Diagnostics
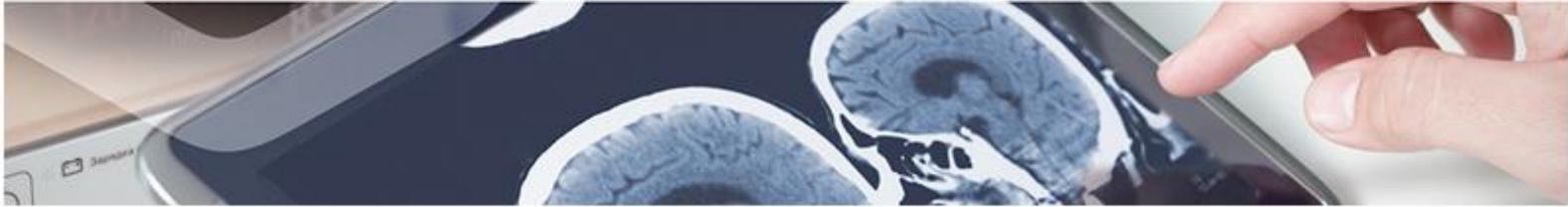
Lactoperoxidase as Parkinson biomarker

A research group from the Andalusian Health System and Sevilla University has developed a new method for the diagnosis of Parkinson.

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Description

Parkinson's disease is a progressive neurodegenerative disorder that affects more than 1% of people over 65 years old and it is characterized by a selective degradation of neurons. Many factors are involved in the development of this disease, such as genes or the presence of neuroinflammation, making it a multifactorial disorder in which recent studies have demonstrated the importance of oxidative stress and microbial infections in its development.

However, despite the importance of this disease, there are not any known diagnostic or prognostic biomarkers that can be used for early detection in patients suffering from it. Nowadays, diagnosis is based on the appearance of clinical symptoms, which appear at a more advanced stage of the disease, and treatment is not possible in the early stages when its therapeutic effect is greater.

Evidence suggests the diagnostic and prognostic using potential blood or cerebrospinal fluid biomarkers, and their combined is of great interest. In this area, our researchers have shown that the enzyme lactoperoxidase is involved in the pathogenesis of the disease and, according to analyses, its concentration and activity is elevated in patients with idiopathic Parkinson's disease, and should be considered as a risk factor. The mechanism by which this alteration occurs may in turn be of great interest for the development of new drugs with new therapeutic targets.

Advantanges

- Obtaining a diagnostic method of the disease in early stages.
- The possibility of using and developing neuroprotective or even curative drugs by inhibiting the enzyme lactoperoxidase.
- Development of effective lactoperoxidase inhibitor drugs without side effects.

Intellectual Property

This technology is protected with a national patent application with priority date 03/11/2021. It is possible extend this protection with an international (PCT) application.

Aims

Collaborators or licensees of this technology are sought for the development of diagnostic kits for Parkinson's disease in early stages, as well as its prognosis, or the development of therapeutic methods based on the inhibition of brain lactoperoxidase as a therapeutic target.

Classification

Area: Diagnostic
Pathology: Parkinson