

## Abstract – OnWebDuals Project - project pitch

In this project we aimed to approach the potential association between clinical and neurophysiological phenotype, spreading pattern, respiratory function, biomarkers, risk factors (in particular exercise), genetic mutations, and survival. For this purpose we prepared a validated consensual questionnaire to record relevant information applying a systematic and standardized process, in the most of the involved centers. From this step we built a detailed database with 1450 patients and 1020 controls, including patients from 6 European centers. At the time of this abstract we have published papers on questionnaire construct (1), neurophysiological phenotype (6), clinical phenotype (5), clinical progression (1), clinical-genetic phenotype (5), respiratory function (2), clinical-environmental factors (3), and biomarkers (2). To expand our achievements we shared our database with a few statistical groups to permit a more complex analysis of this large amount of data, as a consequence more publications have been submitted or are going to be submitted briefly, regarding machine-learning to scrutinize association in the data-set (1) cardio-vascular risk-factor (1), exercise risk-factor (1), disease spreading (1), and family history of neurodegenerative-diseases (1). Other analysis are underway. We contributed to understand disease progression and its interplay with a few clinical-genetic-environmental features; however, the proposal of an epidemiological strategy will depend on a complete analysis, which is still ongoing.

This project has been coordinated by Mamede de Carvalho (Instituto de Medicina Molecular-Faculty of Medicine, University of Lisbon, Lisbon, Portugal) and originally integrated Magdalena Kuzma-Kozakiewicz (Medical University of Warsaw, Poland), Maria Piotrkiewicz (Nałęcz Institute of Biocybernetics and Biomedical Engineering, Polish Academy of Sciences, Warsaw, Poland) Julian Grosskreutz (University Hospital Jena, Jena, Germany), Peter Andersen (Institute of Pharmacology and Clinical Neuroscience, Umeå University, Umeå, Sweden) and Susanne Petri (Hannover Medical School, Hannover, Germany). Later, Hilmi Uysal (Akdeniz University, Faculty of Medicine, Neurology Department, Antalya, Turkey) has entered this consortium without budget to increase subjects recruitment.