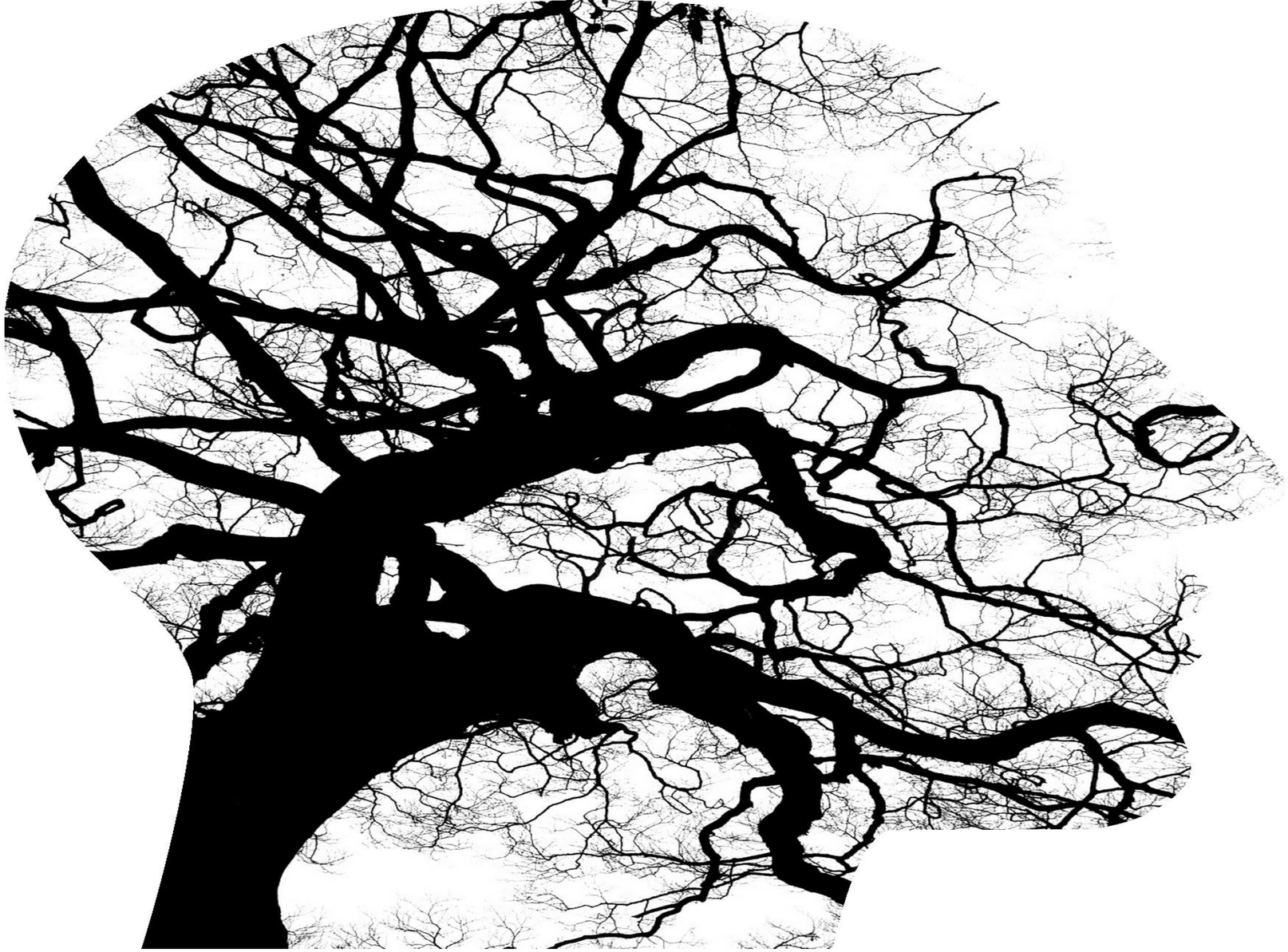

INNOVUS

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A Method of Treating Parkinson's Disease

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The use of lipopolysaccharide (LPS)-binding protein (LBP) to treat Parkinson's Disease (AD) by reducing hypercoagulation (exaggerated blood clotting) commonly associated with this disease.

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BRIEF DESCRIPTION

The use of lipopolysaccharide (LPS)-binding protein (LBP) to treat Parkinson's Disease (AD) by reducing hypercoagulation (exaggerated blood clotting) commonly associated with this disease.

UNIQUE CHARACTERISTICS

The researchers responsible for the development of this innovation have recently shown that there is a bacterial component involved in the aetiology of PD. Multiple research studies have shown that the pyrogenic bacterial wall component, LPS (from gram negative bacteria) is a potent inflammagen (elicits an inflammatory response that causes hypercoagulation in a multitude of inflammatory conditions. LBP naturally occurs in the human body, and in diseases such as PD, the production of LBP is reduced. Consequently, in the context of systemic inflammation, excess LPS cannot be bound and cleared to a sufficient degree, resulting in a hypercoagulable state. This innovation proposes the use of LBP to treat hypercoagualation in inflammatory conditions such as PD.

TARGET MARKET

This innovation is targeted to the following industries:

- Pharmaceutical companies
- Biotechnology companies
- Clinical trials companies

VALUE PROPOSITION/BENEFITS

Inflammation contributes to the development of PD. Hypercoagulation is an important hallmark of inflammation, and reduction of this exaggerated clotting of blood, through the use of LBP, has the potential to limit the development of various comorbidities (cardiovascular complications; pulmonary embolism; thrombotic ischemic stroke, etc.) in patients afflicted with PD. Additionally this technology can be used to prevent/reduce chronic, systemic hypercoagulation which ultimately results in the impairment of microcirculation and vascular disease.

This innovation provides a limited, non-invasive treatment option for hypercoagulation associated with conditions, such as PD, that are inflammatory in nature.

TECHNICAL DESCRIPTION

According to the Parkinson's Disease Foundation there are an estimated 10 million people, globally, living with PD. Moreover, the combined direct and indirect costs associated with PD (treatment costs, loss of income from inability to work, etc.) in the USA alone amounts to nearly US$ 25 billion.

Our researchers have recently shown that LBP has the potential to reverse hypercoagulation in PD, amongst other conditions. Using scanning electron microscopy (SEM) and confocal microscopy, the researchers showed that platelet-poor-plasma from subjects with PD had a much greater propensity for hypercoagulation and for amyloidogenesis, and that these could both be reversed by LBP treatment. These data demonstrate that PD can be treated by administering LBP to patients suffering from this disease

PRINCIPAL RESEARCHERS

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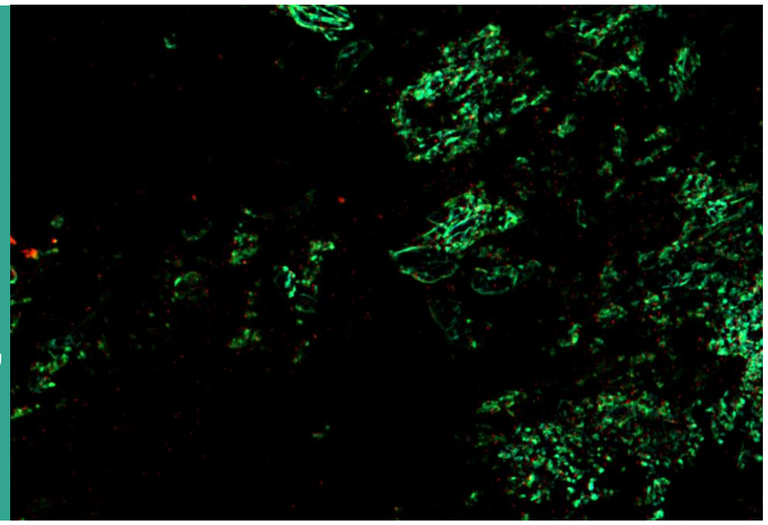
LBP has the potential to prevent/reduce hypercoagulation associated with Parkinson's Disease, which results in the development of various co-morbidities, such as thrombo-embolic ischemic stroke, heart attacks, deep vein thrombosis, lung embolisms ,etc.



INNOVATION STATUS

A PCT application, with application number PCT/IB2017/056117, has been filed for this innovation.