

Lizard venom offers hope for Parkinson's disease patients

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Sleeping gila monster at the Boyce Thompson Arboretum in Tucson, Arizona.

(PhysOrg.com) -- The saliva of a venomous lizard native to southwestern America and Mexico could provide a cure for patients with Parkinson's disease.

A trial is underway at University College London Hospitals in UK to establish whether the drug 'Exenatide' could be used to treat patients with the progressive [neurological condition](#).

A synthetic version of this drug, originally found in the saliva of the Gila monster, is already an approved treatment for patients with diabetes.

However, laboratory evidence suggests it could also arrest the neurodegenerative process that causes Parkinson's disease - potentially leading to a cure. Four independent groups around the world (including colleagues at the School of Pharmacy, London), have shown that this drug can improve symptoms of Parkinson's and rescue [dying cells](#) in five different rodent models of the disease.

Dr Tom Foltynie, consultant neurologist at the National Hospital for Neurology and [Neurosurgery](#), who is leading the trial, said: "This is an incredibly exciting project. At present there is no cure for Parkinson's disease and the drugs currently available only relieve the symptoms, but do not arrest the underlying progressive neurodegenerative process.

"We will be studying a tried and tested drug which is used for the treatment of diabetes and are hopeful it will arrest the neurodegenerative process for Parkinson's and provide new hope of a cure for this disabling condition."

People with Parkinson's don't have enough of a chemical called dopamine because some [nerve cells](#) in their brain have died. Without dopamine people can find that their movements become slower so it takes longer to do things. There's currently no cure for Parkinson's and it is not yet known why people get the condition. Parkinson's doesn't directly cause people to die, but symptoms do get worse over time.

Six million diabetics worldwide inject Exenatide in the abdomen, thigh or arm, 30 to 60 minutes before the first and last meal of the day to control their glucose levels.

It works on a receptor in the gut and pancreas but is also known to act on a receptor in the brain. Dr Foltynie's research, funded by the Cure Parkinson's Trust and involving 40 patients in an initial phase, will seek to establish whether the effects previously seen in animals are

reproduced when these receptors in the brains of Parkinson's disease patients are stimulated by subcutaneous injections of this drug.

Provided by University College London

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