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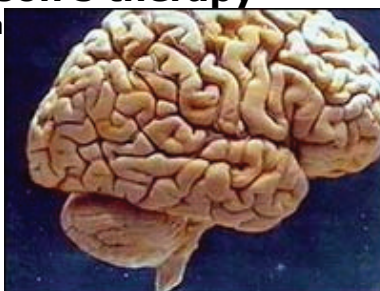
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Hope for new Parkinson's therapy

Scientists have discovered a protein which may help to slow, or even reverse symptoms of Parkinson's disease.



Nerve cell death leads to Parkinson's

Parkinson's destroys nerve cells that produce the brain chemical dopamine, causing movement and balance problems.

Finnish researchers found the new molecule can prevent degeneration of these cells - and help damaged cells start to recover.

Their paper, featured in Nature, showed symptoms eased in rats given injections of the protein.

Current anti-Parkinson's drugs do not stop nerve cells from degenerating and dying, and their effects can be patchy and short-lived.

“ Our new protein has great potential to be developed as drug for Parkinson's disease ”

Dr Mart Saarma
University of Helsinki

The researchers, from the University of Helsinki, believe the new molecule - dubbed conserved dopamine neurotrophic factor (CDNF) - has great potential as a treatment.

Previous research has centred on another protein - GDNF - which some research had suggested could improve symptoms in Parkinson's patients.

However, other studies have thrown doubt over the effect of the protein - and raised serious safety issues.

The Helsinki team decided to search for related proteins - known as growth factors - which worked in a similar way, but were likely to be better tolerated.

They found that CDNF, unlike other similar growth factors, was specific to brain nerve cells.

Experiments were carried out on rats bred to show symptoms similar to Parkinson's.

In tests, CDNF protected 96% of nerve cells in the brains of the animals from degeneration.

Delay in treatment

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To test whether the protein could also help repair damage in nerve cells the researchers also waited a month before treating some of the animals to allow Parkinson's symptoms to really take hold.

This was designed to mimic the situation in human patients, who may already have lost 70% of their dopamine-producing nerve cells by the time they seek treatment.

Following treatment 58% of the dopamine-producing nerve cells were left alive, compared with just 26% in animals who did not receive the protein.

Lead researcher Dr Mart Saarma said: "Our new protein has great potential to be developed as drug for Parkinson's disease, but we need to do more animal experiments and also toxicology studies before we can start clinical trials."

Dr Kieran Breen, of the Parkinson's Disease Society, said the research was still at a very early stage.

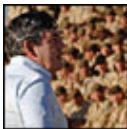
"What is interesting is that the protein shows similar neuro-protective actions to GDNF which indicates that this general type of drug may be useful in the future for developing new therapies for treating Parkinson's.

"However, while GDNF showed some benefits in early clinical trials, larger trials showed side effects, which led to it being withdrawn. It is therefore too early to predict the therapeutic potential of CDNF."

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