French-German cohort study to determine factors associated with weight loss in amyotrophic lateral sclerosis

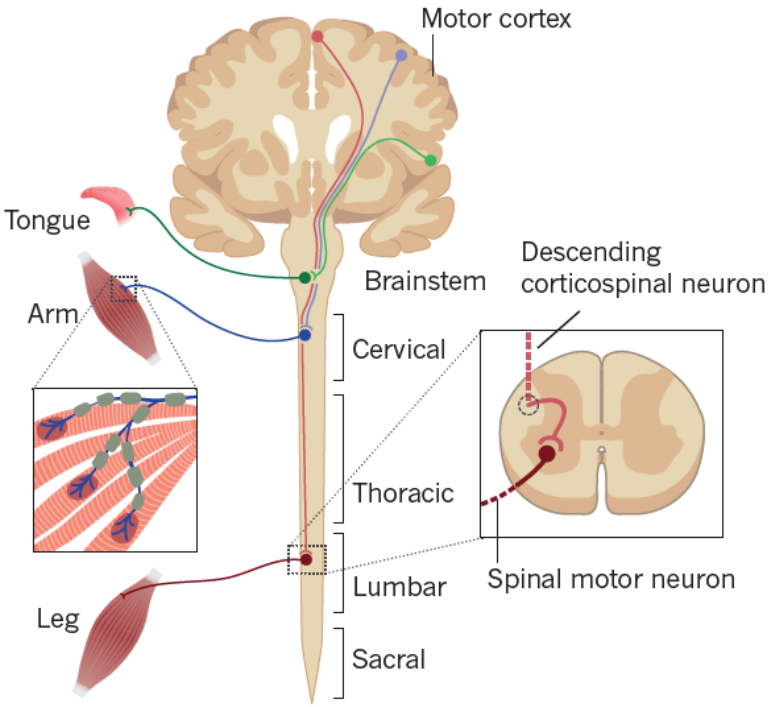
FG-CoALS

Pr. Couratier
Dr. Luna
Centre Référence Maladies rares SLA & autres maladies du neurone moteur
18/01/2022

Scientific rationale

ALS is highly heterogeneous

- Clinically
- Genetically
- Mechanistically



Weight loss

- Early weight loss in ALS
- Weight loss is predictive of prognosis
- Slowing weight loss improves ALS outcome

Objectives

- **<u>Primary objective</u>**

  To identify clinical factors and genetic markers associated with weight loss in ALS

- **<u>Secondary objectives</u>**

  - *To identify the impact of clinical and relevant genetic variants on disease progression and survival stratified by weight loss at time of diagnosis.*
  - *To identify the impact of physical activity, nutrition appetite, relevant metabolites and neurofilaments on disease progression and survival stratified by weight loss at time of diagnosis in a subset of patients (sub-cohort).*
  - *To identify metabolic, inflammatory and imaging factors associated with weight loss in a subset of patients (sub-cohort).*

Outcome measures

- **<u>Primary Outcome Measure</u>**

  Clinical factors and genetic markers independently associated with weight loss in ALS

- **<u>Secondary Outcome Measures</u>**

  – Disease progression (ALSFRS-R slope) and survival
  – Metabolic, inflammatory and imaging factors independently associated with weight loss in ALS

Methodology

- **Study type**

  Observational, Multicenter, Cohort Study

- **Study design**

  Incident ALS cases will be included across the participant centers in France and Germany. Patients will be stratified for weight loss at the time of diagnosis

  A prospective follow-up every 3 months will be conducted to assess disease progression and survival. The follow-up will be of 18 months

  A Minimum Data Set will be collected in the cohort

  A sub-cohort will be established to identify additional factors

Methodology: Population

- **<u>Inclusion Criteria</u>**

  - Incident cases included at the time of diagnosis according to El Escorial revised criteria and Gold Coast criteria for early diagnosis

  - Incident ALS cases identified and followed-up in the participant hospital centers

  - Patients who signed the informed consent form

- **<u>Non Inclusion Criteria</u>**
  - Inability to understand the requirements of the protocol
  - Absence of treatment with Riluzole

Methodology: Population size

- **Number of patients**

  A prospective inclusion of all incident ALS cases will be performed across the participant centers using an exhaustive approach

  The number of ALS cases expected is around 600 incident cases per year in France and 200 incident cases per year in Germany

  Overall, we expected 2400 incident cases during 36 months of inclusion and a minimal expected recruitment of 1500 patients

- **Hypothesis** (basis for calculation of number of subjects)

  Not applicable

Expected outcomes - Valorisation

- **<u>Expected outcomes</u>**

  This ambitious French-German cohort proposal will allow the identification of markers that could potentially be used to personalized dietary counseling and prevent weight loss with a positive impact on disease progression and survival.

- **<u>Valorisation</u>**

  Communication in national and international congress

  Publications in peer-reviewed academic journals

Logistical and financial aspects

- **Finances**
  - **Global cost: 3.15 M**

    Grant financial support: 1.40 KM

    Contribution of participating institutions: 1.75 M
  - **Funding source**

  ANR - Appel à manifestations d'intérêt « Accélérer la recherche et l'innovation sur les maladies rares grâce aux bases de données »

- **Logistics**

FILSLAN – Filière de Santé Maladies Rares Sclérose Latérale Amyotrophique et Maladies du Neurone Moteur – filière de santé maladies rares

7 referral centers
France

RESEARCH FOR RARE – German Networks on Rare Diseases – MND-NET

2 referral centers
Germany

Inserm – La science pour la santé – From science to health

Research partners