; O = Other; H = Hispanic or Latino; N = not Hispanic or Latino; M = male; F = female.
Note: Baseline is defined as Week 1 of the current study ATYR1940-C-006.
Source: Dataset: [NAME], Program: xxxxxx.sas, Output: xxxx.rtf, Generated on: DDMMMYYYY HH:MM
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Programming Note: Include FSHD HI Scales/Subscales in the following order: FSHD-HI Total Score, Shoulder and Arm Function, Mobility, Fatigue, Cognitive Function, Activity Limitation, Core Strength and Function, Gastrointestinal Function, Social Performance, Body Image, Hand and Finger Function, Social Satisfaction, Pain, Emotional Health, Communication (do not include short form score).

Document History

Effective Date	Version	Modified/Reviewed By	Brief Summary of changes to current version
04-Nov-2016	0.1	[redacted] PRA Health Sciences	PRA initial draft version.
06-Feb-2017	0.2	[redacted] /aTyr	Updated version based on comments from aTyr version 0.1 review.
24-Feb-2017	0.3	[redacted] /aTyr	Updated version based on comments from aTyr version 0.2 review.
6-Mar-2017	1.0	[redacted] /aTyr	Added two new tables, updated two listings and one table per aTyr request.
19-Jul-2017	2.0	[redacted]	Draft Version 2.0 with updates according comments to the dry run analysis

charles river

STATISTICAL ANALYSIS PLAN
PK/PD ANALYSIS

aTyr Pharma Inc. Study Number: ATYR1940-C-006
Protocol Version: Version 1.0
Protocol Date: 22 March 2016

Charles River Phase Plan Number: WIL-994023

An Open-Label Extension Study to Evaluate the Long-Term Safety, Tolerability, Biological Activity of ATYR1940 in Patients with Limb Girdle and Fascioscapulohumeral Muscular Dystrophy (FSHD)

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1. INTRODUCTION

This statistical analysis plan (SAP) describes the statistical methods to be used during the reporting of pharmacokinetic (PK) and pharmacodynamic (PD) data collected under aTyr Protocol ATYR1940-C-006.

This SAP should be read in conjunction with the study protocol and all applicable Statistical Analysis Plans and/or Workplans for the study. This version of the plan has been developed using the protocol document Version 1.0 dated 22 March 2016. Any further changes to the protocol may require updates to the SAP. Any deviation from this analysis plan will be described in detail in the clinical report. An overall summary of PK and PD data are planned. aTyr Pharma may perform post-hoc analyses and correlations of PK and serum/plasma based PD data with magnetic resonance imaging (MRI), clinical, and other study data.

2. OBJECTIVES

The objectives of this study are to:

- Evaluate the safety, tolerability, and immunogenicity of long-term treatment with intravenous (IV) administration of ATYR1940 in patients with limb girdle muscular dystrophy 2B (LGMD2B) or fascioscapulohumeral muscular dystrophy (FSHD) previously enrolled in clinical study ATYR1940-C-003 (Stage 1 only) or ATYR1940-C-004.

- Explore biological and pharmacodynamics (PD) activity of ATYR1940 in patients with LGMD2B and FSHD, based on changes in:

    - Serum-based muscle biomarkers.
    - Inflammatory immune state in peripheral blood
    - Muscle Disease and muscle disease burden, based on skeletal muscle magnetic resonance imaging (MRI).
    - Skeletal muscle strength
    - Upper and lower extremity muscle function.
    - Quality of life measures.

3. EXPERIMENTAL DESIGN

3.1. Overall Study Design and Plan

Study ATYR1940-C-006 is a multi-national, multi-center, open-label, extension study designed to evaluate the long-term safety, effects on muscle, and PD of ATYR1940 in patients with LGMD2B or FSHD previously treated in the Protocol ATYR1940-C-003 (Stage 1 only) or ATYR1940-C-004 (i.e., the parent study). This study was conducted at the same study centers at which patients were enrolled in the parent study.

Patients who completed the treatment period in the parent study; who demonstrated acceptable tolerability of ATYR1940, were considered by the Investigator to be compliant with ATYR1940 and the study procedures, and did not meet any criterion for ATYR1940 discontinuation are eligible for participation in the current study.

For the first 12 weeks in this extension study, patients received ATYR1940 at the highest tolerated dose received in the parent study; no dose adjustments were allowed during this 12-week period. After 12 weeks, if the patient demonstrated good tolerability, the ATYR1940 dose may be increased on a patient-specific basis. ATYR1940 dose increases to >3.0 mg/kg were not permissible.

All patients received ATYR1940 on a weekly basis in this study, regardless of the frequency of dosing in the parent study.

ATYR1940 was administered via IV infusion over 90 minutes.

4. STATISTICAL METHODS

4.1. Analyses to be Performed

Listings and tables that summarize serum ATYR1940, HARS, and cytokine concentrations will be created by Charles River Ashland. Furthermore, tables of PBMC immunophenotyping results will be generated. Lastly, a table comparison of ATYR1940 concentrations versus ADA positive subjects will be presented.

4.2. Software Description

The following software maintained at CRL Ashland will be used:

- Pharsight Phoenix® WinNonlin® 6.4 for descriptive statistics calculations, and generation of resulting tables. WinNonlin 6.4 has been fully validated in the operational environment at CRL Ashland.

5. QUALITY ASSURANCE

The study will be audited by Charles River Quality Assurance (QA) in accordance with SOP QA-001 while in progress to assure compliance with applicable Good Laboratory Practice regulations, adherence to the protocol and amendments, if any, and to Charles River SOPs.

6. REPORTS

There will be no formal report generated for this study.

7. SUMMARY TABLES AND LISTINGS

- Individual and Mean ATYR1940 Serum Concentration Versus Time; Sorted by Dose and Subject Number
- Individual and Mean HARS Serum Concentrations

- Individual and Mean Values of Serum Cytokines
- Individual and Mean Values of PBMC Immunophenotyping results
- Comparison of ATYR1940 concentrations in ADA positive subjects

8. PHASE PLAN APPROVAL

aTyr Pharma, Inc.

[redacted]

Date

Charles River Ashland

[redacted]

[redacted]

Date

[redacted]

[redacted]

Date