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A phase Ib study to investigate safety and tolerability of ARGX-119 in adult participants with DOK7 congenital myasthenic syndrome (CMS)

Submission date
18/06/2024

Recruitment status
No longer recruiting

Registration date
08/10/2024

Overall study status
Completed

Last Edited
18/12/2024

Condition category
Nervous System Diseases

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
Congenital myasthenic syndromes (CMS) are a group of rare neuromuscular disorders caused by genetic defects affecting the neuromuscular junction (NMJ). The NMJ is a specialised synapse between motor neurons and muscle cells, essential for movement and breathing. One of the more frequent causes of CMS is a mutation of the DOK7 gene (DOK7-CMS), which accounts for 15-20% of CMS cases. Currently, there are no FDA- (or other health authority) approved treatments for CMS. There is an unmet need for new treatments that improve NMJ stability and function to provide clinical benefit to CMS patients. ARGX-119 is an experimental study drug that binds to a protein on muscle cells, which may help maintain the links between nerves and muscles and improve the signaling between them when this has been disrupted in diseases or syndromes, such as CMS. This may improve muscle strength and reduce fatigue from physical activity. The purpose of this study is to learn if ARGX-119 is safe for participants with CMS who have changes (mutations) in a gene called DOK7. The study will also research how the body processes and removes ARGX-119, how the immune system reacts to ARGX-119, and how ARGX-119 affects the way participants feel and function. This clinical study is planned to be conducted at approximately 12 study sites in Austria, France, Italy, Spain, Canada, the United Kingdom and North America.

Who can participate?
The study population will include adult participants with confirmed diagnosis of DOK7-CMS.

What does the study involve?
Approximately 15 participants will be enrolled, screened, and randomised to receive ARGX-119 or placebo. The study will be up to approximately 11 months long. This is the first time that ARGX-119 will be given to participants with CMS.

What are the possible benefits and risks of participating?
As with all studies, drug treatment and other therapies may involve risks that are known or

unknown. Based on previous studies and the experience of other people who have received ARGX-119 some side effects may occur.

The most commonly reported side effects in an ongoing study with the study drug in healthy participants were bruising at the catheter site, fatigue, common cold, headache, back pain, and irritation from the medical devices (for example, ECG pads). The study drug may also cause an allergic reaction. If this happens, participants may have a fever, itchiness, rash, and in severe cases, difficulty breathing. This can be caused by the study drug or ingredients used to prepare it.

There may be pain, bleeding, bruising or swelling at the site where the blood samples are taken. The participant may also feel dizzy or faint.
Participants may have to visit the hospital more frequently than normal when taking part in this study.

Some participants in this study will receive a placebo. Taking a placebo is the same as not taking any active drug. If participants receive a placebo, their disease may get worse, stay the same, or improve.

ECG - During an ECG participants will need to lie still for a few minutes & small electrodes will be attached to their chest with adhesive pads. It may cause slight discomfort when they are being put on / taken off. Male participants may need to have their chest shaved to perform the ECG. Some participants may be sensitive to the adhesive pads resulting in itchy red areas where the patches were placed. This reaction should settle within a few hours

Physical tests - The physical tests in this study require participants to sit down, stand up, walk, swallow, breathe into a machine, and move their limbs and other muscles. These tests may be tiring.

Where is the study run from?
Argenx BV

When is the study starting and how long is it expected to run for?
June 2024 to October 2025

Who is funding the study?
Argenx BV

Who is the main contact?
ClinicalTrials@argenx.com

Contact information

Type(s)
Scientific

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Additional identifiers

Clinical Trials Information System (CTIS)
2023-509872-41

Integrated Research Application System (IRAS)
1010165

ClinicalTrials.gov (NCT)
NCT06436742

Protocol serial number
ARGX-119-2302, CPMS 62357

Study information

Scientific Title

A phase Ib, double-blinded, randomized, placebo-controlled study to assess the safety, tolerability, pharmacokinetics, immunogenicity, and efficacy of ARGX-119 in adult participants With DOK7-congenital myasthenic syndromes

Study objectives
To evaluate the safety and tolerability of ARGX-119 in participants with DOK7-CMS

1. To assess the PK and immunogenicity of ARGX 119 in participants with DOK7-CMS.
2. To preliminarily assess the efficacy of ARGX-119 in participants with DOK7-CMS with measures of muscle weakness and fatigability, activities of daily living, and patient-reported outcomes of global health.

Ethics approval required
Ethics approval required

Ethics approval(s)
approved 15/08/2024, Health and Social Care Research Ethics Committee B (HSC REC B) (Office for Research Ethics Committees Northern Ireland (ORECNI), Lissue Industrial Estate West, 5 Rathdown Walk, Lisburn, BT28 2RF, United Kingdom; +44 (028) 95 361400; info.orecni@hscni.net), ref: 24/NI/0087

Study design
Randomized placebo-controlled double-blind study

Primary study design
Interventional

Study type(s)
Safety, Efficacy

Health condition(s) or problem(s) studied
Congenital neuromuscular disorders

Interventions
After the screening period, eligible participants will be randomized through IRT in a 4:1 ratio to receive intravenous infusions of ARGX-119 or placebo during the treatment period. Participants will then enter the follow-up period. The full duration of the study is approximately 11 months.

Intervention Type
Drug

Phase
Phase I

Drug/device/biological/vaccine name(s)
ARGX-119 [Humanised IGG1 monoclonal antibody against muscle specific kinase]

Primary outcome(s)
Assessment of adverse events, clinical laboratory tests, electrocardiograms, and vital signs up to week 42

Key secondary outcome(s))
1. Pharmacokinetic (PK) parameters of ARGX-119 measured up to week 42
2. Incidence and prevalence of anti-drug antibodies (ADA) against ARGX-119 measured up to week 42
3. Change from baseline up to week 42 in:
3.1. Disease severity measured using the Quantitative Myasthenia Gravis (QMG) scale
3.2. Impact of myasthenia gravis on daily functioning measured using the Myasthenia Gravis Activities of Daily Living (MG-ADL)
3.3. Changes in patient quality of life measured using the Patient-Reported Outcomes Measurement Information System Global Health (PROMIS-GH) scale

Completion date
28/10/2025

Eligibility

Key inclusion criteria
1. At least 18 years of age
2. Has genetically confirmed congenital myasthenic syndromes due to mutation downstream of kinase 7 (DOK7-CMS).
3. Participants taking oral beta agonists (eg, albuterol, salbutamol, ephedrine) must have been receiving the medication for more than 3 months and agree to remain on the same stable dosing regimen of the same medication until the end of the study

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Sex
All

Key exclusion criteria
1. Diagnosis of CMS due to mutation of any gene other than DOK7.
2. Known medical condition that would interfere with an accurate assessment of CMS, confound the results of the study, or put the patient at undue risk, as assessed by the investigator.
3. History of malignancy, or cancer, unless considered cured by adequate treatment with no evidence of recurrence for more than 5 years. Adequately treated participants with the following cancers can be included at any time: Basal cell or squamous cell skin cancer, Carcinoma in situ of the cervix, Carcinoma in situ of the breast, and Incidental histological findings of prostate cancer
4. Different study drugs received in another clinical study within 12 weeks or 5 half-lives before screening

5. Current participation in another interventional clinical study or prior participation in any gene therapy or cell therapy study
6. Pregnant or lactating state or intention to become pregnant during the study

The complete list of exclusion criteria can be found in the protocol.

Date of first enrolment
25/09/2024

Date of final enrolment
31/01/2025

Locations

Countries of recruitment
United Kingdom

England

Austria

Canada

France

Italy

Spain

United States of America

Study participating centre
-
United Kingdom
-

Sponsor information

Organisation
Argenx (Belgium)

ROR
https://ror.org/04spfxf63

Funder(s)

Funder type
Industry

Funder Name
Argenx

Alternative Name(s)
Argenx SE

Funding Body Type
Government organisation

Funding Body Subtype
For-profit companies (industry)

Location
Netherlands

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are not expected to be made available due to pending procedures for voluntary data sharing.

IPD sharing plan summary
Not expected to be made available