



Clinical trial results: A Long-term Follow-up Study to Evaluate the Safety and Efficacy of RGX-501

Summary

EudraCT number	2019-004496-39
Trial protocol	NL
Global end of trial date	19 July 2024

Results information

Result version number	v1 (current)
This version publication date	25 July 2025
First version publication date	25 July 2025

Trial information

Trial identification

Sponsor protocol code	RGX-501-102
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Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT04080050
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	REGENXBIO INC
Sponsor organisation address	9804 Medical Center Dr, Rockville, United States, MD 20850
Public contact	Medical Affairs , REGENXBIO INC, medinfo@regenxbio.com
Scientific contact	Medical Affairs , REGENXBIO INC, , medinfo@regenxbio.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	19 July 2024
Is this the analysis of the primary completion data?	Yes
Primary completion date	19 July 2024
Global end of trial reached?	Yes
Global end of trial date	19 July 2024
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The primary objective is to evaluate the long-term safety of RGX-501.

Protection of trial subjects:

The study was conducted in accordance with the Declaration of Helsinki and with all applicable laws and regulations of the locales and countries where the study was conducted, and in compliance with Good Clinical Practice Guidelines.

Background therapy:

No study drug was administered in this study. All participants have previously received a single IV infusion of RGX-501 in a separate parent clinical study.

Evidence for comparator: -

Actual start date of recruitment	04 November 2019
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	Netherlands: 2
Country: Number of subjects enrolled	United States: 5
Country: Number of subjects enrolled	Canada: 1
Worldwide total number of subjects	8
EEA total number of subjects	2

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)	8
From 65 to 84 years	0

85 years and over	0
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Subject disposition

Recruitment

Recruitment details:

Enrollment of each participant occurred the same day or after the participant completed the end of study visit or early termination visit from the previous parent study.

Participants were followed in this study cumulatively for up to 5 years after RGX-501 administration or until RGX-501 was commercially available in the participant's country.

Pre-assignment

Screening details:

Screen failures were not applicable to this study.

Every effort was made to recruit eligible participants in this study on the same day of their EOS visit or ETV from the parent study, or even after the participant has completed the parent study's EOS visit or ETV.

Period 1

Period 1 title	A Long-Term Follow-up Study (overall period)
Is this the baseline period?	Yes
Allocation method	Not applicable
Blinding used	Not blinded

Blinding implementation details:

Not applicable.

Arms

Are arms mutually exclusive?	Yes
Arm title	Cohort 1

Arm description:

The dose levels of RGX-501 vector administered in the parent study were 2.5×10^{12} GC/kg.

Arm type	Observational
Investigational medicinal product name	RGX-501
Investigational medicinal product code	RGX-501
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intravenous use

Dosage and administration details:

This was a prospective, observational study to evaluate the long-term safety and efficacy after a single administration of RGX-501. RGX-501 was not administered in this study. Eligible participants were those who had previously enrolled in a parent clinical study (FHGT002) and received a single intravenous (IV) infusion of RGX-501.

Arm title	Cohort 2
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Arm description:

The dose levels of RGX-501 vector administered in the parent study were 7.5×10^{12} GC/kg.

Arm type	Observational
Investigational medicinal product name	RGX-501
Investigational medicinal product code	RGX-501
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intravenous use

Dosage and administration details:

This was a prospective, observational study to evaluate the long-term safety and efficacy after a single administration of RGX-501. RGX-501 was not administered in this study. Eligible participants were those who had previously enrolled in a parent clinical study (FHGT002) and received a single intravenous (IV) infusion of RGX-501.

Arm title	Expansion Cohort 2
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Arm description:

The dose levels of RGX-501 vector administered in the parent study were 7.5×10^{12} GC/kg.

Arm type	Observational
Investigational medicinal product name	RGX-501
Investigational medicinal product code	RGX-501
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intravenous use

Dosage and administration details:

This was a prospective, observational study to evaluate the long-term safety and efficacy after a single administration of RGX-501. RGX-501 was not administered in this study. Eligible participants were those who had previously enrolled in a parent clinical study (FHGT002) and received a single intravenous (IV) infusion of RGX-501.

Number of subjects in period 1	Cohort 1	Cohort 2	Expansion Cohort 2
Started	3	3	2
Completed	1	3	2
Not completed	2	0	0
Lost to follow-up	2	-	-

Baseline characteristics

Reporting groups

Reporting group title	Cohort 1
Reporting group description: The dose levels of RGX-501 vector administered in the parent study were 2.5×10^{12} GC/kg.	
Reporting group title	Cohort 2
Reporting group description: The dose levels of RGX-501 vector administered in the parent study were 7.5×10^{12} GC/kg.	
Reporting group title	Expansion Cohort 2
Reporting group description: The dose levels of RGX-501 vector administered in the parent study were 7.5×10^{12} GC/kg.	

Reporting group values	Cohort 1	Cohort 2	Expansion Cohort 2
Number of subjects	3	3	2
Age categorical			
Units: Subjects			
In utero	0	0	0
Preterm newborn infants (gestational age < 37 wks)	0	0	0
Newborns (0-27 days)	0	0	0
Infants and toddlers (28 days-23 months)	0	0	0
Children (2-11 years)	0	0	0
Adolescents (12-17 years)	0	0	0
Adults (18-64 years)	3	3	2
From 65-84 years	0	0	0
85 years and over	0	0	0
Age continuous			
Units: years			
arithmetic mean	34.6	32.8	28.9
standard deviation	± 6.03	± 8.94	± 1.42
Gender categorical			
Units: Subjects			
Female	1	1	1
Male	2	2	1

Reporting group values	Total		
Number of subjects	8		
Age categorical			
Units: Subjects			
In utero	0		
Preterm newborn infants (gestational age < 37 wks)	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)	8		

From 65-84 years	0		
85 years and over	0		

Age continuous			
Units: years			
arithmetic mean			
standard deviation	-		
Gender categorical			
Units: Subjects			
Female	3		
Male	5		

End points

End points reporting groups

Reporting group title	Cohort 1
Reporting group description: The dose levels of RGX-501 vector administered in the parent study were 2.5×10^{12} GC/kg.	
Reporting group title	Cohort 2
Reporting group description: The dose levels of RGX-501 vector administered in the parent study were 7.5×10^{12} GC/kg.	
Reporting group title	Expansion Cohort 2
Reporting group description: The dose levels of RGX-501 vector administered in the parent study were 7.5×10^{12} GC/kg.	

Primary: Incidence of AEs and SAEs over time

End point title	Incidence of AEs and SAEs over time ^[1]
End point description: The primary endpoints are the incidences of AEs and serious adverse events (SAEs) over time. TEAEs were defined as AEs that started or worsened during or after administration of RGX-501.	
End point type	Primary
End point timeframe: 5 years.	

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.

Justification: Descriptive summaries of safety measures are based on observed data. No imputation of missing data were implemented.

End point values	Cohort 1	Cohort 2	Expansion Cohort 2	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	3	3	2	
Units: Number of participants affected				
Any TEAEs	2	0	2	
Grade 1 - Mild	1	0	1	
Grade 2 - Moderate	1	0	1	
Grade 3 - Severe	0	0	0	
Grade 4 - Life-threatening	0	0	0	
Grade 5 - Death	0	0	0	
Any RGX-501-related TEAEs	0	0	0	
Any TEAEs of special interest	0	0	0	
Any treatment-emergent SAEs	2	0	0	
Any TEAEs leading to study discontinuation	0	0	0	
Any TEAEs leading to death	0	0	0	

Statistical analyses

No statistical analyses for this end point

Secondary: Absolute LDL-C levels by beta quantification

End point title Absolute LDL-C levels by beta quantification

End point description:

Absolute LDL-C levels by beta quantification at Year 3 after RGX-501 administration.

End point type Secondary

End point timeframe:

3 years

End point values	Cohort 1	Cohort 2	Expansion Cohort 2	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	3	3	2	
Units: Change from baseline to Year 3 (mg/dL)				
arithmetic mean (standard deviation)	-145.75 ($\pm$ 4.596)	-74.50 ($\pm$ 74.246)	-155.50 ($\pm$ 13.435)	

Statistical analyses

No statistical analyses for this end point

Secondary: Absolute total cholesterol over the study duration

End point title Absolute total cholesterol over the study duration

End point description:

Absolute total cholesterol over the study duration, as available from medical records or collected as per standard of care (SOC).

End point type Secondary

End point timeframe:

5 years.

End point values	Cohort 1	Cohort 2	Expansion Cohort 2	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	3	3	2	
Units: Change from Baseline to Year 5 (mg/dL)				
arithmetic mean (standard deviation)	-228.00 ($\pm$ 54.991)	-77.38 ($\pm$ 54.313)	-422.26 ($\pm$ 241.084)	

Statistical analyses

No statistical analyses for this end point

Secondary: LDL-C over the study duration

End point title	LDL-C over the study duration
End point description: LDL-C over the study duration, as available from medical records or collected as per standard of care (SOC).	
End point type	Secondary
End point timeframe: 5 years	

End point values	Cohort 1	Cohort 2	Expansion Cohort 2	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	3	3	2	
Units: Change from baseline to Year 5 (mg/dL)				
arithmetic mean (standard deviation)	-172.00 ($\pm$ 36.715)	-38.20 ($\pm$ 52.004)	-370.51 ($\pm$ 179.404)	

Statistical analyses

No statistical analyses for this end point

Secondary: Very low density lipoprotein cholesterol (VLDL-C) over the study duration

End point title	Very low density lipoprotein cholesterol (VLDL-C) over the study duration ^[2]
End point description: Very low density lipoprotein cholesterol (VLDL-C) over the study duration, as available from medical records or collected as per standard of care (SOC).	
End point type	Secondary
End point timeframe: 5 years.	

Notes:

[2] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: Across all 3 cohorts, limited data are available regarding VLDL-C in the LTFU study for the enrolled population from baseline to the secondary efficacy endpoint. There is only data for a single participant at year 5 timepoint which limits the assessment of change from baseline to the secondary efficacy endpoint timepoints for VLDL-C.

End point values	Cohort 2			
Subject group type	Reporting group			
Number of subjects analysed	1			
Units: Change from baseline to Year 5 (mg/dL)				
arithmetic mean (standard deviation)	-22.00 ($\pm$ 0)			

Statistical analyses

No statistical analyses for this end point

Secondary: High density lipoprotein cholesterol (HDL-C) over the study duration

End point title	High density lipoprotein cholesterol (HDL-C) over the study duration
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End point description:

High density lipoprotein cholesterol (HDL-C) over the study duration, as available from medical records or collected as per standard of care (SOC).

End point type	Secondary
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End point timeframe:

5 years

End point values	Cohort 1	Cohort 2	Expansion Cohort 2	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	3	3	2	
Units: Change from baseline to Year 5 (mg/dL)				
arithmetic mean (standard deviation)	-7.33 (± 4.041)	-2.34 (± 2.744)	-4.21 (± 10.222)	

Statistical analyses

No statistical analyses for this end point

Secondary: Calculated non-HDL-C over the study duration

End point title	Calculated non-HDL-C over the study duration
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End point description:

Calculated non-HDL-C over the study duration, as available from medical records or collected as per standard of care (SOC).

End point type	Secondary
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End point timeframe:

5 years.

End point values	Cohort 1	Cohort 2	Expansion Cohort 2	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	3	3	2	
Units: Change from baseline to Year 5				
arithmetic mean (standard deviation)	-220.67 (± 54.372)	-75.04 (± 51.597)	-418.05 (± 230.862)	

Statistical analyses

No statistical analyses for this end point

Secondary: Triglycerides (TG) over the study duration

End point title	Triglycerides (TG) over the study duration
End point description: Triglycerides (TG) over the study duration, as available from medical records or collected as per standard of care (SOC).	
End point type	Secondary
End point timeframe: 5 years.	

End point values	Cohort 1	Cohort 2	Expansion Cohort 2	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	3	3	2	
Units: Change from baseline to Year 5 (mg/dL)				
arithmetic mean (standard deviation)	-50.33 (± 26.407)	-36.59 (± 64.176)	-52.68 (± 8.598)	

Statistical analyses

No statistical analyses for this end point

Secondary: Lipoprotein a (Lp(a)) over the study duration

End point title	Lipoprotein a (Lp(a)) over the study duration ^[3]
End point description: Lipoprotein a (Lp(a)) over the study duration as available from medical records or collected as per standard of care (SOC).	
End point type	Secondary
End point timeframe: 5 years.	

Notes:

[3] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: Across all 3 cohorts, limited data were available regarding Lp(a) in the LTFU study for the enrolled population from baseline to secondary efficacy endpoint. Across all 3 cohorts, data were

available for only 1 participant in cohort 2 for year 5 which limits the assessment of change from baseline for Lp(a).

End point values	Cohort 2			
Subject group type	Reporting group			
Number of subjects analysed	1			
Units: Change from baseline to Year 5				
arithmetic mean (standard deviation)	-184.0 ($\pm$ 0)			

Statistical analyses

No statistical analyses for this end point

Secondary: Usage of lipid-lowering therapies over time

End point title	Usage of lipid-lowering therapies over time ^[4]
End point description: The number of participants who did not resume previously taken or did not initiate any new lipid-lowering treatment over time.	
End point type	Secondary
End point timeframe: 5 years	

Notes:

[4] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: Across all 3 cohorts, only 1 (12.5%) participant did not resume previous lipid-lowering therapies and/or initiate new lipid-lowering treatment in the parent and LTFU studies for the enrolled population.

End point values	Cohort 2			
Subject group type	Reporting group			
Number of subjects analysed	3			
Units: Number of participants	1			

Statistical analyses

No statistical analyses for this end point

Other pre-specified: Summary of healthcare utilization

End point title	Summary of healthcare utilization
End point description:	
End point type	Other pre-specified
End point timeframe: 5 years.	

End point values	Cohort 1	Cohort 2	Expansion Cohort 2	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	3	3	2	
Units: Number of participants				
Any office visits	3	3	2	
Any outpatient procedures	2	2	2	
Any emergency room visits	2	0	2	
Any inpatient hospitalizations	2	1	0	

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Adverse events are reported throughout the study for 5 years.

Assessment type	Systematic
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Dictionary used

Dictionary name	MedDRA
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Dictionary version	23.0
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Reporting groups

Reporting group title	Cohort 1
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Reporting group description:

The dose levels of RGX-501 vector administered in the parent study were 2.5×10^{12} GC/kg.

Reporting group title	Cohort 2
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Reporting group description:

The dose levels of RGX-501 vector administered in the parent study were 7.5×10^{12} GC/kg.

Reporting group title	Expansion Cohort 2
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Reporting group description:

The dose levels of RGX-501 vector administered in the parent study were 7.5×10^{12} GC/kg.

Serious adverse events	Cohort 1	Cohort 2	Expansion Cohort 2
Total subjects affected by serious adverse events			
subjects affected / exposed	2 / 3 (66.67%)	0 / 3 (0.00%)	0 / 2 (0.00%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events	0	0	0
Cardiac disorders			
Angina unstable			
subjects affected / exposed	1 / 3 (33.33%)	0 / 3 (0.00%)	0 / 2 (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
General disorders and administration site conditions			
Non-cardiac chest pain			
subjects affected / exposed	1 / 3 (33.33%)	0 / 3 (0.00%)	0 / 2 (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

Frequency threshold for reporting non-serious adverse events: 1 %

Non-serious adverse events	Cohort 1	Cohort 2	Expansion Cohort 2
Total subjects affected by non-serious adverse events subjects affected / exposed	2 / 3 (66.67%)	0 / 3 (0.00%)	2 / 2 (100.00%)
Injury, poisoning and procedural complications Post procedural haemorrhage subjects affected / exposed occurrences (all)	0 / 3 (0.00%) 0	0 / 3 (0.00%) 0	1 / 2 (50.00%) 1
General disorders and administration site conditions Non-cardiac chest pain subjects affected / exposed occurrences (all) Peripheral swelling subjects affected / exposed occurrences (all)	0 / 3 (0.00%) 0 1 / 3 (33.33%) 1	0 / 3 (0.00%) 0 0 / 3 (0.00%) 0	1 / 2 (50.00%) 1 0 / 2 (0.00%) 0
Gastrointestinal disorders Toothache subjects affected / exposed occurrences (all)	0 / 3 (0.00%) 0	0 / 3 (0.00%) 0	1 / 2 (50.00%) 1
Respiratory, thoracic and mediastinal disorders Dyspnoea subjects affected / exposed occurrences (all) Oropharyngeal pain subjects affected / exposed occurrences (all)	1 / 3 (33.33%) 1 1 / 3 (33.33%) 1	0 / 3 (0.00%) 0 0 / 3 (0.00%) 0	0 / 2 (0.00%) 0 0 / 2 (0.00%) 0
Psychiatric disorders Attention deficit hyperactivity disorder subjects affected / exposed occurrences (all)	0 / 3 (0.00%) 0	0 / 3 (0.00%) 0	1 / 2 (50.00%) 1
Infections and infestations COVID-19 subjects affected / exposed occurrences (all) Ear infection subjects affected / exposed occurrences (all)	1 / 3 (33.33%) 1 1 / 3 (33.33%) 1	0 / 3 (0.00%) 0 0 / 3 (0.00%) 0	2 / 2 (100.00%) 2 0 / 2 (0.00%) 0

Pneumonia			
subjects affected / exposed	1 / 3 (33.33%)	0 / 3 (0.00%)	0 / 2 (0.00%)
occurrences (all)	1	0	0
Upper respiratory tract infection			
subjects affected / exposed	1 / 3 (33.33%)	0 / 3 (0.00%)	0 / 2 (0.00%)
occurrences (all)	2	0	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