

1. Bymaster FP, et al. *Synapse*. 2012;66:522-32.
2. Wigal SB, et al. *Neuropsychiatr Dis Treat*. 2020;16:1411-26.



EFFICACY, SAFETY, AND TOLERABILITY OF CENTANAFADINE TABLETS IN THE TREATMENT OF ADHD: RESULTS FROM PHASE 3, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDIES

Lenard A. Adler, MD<sup>1</sup>; Julie Mary Hobart, PhD<sup>2</sup>; Denis Robert McQuade, PhD<sup>2</sup>; M

<sup>1</sup>NYU Langone Health, New York; <sup>2</sup>Otsuka Pharmaceutical Development & Commercialization, Inc., Princeton, New York, NY

INTERACTIVE POSTER  
Click for supplemental information

CONCLUSIONS

These two Phase 3 studies demonstrated that the CTN SR 200 mg/day treatment group achieved significant improvements in ADHD symptoms compared to placebo. Centanafadine SR 200 mg/day was well tolerated, with no significant differences in adverse events between treatment groups. Centanafadine SR 200 mg/day was associated with improvements in ADHD symptoms, as measured by the ASRS total score, CGI-S total score, and CTN SR total score, compared to placebo. The results of these studies suggest that centanafadine may be a promising treatment for ADHD, and further studies are needed to confirm these findings.

Trials examining the long-term profile of centanafadine are in progress (NCT03605849; NCT05279313)

Table 2. Subject Demographics and Baseline Characteristics for Centanafadine Study 1 and Study 2

- Baseline demographics and clinical characteristics were balanced between study groups
- Most subjects reported moderate-to-severe ADHD symptoms at baseline (AISRS)

ADHD, attention-deficit/hyperactivity disorder; AISRS, Adult ADHD Investigator Symptom Rating Scale; ASRS, Adult ADHD Self-Report Scale; BMI, body mass index; CGI-S, Clinical Global Impression-Severity of Illness Scale; CTN SR, centanafadine sustained release; SD, standard deviation.

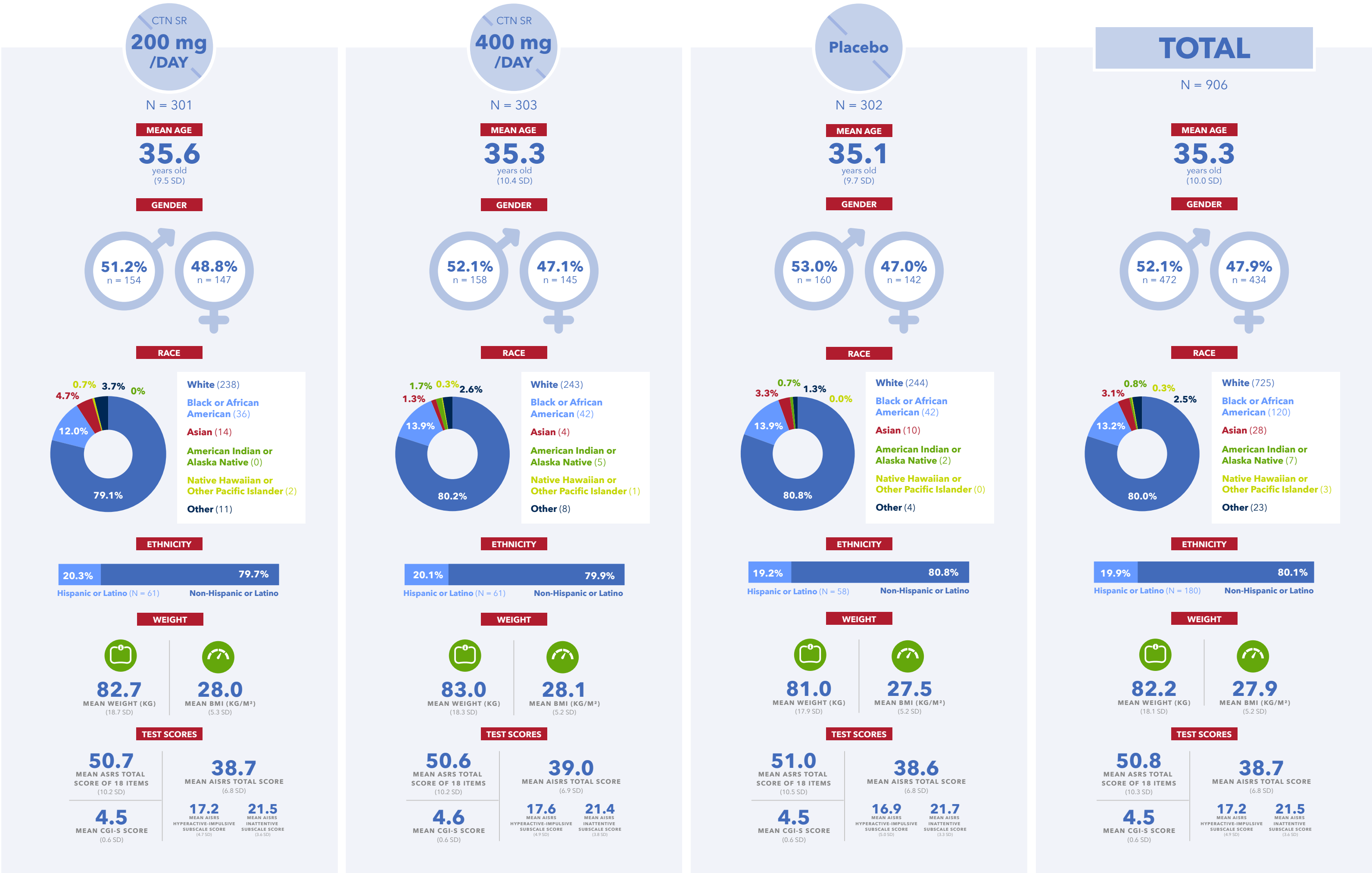
INTRODUCTION

Dr. Adler: Received grant and research support from Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, and Otsuka Pharmaceuticals; served as a consultant to Bracket, Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, Otsuka Pharmaceuticals, SUNY, the National Football League, and Major League Baseball; and has received loyalty payments (as inventor) since 2004 from NYU for license of adult ADHD scales and training materials. Drs. Adams, Madera, Hobart, Chang, and McQuade, and Mr. Angelicola: Employees of Otsuka Pharmaceutical Development & Commercialization. Dr. Liebowitz: Otsuka Pharmaceutical Company.

RESULTS

Subject disposition and baseline demographics

Figure 6. Least Squares Mean Change from Baseline to Day 42 in CGI-S



1. Bymaster FP, et al. *Synapse*. 2012;66:522-32.  
2. Wigal SB, et al. *Neuropsychiatr Dis Treat*. 2020;16:1411-26.



EFFICACY, SAFETY, AND TOLERABILITY OF CENTANAFADINE SUSTAINED-RELEASE TABLETS IN THE TREATMENT OF ADHD: RESULTS FROM PHASE 3, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDIES

Lenard A. Adler, MD<sup>1</sup>; Julie Mary Hobart, PhD<sup>2</sup>; Denis Robert McQuade, PhD<sup>2</sup>; M

<sup>1</sup>NYU Langone Health, New York Commercialization, Inc., Princeton, New York, NY

INTERACTIVE POSTER  
Click for supplemental information

CONCLUSIONS

These two Phase 3 studies demonstrating the efficacy and tolerability of Centanafadine SR 200 mg/day in ADHD symptoms. Centanafadine SR 200 mg/day achieved the primary endpoint of significant improvement in ADHD symptoms.

Centanafadine SR 200 mg/day was well tolerated, with a safety profile consistent with previous studies.

The results of these studies demonstrate that centanafadine SR 200 mg/day is effective and well tolerated in the treatment of ADHD symptoms, including in patients with comorbid conditions.

Trials examining the long-term profile of centanafadine are in progress (NCT03605849; NCT05279313)

Table 3. Incidence of TEAEs During the Double-blind Treatment Period Reported by ≥2% in Any Centanafadine Group and Greater Than Placebo in Study 1 and Study 2

**STUDY 1**  
One subject experienced moderate pneumonia, which resulted in hospitalization and study withdrawal. One subject experienced severe viral gastroenteritis and moderate influenza, which led to hospitalization

**STUDY 2**  
One subject was hospitalized with moderate bronchitis

All SAEs resolved and no changes were made to centanafadine treatment

<sup>a</sup>All adverse events that started after start of trial drug treatment; or if the event was continuous from baseline and was serious, study-drug related, or resulted in death, discontinuation, interruption, or reduction of study therapy.

<sup>b</sup>Subjects were counted once, per term, for the most severe of multiple occurrences of a specific MedDRA preferred term.

CTN SR, centanafadine sustained release; MedDRA, Medical Dictionary for Regulatory Activities; TEAE, treatment-emergent adverse event.

INTRODUCTION



All rash and erythematous rash TEAEs resulting in discontinuation were of mild-to-moderate severity except one rash (centanafadine 400 mg/day group). In seven subjects who discontinued due to rash, the rash resolved with treatment; four subjects who discontinued due to rash were not treated for rash

DISCLOSURES

Dr. Adler: Received grant and research support from Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, and Otsuka Pharmaceuticals; served as a consultant to Bracket, Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, Otsuka Pharmaceuticals, SUNY, the National Football League, and Major League Baseball; and has received loyalty payments (as inventor) since 2004 from NYU for license of adult ADHD scales and training materials. Drs. Adams, Madera, Hobart, Chang, and McQuade, and Mr. Angelicola: Employees of Otsuka Pharmaceutical Development & Commercialization. Dr. Liebowitz: Otsuka Pharmaceutical Company.

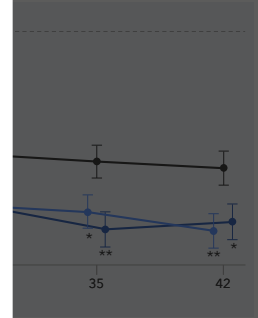
ACKNOWLEDGMENTS

We extend our thanks to the patients, their families, and all participating investigators. The two Phase 3 studies presented in this poster were sponsored by Otsuka Pharmaceutical Development & Commercialization, Inc., Princeton, NJ. Editorial and production assistance for this poster was provided by BioScience Communications, New York, NY.

REFERENCES

- Bymaster FP, et al. *Synapse*. 2012;66:522-32.
- Wigal SB, et al. *Neuropsychiatr Dis Treat*. 2020;16:1411-26.

Figure 6. Least Squares Mean Change from Baseline to Day 42 in CGI-S



TEAEs) were  
ects who  
DB period

jects  
ne and

erate  
dy  
; all  
was  
o the study drug  
made to

continued study

%);  
%);

psychiatric  
taneous  
%); and

d Treatment  
up and

Placebo (n=290)	Total (n=876)
51 (17.6)	218 (24.9)
10 (3.4)	78 (8.9)
3 (1.0)	11 (1.3)
2 (0.7)	22 (2.5)
1 (0.3)	27 (3.1)
6 (2.1)	31 (3.5)
7 (2.4)	27 (3.1)
7 (2.4)	27 (3.1)
5 (1.7)	40 (4.6)
5 (1.7)	40 (4.6)
16 (5.5)	47 (5.4)
16 (5.5)	47 (5.4)
18 (6.2)	83 (9.5)
2 (0.7)	11 (1.3)
3 (1.0)	15 (1.7)
1 (0.3)	11 (1.3)
7 (2.4)	28 (3.2)
5 (1.7)	27 (3.1)
2 (0.7)	17 (1.9)
2 (0.7)	17 (1.9)



Figure 1. Design for Centanafadine Study 1 and Study 2 in Adults With ADHD

- Study 1 and Study 2 were randomized, double-blind (DB), multicenter, placebo-controlled trials comprising four study periods

\*All subjects were required to participate in the 7-day follow-up period (follow-up telephone calls at 1, 3, and 5 days after the last dose of study treatment, and in-clinic follow-up visits at 2 and 7 days after the last dose of study treatment).

Subjects who terminated early, who decided to not enroll in the long-term open-label safety and tolerability study, or who were not eligible to enroll were also required to participate in an additional follow-up telephone call 10 days after the last dose of centanafadine or placebo.

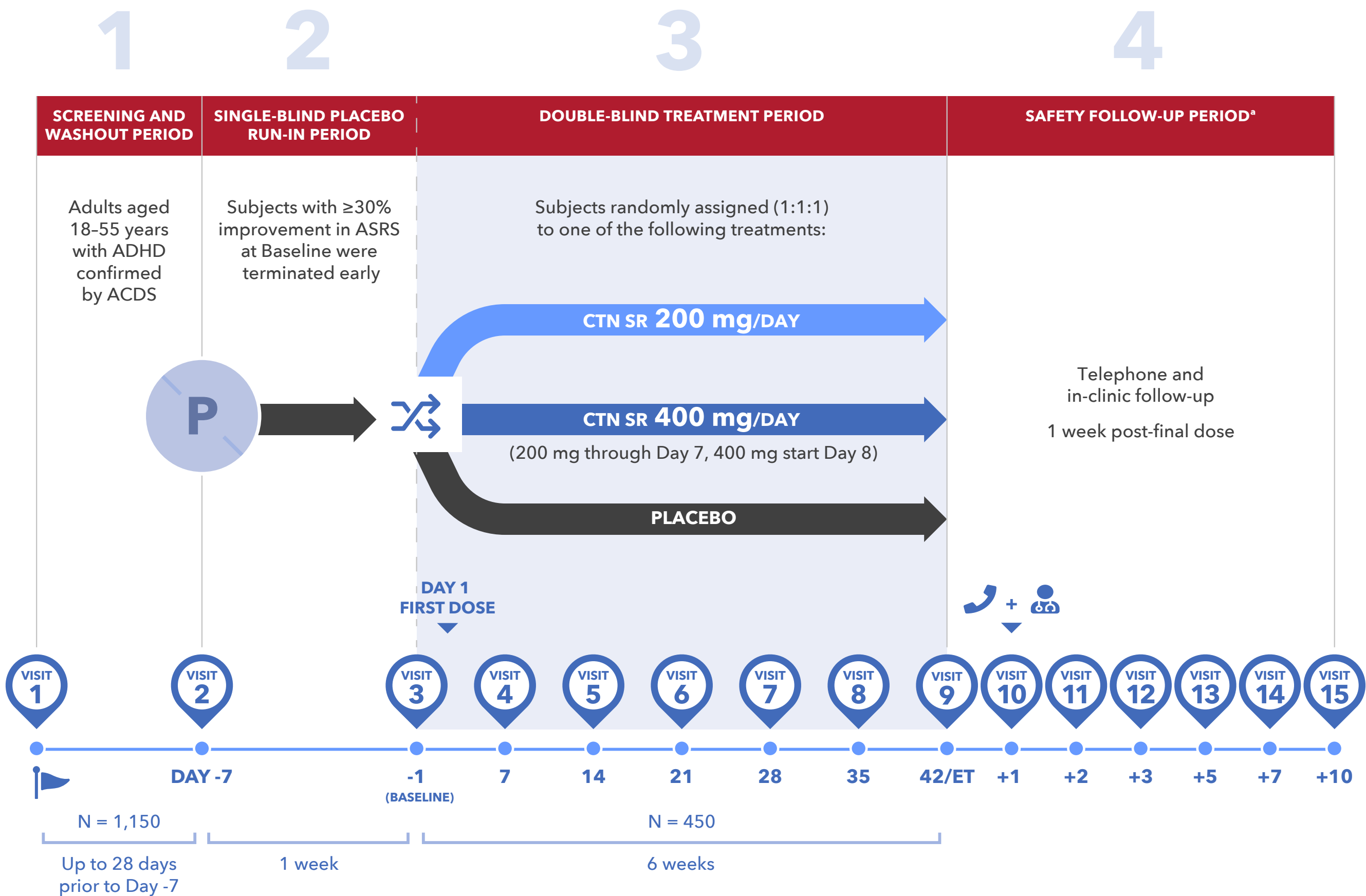
ACDS, Adult ADHD Clinical Diagnostic Scale; ADHD, attention-deficit/hyperactivity disorder; ASRS, Adult ADHD Self-Report Scale; CTN, centanafadine; ET, early termination; P, placebo; SR, sustained release.

INTRODUCTION

RESULTS

Subject disposition and baseline demographics

Figure 6. Least Squares Mean Change from Baseline to Day 42 in CGI-S



Lenard A. Adler, MD<sup>1</sup>; Julie Mary Hobart, PhD<sup>2</sup>; Denis Robert McQuade, PhD<sup>2</sup>; M

<sup>1</sup>NYU Langone Health, New York; Commercialization, Inc., Princeton, New York, NY

INTERACTIVE POSTER  
Click for supplemental content

CONCLUSIONS

These two Phase 3 studies demonstrated that centanafadine SR 200 mg/day was effective in improving ADHD symptoms. Centanafadine SR 200 mg/day achieved the primary endpoint of ASRS total score.

Centanafadine SR 200 mg/day was well tolerated in this study.

The results of these studies suggest that centanafadine may be a promising treatment for ADHD and other neurodevelopmental disorders, including anxiety disorders.

Trials examining the long-term profile of centanafadine are in progress (NCT03605849; NCT05279313)

Dr. Adler: Received grant and research support from Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, and Otsuka Pharmaceuticals; served as a consultant to Bracket, Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, Otsuka Pharmaceuticals, SUNY, the National Football League, and Major League Baseball; and has received royalty payments (as inventor) since 2004 from NYU for license of adult ADHD scales and training materials. Drs. Adams, Madera, Hobart, Chang, and McQuade, and Mr. Angelicola: Employees of Otsuka Pharmaceutical Development & Commercialization. Dr. Liebowitz: Otsuka Pharmaceutical Company.

We extend our thanks to the patients, their families, and all participating investigators. The two Phase 3 studies presented in this poster were sponsored by Otsuka Pharmaceutical Development & Commercialization, Inc., Princeton, NJ. Editorial and production assistance for this poster was provided by BioScience Communications, New York, NY.

- Bymaster FP, et al. *Synapse*. 2012;66:522-32.
- Wigal SB, et al. *Neuropsychiatr Dis Treat*. 2020;16:1411-26.





EFFICACY, SAFETY, AND TOLERABILITY OF CENTANAFADINE TABLETS IN ADHD: RESULTS FROM PHASE 3, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY 1 AND STUDY 2 (Randomized Sample)

- 906 subjects were randomized across both studies (centanafadine 200 mg n = 301; centanafadine 400 mg n = 303; placebo n = 302)

Lenard A. Adler, MD<sup>1</sup>; Julie Mary Hobart, PhD<sup>2</sup>; Denis Robert McQuade, PhD<sup>2</sup>; M<sup>1</sup>NYU Langone Health, New York; Commercialization, Inc., Princeton, New York, NY

INTERACTIVE POSTER  
Click for supplemental information

CONCLUSIONS

These two Phase 3 studies demonstrating the efficacy of CTN SR 200 mg/day in ADHD symptoms. The results of the three neurotrauma disorders, including

Trials examining the long-term profile of centanafadine are in progress (NCT03605849; NCT05279313)

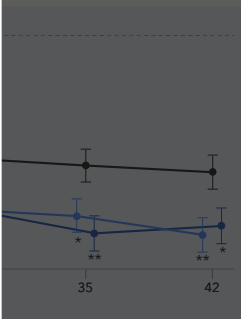
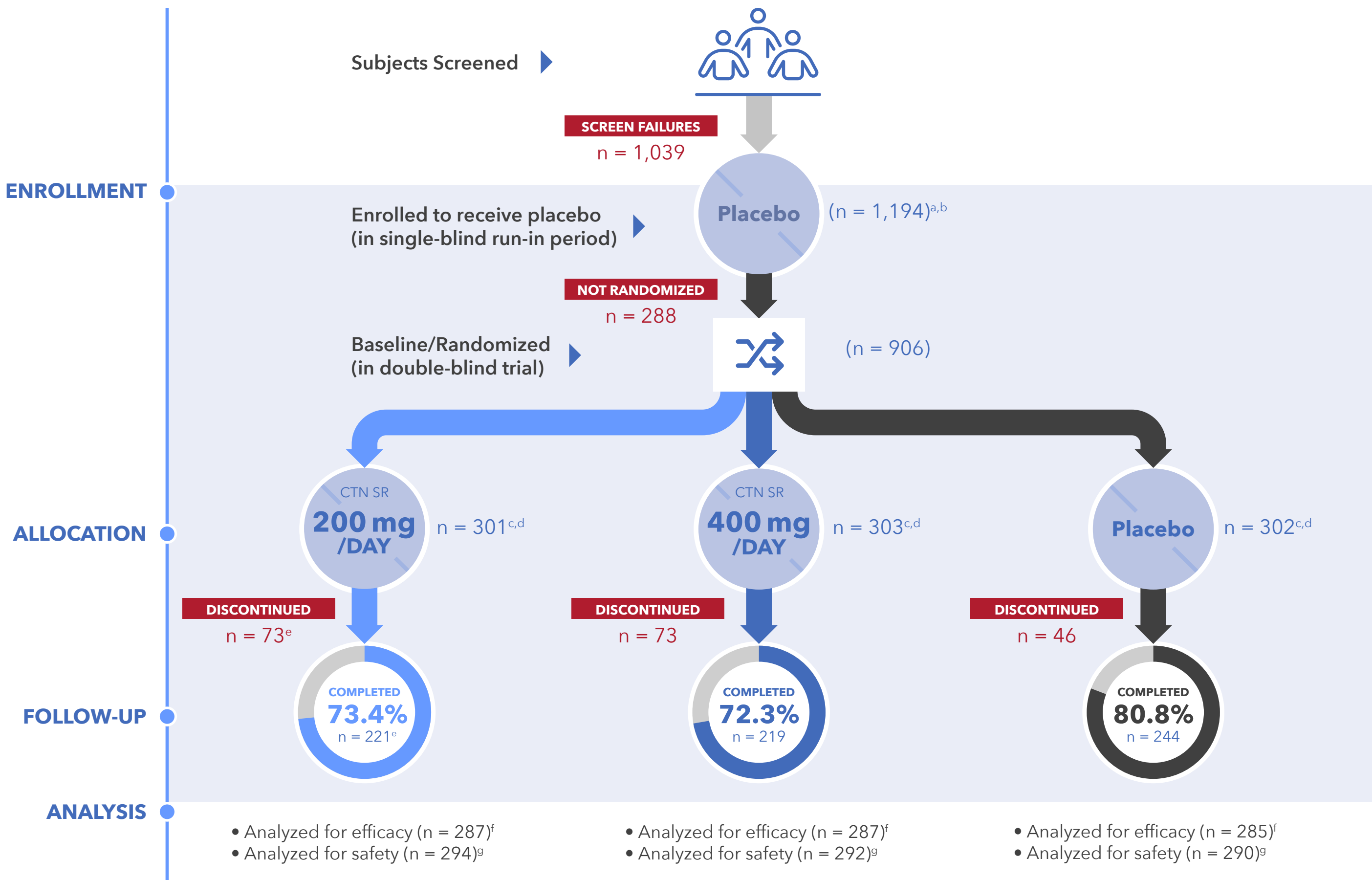
<sup>a</sup>Subjects receiving at least one dose of study medication during the single-blind placebo period/double-blind period. <sup>b</sup>Subjects who signed an informed consent form for the trial and enrolled into the single-blind placebo run-in period. <sup>c</sup>Subjects who were randomized and received study medication during the double-blind period or were not randomized and received study medication during the single-blind placebo period. <sup>d</sup>One subject who was enrolled in the trial did not receive study medication in the placebo run-in period. <sup>e</sup>One subject in the CTN SR 200 mg/day group was included in the discontinued subject count in error but completed all trial visits to be considered a completer. <sup>f</sup>Randomized subjects who received at least one dose of double-blind study medication and had a baseline and post-baseline value for AISRS total score. <sup>g</sup>Subjects receiving at least one dose of study medication during the double-blind treatment period are included in the safety analysis.  
AISRS, Adult ADHD Investigator Symptom Rating Scale; CTN, centanafadine; SR, sustained release.

INTRODUCTION

RESULTS

Subject disposition and baseline demographics

Figure 6. Least Squares Mean Change from Baseline to Day 42 in CGI-S



AEs) were  
ects who  
DB period

jects  
ne and

erate  
dy  
; all  
was  
o the study drug  
made to

continued study

%);  
%);

psychiatric  
aneous  
%); and

d Treatment  
up and

Placebo (n = 290)	Total (n = 975)
51 (17.6)	218 (24.9)
10 (3.4)	78 (8.9)
3 (1.0)	11 (1.3)
2 (0.7)	22 (2.5)
1 (0.3)	27 (3.1)
6 (2.1)	31 (3.5)
7 (2.4)	27 (3.1)
7 (2.4)	27 (3.1)
5 (1.7)	40 (4.6)
5 (1.7)	40 (4.6)
16 (5.5)	47 (5.4)
16 (5.5)	47 (5.4)
18 (6.2)	83 (9.5)
2 (0.7)	11 (1.3)
3 (1.0)	15 (1.7)
1 (0.3)	11 (1.3)
7 (2.4)	28 (3.2)
5 (1.7)	27 (3.1)
2 (0.7)	17 (1.9)
2 (0.7)	17 (1.9)

Dr. Adler: Received grant and research support from Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, and Otsuka Pharmaceuticals; served as a consultant to Bracket, Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, Otsuka Pharmaceuticals, SUNY, the National Football League, and Major League Baseball; and has received loyalty payments (as inventor) since 2004 from NYU for license of adult ADHD scales and training materials. Drs. Adams, Madera, Hobart, Chang, and McQuade, and Mr. Angelicola: Employees of Otsuka Pharmaceutical Development & Commercialization. Dr. Liebowitz: Otsuka Pharmaceutical Company.

We extend our thanks to the patients, their families, and all participating investigators. The two Phase 3 studies presented in this poster were sponsored by Otsuka Pharmaceutical Development & Commercialization, Inc., Princeton, NJ. Editorial and production assistance for this poster was provided by BioScience Communications, New York, NY.

1. Bymaster FP, et al. *Synapse*. 2012;66:522-32.  
2. Wigal SB, et al. *Neuropsychiatr Dis Treat*. 2020;16:1411-26.



EFFICACY, SAFETY, AND TOLERABILITY OF CENTANAFADINE SUSTAINED-RELEASE TABLETS IN ADULTS WITH ADHD: RESULTS FROM PHASE 3, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDIES

Lenard A. Adler, MD<sup>1</sup>; Julie Mary Hobart, PhD<sup>2</sup>; Denis Robert McQuade, PhD<sup>2</sup>; M. ...  
<sup>1</sup>NYU Langone Health, New York; ...  
Commercialization, Inc., Princeton, New York, NY

INTERACTIVE POSTER  
Click for supplemental materials

CONCLUSIONS

These two Phase 3 studies demonstrated that centanafadine SR 200 mg/day and centanafadine SR 400 mg/day significantly improved ADHD symptoms, as measured by the AISRS total score, compared to placebo. Centanafadine was well tolerated, with no significant differences in adverse events compared to placebo. The results of these studies support the use of centanafadine in the treatment of ADHD. Trials examining the long-term profile of centanafadine are in progress (NCT03605849; NCT05279313).

Figure 3. Least Squares Mean Change from Baseline to Day 42 in AISRS Total Score (Primary Endpoint) for Study 1

- AISRS total scores at Day 42 were reduced by:
  - STUDY 1: centanafadine 200 mg/day 25.5%; centanafadine 400 mg/day 24.6%; placebo 17.7%
  - STUDY 2: centanafadine 200 mg/day 32.2% for subjects in the centanafadine 200 mg/day and the centanafadine 400 mg/day dose groups, and 21.4% for subjects in the placebo group

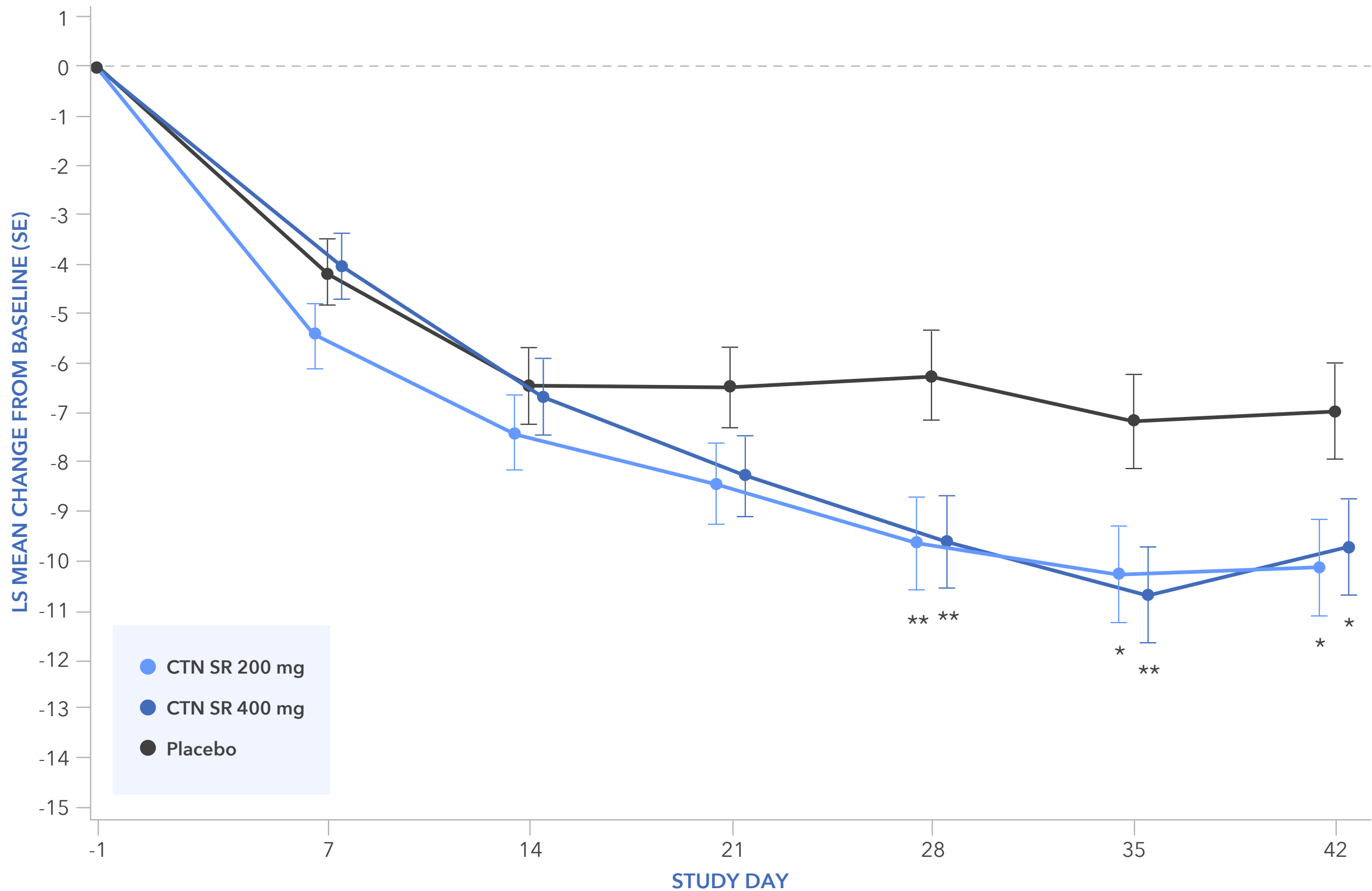
\*P value < 0.05; \*\*P value < 0.01.  
Note: Error bars are LS mean ± one SE. Data are based on an MMRM analysis for AISRS total score using an unstructured variance-covariance structure based on the observed cases data set. Model included fixed class effect terms for treatment, trial center, visit day, and an interaction term of treatment-by-visit day. Treatment differences were calculated based on the difference in LS mean changes vs placebo for MMRM.  
ADHD, attention-deficit/hyperactivity disorder; AISRS, Adult ADHD Investigator Symptom Rating Scale; CTN SR, centanafadine sustained release; LS, least squares; MMRM, mixed-effect model repeated measure; SE, standard error.

INTRODUCTION

RESULTS

Subject disposition and baseline demographics

Figure 6. Least Squares Mean Change from Baseline to Day 42 in CGI-S



LS MEAN DIFFERENCE FROM BASELINE (SE)

CTN SR 200 mg/day	-5.48 (0.66)	-7.43 (0.76)	-8.46 (0.81)	-9.65 (0.93)	-10.27 (0.96)	-10.13 (0.99)
CTN SR 400 mg/day	-4.05 (0.67)	-6.72 (0.77)	-8.29 (0.82)	-9.61 (0.93)	-10.69 (0.96)	-9.73 (0.98)
Placebo	-4.18 (0.67)	-6.46 (0.78)	-6.52 (0.82)	-6.26 (0.93)	-7.19 (0.95)	-6.98 (0.98)

Dr. Adler: Received grant and research support from Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, and Otsuka Pharmaceuticals; served as a consultant to Bracket, Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, Otsuka Pharmaceuticals, SUNY, the National Football League, and Major League Baseball; and has received loyalty payments (as inventor) since 2004 from NYU for license of adult ADHD scales and training materials. Drs. Adams, Madera, Hobart, Chang, and McQuade, and Mr. Angelicola: Employees of Otsuka Pharmaceutical Development & Commercialization. Dr. Liebowitz: Otsuka Pharmaceutical Company.

We extend our thanks to the patients, their families, and all participating investigators. The two Phase 3 studies presented in this poster were sponsored by Otsuka Pharmaceutical Development & Commercialization, Inc., Princeton, NJ. Editorial and production assistance for this poster was provided by BioScience Communications, New York, NY.

1. Bymaster FP, et al. *Synapse*. 2012;66:522-32.  
2. Wigal SB, et al. *Neuropsychiatr Dis Treat*. 2020;16:1411-26.



EFFICACY, SAFETY, AND TOLERABILITY OF CENTANAFADINE SUSTAINED-RELEASE TABLETS IN ADULTS WITH ADHD: RESULTS FROM PHASE 3, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDIES

Lenard A. Adler, MD<sup>1</sup>; Julie Mary Hobart, PhD<sup>2</sup>; Denis Robert McQuade, PhD<sup>2</sup>; M. Dr. Adler: Received grant and research support from Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, and Otsuka Pharmaceuticals; served as a consultant to Bracket, Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, Otsuka Pharmaceuticals, SUNY, the National Football League, and Major League Baseball; and has received loyalty payments (as inventor) since 2004 from NYU for license of adult ADHD scales and training materials. Drs. Adams, Madera, Hobart, Chang, and McQuade, and Mr. Angelicola: Employees of Otsuka Pharmaceutical Development & Commercialization. Dr. Liebowitz: Otsuka Pharmaceutical Company.

<sup>1</sup>NYU Langone Health, New York, NY; <sup>2</sup>Otsuka Pharmaceutical Development & Commercialization, Inc., Princeton, New York, NY

INTERACTIVE POSTER  
Click for supplemental content

CONCLUSIONS

These two Phase 3 studies demonstrated that centanafadine SR 200 mg/day and centanafadine SR 400 mg/day significantly improved ADHD symptoms in adults with ADHD. Centanafadine SR 200 mg/day and centanafadine SR 400 mg/day achieved the primary endpoint of significantly reducing the AISRS total score compared to placebo. Centanafadine SR 200 mg/day and centanafadine SR 400 mg/day were well tolerated. The results of these studies suggest that centanafadine is a promising treatment for ADHD. Trials examining the long-term profile of centanafadine are in progress (NCT03605849; NCT05279313).

Figure 4. Least Squares Mean Change from Baseline to Day 42 in AISRS Total Score (Primary Endpoint) for Study 2

- AISRS total scores at Day 42 were reduced by:
  - STUDY 1: centanafadine 200 mg/day 25.5%; centanafadine 400 mg/day 24.6%; placebo 17.7%
  - STUDY 2: centanafadine 200 mg/day 32.2% for subjects in the centanafadine 200 mg/day and the centanafadine 400 mg/day dose groups, and 21.4% for subjects in the placebo group

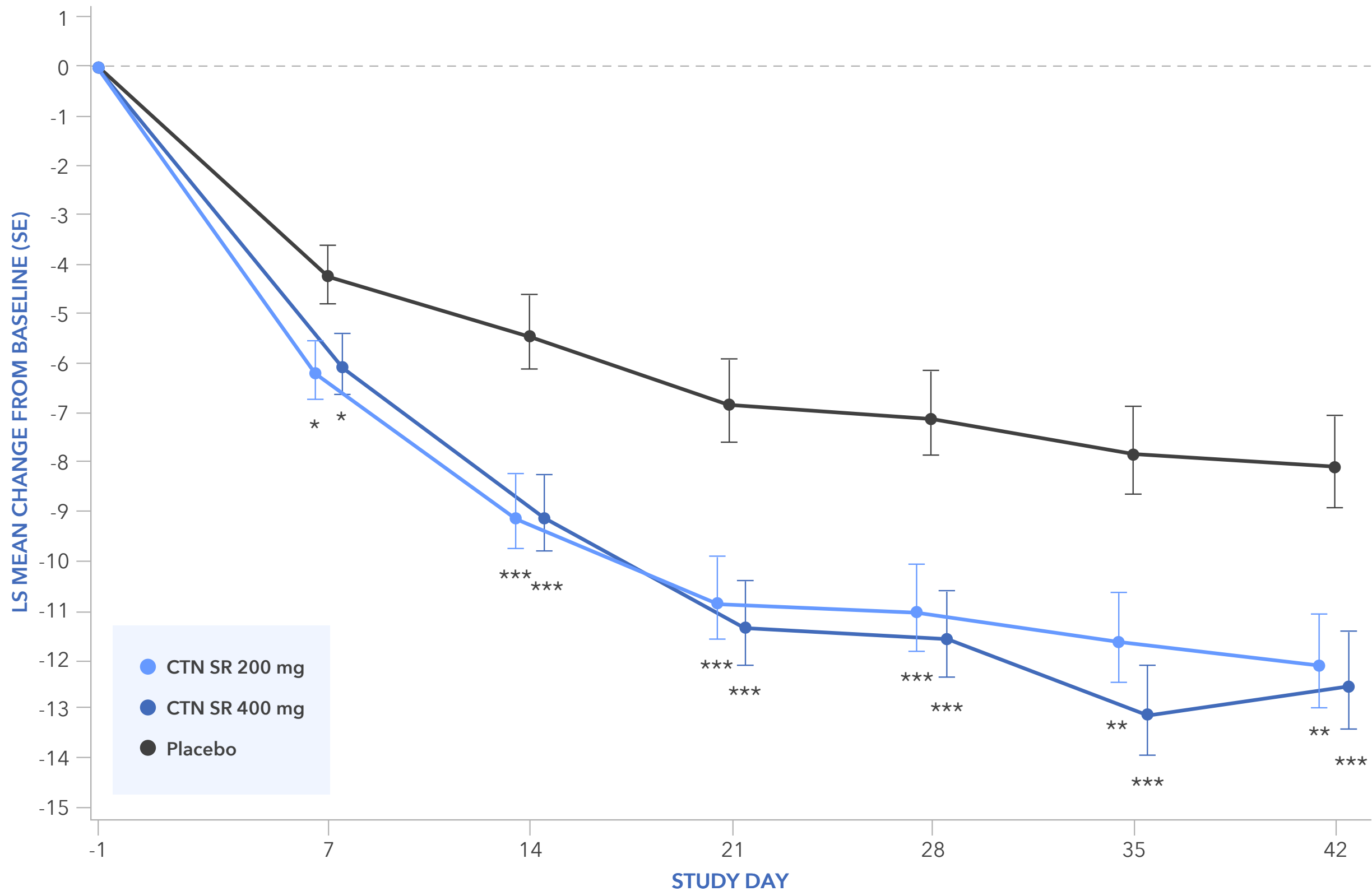
\*P value < 0.05; \*\*P value < 0.01.  
Note: Error bars are LS mean ± one SE. Data are based on an MMRM analysis for AISRS total score using an unstructured variance-covariance structure based on the observed cases data set. Model included fixed class effect terms for treatment, trial center, visit day, and an interaction term of treatment-by-visit day. Treatment differences were calculated based on the difference in LS mean changes vs placebo for MMRM.  
ADHD, attention-deficit/hyperactivity disorder; AISRS, Adult ADHD Investigator Symptom Rating Scale; CTN SR, centanafadine sustained release; LS, least squares; MMRM, mixed-effect model repeated measure; SE, standard error.

INTRODUCTION

RESULTS

Subject disposition and baseline demographics

Figure 6. Least Squares Mean Change from Baseline to Day 42 in CGI-S



LS MEAN DIFFERENCE FROM BASELINE (SE)

CTN SR 200 mg/day	-6.21 (0.62)	-9.09 (0.76)	-10.83 (0.82)	-11.02 (0.86)	-11.61 (0.91)	-12.08 (0.96)
CTN SR 400 mg/day	-6.09 (0.62)	-9.09 (0.78)	-11.31 (0.84)	-11.56 (0.89)	-13.09 (0.93)	-12.49 (0.99)
Placebo	-4.28 (0.61)	-5.44 (0.76)	-6.81 (0.81)	-7.08 (0.85)	-7.84 (0.89)	-8.07 (0.94)

DISCLOSURES

Dr. Adler: Received grant and research support from Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, and Otsuka Pharmaceuticals; served as a consultant to Bracket, Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, Otsuka Pharmaceuticals, SUNY, the National Football League, and Major League Baseball; and has received loyalty payments (as inventor) since 2004 from NYU for license of adult ADHD scales and training materials. Drs. Adams, Madera, Hobart, Chang, and McQuade, and Mr. Angelicola: Employees of Otsuka Pharmaceutical Development & Commercialization. Dr. Liebowitz: Otsuka Pharmaceutical Company.

ACKNOWLEDGMENTS

We extend our thanks to the patients, their families, and all participating investigators. The two Phase 3 studies presented in this poster were sponsored by Otsuka Pharmaceutical Development & Commercialization, Inc., Princeton, NJ. Editorial and production assistance for this poster was provided by BioScience Communications, New York, NY.

REFERENCES

1. Bymaster FP, et al. *Synapse*. 2012;66:522-32.
2. Wigal SB, et al. *Neuropsychiatr Dis Treat*. 2020;16:1411-26.



EFFICACY, SAFETY, AND TOLERABILITY OF CENTANAFADINE SUSTAINED-RELEASE TABLETS IN ADULTS WITH ADHD: RESULTS FROM PHASE 3, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY 1

Lenard A. Adler, MD<sup>1</sup>; Julie Mary Hobart, PhD<sup>2</sup>; Denis Robert McQuade, PhD<sup>2</sup>; M

<sup>1</sup>NYU Langone Health, New York; Commercialization, Inc., Princeton, New York, NY

INTERACTIVE POSTER  
Click for supplemental content

CONCLUSIONS

These two Phase 3 studies demonstrated that centanafadine SR 200 mg/day and 400 mg/day significantly improved ADHD symptoms compared to placebo in the primary endpoint of the change in total score on the Adult ADHD Investigator Symptom Rating Scale (AISRS) at Day 42.

Centanafadine was well tolerated, with no significant differences in adverse events compared to placebo.

The results of these two studies support the use of centanafadine as a treatment for ADHD.

Trials examining the long-term profile of centanafadine are in progress (NCT03605849; NCT05279313)

Figure 5. Least Squares Mean Change from Baseline to Day 42 in CGI-S Score (Secondary Endpoint) for Study 1

- In Study 1, statistically significant differences in CGI-S scores were seen as soon as Day 28 and were maintained to the end of treatment for the centanafadine 400 mg/day group
- In Study 2, statistically significant differences in CGI-S scores were seen as soon as Day 14 for centanafadine 200 mg/day and Day 21 for centanafadine 400 mg/day. Improvements were maintained to the end of the study

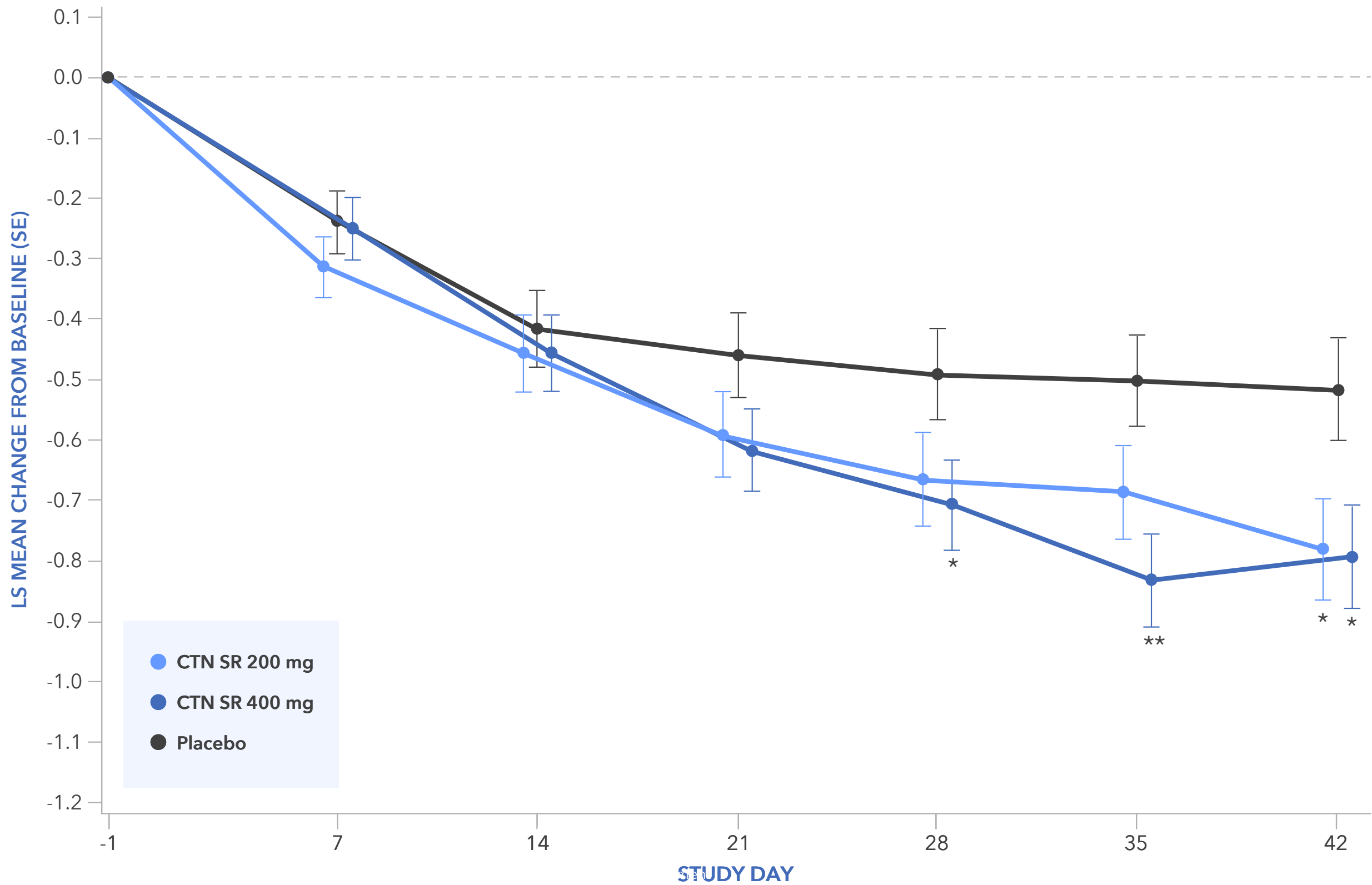
\*P value < 0.05; \*\*P value < 0.01.  
Note: Error bars are LS mean ± one SE. Data are based on an MMRM analysis for AISRS total score using an unstructured variance-covariance structure based on the observed cases data set. Model included fixed class effect terms for treatment, trial center, visit day, and an interaction term of treatment-by-visit day. Treatment differences were calculated based on the difference in LS mean changes vs placebo for MMRM.  
ADHD, attention-deficit/hyperactivity disorder; AISRS, Adult ADHD Investigator Symptom Rating Scale; CGI-S, Clinical Global Impression-Severity of Illness Scale; CTN SR, centanafadine sustained release; LS, least squares; MMRM, mixed-effect model repeated measure; SE, standard error.

INTRODUCTION

RESULTS

Subject disposition and baseline demographics

Figure 6. Least Squares Mean Change from Baseline to Day 42 in CGI-S



LS MEAN DIFFERENCE FROM BASELINE (SE)

CTN SR 200 mg/day	-0.32 (0.05)	-0.46 (0.06)	-0.59 (0.07)	-0.67 (0.08)	-0.69 (0.08)	-0.78 (0.09)
CTN SR 400 mg/day	-0.25 (0.05)	-0.46 (0.06)	-0.62 (0.07)	-0.71 (0.08)	-0.83 (0.08)	-0.79 (0.08)
Placebo	-0.24 (0.05)	-0.41 (0.06)	-0.46 (0.07)	-0.49 (0.08)	-0.50 (0.08)	-0.52 (0.08)



EFFICACY, SAFETY, AND TOLERABILITY OF CENTANAFADINE SUSTAINED-RELEASE TABLETS IN ADULTS WITH ADHD: RESULTS FROM PHASE 3, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY 2

Leonard A. Adler, MD<sup>1</sup>; Julie Mary Hobart, PhD<sup>2</sup>; Denis Robert McQuade, PhD<sup>2</sup>; M...  
<sup>1</sup>NYU Langone Health, New York; Commercialization, Inc., Princeton, New York, NY

INTERACTIVE POSTER  
Click for supplemental materials

CONCLUSIONS

These two Phase 3 studies demonstrated that centanafadine SR 200 mg/day and 400 mg/day significantly improved ADHD symptoms, as measured by the AISR total score, compared to placebo. Centanafadine SR 200 mg/day and 400 mg/day also significantly improved the CGI-S total score, indicating overall clinical improvement. Centanafadine SR 200 mg/day and 400 mg/day were well-tolerated, with no significant differences in adverse events compared to placebo. The results of these studies support the use of centanafadine SR 200 mg/day and 400 mg/day for the treatment of ADHD. Trials examining the long-term profile of centanafadine are in progress (NCT03605849; NCT05279313).

Figure 6. Least Squares Mean Change from Baseline to Day 42 in CGI-S Score (Secondary Endpoint) for Study 2

- In Study 1, statistically significant differences in CGI-S scores were seen as soon as Day 28 and were maintained to the end of treatment for the centanafadine 400 mg/day group
- In Study 2, statistically significant differences in CGI-S scores were seen as soon as Day 14 for centanafadine 200 mg/day and Day 21 for centanafadine 400 mg/day. Improvements were maintained to the end of the study

\*P value < 0.05; \*\*P value < 0.01.

Note: Error bars are LS mean ± one SE. Data are based on an MMRM analysis for AISRS total score using an unstructured variance-covariance structure based on the observed cases data set. Model included fixed class effect terms for treatment, trial center, visit day, and an interaction term of treatment-by-visit day. Treatment differences were calculated based on the difference in LS mean changes vs placebo for MMRM.

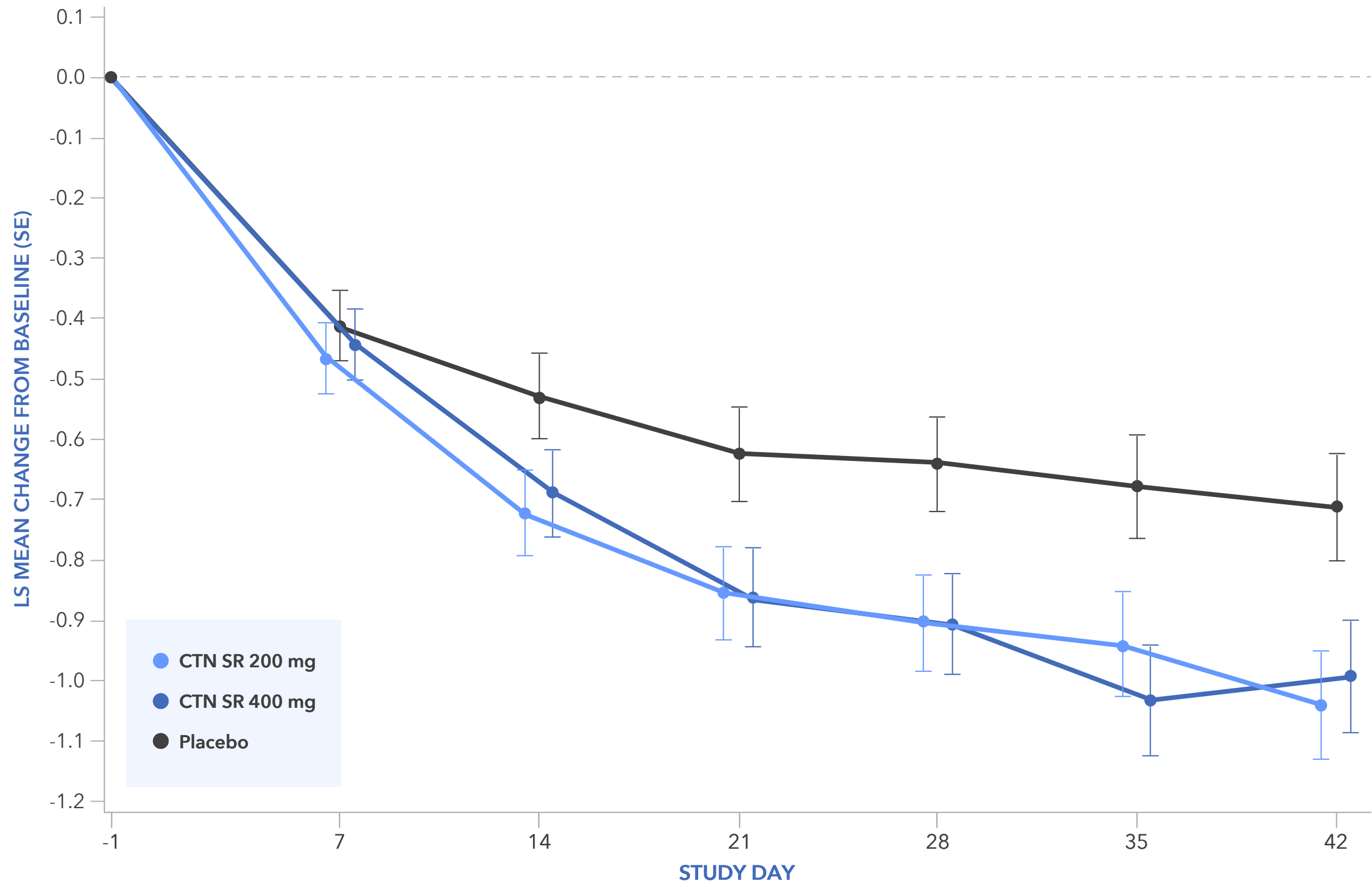
ADHD, attention-deficit/hyperactivity disorder; AISRS, Adult ADHD Investigator Symptom Rating Scale; CGI-S, Clinical Global Impression-Severity of Illness Scale; CTN SR, centanafadine sustained release; LS, least squares; MMRM, mixed-effect model repeated measure; SE, standard error.

INTRODUCTION

RESULTS

Subject disposition and baseline demographics

Figure 6. Least Squares Mean Change from Baseline to Day 42 in CGI-S



LS MEAN DIFFERENCE FROM BASELINE (SE)

CTN SR 200 mg/day	-0.46 (0.06)	-0.72 (0.07)	-0.85 (0.08)	-0.90 (0.08)	-0.94 (0.09)	-1.04 (0.09)
CTN SR 400 mg/day	-0.44 (0.06)	-0.69 (0.07)	-0.86 (0.08)	-0.91 (0.08)	-1.03 (0.09)	-0.99 (0.09)
Placebo	-0.41 (0.06)	-0.53 (0.07)	-0.62 (0.08)	-0.64 (0.08)	-0.68 (0.09)	-0.71 (0.09)

DISCLOSURES

Dr. Adler: Received grant and research support from Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, and Otsuka Pharmaceuticals; served as a consultant to Bracket, Sunovion Pharmaceuticals, Shire/Takeda Pharmaceuticals, Otsuka Pharmaceuticals, SUNY, the National Football League, and Major League Baseball; and has received loyalty payments (as inventor) since 2004 from NYU for license of adult ADHD scales and training materials. Drs. Adams, Madera, Hobart, Chang, and McQuade, and Mr. Angelicola: Employees of Otsuka Pharmaceutical Development & Commercialization. Dr. Liebowitz: Otsuka Pharmaceutical Company.

ACKNOWLEDGMENTS

We extend our thanks to the patients, their families, and all participating investigators. The two Phase 3 studies presented in this poster were sponsored by Otsuka Pharmaceutical Development & Commercialization, Inc., Princeton, NJ. Editorial and production assistance for this poster was provided by BioScience Communications, New York, NY.

REFERENCES

- Bymaster FP, et al. *Synapse*. 2012;66:522-32.
- Wigal SB, et al. *Neuropsychiatr Dis Treat*. 2020;16:1411-26.