

# Clinical study to assess treatment effects of Cerebrolysin in amyotrophic lateral sclerosis

<b>Submission date</b> 01/12/2023	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
		<input type="checkbox"/> Protocol
<b>Registration date</b> 08/01/2024	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
<b>Last Edited</b> 09/01/2024	<b>Condition category</b> Nervous System Diseases	<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Amyotrophic lateral sclerosis (ALS) is a progressive condition that causes you to lose control of your muscles in stages. Cerebrolysin is a drug that supports the nerves and may therefore have a beneficial effect in the treatment of ALS. This study assessed whether patients have a greater therapeutic benefit in treating the symptoms of ALS when Cerebrolysin is added to the standard treatment (riluzole).

### Who can participate?

Patients aged 18 years and over with a confirmed diagnosis of ALS and a considerable increase in muscle tone

### What does the study involve?

Patients received intravenous injections of 10 ml Cerebrolysin once a day, 5 days a week for the first month, then 3 days a week for the next 2 months, administered at home by a specialist nurse. Patients in the placebo group received the same treatment with 10 ml of normal saline. All patients received 50 mg of riluzole by mouth twice daily. Clinical assessments of motor and functional deterioration, spasticity and depressive symptoms were made before the start of treatment, at month 1, month 2 and at the end of the treatment period at month 3.

### What are the possible benefits and risks of participating?

The potential benefit was an improvement in ALS symptoms, and no safety issues were expected.

### Where is the study run from?

Instituto Cardiológico Banfield (ICB) (Argentina)

### When is the study starting and how long is it expected to run for?

July 2020 to June 2022

### Who is funding the study?

Instituto Cardiológico Banfield (ICB) (Argentina) and the study drug was provided by EVER Neuro Pharma GmbH

Who is the main contact?  
Dr Alfredo José Firstenfeld, alfredo.firstenfeld@gmail.com

## Contact information

### Type(s)

Public, Scientific, Principal investigator

### Contact name

Prof Alfredo José Firstenfeld

### Contact details

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## Additional identifiers

### Clinical Trials Information System (CTIS)

Nil known

### Protocol serial number

Nil known

## Study information

### Scientific Title

Add-on treatment with Cerebrolysin improves clinical symptoms in amyotrophic lateral sclerosis patients: results of a prospective, single-center, placebo-controlled, randomized, double-blind, Phase II study

### Study objectives

Patients with amyotrophic lateral sclerosis (ALS) benefit more from treatment with a combination of Cerebrolysin and riluzole than they do from treatment with riluzole alone.

### Ethics approval required

Ethics approval required

### Ethics approval(s)

approved 12/01/2021, Comité De Ética De Clínica Privada Banfield Bancei (Félix de Azara 1780 – Banfield, Pcia de Bs. As, Buenos Aires, Banfield, Austria; +54 (0)11 3754-0050; info@clinicabanfield.com), ref: Carta de dictamen - Cerebrolysin - 12ene21

### Study design

Investigator-initiated interventional prospective single-center placebo-controlled randomized double-blind Phase II study

**Primary study design**

Interventional

**Study type(s)**

Quality of life, Treatment, Safety, Efficacy

**Health condition(s) or problem(s) studied**

Amyotrophic lateral sclerosis

**Interventions**

Patients were randomized 1:1 to Cerebrolysin or placebo (0.9% NaCl). An Excel-generated randomization list was used with blocks of 10 patients to account for balancing the sample size.

Patients received intravenous injections of 10 ml Cerebrolysin once a day, 5 days a week for the first month, then 3 days a week for the next 2 months, administered at home by a specialist nurse.

Patients in the placebo group received the same treatment with 10 ml of normal saline.

All patients received 50 mg of riluzole by mouth twice daily.

Clinical assessments of motor and functional deterioration, spasticity and depressive symptoms were made before the start of treatment, at month 1, month 2 and at the end of the treatment period at month 3.

**Intervention Type**

Drug

**Phase**

Phase II

**Drug/device/biological/vaccine name(s)**

Cerebrolysin, riluzole

**Primary outcome(s)**

Functional impairment is measured using the Amyotrophic Lateral Sclerosis Functional Rating Scale – revised (ALSFERS-R) at baseline and month 1

**Key secondary outcome(s)**

1. Functional impairment is measured using the Amyotrophic Lateral Sclerosis Functional Rating Scale – revised (ALSFERS-R) at baseline to months 2 and 3
2. Depressive symptoms are measured using the Beck's Depression Inventory-II (BDI-II) at baseline to months 1, 2, and 3
3. Spasticity is measured by the Modified Ashworth Scale (MAS) at baseline to months 1, 2, and 3
4. Gross motor skills are measured by the time taken to walk four meters, the walked distance in 120 seconds, and the number of knee bends to the opposite arm at baseline to months 1, 2, and 3
5. Hand strength is measured by an handheld dynamometer at baseline to months 1, 2, and 3

**Completion date**

02/06/2022

# Eligibility

## Key inclusion criteria

1. Either sex and at least 18 years of age
2. Clinically definite diagnosis of ALS according to the El Escorial and revised Airlie House diagnostic criteria
3. Limb onset and/or bulbar onset with pyramidal signs
4. Modified Ashworth Spasticity Scale score of 3
5. Informed consent

## Participant type(s)

Patient

## Healthy volunteers allowed

No

## Age group

Adult

## Lower age limit

18 years

## Sex

All

## Total final enrolment

20

## Key exclusion criteria

1. Co-morbidities such as hepatic disease, renal failure or severe renal impairment, coronary disease, epilepsy, Parkinson's disease, or dementia
2. Any condition that might interfere with compliance with study procedures or influence outcome assessment
3. Pregnant or breastfeeding
4. Participation in another interventional study within the previous 2 months
5. Contraindication to Cerebrolysin
6. Concomitant use of ginkgo biloba, erythropoietin, citicoline, and amantadine

## Date of first enrolment

29/07/2021

## Date of final enrolment

10/03/2022

# Locations

## Countries of recruitment

Argentina

**Study participating centre**  
**Instituto Cardiológico Banfield**  
Maipú 660  
Buenos Aires  
Argentina  
B1828IJN

## **Sponsor information**

**Organisation**  
Instituto Cardiológico Banfield

## **Funder(s)**

**Funder type**  
Hospital/treatment centre

**Funder Name**  
Instituto Cardiológico Banfield

## **Results and Publications**

### **Individual participant data (IPD) sharing plan**

The data-sharing plans for the current study are unknown and will be made available at a later date.

### **IPD sharing plan summary**

Data sharing statement to be made available at a later date