New biomarker assay offers hope for Parkinson's patients

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EU researchers have developed a Parkinson's disease biomarker assay that could lead to early diagnoses and faster, more effective treatments.

Developed through the EU-funded BIOMARKERS FOR PD project, the innovation has the potential to become the first biochemical biomarker assay capable of reflecting the underlying pathophysiology of the disease. A key component of the project has been to evaluate the business opportunities and future development path for such Parkinson's disease biomarkers.

A healthcare priority for Europe

Parkinson's disease is one of the most prevalent neurodegenerative

disorders. Around the world, more than 4.6 million people aged 50 and over currently suffer from the condition, and the World Health Organisation estimates that this number will more than double by 2030.

The condition exacts a heavy social and economic cost. It can significantly impact the quality of life, not only for patients but also for families, friends and carers. In financial terms, it has been estimated that the annual healthcare bill for treating Parkinson's disease in Europe tops EUR 14 billion.

Improving the treatment of Parkinson's disease is therefore a healthcare priority for Europe and a key opportunity for European SMEs and high tech businesses in the healthcare sector. At present only symptomatic therapies are available, and the disease is often difficult to diagnose. Misclassification, especially in early Parkinson's disease, occurs frequently. High sensitivity and specificity can only be obtained at specialised centres and after several years of follow-up.

Developing an effective Parkinson's biomarker

There is therefore a huge unmet market and need for treatments that slow or halt disease progression. One area that has shown promise has been the achievement of early diagnoses, which can improve patient outcomes.

This has been the objective of the BIOMARKERS FOR PD project. The development of an effective Parkinson's disease biomarker assay would help clinical practitioners identify the onset of the disease earlier than previously possible and thus enable them to put in place effective treatments.

Biomarkers are used in clinical practice to describe both normal and pathological conditions. They can also have a prognostic or a predictive

power, and are therefore increasingly used in medicine. Clinical validation of biomarkers is vital for the development of new diagnostics, and this is where the BIOMARKETS FOR PD project has sought to make a difference.

Clinical validation of existing potential biomarkers has also been sought. The project team is looking for evidence of high analytical validity; appropriate sensitivity and specificity; and clinical validity/utility. Results will ultimately facilitate the entry of improved diagnostics in the clinic and the market and enhance the growth potential of high tech SMEs operating in the healthcare sector.

'We are grateful for the support from EU,' says Dr. Gunilla Osswald, CEO of project coordinator BioArctic Neuroscience AB. 'The development of a sensitive and specific biomarker that also could mirror the treatment effect would make an enormous advantage in the development of new disease modifying therapeutics.' The BIOMARKERS FOR PD project is scheduled for completion in March 2016.

More information: For further information please visit www.bioarctic.se/

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