Study to Evaluate Efficacy and Safety of Inclisiran in Adolescents With Heterozygous Familial Hypercholesterolemia

14/12/2025 01:46:01

Main Information

Primary registry identifying number
LBCTR2021034776

Protocol number
CKJX839C12301

MOH registration number

Study registered at the country of origin
Yes

Study registered at the country of origin: Specify

Type of registration
Prospective

Type of registration: Justify
N/A

Date of registration in national regulatory agency

Primary sponsor
Novartis Pharma Services inc.

Primary sponsor: Country of origin
Novartis Pharmaceuticals

Date of registration in primary registry
06/11/2023

Date of registration in national regulatory agency

Public title
Study to Evaluate Efficacy and Safety of Inclisiran in Adolescents With Heterozygous Familial Hypercholesterolemia

Acronym

Scientific title
Two Part (Double-blind Inclisiran Versus Placebo [Year 1] Followed by Open-label Inclisiran [Year 2]) Randomized Multicenter Study to Evaluate Safety, Tolerability, and Efficacy of Inclisiran in Adolescents (12 to Less Than 18 Years) With Heterozygous Familial Hypercholesterolemia and Elevated LDL-cholesterol (ORION-16)

Acronym

Brief summary of the study: English

This is a pivotal phase III study designed to evaluate safety, tolerability, and efficacy of inclisiran in adolescents with heterozygous familial hypercholesterolemia (HeFH) and elevated low density lipoprotein cholesterol (LDL-C).

This is a two-part (1 year double-blind inclisiran versus placebo / 1 year open-label inclisiran) multicenter study designed to evaluate safety, tolerability, and efficacy of inclisiran in adolescents with heterozygous familial hypercholesterolemia (HeFH) and elevated low density lipoprotein cholesterol (LDL-C) on stable standard of care background lipid-lowering therapy. The primary objective is to demonstrate superiority of inclisiran compared to placebo in reducing LDL-C (percent change) at Day 330.

Brief summary of the study: Arabic

[يتبعه إنكليسيران مفتوح اللصاقة1دراسة متعددة المراكز، عشوائيّة التوزيع من قسمين (إنكليسيران مزدوج التعمية مقابل الدواء الوهمي [السنة سنة) المصابين بفرط كوليسترول الدم العائلي18 إلى أقل من 12]) لتقييم سلامة إنكليسيران وقدرة تحمّله وفعاليّته لدى المراهقين (من 2السنة] متغاير الزيجوت وبارتفاع الكوليسترول الضار (أوريون-16((ORION-16)

Health conditions/problem studied: Specify

Heterozygous Familial Hypercholesterolemia

Interventions: Specify

Drug: Inclisiran
Drug: Placebo

Key inclusion and exclusion criteria: Inclusion criteria

Heterozygous Familial Hypercholesterolemia (HeFH) diagnosed either by genetic testing or on phenotypic criteria
Fasting LDL-C >130 mg/dL (3.4 mmol/L) at screening
Fasting triglycerides <400 mg/dL (4.5 mmol/L) at screening
On maximally tolerated dose of statin (investigator's discretion) with or without other lipid-lowering therapy; stable for ≥ 30 days before screening
Estimated glomerular filtration rate (eGFR) >30 mL/min/1.73 m2 at screening

Key inclusion and exclusion criteria: Gender

Both

Key inclusion and exclusion criteria: Specify gender

Key inclusion and exclusion criteria: Age minimum

12

Key inclusion and exclusion criteria: Age maximum

17

Key inclusion and exclusion criteria: Exclusion criteria

Homozygous familial hypercholesterolemia (HoFH)
Active liver disease
Secondary hypercholesterolemia, e.g. hypothyroidism or nephrotic syndrome
Major adverse cardiovascular events within 3 months prior to randomization
Previous treatment with monoclonal antibodies directed towards PCSK9 (within 90 days of screening)
Recent and/or planned use of other investigational medicinal products or devices
Other protocol-defined inclusion/exclusion criteria may apply

Type of study

Interventional

Type of intervention

Pharmaceutical

Type of intervention: Specify type

N/A

Trial scope

Therapy

Trial scope: Specify scope

N/A

Study design: Allocation

Randomized controlled trial

Study design: Masking

Blinded (masking used)

Study design: Control

Placebo

Study phase

3

Study design: Purpose

Treatment

Study design: Specify purpose

N/A

Study design: Assignment

Parallel

Study design: Specify assignment

N/A

IMP has market authorization

Yes, Worldwide

IMP has market authorization: Specify

European Union, United Arab Emirates, Great Britain

Name of IMP

inclisiran

Year of authorization

Month of authorization

Type of IMP

Others

Pharmaceutical class

cholesterol-lowering small interfering ribonucleic acid (siRNA) that inhibits the production of proprotein convertase subtilisin/kexin type 9

Therapeutic indication

heterozygous familial hypercholesterolemia (HeFH) and elevated low density lipoprotein cholesterol (LDL-C)

Therapeutic benefit

to demonstrate superiority of inclisiran compared to placebo in reducing LDL-C (percent change) at Day 330 in adolescents (12 to less than 18 years) with heterozygous familial hypercholesterolemia and elevated LDL-cholesterol

Study model

N/A

Study model: Explain model

N/A

Study model: Specify model

N/A

Time perspective

N/A

Time perspective: Explain time perspective

N/A

Time perspective: Specify perspective

N/A

Target follow-up duration

Target follow-up duration: Unit

Number of groups/cohorts

Biospecimen retention

Samples with DNA**

Biospecimen description

Blood samples collected will be analyzed at Medpace Laboratories, central lab

Target sample size

4

Actual enrollment target size

3

Date of first enrollment: Type

Actual

Date of first enrollment: Date

31/08/2021

Date of study closure: Type

Actual

Date of study closure: Date

16/03/2025

Recruitment status

Complete

Recruitment status: Specify

Date of completion

19/11/2022

IPD sharing statement plan

Yes

IPD sharing statement description

Novartis is committed to sharing with qualified external researchers, access to patient-level data and supporting clinical documents from eligible studies. These requests are reviewed and approved by an independent review panel on the basis of scientific merit. All data provided is anonymized to respect the privacy of patients who have participated in the trial in line with applicable laws and regulations.

This trial data availability is according to the criteria and process described on www.clinicalstudydatarequest.com.

Additional data URL

https://clinicaltrials.gov/ct2/show/NCT04652726?cond=heterozygous+familial+hypercholesterolemia&draw=2&rank=2

Admin comments

Trial status

Approved

Secondary Identifying Numbers

Full name of issuing authority	Secondary identifying number
NCT04652726	Clinical trials.gov

Sources of Monetary or Material Support

Name
Novartis Pharma Services inc.

Secondary Sponsors

Name
NA

Contact for Public/Scientific Queries

Contact type	Contact full name	Address	Country	Telephone	Email	Affiliation
Public	Selim Jambart	Beirut	Lebanon	961 3 406 001	sjambart@dm.net.lb	Hotel Dieu De France
Scientific	Hind Khairallah	Sinelfil	Lebanon	01512002#271	Hind.khairallah@fattal.com.lb	Khalil Fattal et Fils s.a.l.
Public	Hala Tfayli	Beirut	Lebanon	71729759	HT31@AUB .EDU .LB	American University of Beirut Medical Center

Centers/Hospitals Involved in the Study

Center/Hospital name	Name of principles investigator	Principles investigator speciality	Ethical approval
Hotel Dieu De France	Selim Jambart	Endocrinology	Approved
American University of Beirut Medical Center	Hala Tfayli	Pediatric Endocrinology	Approved

Ethics Review

Ethics approval obtained	Approval date	Contact name	Contact email	Contact phone
Hotel Dieu de France	21/12/2020	Sami Richa	cue@usj.edu.lb	961421229
American University of Beirut Medical Center	28/06/2021	Fuad Ziyadeh	irb@aub.edu.lb	00961 -1-350000 or 1 374374, ext: 5445

Countries of Recruitment

Name
Lebanon
Australia
Germany
Hungary
Norway
Spain
United States of America

Health Conditions or Problems Studied

Condition	Code	Keyword
heterozygous familial hypercholesterolemia	Hyperlipidaemia, unspecified (E78.5)	heterozygous familial hypercholesterolemia

Interventions

Intervention	Description	Keyword
Informed Consent/assent form discussion; Inclusion/exclusion assessment; physical examination; neurological examination; blood and urine samples collection; IMP dispensation	Informed Consent/assent form discussion; Inclusion/exclusion assessment; physical examination; neurological examination; blood and urine samples collection; IMP dispensation	ICF, IMP , Lab tests, physical exams

Primary Outcomes

Name	Time Points	Measure
Percentage (%) change in low-density lipoprotein cholesterol (LDL-C)	baseline to Day 330	baseline to Day 330
Demonstrate superiority of inclisiran compared to placebo in reducing LDL-C [percent change]	Day 330 (Year 1)	Day 330 (Year 1)

Key Secondary Outcomes

Name	Time Points	Measure
Time-adjusted % change in LDL-C from baseline	Baseline, after Day 90 up to Day 330	Baseline, after Day 90 up to Day 330
Absolute change in LDL-C from baseline to Day 330	Baseline and Day 330	Baseline and Day 330
% change in apolipoprotein B (Apo B), lipoprotein (a) [Lp(a)], non-high density lipoprotein cholesterol (non-HDL-C), and total cholesterol from baseline to Day 330	Baseline and Day 330	Baseline and Day 330
% change and absolute change in LDL-C from baseline up to Day 720	Baseline, up to Day 720	Baseline, up to Day 720
% change and absolute change in other lipoproteins and lipid parameters	Baseline, up to Day 720	Baseline, up to Day 720
% change and absolute change in proprotein convertase subtilisin/kexin type 9 (PCSK9)	Baseline, up to Day 720	Baseline, up to Day 720

Trial Results

Summary results

Study results globally

Date of posting of results summaries

Date of first journal publication of results

Results URL link

Baseline characteristics

Participant flow

Adverse events

Outcome measures

URL to protocol files