

BIOMARKAPD

Biomarkers for Alzheimer's disease and Parkinson's disease

Alzheimer's and Parkinson's diseases (AD and PD) are the two most common neurodegenerative conditions. They cause major costs for society and suffering and death for millions of patients around the globe. In Europe, more than 8 million individuals have AD or PD. Current treatments are symptomatic but do not stop the underlying disease process. Using biomarkers, we can detect biochemical changes that show when neurons start to die. There are also biochemical tests for brain changes that are specific to AD and PD. Studies suggest that such abnormalities start to appear 10-20 years before onset of symptoms. If we want to do something substantial about these diseases, we need to diagnose them early, before too many neurons have been lost, and then treat them with drugs that inhibit the destructive process. Such drugs are in development. However, in these very early stages of the disease we cannot rely on clinical symptoms, as they may be very subtle, or even absent. Instead, research tells us that we could use biomarkers for disease-specific pathologies. Established biomarkers exist for early AD and promising candidates are underway for PD. However, a major problem today is the lack of standardisation regarding exactly how to perform and use the biomarker tests.

In BIOMARKAPD we detail how we will standardise the biomarker measurements across Europe, how to collect samples, how to perform the measurements and how to interpret the results. We will also create a biobank with samples from well characterised AD and PD patients, including patients in very early disease stages, as well as neurologically healthy controls. These samples will be used to develop new and better assays and to test new and better biomarker candidates. Finally, we will develop certified reference materials that can be used to harmonise assays that are used to measure the different biomarkers. The deliverables of the proposal will have a major influence on clinical research and drug development for neurodegenerative conditions in general and for AD and PD in particular. They will impact these types of efforts globally and make Europe world-leading in this area.

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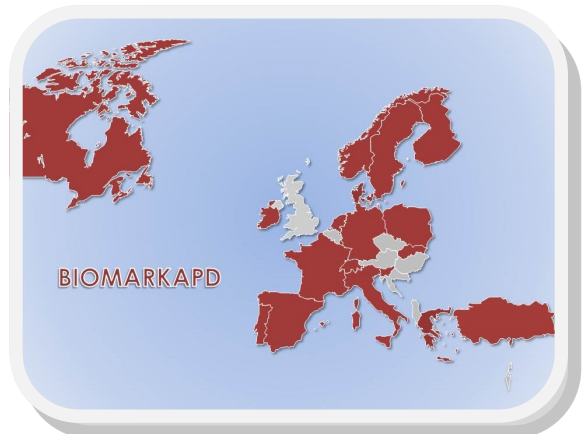
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