

# Diabetes drug focus of new clinical trial for Parkinson's disease

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Type II diabetes and Parkinson's disease may not appear to have much in common but a look below the surface reveals important molecular similarities that provide a potential target for fighting Parkinson's.

These commonalities form the foundation of a clinical trial now underway at Cedars-Sinai in Los Angeles to investigate the use of the diabetes drug liraglutide to slow or stop the progression of Parkinson's. Led by Michele Tagliati, M.D., Steven D. Broidy Chair and Director of Movement Disorders at Cedars-Sinai, the trial is the latest to be launched as part of the Linked Clinical Trials (LCT) initiative, a program spearheaded by UK research charity The Cure Parkinson's Trust in collaboration with Grand Rapids-based Van Andel Research Institute (VARI). Novo Nordisk, which developed liraglutide, also is supporting the trial.

"There is a great need to find therapies that impact the disease process—that is, to slow or actually halt it—rather than just mitigating symptoms," said Patrik Brundin, M.D., Ph.D., head of LCT's international scientific committee and director of VARI's Center for Neurodegenerative Science. "Investigating drugs already approved to treat other conditions and that have already undergone extensive testing provide a unique opportunity to more quickly move these potential new therapies into the clinic. However, as with any investigational new treatment, we urge patience until the clinical studies are completed, which are critical for ensuring efficacy and safety."

Liraglutide belongs to a class of drugs called GLP-1 agonists and prompts the release of insulin, thereby lowering glucose levels in the blood when bound to its receptor. Recent laboratory findings suggest that when liraglutide activates these receptors in the brain, the drug provides protection against degenerative damage to key brain cells, specifically those affected in Parkinson's disease.

"The investigational use of liraglutide is a reflection of our scientific progress and improved understanding of Parkinson's disease," Tagliati said. "Given the increasing evidence of a possible role of insulin resistance in neurodegeneration, we expect this GLP-1 agonist to have a great impact on the symptoms of Parkinson's disease and its progression. A remarkable aspect of this new avenue of research is the focus on mechanisms that may address both motor and non-motor features of the disease. We are grateful for the vision and generosity of the Linked Clinical Trials initiative that made this important clinical effort possible."

Liraglutide is the second GLP-1 agonist to be selected for a trial through LCT. The first, exenatide, demonstrated promising initial results in people with Parkinson's who participated in a year-long clinical trial. Other drugs that are being investigated through LCT include the respiratory drug ambroxol and the cholesterol-lowering drug simvastatin. By focusing on existing medications that have shown promise in preclinical laboratory studies for treating Parkinson's and have already passed the rigorous drug approval process for other diseases, LCT aims to significantly reduce the time and cost required to bring new therapies to people with Parkinson's.

"Linked Clinical Trials is a proactive initiative that has gathered real momentum—it gives us the opportunity to accelerate potentially breakthrough treatments more quickly into the clinic," said Tom Isaacs, president and co-founder of The Cure Parkinson's Trust. "This trial

provides people like me who live with Parkinson's real hope that we are on the brink of a paradigm-shift for the better. There is an urgent need to identify and develop these potentially new therapies to improve the quality of life for everyone around the world who lives with this condition."

There have been few major therapeutic breakthroughs for Parkinson's in the last 50 years with the exception of levodopa, the current gold standard for drug treatment, and deep brain stimulation, a surgical option. Although these therapies may significantly improve quality of life, they do not impact the progressive brain cell death that is the disease's hallmark. LCT's scientific committee, which comprises leading Parkinson's experts and advocates from around the world, continue to investigate additional compounds that not only treat symptoms but that may also slow or stop disease progression.

Provided by Van Andel Research Institute

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