DSMB Report

Project Title: STAAR Study
PI: Marjorie Solomon, PhD & MBA

DSMB Meeting: 04/23/2021

Date of report: 04/13/2021

Data as of: 04/08/2021

Prepared by: Soo Yeon Park, BAS
Research Data Analyst II
UC Davis MIND Institute

Section 1. Recruitment and Participant Status (as of 04/08/2021)

Figure 1. Enrollment and Accrual of Study Participants

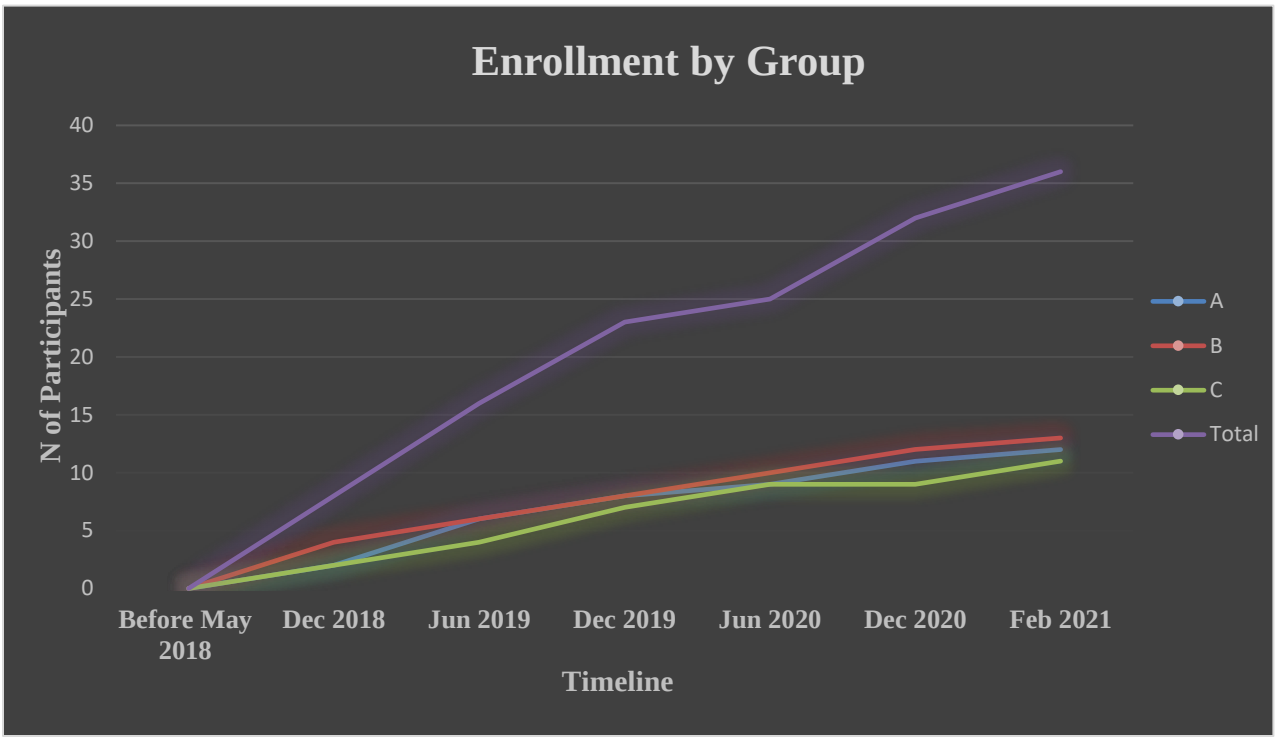
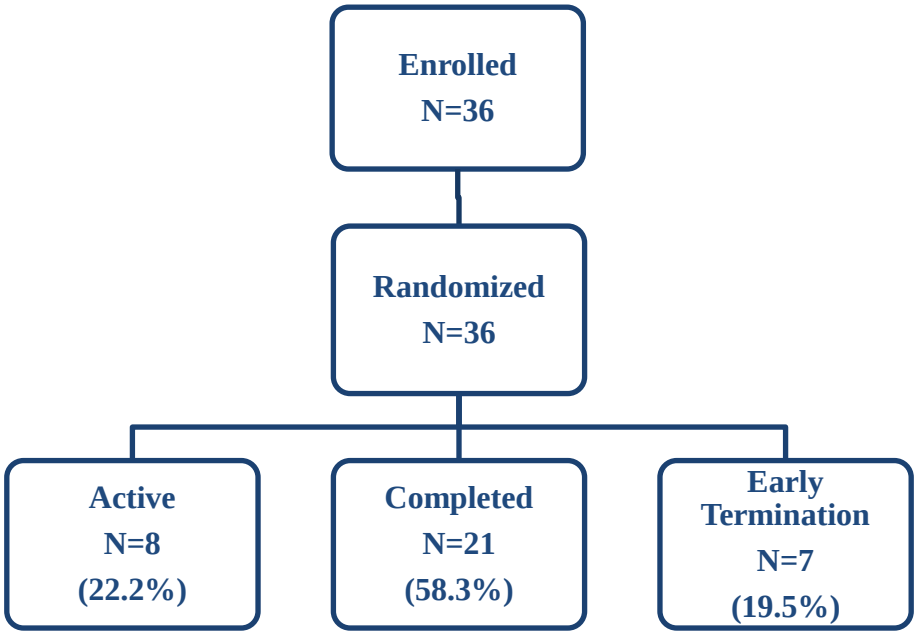


Figure 2. Overall Study Status



Section 2. Demographics (as of 04/08/2021)

Figure 3. Gender of Study Participants

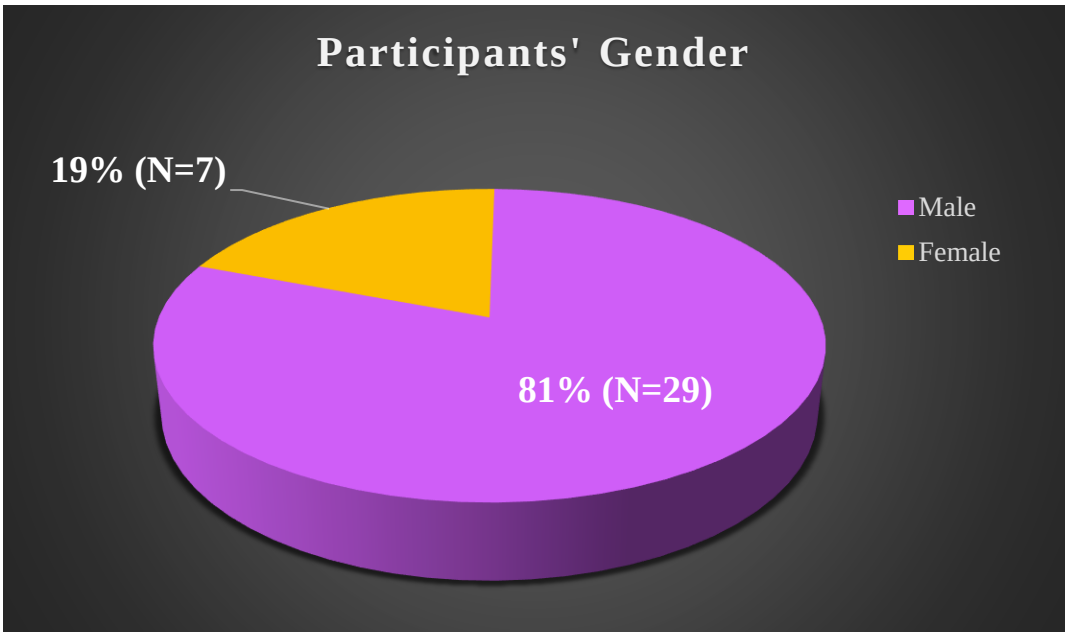


Figure 4. Ethnicity of Study Participants by Study Groups

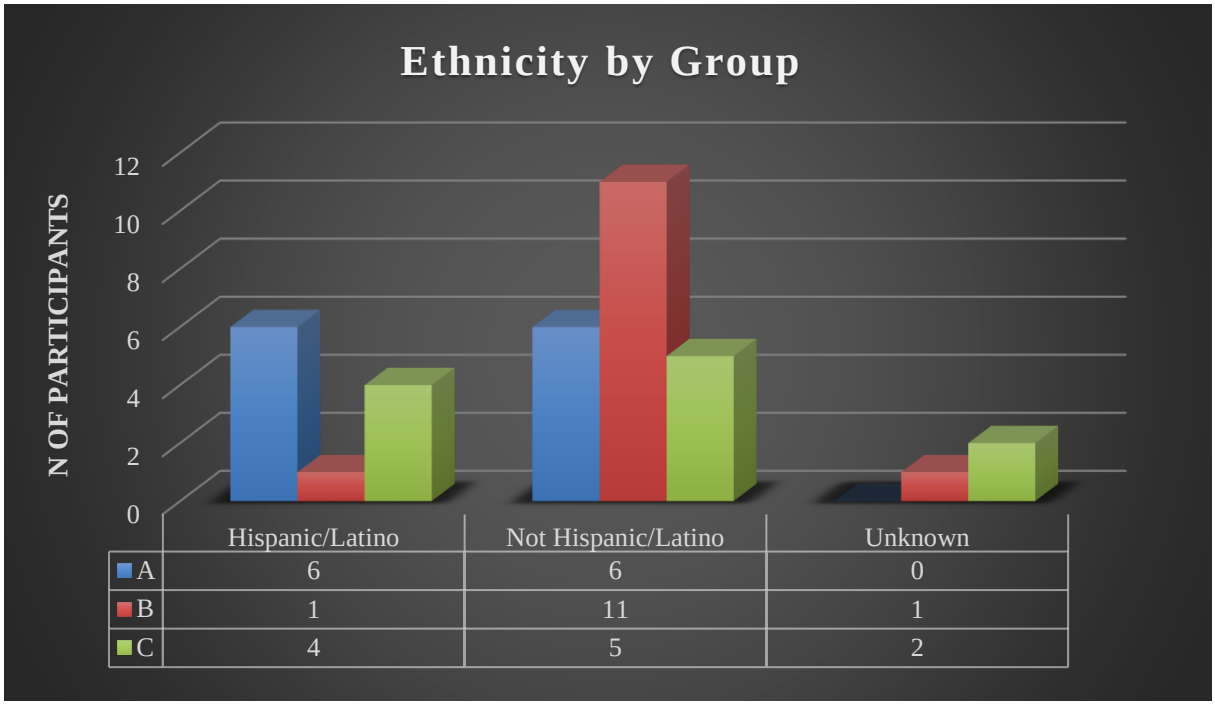
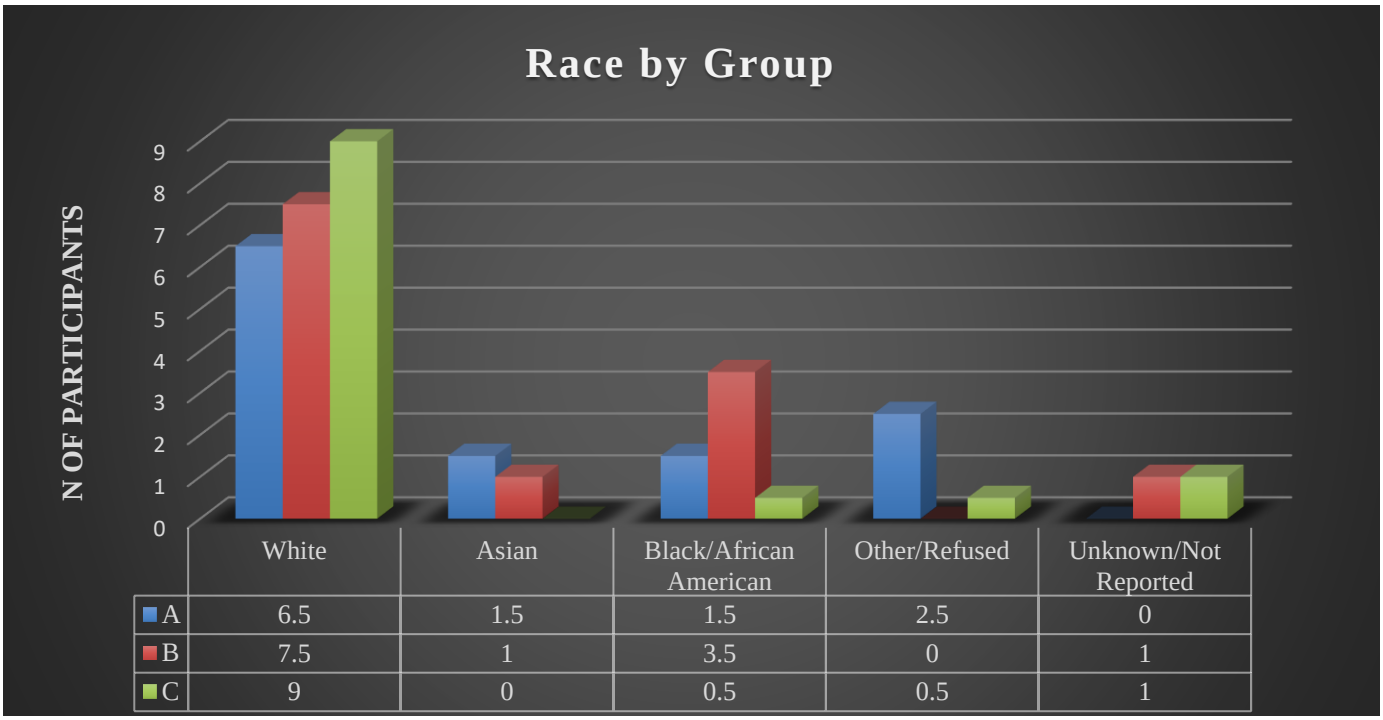


Figure 5. Race of Study Participants by Study Group



**"Other" includes American Indian, Hawaiian/Pacific Islander, etc*

Table 1. Enrollment Age Descriptive of Study Participants by Study Group

		Group A	Group B	Group C
Age	**Mean**	11.59	10.78	10.14
	Median	11.23	10.52	10.11
	SD	2.83	1.43	1.63
	Minimum	9.02	8.86	8.26
	Maximum	19.64	13.96	12.64

Table 2. Group Difference Test Result

	Gender	Ethnicity	Race	Age
Group Difference P-Value	0.76	0.06	0.75	0.25

***** Group Difference was determined by Fisher's Exact test for categorical variables and ANOVA test for age.

Section 2. Safety Assessments for All Participants

The AE data are available for 36 participants as of 04/08/2021. The following statistics were based on the AE data obtained from those 36 participants randomized to treatment groups. Participants had 2.06 events on average with SD = 2.07.

Table 4. Incidence of Adverse Events by Standardized AE Category

Standardized AE Category	Total Participants*	Total %**	Total Events***
Aggression	1	2.8%	1
Allergies	1	2.8%	1
Anxiety	3	8.4%	5#
Choking	1	2.8%	1
Constipation	1	2.8%	1
Cough	1	2.8%	2#
Diarrhea	4	11.2%	5#
Decreased academic performance	1	2.8%	1
Disruptive behavior	1	2.8%	2#
Dizziness	1	2.8%	1
Dysgeusia	1	2.8%	2#
Ear infection	2	5.6%	2
Elevated transaminase	1	2.8%	1
Emotional lability	2	5.6%	2
Fatigue	2	5.6%	2
Fever	2	5.6%	2
Fine motor impairment	1	2.8%	1
Gastrointestinal issues	1	2.8%	1
Hematochezia	1	2.8%	1
Hypoglycemia	1	2.8%	1
Hypokalemia	1	2.8%	1
Influenza	1	2.8%	1
Irritability	1	2.8%	1
Listlessness	1	2.8%	1
Mouthing	1	2.8%	1
Nausea	1	2.8%	1
Obsessive compulsive behavior	1	2.8%	2#
Pharyngitis	1	2.8%	1
Rash	4	11.2%	4
Self-injurious behavior	1	2.8%	1

Standardized AE Category	Total Participants*	Total %**	Total Events***
Skin abrasion	1	2.8%	1
Skin infection	1	2.8%	1
Sleep disturbance	4	11.2%	4
Sprain	2	5.6%	3#
Suicidal thinking	1	2.8%	1
Teeth chattering	1	2.8%	1
Tics	1	2.8%	1
Upper respiratory infection	5	13.9%	7#
Vomiting	2	5.6%	3#
Wheezing	2	5.6%	3#

* *Number of participants experiencing an adverse event (participant is to be counted only once for each adverse event)*

** *% of total number of participants with AE data available to date (total N=36) in the study*

*** *Total number of events overall*

\# *Indicate recurrence of same adverse event*

Table 5. Incidence of Adverse Events by Standardized AE Category, Stratified by Treatment Group

	Group A (n=12)			Group B (n=13)			Group C (n=11)		
Standardized AE Category	Total Partici-pants*	Total %**	Total Events ***	Total Partici-pants*	Total %**	Total Events ***	Total Partici-pants*	Total %**	Total Events ***
Aggression	0	0	0	0	0	0	1	2.8%	1
Allergies	0	0	0	0	0	0	1	2.8%	1
Anxiety	1	2.8%	2#	0	0	0	2	5.6%	3#
Choking	1	2.8%	1	0	0	0	0	0	0
Constipation	1	2.8%	1	0	0	0	0	0	0
Cough	1	2.8%	2#	0	0	0	0	0	0
Decreased academic performance	1	2.8%	1	0	0	0	0	0	0
Diarrhea	2	5.6%	3#	0	0	0	2	5.6%	2
Disruptive Behavior	1	2.8%	2#	0	0	0	0	0	0
Dizziness	0	0	0	0	0	0	1	2.8%	1
Dysgeusia	0	0	0	0	0	0	1	2.8%	2#
Ear infection	1	2.8%	1	0	0	0	1	2.8%	1

	Group A (n=12)			Group B (n=13)			Group C (n=11)		
Standardized AE Category	**Total Partici-pants***	**Total %****	**Total Events *****	**Total Partici-pants***	**Total %****	**Total Events *****	**Total Partici-pants***	**Total %****	**Total Events *****
Elevated transaminase	1	2.8%	1	0	0	0	0	0	0
Emotional lability	1	2.8%	1	0	0	0	1	2.8%	1
Fatigue	2	5.6%	2	0	0	0	0	0	0
Fever	1	2.8%	1	0	0	0	1	2.8%	1
Fine motor impairment	0	0	0	0	0	0	1	2.8%	1
Hematochezia	0	0	0	0	0	0	1	2.8%	1
Hypoglycemia	0	0	0	0	0	0	1	2.8%	1
Hypokalemia	0	0	0	0	0	0	1	2.8%	1
Influenza	0	0	0	0	0	0	1	2/8%	1
Irritability	1	2.8%	1	0	0	0	0	0	0
Listlessness	1	2.8%	1	0	0	0	0	0	0
Mouthing	1	2.8%	1	0	0	0	0	0	0
Nausea	0	0	0	1	2.8%	1	0	0	0
Obsessive compulsive behavior	1	2.8%	2[#]	0	0	0	0	0	0
Pharyngitis	1	2.8%	1	0	0	0	0	0	0
Rash	3	8.4%	3	0	0	0	1	2.8%	1
Self-injurious behavior	0	0	0	1	2.8%	1	0	0	0
Skin abrasion	0	0	0	0	0	0	1	2.8%	1
Skin infection	0	0	0	0	0	0	1	2.8%	1
Sleep disturbance	3	8.4%	3	0	0	0	1	2.8%	1
Sprain	0	0	0	0	0	0	2	5.6%	3[#]
Suicidal thinking	0	0	0	0	0	0	1	2.8%	1
Teeth chattering	1	2.8%	1	0	0	0	0	0	0
Tics	1	2.8%	1	0	0	0	0	0	0
Upper respiratory infection	0	0	0	2	5.6%	3[#]	3	8.4%	4[#]
Vomiting	1	2.8%	2[#]	0	0	0	1	2.8%	1

	Group A (n=12)			Group B (n=13)			Group C (n=11)		
Standardized AE Category	**Total Partici-pants***	**Total %****	**Total Events *****	**Total Partici-pants***	**Total %****	**Total Events *****	**Total Partici-pants***	**Total %****	**Total Events *****
Whezing	1	2.8%	2[#]	0	0	0	1	2.8%	1

* *Number of participants experiencing an adverse event (participant is to be counted only once for each adverse event)*

** *% of total number of participants with AE data available to date (total N=36) in the study*

*** *Total number of events overall*

\# *Indicate recurrence of same adverse event*

Table 6. Severity of Adverse Events by Treatment Group

	Total Number of Participants * (%**) with				
Treatment Group	**NO AE**	**Mild Event**	**Moderate Event**	**Serious Event**	**Group Difference p-value**
Overall	13 (36.1%)	17 (47.2%)	5 (13.9%)	1 (2.8%)	0.002
Group A	1	7	3	1	
Group B	10	2	1	0	
Group C	2	8	1	0	

* *Number of **participants** experiencing a certain severity of an adverse event where each participant is counted only once at the highest level of severity for the event*

** *% of participants experiencing a certain severity of an adverse event*

	Total Number of Adverse Events* (%**)			
Treatment Group	**Mild**	**Moderate**	**Serious**	**Group Difference p-value**
Overall	64 (86.4%)	9 (12.2%)	1 (1.4%)	0.102
Group A	29	7	1	
Group B	4	1	0	
Group C	31	1	0	

* *Total number of **events** experiencing a certain severity of an adverse event*

** *% of events experiencing a certain severity of an adverse event*

Appendix

Listing 1: Adverse Events *

Participant ID	Adverse Event	Severity	Frequency	Action Taken	Outcome**	Relationship to Study Medication***
003X	Diarrhea	1	1	1	1	1
003X	Diarrhea	1	1	1	1	1
005X	Anxiety	1	1	1	1	2
005X	Anxiety	1	1	1	1	2
005X	Sprain	1	3	1	1	1
005X	Sprain	1	3	1	1	1
007V	Dysgeusia	1	1	1	1	3
007V	Dysgeusia	1	1	1	1	2
009V	Mouthing	2	1	1	6	2
009V	Sleep disturbance	1	1	1	1	2
009V	Disruptive Behavior	1	1	1	1	2
009V	Fever	2	1	1	3	1
009V	Ear infection	2	1	1	3	1
009V	Disruptive Behavior	1	1	1	1	1
011X	Anxiety	1	1	1	1	1
011X	Tics	1	1	1	3	2
011X	Listlessness	1	1	1	1	1
011X	Anxiety	2	2	4	1	4
011X	Rash	1	3	1	3	2
006X	Upper respiratory infection	1	1	1	1	1
003X	Rash	1	1	1	3	2
010X	Suicidal thinking	2	1	1	1	2
010X	Anxiety	1	1	1	1	3
010X	Allergies	1	1	1	1	1
022W	Upper respiratory infection	1	2	1	3	1
022W	Nausea	1	3	1	1	1
022W	Upper respiratory infection	2	2	1	1	1
016W	Upper respiratory infection	1	1	1	1	1

Participant ID	Adverse Event	Severity	Frequency	Action Taken	Outcome**	Relationship to Study Medication***
016W	Upper respiratory infection	1	1	1	1	1
016W	Fine motor impairment	1	1	1	3	2
023W	Self-injurious behavior	1	3	1	1	1
019W	Cough	1	1	1	1	1
019W	Cough	1	1	1	1	1
019W	Sleep disturbance	1	1	1	4	3
020W	Constipation	3	2	1	3	3
020W	Vomiting	1	1	1	1	3
020W	Sleep disturbance	1	1	1	1	3
020W	Vomiting	1	1	1	1	1
020W	Diarrhea	1	1	1	1	1
017W	Fatigue	1	1	1	1	2
018W	Hematochezia	1	1	1	3	1
018W	Skin abrasion	1	3	1	3	1
018W	Upper respiratory infection	1	1	1	1	1
002X	Rash	1	1	1	1	1
014W	Aggression	1	1	1	1	2
014W	Vomiting	1	1	1	1	2
014W	Diarrhea	1	1	1	1	2
024W	Obsessive compulsive behavior	1	1	1	1	2
024W	Pharyngitis	1	1	1	1	1
024W	Obsessive compulsive behavior	1	1	1	6	2
015W	Hypoglycemia	1	1	1	1	2
015W	Hypokalemia	1	1	1	1	2
015W	Skin infection	1	1	1	1	1
010X	Sprain	1	3	1	1	1
015W	Influenza	1	1	1	1	1
015W	Upper respiratory infection	1	1	1	1	1

Participant ID	Adverse Event	Severity	Frequency	Action Taken	Outcome**	Relationship to Study Medication***
031Y	Fatigue	1	1	1	1	2
031Y	Wheezing	1	1	1	1	1
031Y	Elevated transaminase	1	1	3	6	4
031Y	Wheezing	1	1	1	1	1
031Y	Emotional lability	2	1	5	3	4
031Y	Irritability	2	1	5	3	4
031Y	Teeth chattering	2	1	5	3	4
012W	Dizziness	1	1	1	1	3
012W	Rash	1	1	1	1	1
012W	Fever	1	1	1	1	1
012W	Ear infection	1	1	1	1	1
012W	Diarrhea	1	1	1	6	1
033Y	Gastrointestinal issues	1	1	1	1	2
033Y	Decreased academic performance	1	2	1	ongoing	2
029Y	Choking	1	1	1	1	5
034Y	Emotional lability	1	1	1	1	2
034Y	Sleep disturbance	1	1	1	6	2
034Y	Wheezing	1	1	1	1	1

* *This listing was sorted by Participant dummy ID.*

Severity	Frequency	Action taken with Study Drug	Outcome	Relationship to study drug
1 = mild 2 = moderate 3 = severe	1 = Intermittent 2 = Continuous 3 = Single	1 = None 2 = Study Drug Temporarily Discontinued 3 = Dose Decrease 4 = Study Drug Permanently Discontinued 5 = Concomitant Medication/ Therapy 6 = Hospitalization/ Hospitalization Prolonged	1 = Recovered 2 = Recovered with sequelae 3 = Recovering 4 = Not Recovered 5 = Fatal 6 = Unknown	1 = Not Related 2 = Unlikely 3 = Possibly related (<50%) 4 = Probably related (>50%) 5 = Definitely related

Listing 2: Demographics

ID	Blinded Group (A, B,or C)	Age at Enrollment (years)	Gender	Race	Ethnicity	Status of Enrollment
001V	B	10	F	Asian	Not Hispanic/Latino	Completed
002X	A	12	M	White	Not Hispanic/Latino	Completed
003X	A	9	M	White	Not Hispanic/Latino	Completed
004V	B	9	M	White and Black/African American	Not Hispanic/Latino	Early Termination
005X	C	8	M	White	Not Hispanic/Latino	Completed
006X	B	12	M	Black/African American	Not Hispanic/Latino	Completed
007V	C	10	M	White and Black/African American	Not Hispanic/Latino	Early Termination
008X	B	9	M	White	Not Hispanic/Latino	Completed
009V	A	9	M	White and American Indian	Hispanic/Latino	Completed
010X	C	12	M	White	Hispanic/Latino	Completed
011X	A	11	M	White and Asian	Hispanic/Latino	Early Termination
022W	B	9	M	White	Hispanic/Latino	Completed
016W	C	8	M	White	Not Hispanic/Latino	Completed
023W	B	11	M	Unknown/Not Reported	Unknown	Completed
019W	A	9	M	Black/African American	Not Hispanic/Latino	Completed
020W	A	9	M	White	Hispanic/Latino	Completed
017W	A	11	M	Other/Refused	Hispanic/Latino	Completed
018W	C	10	M	White	Not Hispanic/Latino	Completed
014W	C	8	M	White	Hispanic/Latino	Early Termination
024W	A	9	M	Other	Hispanic/Latino	Completed
013W	B	11	M	Black/African American	Not Hispanic/Latino	Completed

021W	B	10	M	White	Not Hispanic/Latino	Early Termination
015W	C	9	F	White and Native Hawaiian or Pacific Islander	Hispanic/Latino	Completed
025W	B	13	M	White	Not Hispanic/Latino	Early Termination
012W	C	10	F	Unknown/Not Reported	Unknown	Completed
026Y	C	11	M	White	Not Hispanic/Latino	Early Termination
030Y	B	11	M	Black/African American	Not Hispanic/Latino	Completed
031Y	A	11	M	White	Not Hispanic/Latino	Completed
033Y	A	12	F	White and Black/African American	Not Hispanic/Latino	Active
029Y	A	9	F	White	Hispanic/Latino	Active
034Y	C	8	F	White	Unknown	Active
035Y	B	10	F	White	Not Hispanic/Latino	Active
036Y	C	12	M	White	Hispanic/Latino	Active
028Y	B	8	M	White	Not Hispanic/Latino	Active
027Y	A	11	M	Asian	Not Hispanic/Latino	Active
032Y	B	10	M	White	Not Hispanic/Latino	Active