Dementia with Lewy bodies (DLB) is the result of abnormal α-synuclein aggregation and accumulation in form of Lewy bodies causing neuronal cell death.

DLB is the second most common neurodegenerative dementia after Alzheimer’s Disease (AD) in people older than 65 years. In these populations, the incidence of DLB is reported between 0.5-1.6/1,000 person/year accounting for at least 5% of dementias cases.

DLB is an aggressive disease with a reported average survival of 4.7-year but is frequently mistaken for other degenerative dementias, most often AD.

NEEDS

Until now, there are neither reliable biomarkers for the early diagnosis of DLB, nor disease-modifying therapies have been developed. Although α-synuclein anti-aggregatory agents are under development no biomarkers to monitor their outcome have been identified.

Therefore, there is an urgent need of biomarkers for both early DLB diagnosis and monitoring α-synuclein anti-aggregatory therapies.

SOLUTION

Our project proposes to create a biomarker signature:

• for early DLB diagnosis based on the expression levels of 5 SNCA (α-synuclein) transcripts
• to monitor the efficiency of α-synuclein anti-aggregatory therapies in DLB patients, based on the expression levels of one SNCA transcript

KEY ADVANTAGES

• Easily accessible and minimally invasive: from blood samples
• Quick and non-expensive
• Allows disease confirmation: high accuracy
• Specificity over 90%
• Shortens time to diagnosis
• Monitors disease progression and treatment efficacy
• Inclusion in clinical trials to prevent or delay the onset of the disease

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