Statistical Analysis Plan

[redacted]

Sponsor	BlackThorn Therapeutics, Inc.
Protocol Title:	*Phase 2a, Double-blind, Placebo-Controlled Study to Investigate the Safety, Tolerability, Pharmacokinetics, and Efficacy of BTRX-246040 in Parkinson's Disease Subjects with Motor Fluctuations*
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0.2	16-Nov-2018	Christopher Olson	Incorporated initial feedback, circulated for final review and finalization
0.3	05-Mar-2019	Christopher Olson	Incorporated feedback on shells and circulated for finalization
1.0	10-Apr-2019	Christopher Olson	Updated for finalization
1.1	23-Sep-2019	Christopher Olson	Added text for changes from planned analyses, as the planned PK analyses was not completed

Table of Contents

1. Overview

This statistical analysis plan (SAP) describes the planned analysis and reporting for BlackThorn Therapeutics, Inc. protocol number NEP-PD-201 (*Phase 2a, Double-blind, Placebo-Controlled Study to Investigate the Safety, Tolerability, Pharmacokinetics, and Efficacy of BTRX-246040 in Parkinson's Disease Subjects with Motor Fluctuations*), dated 31-Jul-2018. Reference materials for this statistical plan include the protocol and the accompanying sample data collection documents[1, 2]. Operational aspects related to collection and timing of planned clinical assessments are not repeated in this SAP unless relevant to the planned analysis.

The structure and content of this SAP provides sufficient detail to meet the requirements identified by the Food and Drug Administration (FDA), European Medicines Agency (EMA), and International Conference on Harmonization (ICH) of Technical Requirements for Registration of Pharmaceuticals for Human Use: Guidance on Statistical Principles for Clinical Trials[3], International Conference on Harmonization; Statistical Principles for Clinical Trials: Addendum on Estimands and Sensitivity Analysis in Clinical Trials[4]. All work planned and reported for this SAP will follow internationally accepted guidelines, published by the American Statistical Association[5] and the Royal Statistical Society[6], for statistical practice.

The planned analyses identified in this SAP will be included in clinical study reports (CSRs), regulatory submissions, or future manuscripts. Also, post-hoc exploratory analyses not necessarily identified in this SAP may be performed to further examine study data. Any post-hoc or unplanned, exploratory analysis performed will be clearly identified as such in the final CSR.

The statistical plan described hereafter is an *a priori* plan. It will be submitted to file prior to any unblinded inferential or descriptive analysis of data pertaining to BlackThorn Therapeutics, Inc.'s study NEP-PD-201.

2. Study Objectives and Endpoints

2.1. Study Objectives

The purpose of this study is to assess the safety, tolerability, pharmacokinetics and efficacy of BTRX-246040 in subjects with Parkinson's Disease (PD) who have motor fluctuations and predictable early morning off periods.

2.1.1. Safety Objectives

- To evaluate the safety of single ascending doses of BTRX-246040 in PD subjects with motor fluctuations and predictable early morning off periods.

2.1.2. Tolerability Objectives

- To assess the tolerability of BTRX-246040 in PD subjects with motor fluctuations and predictable early morning off periods.

2.1.3. Pharmacokinetic Objectives

- To evaluate the single-dose C_{max}, T_{max}, $T_{1/2}$ and AUC of BTRX-246040.
- To evaluate the relationship between clinical efficacy/response and plasma levels of BTRX-246040 in PD subjects with motor fluctuations and predictable early morning off periods.

2.1.4. Efficacy Objectives

- To evaluate the effect of single ascending doses of BTRX-246040 on the clinical features of PD in levodopa-treated PD subjects with motor fluctuations and predictable early morning off periods.

2.2. Study Endpoints

2.2.1. Primary Endpoint

The primary endpoint of this study is the maximal change in Unified Parkinson's Disease Rating Scale (UPDRS) Part III from pre-dose to post-dose on Day 1

2.2.2. Secondary Endpoints

The secondary endpoints of this study include the following:

- Duration of ON time on Day 1.
- Percentage of subjects that turn ON on Day 1.
- Time to ON on Day 1.
- Area under the curve for UPDRS Part III during the 8 hours of assessment on Day 1.
- Change from pre-dose dyskinesia rating (from the UPDRS Part III motor response and dyskinesia assessment).

2.2.3. Safety Endpoints

The safety endpoints of this study include the following:

- Adverse Events (AEs), AEs leading to discontinuation from the study drug, and serious AEs (SAEs).
- Change from baseline in clinical laboratory results, electrocardiogram (ECG) results, and vital signs.
- Neurological Exams.
- Columbia Suicide Severity Rating Scale (C-SSRS).

2.2.4. Pharmacokinetic Endpoint

- Pharmacokinetic profile will be evaluated by descriptive review of Cmax, Tmax, AUC, Elimination Half life parameters for BTRX-246040.

2.2.5. Tolerability Endpoint

Tolerability of BTRX-246040 will be assessed by the percentage of subjects who complete the protocol.

3. Overall Study Design and Plan

This is a phase 2a, double-blind, placebo-controlled study to investigate the safety, tolerability, pharmacokinetics, and efficacy of BTRX-246040 in PD subjects with motor fluctuations. A sample size of 8 subjects per cohort will be randomized to BTRX-246040 40 mg (1 capsule), 80 mg (2 capsules), 120 mg (3 capsules), or matching Placebo. Subjects must be between the ages of 30 and 76 and have a clinical diagnosis of PD with motor fluctuations and predictable early morning off periods.

The overall maximum study duration for an individual subject is expected to be approximately 36 days (including the 28 day screening period) with study drug treatment duration of 1 day. As per the schedule of events in Table 2 subjects will be randomly assigned in a 6:2 ratio (BTRX-246040: Placebo) by cohort. After the 1 day treatment (including the 8 hour observation period), the study center will conduct a follow-up safety visit 7 days later (Day 8).

3.1. Overall Design

3.2. Sample Size and Power

No formal sample size calculations were calculated. A sample size of 8 subjects per group was deemed sufficient to evaluate the preliminary safety, tolerability, and efficacy of the different dose levels.

3.3. Study Population and Treatments Administered

The study will enroll approximately 24 subjects in a 6:2 ratio (BTRX-246040: Placebo) who have diagnosed PD with motor fluctuations and predictable early morning off periods. Additional subjects may be added to a cohort to better understand safety at a particular dose cohort.

This study involves a comparison of BTRX-246040 versus Placebo taken orally as a single dose in 3 sequential ascending dose cohorts. The planned dosing for each cohort is noted in Table 1.

Table 1: Treatment Regimens

Treatment Group	Regimen
BTRX-246040	• Cohort 1 – 40 mg (1 capsule) • Cohort 2 – 80 mg (2 capsules) • Cohort 3 – 120 mg (3 capsules) •
Placebo	• Cohort 1 – (1 capsule) • Cohort 2 – (2 capsules) • Cohort 3 – (3 capsules)

	•

Following completion of each cohort, unblinded safety, tolerability, efficacy and, if available, PK data will be reviewed by an unblinded Dosing Review Committee (DRC) to determine if it is safe to proceed to the next higher dose level.

3.4. Method of Assigning Subjects to Treatment Groups

In this parallel-group randomized phase 2a study, subjects who meet study entry criteria will be randomly assigned to receive BTRX-246040, or Placebo as described above at Visit 2. The randomization numbers will be assigned sequentially by cohort through a central interactive web-response system (IWRS) as subjects who meet eligibility criteria are enrolled into the study.

The randomization schedule will be prepared by Premier Research before the start of the study. No one involved in the clinical conduct will have access to the randomization schedule before official unblinding of treatment assignment. No subject will be randomized into the study more than once.

3.5. Blinding and Unblinding

BTRX-246040 and Placebo capsules and packaging will be identical to maintain the investigator, subject, and clinical study team member blinds.

All subjects, investigators, and study personnel involved in the conduct of the study, including data management, will be blinded to the treatment assignment with the exception of a prespecified independent statistician/programmer from Premier Research who will be involved in generation of the randomization code. The unblinded study personnel will not participate in study procedures or data analysis prior to unblinding of the study data which will be performed after database lock, but will be involved in preparing the unblinded report for the DRC.

Study personnel will endeavor to safeguard the integrity of the study blind to minimize bias in the conduct of the study. Treatment unblinding is discouraged but may be permitted in case of medical emergency only if that requires immediate knowledge of the subject's treatment assignment. The process of unblinding one subject should not jeopardize the validity and integrity of the whole study. If an Investigator, site personnel performing the assessments, or subject is unblinded, the subject must be discontinued from the study.

3.6. Schedule of Events

A detailed schedule of events for the study is provided in Table 2.

Table 2: Schedule of Events

Study Periods	SCRN	Treatment Period	Follow-up or Early Termination	Unscheduled visits[1]
Visit no.	**1**	**2**	**3**	
Study Day	**-28 to 0**	**1**	**8 (±1)**	
Informed consent Form	X			
Demographic Data	X			
Medical History, including PD history	X			
Vital signs[2]	X	X	X	X
Height and weight[3]	X	X	X	X
Physical Exam	X		X	X
Neurological Exam	X		X	
Concomitant Medications	X	X	X	X
Columbia Suicide Severity Rating Scale (C-SSRS)-Baseline/Screening version	X			
Columbia Suicide Severity Rating Scale (C-SSRS)-Since last visit version		X	X	X
Montreal Cognitive Assessment (MoCA)	X			
Beck Depression Inventory-II	X			
QUIP-RS - Screening version	X			
QUIP-RS - Since last visit version		X	X	X
UPDRS Part III and dyskinesia rating in the OFF state	X[4]	X[5]		
UPDRS Part III and dyskinesia rating in the ON state	X[4]	X[5]		
Modified Hoehn and Yahr scale in the ON state	X			
12 lead ECG	X	X	X	X
Inclusion/exclusion criteria	X			

[1] Unscheduled visits may be conducted at any time for safety reasons and/or for any other reason.

[2] Vital signs include supine (at least 5 min) and standing (after approximately 2 min) BP and pulse rate, body temperature and body weight. At Day 1, 3 sets each of supine and standing BP and pulse rate will be measured at least 15-20 minutes apart at pre-dose and will be measured once at 2, 4, 6, and 8 hours after dosing.

[3] Height will be measured only once, at Screening. Body weight will be measured once per visit.

[4] At screening, UPDRS Part III and dyskinesia rating should be done in the OFF and the ON state. This can be done in either the practically defined OFF state or after a subject wears OFF following a levodopa dose.

[5] At Day 1, UPDRS Part III and dyskinesia rating will be conducted in the OFF state Pre-dose and every 30 minutes for 4 hours and then hourly for another 4 hours (or until subject turns OFF) following study drug administration. If the subject remains ON after 8 hours, they should be called the next morning to record the time they turned OFF, and the time they took their first regularly scheduled anti-parkinsonian medications after study drug, to a maximum of 24 hours

Laboratory Evaluation	X		X	X
Urine drug screen	X			
Approval via Enrollment Authorization Committee (EAC)	X			
Randomization		X		
Study Drug administered		X		
Adverse Events		X	X	X
BTRX-246040 pharmacokinetics§		X		
Time to ON and duration of ON recorded		X		
Drug accountability		X		

§ BTRX-246040 pharmacokinetics to be collected pre-dose and 30, 60, 120, 240, and 480 minutes after study drug

4. Statistical Analysis and Reporting

All final, planned analyses identified in this SAP will be performed after the study database has been locked and treatment codes have been unblinded.

4.1. Introduction

Data processing, tabulation of descriptive statistics, calculation of inferential statistics, and graphical representations will be performed using SAS® (release 9.4 or higher. If the use of other software is warranted, the final statistical methodology report will detail what software was used for what purposes.

Continuous variable summaries will include the number of subjects (n) with non-missing values, mean, standard deviation (SD), median, minimum, and maximum.

Categorical variable summaries will include the frequency and percentage of subjects that are in the particular category or each possible value. In general the denominator for the percentage calculation will be based upon the study population for the specified treatment group and overall, unless otherwise specified. The denominator for by-visit displays will be the number of subjects in the relevant study population and treatment with non-missing data at each visit.

The minimum and maximum will be reported with the same degree of precision (i.e., the same number of decimal places) as the observed data. Measures of location (mean and median) will be reported to 1 degree of precision more than the observed data and measures of spread (SD) will be reported to 2 degrees of precision more than the observed data. Percentages will be presented to 1 decimal place, unless otherwise specified.

4.2. Interim Analysis and Data Monitoring

No interim analysis is currently planned. If an interim analysis is planned in the future, this will be amended in protocol and in the SAP text as applicable. Safety of planned cohorts will be evaluated by the DRC per section 9.7 of the protocol.

5. Analysis Populations

The following 2 analysis populations are planned for this study:

- **Modified Intent-to-Treat Population (mITT):** Includes all randomized subjects who received at least one dose of study drug and have at least 1 post-baseline scoring of motor activity. In accordance with the intent-to-treat principle, all subjects will be kept in their randomized treatment group. The mITT population will serve as the primary population for efficacy evaluations.
- **Safety Analysis Population (SAF):** Includes all subjects who have received study drug. All subjects will be evaluated according to actual treatment received. The safety population will serve as the primary population for safety evaluations.

Inclusion in the analysis populations described above will be determined prior to database lock.

5.1. Statistical Definitions and Algorithms

5.1.1. Baseline

The last non-missing observation recorded on or before the first dose of study drug will be used as the baseline observation for all calculations of change from baseline.

5.1.2. Adjustments for Covariates

No planned covariates will be included in any planned analyses. Exploration of additional covariates will be considered as data becomes available post database lock.

5.1.3. Multiple Comparisons/Multiplicity

There will be no adjustments for multiple comparisons for efficacy or safety endpoints.

5.1.4. Handling of Dropouts or Missing Data

There will be no imputation for efficacy or safety endpoints.

5.1.5. Analysis Visit Windows

In general, analysis of all variables for this study will use the nominal visit or time point as collected in the eCRF/database. Scheduled visits will be selected over unscheduled visits. Unscheduled visits will be presented in data listings.

5.1.6. Derived Variables

- Study Day = Assessment Date – Date of First Dose + 1
- Change from Baseline = Value Post-Baseline – Value at Baseline
- % Change from Baseline = 100 * Change from Baseline / Value at Baseline
- Duration of ON time on Day 1 = First returned to OFF state Datetime (UPDRS2 or DFUP CRF Page) - First reported ON state Datetime (UPDRS2 CRF Page)
- Time to ON on Day 1 = First reported ON state Datetime (UPDRS2 CRF Page) - Study drug administration Datetime (EX1 CRF Page)
- UPDRS Part III Score = Summation of all items in motor examination (14-item rating scale), each item scored from 0 (Normal) to 4 (Most severe). If any item is missing, the total score will be missing.
- Adverse events beginning with the initial dose of IP or during subsequent duration of their enrollment in the study will be considered treatment-emergent AEs (TEAEs)

It is expected additional derived variables will be needed, but the SAP will not be amended unless they are part of the primary or secondary endpoints in the study.

5.1.7. Data Adjustments/Handling/Conventions

All collected data will be presented in listings. Data not subject to analysis according to this plan will not appear in any tables or graphs but will be included only in the data listings.

In general for quantitative laboratory values reported as '<' or '≤', the lower limit of quantitation (LLOQ) or limit of detection (LOD), one-half of the reported value (i.e., LLOQ, LOD) will be used for analysis. For quantitative laboratory values reported as '>' or '≥', the upper limit of quantitation (ULOQ), the reported value (i.e., ULOQ) will be used for analysis.

For analysis purposes, repeat laboratory test results will not be used unless the original laboratory value is missing or indicated as invalid, in which case the first non-missing repeat laboratory value will be used for data analysis.

Adverse events and Medical History will be coded using the MedDRA thesaurus. Concomitant and Prior medications will be coded using WHO Drug Dictionary (WHO-DD).

If partial dates occur for AEs or medications, the convention for replacing missing dates for analyses is as follows:

For partial start dates:

- If the year is unknown, then do not impute the date but assign a missing value.
- If the month is unknown, then:
    - If the year matches the year of the randomization date, then impute the month and day of the randomization date.
    - Otherwise, assign 01 January
- If the day is unknown, then:
    - If the month and year match the month and year of the randomization date, then impute the day of the first study drug administration date.
    - Otherwise, assign 01.

For partial end dates:

- If the year is unknown, then do not impute the date but assign a missing value.
- If the month is unknown, then assign the last day of the year 31 December.
- If the day is unknown, then assign the last day of the month.

After implementing the rules above, to determine whether AEs (or medications) with missing start or stop dates are pretreatment or on/after treatment, the following strategy will be used:

1. If the start date and stop date are both missing, then the most conservative approach is taken and the AE (or medication) is considered to be treatment emergent (or concomitant).
2. If the start date is missing but the stop date is not missing and is after the day of study drug administration, then the most conservative approach is taken and the AE (or medication) is considered to be treatment emergent (or concomitant).
3. If the start date is missing but the stop date is not missing and is on or before the day of study drug administration, then the AE (or medication) is considered to be

before treatment (or prior).

If the start date is not missing but the stop date is missing, then the most conservative approach is taken. Medication is considered to be concomitant and AEs are considered to be treatment-emergent.

A treatment related AE is any AE with a relationship to the study drug of "Possibly Related", "Probably Related" or "Related". Any AE with a missing relationship will be analyzed as treatment related. If an AE has a missing severity, it will be imputed as "Severe".

6. Study Subjects and Demographics

6.1. Disposition of Subjects and Withdrawals

Disposition will include tabulations by treatment group and overall of the number of subjects randomized into each treatment group, the number of subjects who received treatment, tabulated reasons for discontinuation from the study, and number of subjects in each analysis population.

A by-subject listing of all disposition information will be presented.

6.2. Protocol Deviations

A by-subject listing of all protocol deviations and their category, description and type will be presented.

6.3. Demographics and Other Baseline Characteristics

Descriptive summaries of demographic (age, gender, race, ethnicity) and other baseline characteristics (height, weight and BMI) will be provided for all subjects by treatment group and overall. These tabulations will be repeated for mITT and SAF populations. Any physical examination/neurological exam findings will be recorded as medical history or AEs and will be summarized as specified in Section 6.4 or 8.1.

All demographic and other baseline characteristics will be presented in subject listings.

6.4. Medical History

Subjects reporting various medical histories, grouped by MedDRA system organ class (SOC) and preferred term (PT) will be tabulated for the SAF population.

A by-subject listing of all medical and PD history will be presented.

6.5. Prior Medications

Subjects taking prior medications, coded using WHO-DD Enhanced Version Sep. 2017 will be tabulated by Anatomical Therapeutic Chemical (ATC) classification level 4 and preferred term. A prior medication is any non-protocol specified drug or substance administered prior to first date of study drug whether or not it was stopped before administration.

A by-subject listing of all prior and concomitant medications will be presented.

6.6. Concomitant Medications

Concomitant medications will be tabulated similarly to Prior medications. A concomitant medication is any non-protocol specified drug or substance administered during participation in the study on or after first date of study drug. A medication can be considered both concomitant and prior if the subject took medication prior to the study and continued taking it after first study drug administration.

6.7. Exposure and Study Drug Administration

A by subject listing will be provided for all drug exposure and study drug administration information collected.

7. Efficacy Analysis

All efficacy variables will be summarized using the mITT population as the primary population of interest, unless otherwise specified.

7.1. Primary Efficacy Analysis

The primary efficacy endpoint of this study is the maximal change in UPDRS Part III Total Score from pre-dose to post-dose on Day 1 (collected every 30 minutes for 4 hrs, then hourly for 4 more hours) in all subjects. The mean maximal change will be presented along with its standard deviation, by treatment group. Data for all BTRX-246040 subjects pooled across cohorts will be compared with data for all Placebo subjects pooled across cohorts.

The observed value and change from baseline will be summarized descriptively for UPDRS Part III Total Score at each Day 1 time point, in addition to the maximal change described above. A scatter plot of the maximal change in UPDRS Part III Total Score will also be presented.

7.2. Secondary Efficacy Analysis

The secondary endpoints consist of the following:

- Duration of ON time on Day 1
- Percentage of subjects that turn ON on Day 1
- Time to ON on Day 1
- AUC for UPDRS Part III during the 8 hours of assessment on Day 1
- Change from pre-dose dyskinesia rating (from the UPDRS Part III motor response and dyskinesia assessment)

For continuous results noted above, the observed value and change from baseline for each time point will be summarized by treatment group. For categorical results, the frequency and percentage of subjects will be provided. Graphical displays for these endpoints will be created as applicable, including a scatter plot of UPDRS by time point and treatment.

8. Safety and Tolerability Analysis

Safety will be evaluated from reported TEAEs, changes in clinical laboratory values, changes in vital signs, ECG, physical examination results, neurological examination, and the C-SSRS. No formal inferential analyses will be conducted for safety outcomes, unless otherwise noted. Unless otherwise specified, all safety analyses will be conducted on the SAF population.

8.1. Adverse Events

All AEs and SAEs will be coded using the MedDRA v20.1 thesaurus. Adverse event analyses will include TEAEs, defined as AEs which start after the first dose of study medication. The frequency and percentage of subjects reporting TEAEs, grouped by MedDRA SOC and PT, will be tabulated by treatment group for the SAF. Such summaries will be displayed for the following:

- TEAEs by SOC and PT
- TEAEs by SOC, PT, and severity
- TEAEs by SOC, PT, and relationship to the study medication
- TEAEs leading to death by SOC, and PT
- SAE TEAEs other than deaths by SOC, and PT
- AEs leading to premature discontinuation by SOC, and PT
- Listing of non-TEAEs

In the case of multiple occurrences of the same AE within the same subject, each subject will only be counted once for each preferred term. In the summaries showing severity and relationship to study medication the event with the maximum severity or strongest

relationship will be reported. If a particular event is missing the severity and/or relationship, then the strongest possible severity or relationship will be assumed for analysis (severity = severe, relationship = related).

Missing and partially missing AE start and/or stop dates will be imputed for the purpose of statistical analysis, according to the specifications described in Section 5.1.7.

In the AE data listings, all AEs will be displayed and TEAEs will be flagged. In the event the number of TEAEs is low from the tabulations above, only listings will be provided.

8.1.1. Adverse Events Leading to Withdrawal

A summary of incidence rates (frequencies and percentages) of AEs leading to withdrawal of study drug, by treatment group, SOC, and preferred term will be prepared.

8.1.2. Deaths and Serious Adverse Events

Any deaths that occur during the study will be listed.

Serious adverse events will be listed and also tabulated by system organ class and preferred term and presented by treatment.

8.2. Clinical Laboratory Evaluations

Descriptive summaries of actual (absolute) values and changes from baseline will be presented for each clinical laboratory analyte by treatment group.

The number of subjects with clinical laboratory values below, within, or above the normal range by time point will be tabulated for each clinical laboratory analyte by treatment group. These shift tables will tabulate the number and proportion of subjects from baseline to post-baseline categories of low, normal or high.

By-subject listings of laboratory analytes will be presented. Any out-of-range values that are identified by the investigator as being clinically significant will be shown on this listing.

Pregnancy and urine drug screen test results will be listed.

8.3. Vital Signs

Descriptive summaries of actual values and changes from baseline will be calculated for systolic blood pressure, diastolic blood pressure, pulse, respiratory rate, BMI, body weight, and oral body temperature. This summary will be presented by treatment group. Height and Weight at screening will be used to calculate BMI.

A by-subject listing of all vital sign measurements will be presented.

8.3.1. Orthostatic Blood Pressure

A separate summary with descriptive statistics of orthostatic blood pressure and pulse will be presented by time point, including values and change from baseline. The average of the three orthostatic BP and pulse measurements will be used for comparison to all post-treatment measurements to minimize the impact of biological variability and to serve as a more reliable baseline.

Additionally, the number and percentage of subjects with abnormal drops will also be shown. A drop in systolic blood pressure of ≥ 20 mmHg, or in diastolic blood pressure of ≥ 10 mmHg upon standing will be considered abnormal.

A by-subject listing of orthostatic blood pressures will be presented.

8.4. Electrocardiograms

Descriptive summaries will be presented for ECG measures of PR interval, QRS interval, QT interval, QTc interval (both correction methods), RR interval and HR. These summaries will be presented by treatment group at each visit.

The frequency and percentage of subjects with normal and abnormal ECG results will be summarized by treatment group at each visit. A by-subject listing of all ECG measures and incidences of abnormalities will be presented.

8.5. Pharmacokinetic Analysis

Individual concentration vs actual time data will be used to estimate the PK parameters (Cmax, Tmax, T1/2, AUC) of BTRX-246040 by standard non-compartmental methods for each subject in the SAF population.

For PK data, all values below the limit of quantification (BLQ) will be set to 0 for summary statistics and graphs. Individual concentrations of BTRX-256040 will be summarized at each time point using descriptive statistics. Individual concentration plots and mean data graphs will be produced. All graphs will be presented using both linear and semi-logarithmic scales.

All BTRX-256040 concentration data will be presented in a by-subject listing.

8.6. Columbia-Suicide Severity Rating Scale

All measures of suicidal ideation and behavior collected on the C-SSRS will be listed by subject.

8.7. Impulsive Compulsive Disorders in Parkinson's Disease-Rating Scale

The frequency and percentage of subjects with positive response ("rarely" or higher) for

each disorder will be tabulated by treatment group and visit. Additionally, the total Impulsive Control Disorder score and total QUIP-RS score will also be presented with descriptive statistics by treatment group and visit (both actual values and changes from baseline). All scales will be presented in a by-subject listing with the individual questions and total scores shown.

9. Changes from Planned Analysis

- The relationship between clinical efficacy/response and plasma levels of BTRX-246040 in PD subjects with motor fluctuations and predictable early morning off periods was not analyzed.
- The planned PK analyses of Cmax, Tmax, T1/2, AUC were not calculated.

There are no additional changes to the planned analyses specified in the protocol.

10. References

1. BlackThorn Therapeutics, Inc. protocol number NEP-PD-201, *Phase 2a, Double-blind, Placebo-Controlled Study to Investigate the Safety, Tolerability, Pharmacokinetics, and Efficacy of BTRX-246040 in Parkinson's Disease Subjects with Motor Fluctuations*, dated 31-Jul-2018
2. BlackThorn Therapeutics, Inc. eCRF NEP-PD-201, dated 21-Sep-2018, v1.0
3. US Federal Register. (1998) International Conference on Harmonization; Guidance on Statistical Principles for Clinical Trials. Department of Health and Human Services: Food and Drug Administration [Docket No. 97D-0174]. Federal Register Volume 63, Number 179, pages 49583-49598. September 16, 1998.
4. US Federal Register. (2017) International Conference on Harmonization; Statistical Principles for Clinical Trials: Addendum on Estimands and Sensitivity Analysis in Clinical Trials. Department of Health and Human Services: Food and Drug Administration [Docket No. FDA-2017-D-6113-0002]. October 31, 2017.
5. ASA. (2018) Ethical Guidelines for Statistical Practice. Prepared by the Committee on Professional Ethics, April 14, 2018. http://www.amstat.org/about/ethicalguidelines.cfm
6. RSS. (2014) The Royal Statistical Society: Code of Conduct, June 2014. http://www.rss.org.uk/Images/PDF/join-us/RSS-Code-of-Conduct-2014.pdf..

11. Tables, Listings, and Figures

All listings, tables, and graphs will have a header showing the sponsor's company name and protocol, the footer indicates the file name, path, and the source of the data (listing number).

General Reporting Conventions:

- All tables and data listings will be developed in landscape orientation.
- Specialized text styles, such as bolding, italics, borders, shading, superscripted and subscripted text will not be used in tables and data listings unless they add significant value to the table, figure, or data listing.
- Only standard keyboard characters should be used in tables and data listings. Special characters, such as nonprintable control characters, printer-specific characters, or font specific characters, will not be used on a table, figure, or data listing. Hexadecimal character representations are allowed (e.g., μ, α, β).
- All titles will be centered on a page. The ICH numbering convention is to be used for all outputs.
- All footnotes will be left justified and at the bottom of a page.
- Missing values for both numeric and character variables will be presented as

blanks in a table or data listing. A value of zero may be used if appropriate to identify when the frequency of a variable is not observed.

- All date values will be presented as ddmmmyyyy (e.g., 29AUG2011) format. A 4-digit year is preferred for all dates.
- If applicable, all observed time values will be presented by using a 24-hour clock HH:MM:SS format (e.g., 01:35:45 or 11:26). Seconds should only be reported if they were measured as part of the study.
- All tables and data listings will have the name of the program, the location, and a run date and time stamp on the bottom of each output.

Population Summary Conventions

- Population sizes may be presented for each classification factor as totals in the column header as (N=xxxx), where appropriate.
- Population sizes shown with summary statistics are the sample size (n) of subjects with non-missing values.
- All population summaries for categorical variables will include all categories that were planned and for which the subjects may have had a response. Percentages corresponding to null categories (cells) will be suppressed, however counts and percentages of missing values may be needed.
- All population summaries for continuous variables will include: N, mean, median, SD, minimum, and maximum. Other summaries (e.g., number missing) may be used as appropriate.
- All percentages are rounded and reported to a single decimal point (xx.x %). A percentage of 100% will be reported as 100%. No value of 0% will be reported. Any computation of percent that results in 0% is to be presented as a 0.

11.1. Planned Table Descriptions

The following are planned summary tables for protocol number NEP-PD-201. The table numbers and page numbers are place holders only and will be determined when the tables are produced.

Table Number	Population	Table Title
14.1 Demographics and Baseline Tables		
14.1.1	SCREEN	Study Populations and Subject Disposition
14.1.2.1	SAF	Demographics
14.1.2.2	mITT	Demographics
14.1.3	SAF	Medical History
14.1.4	SAF	Concomitant Medications
14.1.5	SAF	Prior Medications
14.2 Efficacy and PK Tables		
14.2.1.1	mITT	Summary of UPDRS Part III Total Score pre-dose to post-dose on Day 1
14.2.1.2	mITT	AUC of UPDRS Part III Total Score
14.2.2	mITT	Summary of Dyskinesia Rating on Day 1
14.2.3	mITT	Summary of Duration of ON and Time to ON on Day 1
14.2.4	mITT	Summary of Pharmacokinetic Parameters
14.3 Safety and Tolerability Tables		
14.3.1 Displays of Adverse Events		
14.3.1.1	SAF	Summary of all TEAEs
14.3.1.2	SAF	TEAEs by SOC and Preferred Term
14.3.1.3	SAF	TEAEs by SOC, Preferred Term and Severity
14.3.1.4	SAF	TEAEs by SOC, Preferred Term and Relationship to Study Medication
14.3.1.5	SAF	TEAEs leading to discontinuation by SOC and Preferred Term
14.3.1.6	SAF	TESAEs other than deaths by SOC and Preferred Term
14.3.1.7	SAF	TEAEs leading to death by SOC and Preferred Term
14.3.2 Laboratory Safety Data		
14.3.2.1	SAF	Summary of Clinical Chemistry by Study Visit
14.3.2.2	SAF	Summary of Hematology by Study Visit
14.3.2.3	SAF	Summary of Urinalysis by Study Visit
14.2.2.4	SAF	Summary of Coagulation by Study Visit
14.3.2.5	SAF	Shifts from Baseline of Clinical Chemistry by Study Visit
14.3.2.6	SAF	Shifts from Baseline of Hematology by Study Visit
14.3.2.7	SAF	Shifts from Baseline of Urinalysis by Study Visit
14.3.2.8	SAF	Shifts from Baseline of Coagulation by Study Visit
14.3.3 Vital Signs and ECG Data		
14.3.3.1	SAF	Summary of Vital Signs by Study Visit
14.3.3.2	SAF	Summary of Orthostatic Blood Pressure and Pulse by Study Visit
14.3.3.3	SAF	Incidence of Abnormal Orthostatic Blood Pressure by Study Visit
14.3.3.4	SAF	Summary of ECG Parameters by Study Visit
14.3.3.5	SAF	Incidence of Abnormal ECG by Study Visit
14.3.4 Other Safety Data		
14.3.4.1	SAF	Summary of Impulsive Control Disorder and QUIP-RS by

		Study Visit

11.2. Planned Figure Descriptions

The following are planned summary figures for protocol number NEP-PD-201. The figure numbers and page numbers are place holders only and will be determined when the figures are produced.

Figure Number	Population	Figure Title
14.2 Efficacy Figures		
14.2.1	mITT	AUC of UPDRS Part III Total Score
14.2.2	mITT	Scatter Plot of maximal change in UPDRS Part III Total Score
14.2.3	mITT	Scatter Plot of UPDRS Part III Total Score by timepoint
14.3 Safety Figures		
14.3.1	SAF	Scatter Plot of serum concentration linear
14.3.2	SAF	Scatter Plot of serum concentration (logarithmic)

11.3. Planned Listing Descriptions

The following are planned data and subject data listings for protocol number NEP-PD-201.

Listing Number	Population	Listing Title
16.2.1 Subject Disposition		
16.2.1.1	SCREEN	Assignment to Analysis Populations and Treatment Arm
16.2.1.2	SCREEN	Study Completion Status and Reasons for Discontinuation
16.2.1.3	SCREEN	Inclusion and Exclusion Criteria
16.2.2 Protocol Deviations		
16.2.2.1	mITT	Protocol Deviations
16.2.4 Demographics and Other Baseline Characteristics		
16.2.4.1	SAF	Demographics
16.2.4.2	SAF	Medical and PD History
16.2.4.3	SAF	Concomitant and Prior Medications
16.2.5 Drug Exposure and Concentration Data		
16.2.5.1.1	SAF	Drug Accountability
16.2.5.1.2	SAF	Study Drug Administration
16.2.5.2	SAF	Serum Concentration of BTRX-246040
16.2.6 Efficacy Listings		
16.2.6.1	mITT	Unified Parkinson's Disease Rating Scale (Part III)
16.2.6.2	mITT	Total UPDRS Score (Part III) and Dyskinesia Rating
16.2.6.3	mITT	Time to and Duration of ON state
16.2.7 Adverse Event Listings		
16.2.7.1	SAF	Treatment-Emergent Adverse Events
16.2.7.2	SAF	Serious Adverse Events
16.2.7.3	SAF	Adverse Events Leading to Discontinuation
16.2.7.4	SAF	Listing of Deaths
16.2.8 Laboratory Data Listings		
16.2.8.1	SAF	Clinical Chemistry
16.2.8.2	SAF	Hematology
16.2.8.3	SAF	Urinalysis
16.2.8.4	SAF	Coagulation
16.2.8.5	SAF	Urine Drug Screen
16.2.9 Other Clinical Observations and Measurements		
16.2.9.1	SAF	Vital Signs
16.2.9.2	SAF	Electrocardiogram
16.2.9.3	SAF	Physical Examination
16.2.9.4	SAF	Neurological Examination
16.2.9.5	SAF	Columbia-Suicide Severity Rating Scale (C-SSRS)
16.2.9.6	SAF	Questionnaire for Impulsive-Compulsive Disorders in Parkinson's disease Rating Scale (QUIP-RS)
16.2.9.7	SAF	Montreal Cognitive Assessment (MoCA)
16.2.9.8	SAF	Beck Depression Inventory-II
16.2.9.9	SAF	Modified Hoehn and Yahr scale

12. Tables, Listings, and Figure Shells

12.1. Standard Layout for all Tables, Listings, and Figures

The following standard layout will be applied to all Tables, Listings, and Figures in support of this study. Note that programming notes may be added if appropriate after each TLF shell as noted by {}.

Standardized Layout

BlackThorn Therapeutics, Inc. Page xx of xx
Protocol NEP-PD-201 <version>

<Table, Listing, Figure> xx.x.x

<Title of Table Listing or Figure>

<Study Population and if applicable subgroup Description>

Body of Table, Listing or Figure

Note: *<Note: If directly Applicable>*
Footnote 1 *<if applicable>*
Footnote 2 *<if applicable>*
Footnote n *<if applicable>*
Source: Listings xx.x.x, xx.x.x *<if applicable>*
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

12.2. Planned Table Shells

Table 14.1.1
Study Populations and Subject Disposition
All Screened Subjects

Status or Variable/Statistic	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Screened for Eligibility	xx	xx	xx	xx
Randomized	xx	xx	xx	xx
mITT Population [1]	xx	xx	xx	xx
SAF Population [2]	xx	xx	xx	xx
Completed Study Treatment	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Early Discontinuation	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Reason for Early Discontinuation [3]				
Physician decision	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%)
Study terminated by sponsor	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Adverse event	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%)

Note: Percentages are based on the number of subjects in the SAF Population. Assigned/planned treatment groups are presented.
[1] The Modified Intent-to-Treat Population (mITT) includes all randomized subjects who received at least one dose of study drug and have at least 1 post-baseline scoring of motor activity. All subjects will be evaluated according to assigned treatment.
[2] The Safety Population (SAF) includes all subjects who have received study drug. All subjects will be evaluated according to actual treatment type received.
[3] Percentages are based off of number of early terminations per applicable treatment column.
{Programming Note: If treatment/bottle mix-up occurs and subject takes one or more incorrect pills, please footnote this in this table with surrounding details}
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.1.2.1
Demographics
Safety Population

Variable Statistics or Category	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Age (years)				
n	xx	xx	xx	xx
Mean	xx.x	xx.x	xx.x	xx.x
Standard Deviation	xx.xx	xx.xx	xx.xx	xx.xx
Median	xx.x	xx.x	xx.x	xx.x
Minimum, Maximum	xx, xx	xx, xx	xx, xx	xx, xx
Gender				
Male	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Female	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Race				
American Indian or Alaska Native	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%)
More than one race	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)

Note: Percentages are 100*n/N. Treatment groups are based on treatment received.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.1.2.1
Demographics
Safety Population

Variable Statistics or Category	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Ethnicity				
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%)
Height (cm)				
n	xx	xx	xx	xx
Mean	xxx.x	xxx.x	xxx.x	xxx.x
Standard Deviation	xxx.xx	xxx.xx	xxx.xx	xxx.xx
Median	xxx.x	xxx.x	xxx.x	xxx.x
Minimum, Maximum	xxx, xxx	xxx, xxx	xxx, xxx	xxx, xxx
Weight (kg)				
n	xx	xx	xx	xx
Mean	xxx.xx	xxx.xx	xxx.xx	xxx.xx
Standard Deviation	xxx.xxx	xxx.xxx	xxx.xxx	xxx.xxx
Median	xxx.xx	xxx.xx	xxx.xx	xxx.xx
Minimum, Maximum	xxx.x, xxx.x	xxx.x, xxx.x	xxx.x, xxx.x	xxx.x, xxx.x

Note: Percentages are 100*n/N. Treatment groups are based on treatment received.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.1.2.1
Demographics
Safety Population

Variable Statistics or Category	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
BMI (kg/m2)	xx	xx	xx	xx
n	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Mean	xx.xxxx	xx.xxxx	xx.xxxx	xx.xxxx
Standard Deviation	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Median	xx.xx, xx.xx	xx.xx, xx.xx	xx.xx, xx.xx	xx.xx, xx.xx
Minimum, Maximum				
Years of education (yrs)				
n	xx	xx	xx	xx
Mean	xxx.x	xxx.x	xxx.x	xxx.x
Standard Deviation	xxx.xx	xxx.xx	xxx.xx	xxx.xx
Median	xxx.x	xxx.x	xxx.x	xxx.x
Minimum, Maximum	xxx, xxx	xxx, xxx	xxx, xxx	xxx, xxx

Note: Percentages are 100*n/N. Treatment groups are based on treatment received.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.1.2.2
Demographics
Modified Intent-to-Treat Population
{Programming Note: Repeat 14.1.2.1 with mITT population, update footnote to indicate planned treatment groups are presented}

Table 14.1.3
Medical History
Safety Population

System Organ Class [1] Preferred Term	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Number of subjects with at least one medical history event	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
SOC 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
PT 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
PT 2	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
PT 3	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
SOC 2	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
PT 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
PT 2	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)

{Repeated for all applicable SOC/PT combinations}

Note: Percentages are 100*n/N. Treatment groups are based on treatment received. Subjects were counted only once for each System Organ Class and Preferred Term.
[1] Medical History was coded using MedDRA version 20.1.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.1.4
Concomitant Medications
Safety Population

ATC [1] Preferred Term	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Number of subjects with at least one concomitant medication	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
ATC 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Medication 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Medication 2	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
ATC 2				
Medication 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Medication 2	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)

{Repeated for all applicable ATC/PT combinations}

Note: Percentages are 100*n/N. Treatment groups are based on treatment received. Subjects were counted only once for each Anatomical Therapeutic Chemical (ATC) or Preferred Term. A concomitant medication is any non-protocol specified drug or substance administered during participation in the study on or after first date of study drug.
[1] Medications were coded using WHO-DD (Enhanced version Sep. 2017), ATC Level 4
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.1.5
Prior Medications
Safety Population

ATC [1] Preferred Term	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Number of subjects with at least one prior medication	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
ATC 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Medication 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Medication 2	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
ATC 2				
Medication 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Medication 2	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)

{Repeated for all applicable ATC/PT combinations}

Note: Percentages are 100*n/N. Treatment groups are based on treatment received. Subjects were counted only once for each Anatomical Therapeutic Chemical (ATC) or Preferred Term. A prior medication is any non-protocol specified drug or substance administered prior to first date of study drug whether or not it was stopped before study drug administration.
[1] Medications were coded using WHO-DD (Enhanced version Sep. 2017), ATC Level 4
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.2.1.1
Summary of UPDRS Part III Total Score pre-dose to post-dose on Day 1
Modified Intent-to-Treat Population

Parameter Timepoint Statistics	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Pooled BTRX-246040 (N=xx)	Placebo (N=xx)
UPDRS Part III Total Score					
Pre-Dose Day 1					
n	xx	xx	xx	xx	xx
Mean (95% CI)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)
Standard Deviation	xx.xxx	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Median	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Minimum, Maximum	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
Post-Dose Day 1, <timepoint>					
n	xx	xx	xx	xx	xx
Mean (95% CI)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)
Standard Deviation	xx.xxx	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Median	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Minimum, Maximum	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x

{Repeat for all post-dose timepoints, add descriptive summary for maximal change on Day 1 after all post dose day 1 timepoints summarized}

Note: Treatment groups are based on treatment assigned.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.2.1.2
AUC of UPDRS Part III Total Score
Modified Intent-to-Treat Population

Parameter Statistics	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Pooled BTRX-246040 (N=xx)	Placebo (N=xx)
AUC					
n	xx	xx	xx	xx	xx
Mean (95% CI)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)
Standard Deviation	xx.xxx	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Median	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Minimum, Maximum	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x

Note: Treatment groups are based on treatment assigned.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.2.2
Summary of Dyskinesia Rating on Day 1
Modified Intent-to-Treat Population

Parameter Timepoint Statistics	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Pooled BTRX-246040 (N=xx)	Placebo (N=xx)
Dyskinesia Rating					
Pre-Dose Day 1					
0 - No dyskinesia	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
1 - Minimal or slight dyskinesia	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
2 - Mild dyskinesia	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
3 - Moderate dyskinesia	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
4 - Severe dyskinesia	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Post-Dose Day 1, <timepoint>					
0 - No dyskinesia	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
1 - Minimal or slight dyskinesia	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
2 - Mild dyskinesia	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
3 - Moderate dyskinesia	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
4 - Severe dyskinesia	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Post-Dose Day 1 Change, <timepoint>					
n	xx	xx	xx	xx	xx
Mean (95% CI)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)
Standard Deviation	xx.xxx	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Median	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Minimum, Maximum	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x

{Repeat for all post-dose timepoints}

Note: Percentages are 100*n/N. Treatment groups are based on treatment assigned.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.2.3
Summary of Duration of ON and Time to ON on Day 1
Modified Intent-to-Treat Population

Parameter Statistics	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Pooled BTRX-246040 (N=xx)	Placebo (N=xx)
Duration of ON, Day 1 (hours)					
n	xx	xx	xx	xx	xx
Mean (95% CI)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)
Standard Deviation	xx.xxx	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Median	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Minimum, Maximum	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
Time to ON, Day 1 (hours)					
n	xx	xx	xx	xx	xx
Mean (95% CI)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)
Standard Deviation	xx.xxx	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Median	xx.xx	xx.xx	xx.xx	xx.xx	xx.xx
Minimum, Maximum	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
Subjects that turn ON, Day 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)

Note: Percentages are 100*n/N. Treatment groups are based on treatment assigned. Duration of ON, Day 1 = First returned to OFF state datetime (UPDRS2 or DFUP CRF Page) – First reported ON state datetime (UPDRS2 CRF Page). Time to ON, Day 1 = First reported ON state datetime (UPDRS2 CRF Page) – Study drug administration datetime (EX1 CRF Page).
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.2.4
Summary of Pharmacokinetic Parameters
Modified Intent-to-Treat Population

Parameter Statistics	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Cmax				
n	xx	xx	xx	xx
Mean (95% CI)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)
Standard Deviation	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Median	xx.xx	xx.xx	xx.xx	xx.xx
Minimum, Maximum	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
Tmax				
n	xx	xx	xx	xx
Median	xx.xx	xx.xx	xx.xx	xx.xx
Minimum, Maximum	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
λZ				
n	xx	xx	xx	xx
Mean (95% CI)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)
Standard Deviation	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Median	xx.xx	xx.xx	xx.xx	xx.xx
Minimum, Maximum	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
{Continue for T1/2, AUC}				

Note: Treatment groups are based on treatment received.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.3.1.1
Summary of all AEs
Safety Population

Category	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Subjects with at least one [1]				
Treatment Emergent Adverse Event (TEAE)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Mild	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Moderate	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Severe	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
TEAE Potentially Related to Study Drug	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Serious Adverse Event (SAE)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
SAE Potentially Related to Study Drug	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Adverse Event Leading to Discontinuation	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Adverse Event Leading to Death	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)

Note: Percentages are 100*n/N. Treatment groups are based on treatment received. Subjects were counted only once for each System Organ Class and Preferred Term. Additionally, each subject is counted at the most once within the most severe event under the summary of severity TEAEs.If a particular event is missing the severity and/or relationship, then the strongest possible severity or relationship will be assumed for analysis (severity = severe, relationship = related). TEAEs are defined as AEs which start after the first dose of study medication.
[1] Adverse Events were coded using MedDRA version 20.1.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.3.1.2
TEAEs by SOC, and Preferred Term
Safety Population

System Organ Class [1] Preferred Term	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Number of subjects with at least one TEAE	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
SOC 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
PT 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
PT 2	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
PT 3	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
SOC 2	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
PT 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
PT 2	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)

{Repeated for all applicable SOC/PT combinations}

Note: Percentages are 100*n/N. Treatment groups are based on treatment received. Subjects were counted only once for each System Organ Class and Preferred Term.
TEAEs are defined as AEs which start after the first dose of study medication.
[1] Adverse Events were coded using MedDRA version 20.1.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.3.1.3
TEAEs by SOC, Preferred Term and Severity
Safety Population

System Organ Class [1] Preferred Term Severity	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Number of subjects with at least one TEAE	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
SOC 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Mild	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Moderate	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Severe	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
PT 1	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Mild	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Moderate	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Severe	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)

{Repeated for all applicable SOC/PT combinations}

Note: Percentages are 100*n/N. Treatment groups are based on treatment received. Subjects were counted only once for each System Organ Class and Preferred Term under highest severity. If a particular event is missing the severity, then the strongest possible severity will be assumed for analysis (severity = severe). TEAEs are defined as AEs which start after the first dose of study medication.
[1] Adverse Events were coded using MedDRA version 20.1.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.3.1.4
TEAEs by SOC, Preferred Term and Relationship to Study Medication
Safety Population
{Programming Note: Repeat 14.3.1.3 with relationship to study medication levels and change Severity in the footnotes to Relationship. For the strongest possible relationship, put (relationship = related)}

Table 14.3.1.5
TEAEs leading to discontinuation by SOC and Preferred Term
Safety Population
{Programming Note: Repeat 14.3.1.2 subset to TEAEs leading to discontinuation}

Table 14.3.1.6
TESAEs other than deaths by SOC and Preferred Term
Safety Population
{Programming Note: Repeat 14.3.1.2 subset to TESAEs other than deaths}

Table 14.3.1.7
TEAEs leading to death by SOC and Preferred Term
Safety Population
{Programming Note: Repeat 14.3.1.2 subset to TEAEs leading to death}

Table 14.3.2.1
Summary of Clinical Chemistry by Study Visit
Safety Population

Analyte Visit Statistics	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	 Placebo (N=xx)
Analyte (unit)				
Baseline				
n	xx	xx	xx	xx
Mean (95% CI)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)
Standard Deviation	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Median	xx.xx	xx.xx	xx.xx	xx.xx
Minimum, Maximum	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x
Follow-up/ET				
n	xx	xx	xx	xx
Mean (95% CI)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)	xx.xx (x.xx, x.xx)
Standard Deviation	xx.xxx	xx.xxx	xx.xxx	xx.xxx
Median	xx.xx	xx.xx	xx.xx	xx.xx
Minimum, Maximum	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x	xx.x, xx.x

{Programming Note: Continue for all applicable parameters, presenting change from baseline after the summary statistics for Follow-up/ET}

Note: Treatment groups are based on treatment received. The last non-missing observation recorded on or before the first dose of study drug will be used as the baseline observation.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.3.2.2
Summary of Hematology by Study Visit
Safety Population
{Programming Note: Repeat 14.3.2.1 with hematology analytes}

Table 14.3.2.3
Summary of Urinalysis by Study Visit
Safety Population
{Programming Note: Repeat 14.3.2.1 with urinalysis analytes}

Table 14.3.2.4
Summary of Coagulation by Study Visit
Safety Population
{Programming Note: Repeat 14.3.2.1 with coagulation analytes}

Table 14.3.2.5
Shifts from Baseline of Clinical Chemistry by Study Visit
Safety Population

	Baseline											
Analyte	BTRX-246040 40 mg (N=xx)			BTRX-246040 80 mg (N=xx)			BTRX-246040 120 mg (N=xx)			Placebo (N=xx)		
Follow-up/ET Results	Low	Normal	High	Low	Normal	High	Low	Normal	High	Low	Normal	High
Analyte (unit)												
Low	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Normal	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
High	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	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%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Analyte (unit)												
Low	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Normal	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
High	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	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%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)

Note: Percentages are 100*n/N. Treatment groups are based on treatment received. Baseline result is presented horizontally across the top, and Follow-up/ET result is presented vertically in the first column. The last non-missing observation recorded on or before the first dose of study drug will be used as the baseline observation.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.3.2.6
Shifts from Baseline of Hematology by Study Visit
Safety Population
{Programming Note: Repeat 14.3.2.4 with hematology analytes}

Table 14.3.2.7
Shifts from Baseline of Urinalysis by Study Visit
Safety Population
{Programming Note: Repeat 14.3.2.4 with urinalysis analytes}

Table 14.3.2.8
Shifts from Baseline of Coagulation by Study Visit
Safety Population
{Programming Note: Repeat 14.3.2.4 with coagulation analytes}

Table 14.3.3.1
Summary of Vital Signs by Study Visit
Safety Population
{Programming Note: Repeat 14.3.2.1 with vital signs parameters and all applicable study visits/change from baselines}

Table 14.3.3.2
Summary of Orthostatic Blood Pressure and Pulse by Study Visit
Safety Population
{Programming Note: Repeat 14.3.2.1 with orthostatic blood pressure and pulse for all applicable study visits/change from baselines. The Average of the three BP and Pulse measurements will be used for baseline, update footnote as applicable (as in 14.3.3.3) to reflect this}

Table 14.3.3.3
Incidence of Abnormal Orthostatic Blood Pressure by Study Visit
Safety Population

Visit Change from Baseline	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Day 1, 2 hours post-dose	xx	xx	xx	xx
>= 20 mmHg systolic blood pressure drop	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
>= 10 mmHg diastolic blood pressure drop	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Day 1, 4 hours post-dose	xx	xx	xx	xx
>= 20 mmHg systolic blood pressure drop	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
>= 10 mmHg diastolic blood pressure drop	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Day 1, 6 hours post-dose	xx	xx	xx	xx
>= 20 mmHg systolic blood pressure drop	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
>= 10 mmHg diastolic blood pressure drop	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Day 1, 8 hours post-dose	xx	xx	xx	xx
>= 20 mmHg systolic blood pressure drop	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
>= 10 mmHg diastolic blood pressure drop	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Follow-up/ET	xx	xx	xx	xx
>= 20 mmHg systolic blood pressure drop	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
>= 10 mmHg diastolic blood pressure drop	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)

Note: Percentages are 100*n/N. Treatment groups are based on treatment received. The average of the three BP and pulse measurements will be used for comparison to all post-treatment measurements to minimize the impact of biological variability and to serve as a more reliable baseline orthostatic vital sign measurement..
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.3.3.4
Summary of ECG Parameters by Study Visit
Safety Population
{Programming Note: Repeat 14.3.2.1 with ECG parameters and all applicable study visits/change from baselines}

Table 14.3.3.5
Incidence of Abnormal ECG by Study Visit
Safety Population

Visit Category	BTRX-246040 40 mg (N=xx)	BTRX-246040 80 mg (N=xx)	BTRX-246040 120 mg (N=xx)	Placebo (N=xx)
Baseline	xx	xx	xx	xx
Normal	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Abnormal, not clinically significant	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Abnormal, clinically significant	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Day 1, 1 hour post-dose	xx	xx	xx	xx
Normal	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Abnormal, not clinically significant	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Abnormal, clinically significant	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Follow-up/ET	xx	xx	xx	xx
Normal	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Abnormal, not clinically significant	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)
Abnormal, clinically significant	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)	xx (xx.x%)

Note: Percentages are 100*n/N. Treatment groups are based on treatment received. The last non-missing observation recorded on or before the first dose of study drug will be used as the baseline observation.
SOURCE: Listings xx.x.x, xx.x.x
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Table 14.3.4.1
Summary of Impulsive Control Disorder and QUIP-RS by Study Visit
Safety Population
{Programming Note: Repeat 14.3.2.1 with QUIP-RS and Impulsive Control Disorder parameters (including Total ICD, Total QUIP-RS) and all applicable study visits/change from baselines}

12.3. Planned Figure Shells

Figure 14.2.1
AUC of UPDRS Part III Total Score
Modified Intent-to-Treat Population
{Programming Note: Line plot by cohort for 8 hours of collected UPDRS Part III Total Scores. Y = UPDRS Part III Score, X = Time}

Figure 14.2.2
Scatter Plot of maximal change in UPDRS Part III Total Score
Modified Intent-to-Treat Population
{Programming Note: Scatter plot by cohort of maximum change for UPDRS Part III Total Scores. Y = Change in UPDRS Part III Score, X = Time}

Figure 14.2.3
Scatter Plot of UPDRS Part III Total Score by timepoint
Modified Intent-to-Treat Population
{Programming Note: Scatter plot by cohort of UPDRS Part III Total Scores. Y = UPDRS Part III Score, X = Individual Timepoints}

Figure 14.3.1
Scatter Plot of serum concentration (linear)
Safety Population
{Programming Note: Scatter plot by cohort of serum concentration (active treatment only). Y = serum concentration (linear scale), X = Time}

Figure 14.3.2
Scatter Plot of serum concentration (logarithmic)
Safety Population
{Programming Note: Scatter plot by cohort of serum concentration (active treatment only). Y = serum concentration (log scale), X = Time}

12.4. Planned Listing Shells

Listing 16.2.1.1
Assignment to Analysis Populations and Treatment Arm
All Subjects Screened

Subject ID	Randomized?	Randomization Date	Randomization Number	Cohort	Planned Treatment	Actual Treatment	mITT	SAF
XXXXX	Yes	DDMMMYYYY	XXXX	Cohort 1	xxxxxxx	xxxxxxx	Yes	Yes
XXXXX	Yes	DDMMMYYYY	XXXX	Cohort 2	xxxxxxxxxx	xxxxxxxxxx	Yes	Yes
XXXXX	Yes	DDMMMYYYY	XXXX	Cohort 3	xxxxxxx	xxxxxxx	Yes	Yes
XXXXX	No						No	No

Note: mITT = Modified Intent-to-Treat Population, SAF = Safety Population.
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.1.2
Study Completion Status and Reasons for Discontinuation
All Subjects Screened

Planned Treatment: XXXXXXX

Subject ID	Screen Date	Completed Study?	Date Completed	Date of Discontinuation	Reason for Discontinuation	Date of Last Contact if Lost to Follow-Up/ Reason	Date of Death/ Reason	Was the Blind Broken for this Subject?/ Date Broken/ Reason
XXXXX	DDMMMYYYY	Yes	DDMMMYYYY			DDMMMYYYY		
XXXXX	DDMMMYYYY	Yes	DDMMMYYYY	DDMMMYYYY	xxxxxxxxxxxx xxxxx	DDMMMYYYY/ xxxxxxx xxxx	DDMMMYYYY/ xxxxxxxxx	Yes/ DDMMMYYYY/ xxxxxxxx xxxx x xxxxxxx xxxx
XXXXX	DDMMMYYYY	No		DDMMMYYYY	xxxxxxxxxxxx xxxxx	DDMMMYYYY		
XXXXX	DDMMMYYYY	Yes	DDMMMYYYY			DDMMMYYYY		

{Programming Note: In the case of screen failure, put "SCREEN FAILURE," concatenated SCR_FAIL.DSREAS (either ELIGIBILITY, WITHDRAWAL OF CONSENT, ADVERSE EVENT, or OTHER:). In the case of Other, also concatenate the Other specify reason. For post-randomization discontinuations, put NCOMPLT. In addition, for AE, PHYSICIAN DECISION, or OTHER, add a colon, a space, and the associated specify reason.}

Listing 16.2.1.3
Inclusion and Exclusion Criteria
All Subjects Screened

Subject ID	Did subject meet all eligibility criteria?	Criteria Not Met	Description of Criteria Not Met
XXXXX	No	Inclusion #1, Exclusion #2	xxxxxxxxxxxxxxxxxx xxxxxxxx xxxxxxxxxxxxx; xxxxxxxxxxxxxxxxxxxxx
XXXXX	Yes		
XXXXX	Yes		
XXXXX	No	Inclusion #9	xxxxxxxxxxxxxxxxxx xxxxxxxxxxx xxxxxxxxxxx

T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.2.1
Protocol Deviations
Modified Intent-to-Treat Population

Planned Treatment: XXXXXXX

Subject ID	Event Date	Event Report Date	Event Type	Event Category	Description
XXXXX	DDMMMYYYY	DDMMMYYYY	Major	xxxxxxxxxxxx	xxxxxxxxxxxxxxx xxxxxxxxxx; xxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxx xxx
XXXXX	DDMMMYYYY	DDMMMYYYY	Minor	xxxxxxxxxxxx	xxxxxxxxxxxxxxx xxxxxxxxxx; xxxxxxxxxxxxxxx xxxxxxxx
XXXXX	DDMMMYYYY	DDMMMYYYY	Minor	xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxx; xxxxxxxxx
XXXXX	DDMMMYYYY	DDMMMYYYY	Major	xxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxx; xxxxxxxxxxxxxx xxxxxxxxx

T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.4.1
Demographics
Safety Population

Actual Treatment: XXXXXXX

Subject ID	Informed Consent Date	Date of Birth	Age (yrs)	Gender	Ethnicity	Race	Years of Education	Baseline Weight (kg)	Baseline Height (cm)	Baseline BMI (kg/m2)
XXXXX	DDMMMYYYY	DDMMMYYYY	xx	Female	xxxxxxxxxxxx	xxxxxxxxxx	xx	xx.x	xx	xx.xx
XXXXX	DDMMMYYYY	DDMMMYYYY	xx	Male	xxxxxxx	xxxxx	xx	xx.x	xx	xx.xx
XXXXX	DDMMMYYYY	DDMMMYYYY	xx	Male	xxxxxx	xxxx	xx	xx.x	xx	xx.xx
XXXXX	DDMMMYYYY	DDMMMYYYY	xx	Female	xxxxxxxxxx	xxxxxxxxx	xx	xx.x	xx	xx.xx

T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.4.2
Medical and PD History
Safety Population

Actual Treatment: XXXXXXX

Subject ID	Any History?	Ongoing?	System Organ Class [1]/ Preferred Term/ Verbatim Term	Start Date/ End Date	Medication given?/ Intensity	Parkinson's Disease History Date of Diagnosis
XXXXX	Yes	No	XXXXXXXXXXXXXXXXXX/ XXXXXXX/ XXXXXXXXXXXXXXXXXXXXXXX	DDMMMYYYY/ DDMMMYYYY	No/xxxxx	DDMMMYYYY
XXXXX		Yes	XXXXXXXXXXXXXXXXX/ XXXXXXX/ XXXXXXXXXXXXXXXXXXXXXXX	DDMMMYYYY/ ONGOING	Yes/xxxxx	DDMMMYYYY
XXXXX	No					DDMMMYYYY
XXXXX	Yes	No	XXXXXXXXXXXXXXXXXX/ XXXXXXX/ XXXXXXXXXXXXXXXXXXXXXXX	DDMMMYYYY/ DDMMMYYYY	Yes/xxxxxx	DDMMMYYYY

[1] Medical history was coded using MedDRA version 20.1.
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.4.3
Concomitant and Prior Medications
Safety Population

Actual Treatment: XXXXXXX

Subject ID	Any Meds?	Type [1]	Anatomic Therapeutic Class (level 4) [2]/ Preferred Term/ Verbatim Term	Start Date (Study Day)/ End Date (Study Day) [3]	Indication	Dose (unit)/ Route/ Frequency
XXXXX	Yes	C	XXXXXXXXXXXXXXXXXX/ XXXXXXX/ XXXXXXXXXXXXXXXXXXXXXXXXXXXX	DDMMMYYYY (xx)/ DDMMMYYYY (xx)	xxxxxxxxxx	XXXXXXXXXXXXXXXXXX <units> / XXXXXXX/ XXXXXXXXXXXXXXXXXXXX
		C	XXXXXXXXXXXXXXXXXX/ XXXXXXX/ XXXXXXXXXXXXXXXXXXXXXXXXX	DDMMMYYYY (xx)/ ONGOING	xxxxxxx	XXXXXXXXXXXXXXXXXX <units> / XXXXXXX/ XXXXXXXXXXXXXXXXXXXX
XXXXX	No					
XXXXX	Yes	P	XXXXXXXXXXXXXXXXXX/ XXXXXXX/ XXXXXXXXXXXXXXXXXXXXXXXXX	DDMMMYYYY (xx)/ ONGOING	xxxxxxx	XXXXXXXXXXXXXXXXXX <units> / XXXXXXX/ XXXXXXXXXXXXXXXXXXXX

[1] C = Concomitant medication, administered during participation in the study, on or after first date of study drug; P = Prior Medication, administered prior to first date of study drug whether or not stopped prior to study drug administration.
[2] Medications were coded using WHO-DD Enhanced Version Sep. 2017, ATC level 4.
[3] Study Day = Assessment Date – Date of First Dose + 1
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.5.1.1
Drug Accountability
Safety Population

Planned Treatment: XXXXXXX

Subject ID	Drug dispensed?	Reason not dispensed	Date dispensed	Bottle 1 dispensed/ Bottle number	Bottle 2 dispensed/ Bottle number	Bottle 3 dispensed/ Bottle number	Bottle 4 dispensed/ Bottle number
XXXXX	Yes		DDMMMYYYY	Yes/xxxx	Yes/xxxx*	Yes/xxxx	Yes/xxxx
XXXXX	No	xxxx xxxxxxxxx					
XXXXX	Yes		DDMMMYYYY	Yes/xxxx	Yes/xxxx	No	No
XXXXX	Yes		DDMMMYYYY	Yes/xxxx	Yes/xxxx	No	No

* Actual Treatment does not match Planned Treatment.
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

{Programming Note: Bottle 4 dispensed date may not be necessary, please check data prior to including this column.}

Listing 16.2.5.1.2
Study Drug Administration
Safety Population

Actual Treatment: XXXXXXX

Subject ID	Drug Administered?	Reason not administered	Date of administration	Time of administration	Number of capsules taken
XXXXX	Yes		DDMMMYYYY	HH:MM	xx
XXXXX	No	xxxx xxxxxxxxx			
XXXXX	Yes		DDMMMYYYY	HH:MM	xx
XXXXX	Yes		DDMMMYYYY	HH:MM	xx

T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

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Protocol NEP-PD-201

Listing 16.2.5.2
Serum Concentration of BTRX-246040
Safety Population

Actual Treatment: XXXXXXX

Subject ID	Sample collected?	Reason not collected	Timepoint	Date collected	Time collected	Serum concentration (unit)
XXXXX	Yes		Pre-dose	DDMMMYYYY	HH:MM	xx.xx
	Yes		30 minutes post-dose	DDMMMYYYY	HH:MM	xx.xx
	Yes		60 minutes post-dose	DDMMMYYYY	HH:MM	xx.xx
	Yes		120 minutes post-dose	DDMMMYYYY	HH:MM	xx.xx
	Yes		240 minutes post-dose	DDMMMYYYY	HH:MM	xx.xx
	No	xxxxxxxxxxxxx	480 minutes post-dose			
XXXXX	No		Pre-dose			

T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.6.1
Unified Parkinson's Disease Rating Scale (Part III)
Modified Intent-to-Treat Population

Planned Treatment: XXXXXXX

Subject ID	Was assessment completed?	Reason not completed	Date of Assessment	Start time	Timepoint	Status	Question Text	Result
XXXXX	Yes		DDMMMYYYY	HH:MM	30 minutes post-dose	ON	xxxxxxxx xxxxxxxxxx xxxxxxxxxx	xxx
							xxxxxxxx xxxxxxxxxx xxxxxxxxxx	xxx
							xxxxxxxx xxxxxxxxxx xxxxxxxxxx	xxx
							xxxxxxxx xxxxxxxxxx xxxxxxxxxx	xxx
							xxxxxxxx xxxxxxxxxx xxxxxxxxxx	xxx
							xxxxxxxx xxxxxxxxxx xxxxxxxxxx	xxx
							xxxxxxxx xxxxxxxxxx xxxxxxxxxx	xxx
							... .	
					60 minutes post-dose	OFF	xxxxxxxx xxxxxxxxxx xxxxxxxxxx	xxx
							xxxxxxxx xxxxxxxxxx xxxxxxxxxx	xxx

T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

{Programming Note: Dyskinesia rating and Total Score for UPDRS appears in 16.2.6.2, include screening UPDRS results, if more space is required combine time and date columns}

Listing 16.2.6.2
Total UPDRS Score (Part III) and Dyskinesia Rating
Modified Intent-to-Treat Population

Planned Treatment: XXXXXXX

Subject ID	Was assessment completed?	Reason not completed	Date of Assessment	Start time	Timepoint	Status	Total UPDRS Score (Part III)	Dyskinesia Rating
XXXXX	Yes		DDMMMYYYY	HH:MM	30 minutes post-dose	ON	xxx	xxx xxxxxxxxxx
					60 minutes post-dose	ON	xxx	xxx xxxxxxxxxx
					90 minutes post-dose	ON	xxx	xxx xxxxxxxxx
					120 minutes post-dose	ON	xxx	xxx xxxxxxxxxxx
					....			

T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

{Programming Note: Include screening UPDRS results}

Listing 16.2.6.3
Time to and Duration of ON state
Modified Intent-to-Treat Population

Planned Treatment: XXXXXXX

Subject ID	On State Datetime	Off State Datetime	Study administration Datetime	Time to On State (hrs) [1]	Duration of ON State (hrs) [2]
XXXXX	DDMMMYYYY: HH:MM	DDMMMYYYY: HH:MM	DDMMMYYYY: HH:MM	xxx.x	xxx.x
XXXXX	DDMMMYYYY: HH:MM	DDMMMYYYY: HH:MM	DDMMMYYYY: HH:MM	xxx.x	xxx.x
XXXXX	DDMMMYYYY: HH:MM	DDMMMYYYY: HH:MM	DDMMMYYYY: HH:MM	xxx.x	xxx.x
XXXXX	DDMMMYYYY: HH:MM	DDMMMYYYY: HH:MM	DDMMMYYYY: HH:MM	xxx.x	xxx.x

[1] Duration of ON time on Day 1 = First returned to OFF state Datetime (UPDRS2 or DFUP CRF Page) - First reported ON state Datetime (UPDRS2 CRF Page).
[2] Time to ON on Day 1 = First reported ON state Datetime (UPDRS2 CRF Page) - Study drug administration Datetime (EX1 CRF Page)
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.7.1
Treatment-emergent adverse events
Safety Population

Actual Treatment: XXXXXXX

Subject ID	System Organ Class [1]/ Preferred Term/ Verbatim Term	Start Datetime (Study Day) [2]/ End Datetime (Study Day)	Event Duration (days:hrs:min) [3]	Severity/ Relationship to Study Drug	Outcome/ Study Med Action Taken/Other Action Taken	Serious	CA/DIS/HO/ DE/LT/OTH [4]
XXXXX	xxxxxxxxxx xxxxx xxxxx/ xxxxxxxxxxxxxxxx/ xxxxxxxxxxxxxxxxx	DDMMMYYYY:HH:MM (xx)/ DDMMMYYYY:HH:MM (xx)	DD:HH:MM	xxxxxxx/ xxxxxxxxxxxxxxx	xxxxxxxxxxxxx/ xxxxxxxxxxx xxxxxx/ xxxxxxxxxxxxxx	No	No/No/No/ No/No/No
XXXXX	xxxxxxxxxx xxxxx xxxxx/ xxxxxxxxxxxxxxxxxxxxx/ xxxxxxxxxxx xxxxxxxxxxxxx	DDMMMYYYY:HH:MM (xx)/ DDMMMYYYY:HH:MM (xx)	DD:HH:MM	xxxxxxx/ xxxxxxxxxxxxxxx	xxxxxxxxxxxxx/ xxxxxxxxxxx/ xxxxxxxxx	Yes	No/No/Yes/ No/No/Yes
XXXXX	xxxxxxxxxx xxxxx xxxxx/ xxxxxxxxxxxxxxxxxx/ xxxxxxxxxxxxxxxxx	DDMMMYYYY:HH:MM (xx)/ ONGOING	DD:HH:MM	xxxxxxx/ xxxxxxxxxxxxxxx	xxxxxxxxxxxxx/ xxxxxxxxxxx / xxxxxx	No	No/No/No/ No/No/No

[1] Adverse Events were coded using MedDRA version 20.1.
[2] Study Day = Assessment Date – Date of First Dose + 1.
[3] Days:Hours:Minutes is based on End Date & Time – Start Date & Time + 1
[4] CA = Congenital abnormality or birth defect, DE = Death (fatal), DIS = Persistent or significant disability/incapacity, HO = Hospitalization or prolongation of hospitalization, LT = Life-threatening event, OTH = Other important medical event.
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

{Programming Note: Event duration will be displayed as DD:HH:MM, and is the difference of end datetime – start datetime + 1. if other action is populated, concatenate with action taken with study medication separated by semi-colon. If there is "Procedure, specify" or "Other, specify" details, they would also need to be presented here. If Death is marked as Yes, add date in column for death date pulled from disposition data separated by semi-colon. }

Listing 16.2.7.2
Serious adverse events
Safety Population
{Programming Note: Repeat 16.2.7.1 with only SAEs}

Listing 16.2.7.3
Adverse Events leading to discontinuation
Safety Population
{Programming Note: Repeat 16.2.7.1 with only AEs leading to discontinuation}

Listing 16.2.7.4
Listing of deaths
Safety Population
{Programming Note: Repeat 16.2.7.1 with only fatal AEs}

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Protocol NEP-PD-201

Listing 16.2.8.1
Clinical Chemistry
Safety Population

Actual Treatment: XXXXXXX

Subject ID /Age/Sex	Analyte (units)	Visit (Study Day[1])	Collection Date/ Collection Time	Sample collected?	Test Result [2]	Units	Standard Reference Range Low	Standard Reference Range High	Change from Baseline	Accession Number
XXXXX/XX/M	xxxxxxxxxx	xxx (xx)	DDMMMYYYY/ HH:MM	Yes	xxxxx	xxxxx	xx	xx		xxxxxxxx
		xxx (xx)	DDMMMYYYY/ HH:MM	No						
		xxx (xx)	DDMMMYYYY/ HH:MM	Yes	xxxxx^	xxxxx	xx	xx	xxx	xxxxxxxxxx
XXXXX/XX/F	xxxxxxxxxx	xxx (xx)	DDMMMYYYY/ HH:MM	Yes	xxxxx	xxxxx	xx	xx		xxxxxxxx
		xxx (xx)	DDMMMYYYY/ HH:MM	Yes	xxxxx	xxxxx	xx	xx	xxx	xxxxxxxx

[1] Study Day = Assessment Date – Date of First Dose + 1
[2] L = low result, H = high result, ^ = abnormal result.
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY
{Programming note, if abnormal, add clinical significance if collected to test result column}

Listing 16.2.8.2
Hematology
Safety Population
{Programming Note: Repeat 16.2.8.1 with hematology analytes}

Listing 16.2.8.3
Urinalysis
Safety Population
{Programming Note: Repeat 16.2.8.1 with urinalysis analytes}

Listing 16.2.8.4
Coagulation
Safety Population
{Programming Note: Repeat 16.2.8.1 with coagulation analytes}

Listing 16.2.8.5
Urine Drug Screen
Safety Population

Actual Treatment: XXXXXXX

Subject ID	Analyte	Visit (Study Day[1])	Date and Time Performed	Drug Screen Performed?	Reason not Performed	Test Result [2]	Comments
XXXXX	xxxxxxxxxx	xxx (xx)	DDMMMYYYY/HH:MM	Yes		xxxxx	
	xxxxxxxxxx	xxx (xx)	DDMMMYYYY/HH:MM	No	xxxxxxxxxx		xxxxxx
	xxxxxxxxxx	xxx (xx)	DDMMMYYYY/HH:MM	Yes		xxxxx	
	xxxxxxxxxx	xxx (xx)	DDMMMYYYY/HH:MM	Yes		xxxxx	
	xxxxxxxxxx	xxx (xx)	DDMMMYYYY/HH:MM	Yes		xxxxx	xxxxxxxx
	xxxxxxxxxx	xxx (xx)	DDMMMYYYY/HH:MM	Yes		xxxxx	xxxxxx
	xxxxxxxxxx	xxx (xx)	DDMMMYYYY/HH:MM	Yes		xxxxx	xxxxxxx
	xxxxxxxxxx	xxx (xx)	DDMMMYYYY/HH:MM	Yes		xxxxx	
	xxxxxxxxxx	xxx (xx)	DDMMMYYYY/HH:MM	Yes		xxxxx	

[1] Study Day = Assessment Date – Date of First Dose + 1
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

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Protocol NEP-PD-201

Listing 16.2.9.1
Vital Signs
Safety Population

Actual Treatment: XXXXXXX

Subject ID	Visit (Study Day[1])	Position	Datetime of Measurement	Vital Signs Collected?	Reason not collected	Height (cm)	Weight (kg)	BMI (kg/m2)	Temp (C)	Respir-ation Rate (bpm)	Pulse (beats/min)	Systolic Blood Pressure (mmHg)	Diastolic Blood Pressure (mmHg)
XXXXX	xxx (xx)	N/A	DDMMMYYYY: HH:MM	Yes		xxx.x	xxx.x	xx.x	xxx.x				
	xxx (xx)	Supine	DDMMMYYYY: HH:MM	Yes						xxx	xxx	xxx	xxx
	xxx (xx)	Standing	DDMMMYYYY: HH:MM	Yes						xxx	xxx	xxx	xxx
	xxx (xx)	N/A	DDMMMYYYY	Yes		xxx.x	xxx.x	xx.x	xxx.x				
	xxx (xx)	Supine	DDMMMYYYY: HH:MM	Yes						xxx	xxx	xxx	xxx
	xxx (xx)	Standing	DDMMMYYYY: HH:MM	No	xxxxxx								

[1] Study Day = Assessment Date – Date of First Dose + 1

T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.9.2
Electrocardiogram
Safety Population

Actual Treatment: XXXXXXX

Subject ID	Visit (Study Day[1])	Date of Measurement	Time Collected	ECG Collected?	Reason not collected	PR (msec)	QRS (msec)	QT (msec)	QTcB (msec)	QTcF (msec)	RR (msec)	Investigator Interpretation [2]
XXXXX	xxx (xx)	DDMMMYYYY	HH:MM	Yes		xxx	xxx	xxx	xxx	xxx	xxx	Normal
	xxx (xx)	DDMMMYYYY	HH:MM	Yes		xxx	xxx	xxx	xxx	xxx	xxx	Normal
XXXXX	xxx (xx)	DDMMMYYYY	HH:MM	Yes		xxx	xxx	xxx	xxx	xxx	xxx	Normal
	xxx (xx)	DDMMMYYYY	HH:MM	Yes		xxx	xxx	xxx	xxx	xxx	xxx	Abnormal, NCS
XXXXX	xxx (xx)	DDMMMYYYY	HH:MM	No	xxxxxx							
	xxx (xx)	DDMMMYYYY	HH:MM	Yes		xxx	xxx	xxx	xxx	xxx	xxx	Abnormal, NCS

[1] Study Day = Assessment Date – Date of First Dose + 1
[2] CS = clinically significant, NCS = not clinically significant.
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.9.3
Physical Examination
Safety Population

Actual Treatment: XXXXXXX

Subject ID	Visit (Study Day[1])	Exam Date	Exam Time	Performed?	Body System	Result	Abnormal Findings	Clinically Significant [2]
XXXXX	xxx (xx)	DDMMMYYYY	HH:MM	Yes	xxxxxxx	xxxxxxxxxx		
					xxxxxxx	xxx		
					xxxxxxx	xxxxx		
					xxxxxxx	xxxxxxxxxx	xxxxxxx	NCS
					xxxxxxx	xxxxxxxxx		
					xxxxxxx	xxxxxxxxx		
					xxxxxxx	xxxxxxxx		
					xxxxxxx	xxxxxxxxxx	xxxxxxxxxx	CS

[1] Study Day = Assessment Date – Date of First Dose + 1
[2] CS = clinically significant, NCS = not clinically significant.
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.9.4
Neurological Examination
Safety Population

{Programming Note: Repeat 16.2.9.3, use applicable Neurological Examination question text/results. In the header, replace "Body System" with "Neurological System"}

Listing 16.2.9.5
Columbia-Suicide Severity Rating Scale (C-SSRS)
Safety Population
{Programming Note: Repeat 16.2.6.1, drop timepoint, status and use applicable C-SSRS question text/results}

Listing 16.2.9.6
Questionnaire for Impulsive-Compulsive Disorders in Parkinson's disease Rating Scale (QUIP-RS)
Safety Population
{Programming Note: Repeat 16.2.6.1, drop timepoint, status and use applicable QUIP-RS question text/results, including ICD, QUIP-RS}

Listing 16.2.9.7
Montreal Cognitive Assessment (MoCA)
Safety Population

Actual Treatment: XXXXXXX

Subject ID [1]	Visit (Study Day[2])	Date of Assessment	Time Collected	Assessment Collected?	Reason not collected	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Total
XXXXX	xxx (xx)	DDMMMYYYY	HH:MM	Yes		xx	xx	xx	xx	xx	xx	xx	xx	xxx
	xxx (xx)	DDMMMYYYY	HH:MM	Yes		xx	xx	xx	xx	xx	xx	xx	xx	xxx
XXXXX*	xxx (xx)	DDMMMYYYY	HH:MM	Yes		xx	xx	xx	xx	xx	xx	xx	xx	xxx
	xxx (xx)	DDMMMYYYY	HH:MM	Yes		xx	xx	xx	xx	xx	xx	xx	xx	xxx
XXXXX	xxx (xx)	DDMMMYYYY	HH:MM	No	xxxxxx									
	xxx (xx)	DDMMMYYYY	HH:MM	Yes		xx	xx	xx	xx	xx	xx	xx	xx	xxx

Note: Q1 = Visuospatial/Executive, Q2 = Naming, Q3 = Memory, Q4 = Attention, Q5 = Language, Q6 = Abstraction, Q7 = Delayed Recall, Q8 = Orientation
[1] * = Subject has less than or equal to 12 years of education. For these subjects, 1 point is added to the total score.
[2] Study Day = Assessment Date – Date of First Dose + 1
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Listing 16.2.9.8
Beck Depression Inventory-II
Safety Population
{Programming Note: Repeat 16.2.9.7, update footnote and stack columns as necessary to fit additional questions}

Listing 16.2.9.9
Modified Hoehn and Yahr scale
Safety Population

Actual Treatment: XXXXXXX

Subject ID	Visit (Study Day[1])	Date of Assessment	Time Collected	Hoehn and Yahr Staging Score
XXXXX	xxx (xx)	DDMMMYYYY	HH:MM	xxxxxxxxx
	xxx (xx)	DDMMMYYYY	HH:MM	xxxxxxxxx
XXXXX	xxx (xx)	DDMMMYYYY	HH:MM	xxxxxxxxx
	xxx (xx)	DDMMMYYYY	HH:MM	xxxxxxxxx
XXXXX	xxx (xx)	DDMMMYYYY	HH:MM	
	xxx (xx)	DDMMMYYYY	HH:MM	xxxxxxxxx

[1] Study Day = Assessment Date – Date of First Dose + 1
T:\BlackThorn\ NEP-PD-201\...\xxxxxx.sas run on DDMMMYYYY at HH:MM on data extracted on DDMMMYYYY

Appendix 1: Library of Abbreviations

Abbreviation	Definition
ATC	anatomical therapeutic chemical
AUC	area under the curve
BLQ	beneath limit of quantification
BMI	body mass index
CI	confidence interval
CRF	case report form
CRO	contract research organization
CS	clinically significant
CSR	clinical study report
C-SSRS	Columbia Suicide Severity Rating Scale
DB	database
DBL	database lock
DBP	diastolic blood pressure
DRC	dosing review committee
ECG	electrocardiogram
eCRF	electronic case report form
EDC	electronic data capture
EMA	european medicines agency

Abbreviation	Definition
eTMF	electronic trial master file
FDA	food and drug administration
HR	heart rate
IB	investigator's brochure
ICH	international council for harmonization
IWRS	interactive web-response system
LLOQ	lower limit of quantification
LOD	limit of detection
MedDRA	medical dictionary for regulatory activities
mITT	modified intent-to-treat population
NA	not applicable
NCS	non-clinically significant
PD	Parkinson's Disease
PE	physical examination
PK	pharmacokinetic
PD	protocol deviation
SAE	serious adverse event
SAF	safety analysis population
SAP	statistical analysis plan

Abbreviation	Definition
SAS®	a software system used for data analysis
SBP	systolic blood pressure
SD	standard deviation
SE	standard error
SOC	system organ class
SOP	standard operating procedure
TEAE	treatment-emergent adverse event
TMF	trial master file
ULOQ	upper limit of quantification
UPDRS	Unified Parkinson's Disease Rating Scale
WHO	world health organization
WHO-DD	world health organization drug dictionary