Clinical trial results:
A Randomized, Placebo-controlled, 2-way Crossover, Double-blind Study to Evaluate the Efficacy, Safety and Tolerability of JNJ-42847922 in Subjects With Insomnia Disorder Without Psychiatric Comorbidity.

Summary

EudraCT number	2015-001672-22
Trial protocol	DE NL
Global end of trial date	02 December 2015

Results information

Result version number	v1 (current)
This version publication date	16 December 2016
First version publication date	16 December 2016

Trial information

Trial identification

Sponsor protocol code	42847922ISM2002

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT02464046
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Janssen-Cilag International NV
Sponsor organisation address	Turnhoutseweg 30, Beerse, Belgium, 2340
Public contact	Clinical Registry Group, Janssen-Cilag International NV, ClinicalTrialsEU@its.jnj.com
Scientific contact	Clinical Registry Group, Janssen-Cilag International NV, ClinicalTrialsEU@its.jnj.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	02 December 2015
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	02 December 2015
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The main purpose of the study was to investigate the effect of JNJ-42847922 (change versus placebo) on sleep efficiency (SE), defined as total sleep time (TST) / time in bed (TIB), measured by polysomnography (PSG) after single and multiple dose administration to subjects with insomnia disorder without psychiatric comorbidity.

Protection of trial subjects:

This study was conducted in accordance with the ethical principles that have their origin in the Declaration of Helsinki and that are consistent with Good Clinical Practices and applicable regulatory requirements. Safety and tolerability evaluations were based upon physical examinations, vital signs, electrocardiogram (ECGs), urine drug and pregnancy testing, clinical labs (hematology, chemistry panel, and urinalysis), cognitive test battery, columbia suicide severity rating scale (C-SSRS), bond and lader visual analogue scale, karolinska sleepiness scale (KSS) and adverse events (AEs) /serious adverse events (SAEs) were reported throughout the study.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	01 August 2015
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Germany: 15
Country: Number of subjects enrolled	Netherlands: 5
Country: Number of subjects enrolled	United States: 8
Worldwide total number of subjects	28
EEA total number of subjects	20

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0

Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	28
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

A total of 28 subjects with insomnia without psychiatric comorbidity received the study treatment, out of which 27 subjects completed the study.

Period 1

Period 1 title	Crossover Study (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator

Arms

Are arms mutually exclusive?	Yes
Arm title	Placebo followed by JNJ-42847922

Arm description:

Subjects received Placebo once daily (qd) for 5 days in treatment Period 1 followed by 40 milligram (mg) JNJ-42847922 qd for 5 days in treatment Period 2 via oral route. Both the treatment periods were separated by a washout period of minimum 5 days.

Arm type	Experimental
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Subjects received JNJ-42847922 matching Placebo tablets qd for 5 days via oral route.

Investigational medicinal product name	JNJ-42847922
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Subjects received 40 milligram (mg) JNJ-42847922 (2 x 20-mg tablets) qd for 5 days via oral route.

Arm title	JNJ-42847922 followed by Placebo

Arm description:

Subjects received 40 mg JNJ-42847922 once daily (qd) for 5 days in treatment Period 1 followed by Placebo qd for 5 days in treatment period 2 via oral route. Both the treatment periods were separated by a washout period of minimum 5 days.

Arm type	Experimental
Investigational medicinal product name	JNJ-42847922
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Subjects received 40 mg JNJ-42847922 (2 x 20-mg tablets) via qd for 5 days via oral route.

Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Subjects received JNJ-428479225 matching Placebo tablets qd for 5 days via oral route.

Number of subjects in period 1	Placebo followed by JNJ-42847922	JNJ-42847922 followed by Placebo
Started	14	14
Completed	13	14
Not completed	1	0
Consent withdrawn by subject	1	-

Baseline characteristics

Reporting groups	
Reporting group title	Placebo followed by JNJ-42847922
Reporting group description:	
Subjects received Placebo once daily (qd) for 5 days in treatment Period 1 followed by 40 milligram (mg) JNJ-42847922 qd for 5 days in treatment Period 2 via oral route. Both the treatment periods were separated by a washout period of minimum 5 days.	
Reporting group title	JNJ-42847922 followed by Placebo
Reporting group description:	
Subjects received 40 mg JNJ-42847922 once daily (qd) for 5 days in treatment Period 1 followed by Placebo qd for 5 days in treatment period 2 via oral route. Both the treatment periods were separated by a washout period of minimum 5 days.	

Reporting group values	Placebo followed by JNJ-42847922	JNJ-42847922 followed by Placebo	Total
Number of subjects	14	14	28
Title for AgeCategorical Units: subjects			
Adults (18-64 years)	14	14	28
Title for AgeContinuous Units: years			
arithmetic mean	45.5	46	
standard deviation	± 14.14	± 12.37	-
Title for Gender Units: subjects			
Female	9	10	19
Male	5	4	9

End points

End points reporting groups

Reporting group title	Placebo followed by JNJ-42847922
Reporting group description:	
Subjects received Placebo once daily (qd) for 5 days in treatment Period 1 followed by 40 milligram (mg) JNJ-42847922 qd for 5 days in treatment Period 2 via oral route. Both the treatment periods were separated by a washout period of minimum 5 days.	
Reporting group title	JNJ-42847922 followed by Placebo
Reporting group description:	
Subjects received 40 mg JNJ-42847922 once daily (qd) for 5 days in treatment Period 1 followed by Placebo qd for 5 days in treatment period 2 via oral route. Both the treatment periods were separated by a washout period of minimum 5 days.	
Subject analysis set title	Placebo
Subject analysis set type	Intention-to-treat
Subject analysis set description:	
Intention to treat (ITT) analysis set which included all randomized subjects who received at least one dose of the study medication (placebo or 40mg JNJ-42847922) and who had at least one Sleep Efficiency assessment.	
Subject analysis set title	40 milligram (mg) JNJ-42847922
Subject analysis set type	Intention-to-treat
Subject analysis set description:	
ITT analysis set which included all randomized subjects who received at least one dose of the study medication (placebo or 40mg JNJ-42847922) and who had at least one Sleep Efficiency assessment.	
Subject analysis set title	Placebo
Subject analysis set type	Safety analysis
Subject analysis set description:	
All subjects who received at least one dose of study drug were included in the safety analysis.	
Subject analysis set title	40 mg JNJ-42847922
Subject analysis set type	Safety analysis
Subject analysis set description:	
All subjects who received at least one dose of study drug were included in the safety analysis.	

Primary: Sleep Efficiency by Polysomnography

End point title	Sleep Efficiency by Polysomnography
End point description:	
Sleep Efficiency is defined as the total sleep time divided by the total time in bed multiplied by 100 (that is, the number of minutes from the beginning of the Polysomnography recording to the end of the recording). Sleep efficiency was evaluated using Intention to Treat (ITT) Analysis Set.	
End point type	Primary
End point timeframe:	
Up to Night 5	

End point values	Placebo	40 milligram (mg) JNJ-42847922		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	28	27		
Units: Percentage				
least squares mean (standard error)				
Day 1/2	83.26 (± 1.31)	89.03 (± 1.33)		

Day 5/6	77.29 (± 1.66)	85.41 (± 1.69)		

Statistical analyses

Statistical analysis title	Statistical analysis 1
Statistical analysis description: Statistical analysis 1 was evaluated on Day1/2.	
Comparison groups	Placebo v 40 milligram (mg) JNJ-42847922
Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.001
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Difference to Placebo
Point estimate	5.77
Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	3.79
upper limit	7.74

Statistical analysis title	Statistical analysis 2
Statistical analysis description: Statistical analysis 2 was evaluated on day 5/6.	
Comparison groups	40 milligram (mg) JNJ-42847922 v Placebo
Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.001
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Difference to Placebo
Point estimate	8.12
Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	5.39
upper limit	10.86

Secondary: Total Sleep Time by Polysomnography

End point title	Total Sleep Time by Polysomnography

End point description:

All of the minutes of Stages 1, 2, 3/4 Non Rapid Eye-Movement (NREM) and Rapid-Eye-Movement

(REM) sleep, as measured by Polysomnography, are summed to determine the Total Sleep Time. Sleep efficiency was evaluated using Intention to Treat Analysis Set.

End point type	Secondary

End point timeframe:

Up to Night 5

End point values	Placebo	40 milligram (mg) JNJ-42847922		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	28	27		
Units: minutes				
least squares mean (standard error)				
Day 1/2	399.62 (± 6.27)	427.38 (± 6.38)		
Day 5/6	370.98 (± 7.96)	409.99 (± 8.1)		

Statistical analyses

Statistical analysis title	Statistical Analysis 1

Statistical analysis description:

Statistical Analysis 1 was evaluated on day 1/2.

Comparison groups	Placebo v 40 milligram (mg) JNJ-42847922
Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.001
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Difference to Placebo
Point estimate	27.75
Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	18.28
upper limit	37.22

Statistical analysis title	Statistical analysis 2

Statistical analysis description:

Statistical analysis 2 was evaluated on day 5/6.

Comparison groups	Placebo v 40 milligram (mg) JNJ-42847922

Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.001
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Difference to Placebo
Point estimate	39
Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	25.87
upper limit	52.14

Secondary: Wake Time After Sleep Onset by Polysomnography

End point title	Wake Time After Sleep Onset by Polysomnography

End point description:

The number of minutes in the Awake stage after the onset of persistent sleep to the end of the recording. The efficiency was evaluated using Intention to Treat Analysis Set. The value 999 indicates that SD was not available after back-transformation of the parameter estimates from log scale.

End point type	Secondary

End point timeframe:

Up to Night 5

End point values	Placebo	40 milligram (mg) JNJ-42847922		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	28	27		
Units: minutes				
least squares mean (standard deviation)				
Day 1/2	43.28 (± 999)	31.16 (± 999)		
Day 5/6	54.71 (± 999)	43.7 (± 999)		

Statistical analyses

Statistical analysis title	Statistical Analysis 1
Comparison groups	Placebo v 40 milligram (mg) JNJ-42847922
Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.009
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Ratio to Placebo
Point estimate	0.72

Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	0.61
upper limit	0.86

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo v 40 milligram (mg) JNJ-42847922
Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.094
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Ratio to Placebo
Point estimate	0.8
Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	0.64
upper limit	0.99

Secondary: Total Time Spent in Deep Sleep by Polysomnography

End point title	Total Time Spent in Deep Sleep by Polysomnography

End point description:

Duration of slow wave sleep was reported. Sleep efficiency was evaluated using Intention to Treat Analysis Set.

End point type	Secondary

End point timeframe:

Up to Night 5

End point values	Placebo	40 milligram (mg) JNJ-42847922		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	28	27		
Units: minutes (min.)				
least squares mean (standard error)				
Day 1/2	88.52 (± 8.01)	86.56 (± 8.06)		
Day 5/6	85.77 (± 7.88)	87.04 (± 7.92)		

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo v 40 milligram (mg) JNJ-42847922
Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.644
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Difference to Placebo
Point estimate	-1.96
Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	-8.84
upper limit	4.93

Statistical analysis title	Statistical analysis 2
Statistical analysis description:	
Statistical analysis 2 was evaluated on Day 5/6.	
Comparison groups	Placebo v 40 milligram (mg) JNJ-42847922
Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.396
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Difference to Placebo
Point estimate	1.28
Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	-5.03
upper limit	7.58

Secondary: Latency to Persistent Sleep by Polysomnography

End point title	Latency to Persistent Sleep by Polysomnography

End point description:

Elapsed time from the beginning of the Polysomnography recording to the onset of the first 10 minutes of continuous sleep was measured over 2 nights and the average time to sleep was calculated. Sleep efficiency was evaluated using Intention to Treat Analysis Set. The value 999 indicates that SD was not available after back-transformation of the parameter estimates from log scale.

End point type	Secondary

End point timeframe:

Up to Night 5

End point values	Placebo	40 milligram (mg) JNJ-42847922		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	28	27		
Units: minutes				
least squares mean (standard deviation)				
Day 1/2	27.62 (± 999)	11.2 (± 999)		
Day 5/6	33.78 (± 999)	10.56 (± 999)		

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo v 40 milligram (mg) JNJ-42847922
Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.001
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Ratio to Placebo
Point estimate	0.41
Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	0.33
upper limit	0.5

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo v 40 milligram (mg) JNJ-42847922
Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.001
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Ratio to Placebo
Point estimate	0.31
Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	0.24
upper limit	0.4

Secondary: Wake Time Within Total Sleep Period by Polysomnography

End point title	Wake Time Within Total Sleep Period by Polysomnography

End point description:

The number of minutes in the Awake stage within sleep up to the end of the recording. This endpoint was evaluated using Intention to Treat Analysis set. The value 999 indicates that SD was not available after back-transformation of the parameter estimates from log scale.

End point type	Secondary

End point timeframe:

Up to Night 5

End point values	Placebo	40 milligram (mg) JNJ-42847922		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	28	27		
Units: minutes				
arithmetic mean (standard deviation)				
Day 1/2	34.98 (± 999)	26.02 (± 999)		
Day 5/6	35.93 (± 999)	25.18 (± 999)		

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo v 40 milligram (mg) JNJ-42847922
Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.025
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Ratio to Placebo
Point estimate	0.74
Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	0.62
upper limit	0.9

Statistical analysis title	Statistical analysis 2
Comparison groups	40 milligram (mg) JNJ-42847922 v Placebo
Number of subjects included in analysis	55
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.02
Method	Mixed model repeated measures (MMRM)
Parameter estimate	LS Means Ratio to Placebo
Point estimate	0.7

Confidence interval	
level	Other: 80 %
sides	2-sided
lower limit	0.56
upper limit	0.87

Secondary: Wake Time After Final Awakening by Polysomnography

End point title	Wake Time After Final Awakening by Polysomnography

End point description:

The number of minutes of wake time after final Awakening from sleep. This endpoint was evaluated using Intention to Treat Analysis set.

End point type	Secondary

End point timeframe:

Up to Night 5

End point values	Placebo	40 milligram (mg) JNJ-42847922		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	28	27		
Units: minutes				
arithmetic mean (standard deviation)				
Day 1/2	4.55 (± 8.932)	5.83 (± 14.35)		
Day 5/6	19.04 (± 30.232)	27.15 (± 42.957)		

Statistical analyses

No statistical analyses for this end point

Secondary: Leeds Sleep Evaluation Questionnaire (LSEQ) Score

End point title	Leeds Sleep Evaluation Questionnaire (LSEQ) Score

End point description:

The LSEQ is a participant-reported 10-item visual analogue scale score used to rate the quality of sleep and to assess changes in sleep quality over the course of treatment. This questionnaire has 10 selfrating 100 mm line analogue questions concerning sleep and early morning behavior. The higher the score, i.e. the closer the value is to 100 the worse the rating by the participant. The 10 responses are grouped into 4 subscores: the ease of getting to sleep, the perceived quality of sleep, the ease of awakening from sleep and the integrity of behavior following wakefulness. Sleep efficiency was evaluated using Intention to Treat Analysis Set.

End point type	Secondary

End point timeframe:

Up to Night 5

End point values	Placebo	40 milligram (mg) JNJ-42847922		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	28	27		
Units: Units on a scale				
arithmetic mean (standard deviation)				
Day 1/2: Getting to Sleep	46.99 (± 10.975)	37.19 (± 14.514)		
Day 5/6: Getting to Sleep	50.49 (± 10.152)	33.59 (± 13.28)		
Day 1/2: Quality of Sleep	50.2 (± 11.957)	41 (± 15.779)		
Day 5/6: Quality of Sleep	47.21 (± 11.215)	33.38 (± 18.686)		
Day 1/2: Awakening from Sleep	49.71 (± 11.406)	48.72 (± 12.558)		
Day 5/6: Awakening from Sleep	45.27 (± 8.859)	40.83 (± 18.899)		
Day 1/2: Behavior Following Waking	54.61 (± 13.363)	48.54 (± 12.045)		
Day 5/6: Behavior Following Waking	49.3 (± 14.474)	37.69 (± 17.696)		

Statistical analyses

No statistical analyses for this end point

Secondary: Subjective Assessment of Sleep by Questionnaire

End point title	Subjective Assessment of Sleep by Questionnaire

End point description:

Subjective assessment of sleep parameters was assessed by following questions to indicate how much and how well participant slept during the past night: 1. How long did it take you to fall asleep for the first time (Mean Subjective sleep onset latency); 2. How long have you slept in total (Total sleep time); 3. How long were you awake after initial sleep onset until you finally got out of bed (Wake After Sleep Onset); 4. How often did you awake during the night (how many times); 5. How did you rate the quality of the night sleep (1= extremely bad 10 =excellent). Sleep efficiency was evaluated using Intention to Treat Analysis Set.

End point type	Secondary

End point timeframe:

Up to Night 5

End point values	Placebo	40 milligram (mg) JNJ-42847922		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	14	14		
Units: minutes (min.)				
arithmetic mean (standard deviation)				
Day1/2: How long awake after initial sleep	81.1 (± 76.31)	57.4 (± 42.09)		

Day5/6: How long awake after initial sleep	71.3 (± 67.63)	61.9 (± 57.06)		
Day1/2: Duration Slept in Total	340.7 (± 68.82)	361.9 (± 64.68)		
Day5/6: Duration Slept in Total	327 (± 61.96)	374.4 (± 50.96)		
Day1/2: Duration took to fall asleep first time	65.2 (± 45.06)	37.4 (± 30.8)		
Day5/6: Duration took to fall asleep first time	75.2 (± 44.44)	29.4 (± 16.93)		
Day 1/2: Frequency of Wake Up During Night	3.8 (± 2.94)	3.6 (± 2.33)		
Day 5/6: Frequency of Wake Up During Night	3.2 (± 3.18)	2.8 (± 1.88)		
Day 1/2: Rate the Quality of Your Sleep	4.6 (± 2.17)	5.9 (± 1.97)		
Day 5/6: Rate the Quality of Your Sleep	4.8 (± 1.97)	6.3 (± 2.13)		

Statistical analyses

No statistical analyses for this end point

Secondary: Next Morning Residual Effects by Bond and Lader Visual Analogue Scale

End point title	Next Morning Residual Effects by Bond and Lader Visual Analogue Scale

End point description:

The Bond and Lader Visual Analogue Scale consists of sixteen 100 mm visual analog scales anchored by antonyms (example, Alert-Drowsy, Lethargic-Energetic, etc). Scores were combined to form three mood factors: alertness, calmness, and contentedness. This endpoint was evaluated using Safety analysis set.

End point type	Secondary

End point timeframe:

Up to Day 6

End point values	Placebo	40 mg JNJ-42847922		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	28	27		
Units: Units on a scale				
arithmetic mean (standard deviation)				
Day 2 Alert-Drowsy	53.4 (± 18.88)	46 (± 17)		
Day 6 Alert-Drowsy	40.6 (± 40.6)	38.9 (± 17.78)		
Day 2 Strong-Feeble	50.4 (± 13.83)	43 (± 15)		
Day 6 Strong-Feeble	41.9 (± 13.93)	39.4 (± 16.03)		
Day 2 Clearheaded-Muzzy	51.8 (± 15.94)	52.7 (± 20.38)		
Day 6 Clearheaded-Muzzy	57.8 (± 16.45)	62.4 (± 16.2)		
Day 2 Well-Coordinated-Clumsy	48 (± 16.7)	42.2 (± 15.73)		
Day 6 Well-Coordinated-Clumsy	41 (± 14.15)	37.1 (± 18.6)		
Day 2 Energetic-Lethargic	47.1 (± 15.98)	53.5 (± 16.98)		
Day 6 Energetic-Lethargic	55.9 (± 16.64)	55.7 (± 13.27)		
Day 2 Quick-Witted-Mentally Slow	48.2 (± 12.82)	53.5 (± 15.5)		
Day 6 Quick-Witted-Mentally Slow	58 (± 12.52)	60 (± 12.16)		

Day 2 Attentive-Dreamy	52.2 (± 14.39)	45.2 (± 18.54)		
Day 6 Attentive-Dreamy	43.8 (± 19.08)	37.4 (± 17.01)		
Day 2 Proficient-Incompetent	54.9 (± 11.23)	57.9 (± 15.34)		
Day 6 Proficient-Incompetent	59.7 (± 13.9)	66.1 (± 13.52)		
Day 2 Interested-Bored	41.9 (± 15.35)	40.6 (± 18.31)		
Day 6 Interested-Bored	38.5 (± 17.36)	33.2 (± 16.49)		
Day 2 Contented-Discontented	46.9 (± 16.84)	38.2 (± 14.77)		
Day 6 Contented-Discontented	40.2 (± 16.59)	35.3 (± 17.19)		
Day 2 Tranquil-Troubled	56.5 (± 13.54)	59.3 (± 14.24)		
Day 6 Tranquil-Troubled	60.2 (± 14.97)	64.3 (± 16.46)		
Day 2 Happy-Sad	43 (± 13.51)	39.4 (± 13.62)		
Day 6 Happy-Sad	36.7 (± 17.1)	33.6 (± 15.58)		
Day 2 Friendly-Antagonistic	65.1 (± 16.52)	66.4 (± 14.34)		
Day 6 Friendly-Antagonistic	66.2 (± 16.41)	70.1 (± 15.23)		
Day 2 Sociable-Withdrawn	53.7 (± 16.71)	53.8 (± 20.17)		
Day 6 Sociable-Withdrawn	62 (± 15.93)	63.7 (± 18.4)		
Day 2 Calm-Excited	40.1 (± 16.12)	35.1 (± 14.68)		
Day 6 Calm-Excited	41.6 (± 17.22)	37.1 (± 15.43)		
Day 2 Relaxed-Tense	53.5 (± 15.25)	60.4 (± 14.76)		
Day 6 Relaxed-Tense	56.8 (± 16.43)	64.7 (± 11.46)		

Statistical analyses

No statistical analyses for this end point

Secondary: Next Morning Residual Effects by Karolinska Sleepiness Scale

End point title	Next Morning Residual Effects by Karolinska Sleepiness Scale

End point description:

The Karolinska Sleepiness Scale is a participant-reported assessment used to rate sleepiness on a scale of 1 to 9, ranging from 'extremely alert' (1) to 'very sleepy, great effort to keep awake, fighting sleep. This endpoint was evaluated using Safety analysis set.

End point type	Secondary

End point timeframe:

Up to Day 6

End point values	Placebo	40 mg JNJ-42847922		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	28	27		
Units: Units on a scale				
arithmetic mean (standard deviation)				
Day 2	5.43 (± 1.399)	4.85 (± 1.433)		
Day 6	4.71 (± 1.607)	3.89 (± 1.368)		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
Baseline, up to Follow-up (61 Days)	
Adverse event reporting additional description:	
The Adverse events were reported on Safety Analysis Set population.	
Assessment type	Non-systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	18.1

Reporting groups	
Reporting group title	Placebo
Reporting group description:	
Subjects received JNJ-42847922 matching Placebo tablets once daily for 5 days via oral route.	
Reporting group title	40 mg JNJ-42847922
Reporting group description:	
Subjects received 40 milligram (mg) JNJ-42847922 (2 x 20-mg tablets) once daily for 5 days via oral route.	

Serious adverse events	Placebo	40 mg JNJ-42847922	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 28 (0.00%)	0 / 27 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events			

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	Placebo	40 mg JNJ-42847922	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	6 / 28 (21.43%)	8 / 27 (29.63%)	
Nervous system disorders			
Headache			
subjects affected / exposed	3 / 28 (10.71%)	4 / 27 (14.81%)	
occurrences (all)	3	5	
Somnolence			
subjects affected / exposed	2 / 28 (7.14%)	3 / 27 (11.11%)	
occurrences (all)	2	3	
Psychiatric disorders			

Abnormal dreams subjects affected / exposed occurrences (all)	0 / 28 (0.00%) 0	2 / 27 (7.41%) 4	
Infections and infestations Nasopharyngitis subjects affected / exposed occurrences (all)	2 / 28 (7.14%) 2	1 / 27 (3.70%) 1	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
03 August 2014	A combination of a hormonal contraceptive with a pearl-index less than (<) 1 percent (%) in addition to a barrier method are required for use with an investigational compound for which no reproductive toxicology studies have been completed. References to "Observed significant mean differences (active to placebo) for Sleep efficiency (SE)" have specified. To comply with German privacy regulations, no full date of birth was documented to identify a study subject.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported