Clinical trial results:
A Randomized, Double-Blind, Placebo-Controlled, Parallel Group Study to Evaluate Efficacy, Safety and Tolerability of DRL-17822 in Patients with Type II Hyperlipidemia

Summary

EudraCT number	2011-001023-21
Trial protocol	IT
Global end of trial date	10 June 2012

Results information

Result version number	v1 (current)
This version publication date	05 May 2019
First version publication date	05 May 2019

Trial information

Trial identification

Sponsor protocol code	DRL-17822/CD/004

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT01388816
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Dr. Reddy's Laboratories Limited
Sponsor organisation address	Innovation Plaza, Survey No. 42,45,46 & 54, Bachupally, Qutubullapur, Hyderabad, India, 500090
Public contact	Regulatory Operations Europe, PHARMANET Ltd., 44 8702420780, regopseurope@pharmanet.com
Scientific contact	Regulatory Operations Europe, PHARMANET Ltd., 44 8702420780, regopseurope@pharmanet.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	14 May 2013
Is this the analysis of the primary completion data?	Yes
Primary completion date	14 May 2012
Global end of trial reached?	Yes
Global end of trial date	10 June 2012
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The purpose of this study is to determine if a new drug, DRL-17822, is safe and effective in elevating high density lipoprotein cholesterol (HDL-C) and reducing low density lipoprotein cholesterol (LDL-C) in people with abnormal cholesterol levels that may put them at risk for heart disease.

Protection of trial subjects:

Timely and complete recording of all AEs assists the Sponsor in identifying any untoward medical occurrence.

Background therapy:

None

Evidence for comparator:

Placebo Comparator: Placebo capsule

The 2-week placebo run-in period in this study was included to minimize these effects and to assess the effects on lipid profiles related primarily to receipt of DRL-17822.
The placebo comparator arm was included to compare and find out the true effects of DRL-17822 on efficacy and safety

Actual start date of recruitment	28 July 2011
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	Poland: 30
Country: Number of subjects enrolled	Italy: 21
Country: Number of subjects enrolled	Ukraine: 125
Worldwide total number of subjects	176
EEA total number of subjects	51

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	0

months)	
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	144
From 65 to 84 years	32
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

A total of 362 patients were screened with 186 patients being screen failures. A total of 176 patients received placebo run-in and were randomized equally in the 4 treatment groups.The majority of patients (71%, [125/17 6] patients) were recruited in Ukraine (125), Italy (21) and Poland (30). Recruitment date July 2011 & completion date May 2012

Pre-assignment

Screening details:

A total of 362 patients with type II hyperlipidemia were screened with 186 patients being screen failures. A total of 176 patients received placebo run-in and were randomized equally in the 4 treatment groups.

Period 1

Period 1 title	Placebo-run-in period
Is this the baseline period?	Yes
Allocation method	Non-randomised - controlled
Blinding used	Single blind
Roles blinded	Subject

Blinding implementation details:

double dummy technique

Arms

Arm title	Placebo run-in

Arm description:

Placebo run-in period

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

Dosage and administration details:

During single-blind placebo phase, eligible patients received Placebo for DRL-17822 along with instruction on diet and this phase was up to 2 weeks.

Number of subjects in period 1	Placebo run-in
Started	176
Completed	176

Period 2

Period 2 title	Randomization Period
Is this the baseline period?	No
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Monitor

Blinding implementation details:

Double dummy technique

Arms

Are arms mutually exclusive?	Yes
Arm title	DRL-17822 50 mg

Arm description:

This period of the study was double-blind. Study drug was taken orally once daily, immediately after breakfast, for 28 consecutive days

Arm type	Experimental
Investigational medicinal product name	DRL-17822 50 mg Capsules
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Capsule
Routes of administration	Oral use

Dosage and administration details:

Study drug was taken orally once daily, immediately after breakfast, for 28 consecutive days

Arm title	DRL-17822 150 mg

Arm description:

This period of the study was double-blind. Study drug was taken orally once daily, immediately after breakfast, for 28 consecutive days

Arm type	Experimental
Investigational medicinal product name	DRL-17822 150 mg capsules
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Capsule
Routes of administration	Oral use

Dosage and administration details:

Study drug was taken orally once daily, immediately after breakfast, for 28 consecutive days

Arm title	DRL-17822 300 mg

Arm description:

This period of the study was double-blind. Study drug was taken orally once daily, immediately after breakfast, for 28 consecutive days

Arm type	Experimental
Investigational medicinal product name	DRL-17822 300 mg Capsules
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Capsule
Routes of administration	Oral use

Dosage and administration details:

Study drug was taken orally once daily, immediately after breakfast, for 28 consecutive days

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

Dosage and administration details:

Placebo was taken orally once daily, immediately after breakfast, for 28 consecutive days

Arm title	Placebo capsules

Arm description:

This period of the study was double-blind. Study drug was taken orally once daily, immediately after breakfast, for 28 consecutive days

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

Dosage and administration details:

Placebo capsule was taken orally once daily, immediately after breakfast, for 28 consecutive days

Number of subjects in period 2	DRL-17822 50 mg	DRL-17822 150 mg	DRL-17822 300 mg
Started	43	44	44
Completed	39	41	44
Not completed	4	3	0
Consent withdrawn by subject	1	1	-
Adverse event, non-fatal	2	-	-
Non compliance	-	1	-
Lost to follow-up	1	-	-
Protocol deviation	-	1	-

Number of subjects in period 2	Placebo capsules
Started	45
Completed	43
Not completed	2
Consent withdrawn by subject	2
Adverse event, non-fatal	-
Non compliance	-
Lost to follow-up	-
Protocol deviation	-

Baseline characteristics

Reporting groups	
Reporting group title	Placebo run-in
Reporting group description:	
Placebo run-in period	

Reporting group values	Placebo run-in	Total	
Number of subjects	176	176	
Age categorical			
Male or female, 18 to 70 years of age, inclusive. Female patients had to be post-menopausal or surgically sterile			
Units: Subjects			
Adults (18-64 years)	0	0	
From 65-84 years	0	0	
Age 18-70 years	176	176	
Gender categorical			
Male or female, 18 to 70 years of age, inclusive. Female patients had to be post-menopausal or surgically sterile			
Units: Subjects			
Female	99	99	
Male	77	77	

End points

End points reporting groups

Reporting group title	Placebo run-in
Reporting group description:	
Placebo run-in period	
Reporting group title	DRL-17822 50 mg
Reporting group description:	
This period of the study was double-blind. Study drug was taken orally once daily, immediately after breakfast, for 28 consecutive days	
Reporting group title	DRL-17822 150 mg
Reporting group description:	
This period of the study was double-blind. Study drug was taken orally once daily, immediately after breakfast, for 28 consecutive days	
Reporting group title	DRL-17822 300 mg
Reporting group description:	
This period of the study was double-blind. Study drug was taken orally once daily, immediately after breakfast, for 28 consecutive days	
Reporting group title	Placebo capsules
Reporting group description:	
This period of the study was double-blind. Study drug was taken orally once daily, immediately after breakfast, for 28 consecutive days	

Primary: Percent Change in HDL-C From Baseline

End point title	Percent Change in HDL-C From Baseline
End point description:	
End point type	Primary
End point timeframe:	
Percent change from baseline in HDL-C after 28 days of treatment in patients with Type II hyperlipidemia	

End point values	DRL-17822 50 mg	DRL-17822 150 mg	DRL-17822 300 mg	Placebo capsules
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	42	43	44	44
Units: Percentage				
arithmetic mean (full range (min-max))	84.2 (69.8 to 98.6)	122.1 (107.8 to 136.3)	160.6 (146.5 to 174.6)	3.2 (-10.8 to 17.3)

Statistical analyses

Statistical analysis title	Efficacy analysis

Statistical analysis description:

The primary efficacy analysis was performed on the Intent-To-Treat (ITT) population. Percent change in HDL-C was analyzed using an Analysis of Variance (ANOVA) model to examine the differences between

DRL-17822 dose levels and Placebo treatment. Each DRL-17822 treatment group was compared with placebo using Dunnett's test

Comparison groups	DRL-17822 150 mg v DRL-17822 300 mg v DRL-17822 50 mg v Placebo capsules
Number of subjects included in analysis	173
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.05
Method	ANOVA

Secondary: Changes in LDL

End point title	Changes in LDL
End point description:	
Change from baseline (LOCF, ITT population)	
End point type	Secondary
End point timeframe:	
Time Frame: 28 days	

End point values	DRL-17822 50 mg	DRL-17822 150 mg	DRL-17822 300 mg	Placebo capsules
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	42	43	44	44
Units: Percentage				
arithmetic mean (full range (min-max))	-15.4 (-26.3 to -4.5)	-18.7 (-29.5 to -7.9)	-39.4 (-50.1 to -28.8)	4.9 (-5.8 to 15.5)

Statistical analyses

No statistical analyses for this end point

Secondary: Changes in HDL-C/LDL-C Ratio

End point title	Changes in HDL-C/LDL-C Ratio
End point description:	
Change from baseline (LOCF, ITT population)	
End point type	Secondary
End point timeframe:	
Time Frame: 28 Days	

End point values	DRL-17822 50 mg	DRL-17822 150 mg	DRL-17822 300 mg	Placebo capsules
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	42	43	44	44
Units: Percentage				
arithmetic mean (full range (min-max))	-15.4 (-26.3 to -4.5)	-18.7 (-29.5 to -7.9)	-39.4 (-50.1 to -28.8)	0.6 (-41.2 to 42.3)

Statistical analyses

No statistical analyses for this end point

Secondary: change in Total Cholesterol

End point title	change in Total Cholesterol

End point description:

Change from baseline (LOCF, ITT population)

End point type	Secondary

End point timeframe:

Time Frame : 28 Days

End point values	DRL-17822 50 mg	DRL-17822 150 mg	DRL-17822 300 mg	Placebo capsules
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	42	43	44	44
Units: Percentage				
arithmetic mean (full range (min-max))	-0.9 (-5.3 to 3.5)	-0.8 (-5.2 to 3.5)	-0.8 (-5.1 to 3.5)	1.5 (-2.9 to 5.8)

Statistical analyses

No statistical analyses for this end point

Secondary: Changes in Triglycerides

End point title	Changes in Triglycerides

End point description:

Change from baseline (LOCF, ITT population)

End point type	Secondary

End point timeframe:

Time Frame : 28 Days

End point values	DRL-17822 50 mg	DRL-17822 150 mg	DRL-17822 300 mg	Placebo capsules
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	42	43	44	44
Units: Percentage				
arithmetic mean (full range (min-max))	-14.2 (-26.7 to -1.7)	0.9 (-11.5 to 13.2)	-11.3 (-23.5 to 1.0)	4.5 (-7.7 to 16.7)

Statistical analyses

No statistical analyses for this end point

Secondary: Changes in Apolipoproteins (Apo A1)

End point title	Changes in Apolipoproteins (Apo A1)
End point description:	
Change from baseline (LOCF, ITT population)	
End point type	Secondary
End point timeframe:	
Time Frame: 28 Days	

End point values	DRL-17822 50 mg	DRL-17822 150 mg	DRL-17822 300 mg	Placebo capsules
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	42	43	44	44
Units: Percentage				
arithmetic mean (full range (min-max))	35.0 (29.0 to 41.1)	44.8 (38.8 to 50.8)	59.1 (53.2 to 65.1)	1.8 (-4.1 to 7.7)

Statistical analyses

No statistical analyses for this end point

Secondary: Changes in Apolipoproteins (Apo B)

End point title	Changes in Apolipoproteins (Apo B)
End point description:	
Change from baseline (LOCF, ITT population)	
End point type	Secondary
End point timeframe:	
Time Frame : 28 Days	

End point values	DRL-17822 50 mg	DRL-17822 150 mg	DRL-17822 300 mg	Placebo capsules
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	42	43	44	44
Units: Percentage				
arithmetic mean (full range (min-max))	-15.1 (-20.5 to -9.7)	-22.2 (-27.6 to -16.9)	-28.9 (-34.2 to -23.6)	2.9 (-2.4 to 8.2)

Statistical analyses

No statistical analyses for this end point

Secondary: Changes in Apolipoproteins (Apo E)

End point title	Changes in Apolipoproteins (Apo E)
End point description:	
Change from baseline (LOCF, ITT population)	
End point type	Secondary
End point timeframe:	
Time Frame: 28 Days	

End point values	DRL-17822 50 mg	DRL-17822 150 mg	DRL-17822 300 mg	Placebo capsules
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	42	43	44	44
Units: Percentage				
arithmetic mean (full range (min-max))	2.6 (-15.3 to 20.6)	10.9 (-6.9 to 28.6)	32.5 (15.0 to 50.1)	3.9 (-13.7 to 21.4)

Statistical analyses

No statistical analyses for this end point

Secondary: Changes in Apolipoproteins (Apo Lp(a))

End point title	Changes in Apolipoproteins (Apo Lp(a))
End point description:	
Change from baseline (LOCF, ITT population)	
End point type	Secondary
End point timeframe:	
Time Frame: 28 Days	

End point values	DRL-17822 50 mg	DRL-17822 150 mg	DRL-17822 300 mg	Placebo capsules
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	42	43	44	44
Units: Percentage				
arithmetic mean (full range (min-max))	-26.2 (-63.9 to 11.4)	10.0 (-26.2 to 46.2)	-37.7 (-75.4 to -0.1)	2.8 (-34.4 to 40.0)

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
Time Frame: 28 days	
Assessment type	Systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	15.0

Reporting groups	
Reporting group title	Placebo Capsule
Reporting group description: -	
Reporting group title	DRL-17822 50 mg
Reporting group description: -	
Reporting group title	DRL-17822 150 mg
Reporting group description: -	
Reporting group title	DRL-17822 300 mg
Reporting group description: -	

Serious adverse events	Placebo Capsule	DRL-17822 50 mg	DRL-17822 150 mg
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 45 (2.22%)	1 / 43 (2.33%)	0 / 43 (0.00%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events	0	0	0
Respiratory, thoracic and mediastinal disorders			
Pneumonia			
subjects affected / exposed	0 / 45 (0.00%)	1 / 43 (2.33%)	0 / 43 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Abscess			
subjects affected / exposed	1 / 45 (2.22%)	0 / 43 (0.00%)	0 / 43 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Serious adverse events	DRL-17822 300 mg		
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 44 (0.00%)		
number of deaths (all causes)	0		
number of deaths resulting from	0		

adverse events			
Respiratory, thoracic and mediastinal disorders			
Pneumonia			
subjects affected / exposed	0 / 44 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Infections and infestations			
Abscess			
subjects affected / exposed	0 / 44 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		

Frequency threshold for reporting non-serious adverse events: 2 %

Non-serious adverse events	Placebo Capsule	DRL-17822 50 mg	DRL-17822 150 mg
Total subjects affected by non-serious adverse events			
subjects affected / exposed	8 / 45 (17.78%)	4 / 43 (9.30%)	6 / 43 (13.95%)
Investigations			
Pyrexia			
subjects affected / exposed	1 / 45 (2.22%)	2 / 43 (4.65%)	0 / 43 (0.00%)
occurrences (all)	1	2	0
Nervous system disorders			
Headache			
subjects affected / exposed	0 / 45 (0.00%)	1 / 43 (2.33%)	1 / 43 (2.33%)
occurrences (all)	0	1	1
Gastrointestinal disorders			
Nausea			
subjects affected / exposed	1 / 45 (2.22%)	1 / 43 (2.33%)	2 / 43 (4.65%)
occurrences (all)	1	1	4
Abdominal pain			
subjects affected / exposed	2 / 45 (4.44%)	0 / 43 (0.00%)	0 / 43 (0.00%)
occurrences (all)	2	0	0
Renal and urinary disorders			
Pollakiuria			
subjects affected / exposed	2 / 45 (4.44%)	0 / 43 (0.00%)	0 / 43 (0.00%)
occurrences (all)	2	0	0
Infections and infestations			

Nasopharyngitis			
subjects affected / exposed	0 / 45 (0.00%)	0 / 43 (0.00%)	3 / 43 (6.98%)
occurrences (all)	0	0	3
Respiratory tract infection			
subjects affected / exposed	2 / 45 (4.44%)	0 / 43 (0.00%)	0 / 43 (0.00%)
occurrences (all)	2	0	0

Non-serious adverse events	DRL-17822 300 mg		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	2 / 44 (4.55%)		
Investigations			
Pyrexia			
subjects affected / exposed	0 / 44 (0.00%)		
occurrences (all)	0		
Nervous system disorders			
Headache			
subjects affected / exposed	2 / 44 (4.55%)		
occurrences (all)	3		
Gastrointestinal disorders			
Nausea			
subjects affected / exposed	0 / 44 (0.00%)		
occurrences (all)	0		
Abdominal pain			
subjects affected / exposed	0 / 44 (0.00%)		
occurrences (all)	0		
Renal and urinary disorders			
Pollakiuria			
subjects affected / exposed	0 / 44 (0.00%)		
occurrences (all)	0		
Infections and infestations			
Nasopharyngitis			
subjects affected / exposed	0 / 44 (0.00%)		
occurrences (all)	0		
Respiratory tract infection			
subjects affected / exposed	0 / 44 (0.00%)		
occurrences (all)	0		

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported