

### Three year grant for Parkinson's UK leads to further understanding of the PINK1 gene

Parkinson's disease is a progressive neurological condition which affects 120,000 people in the UK. People with Parkinson's don't have enough of a chemical called dopamine. Without dopamine people can find that their movements become slower so it takes longer to do things. The loss of nerve cells in the brain causes the symptoms of Parkinson's to appear. There's currently no cure for Parkinson's and we don't yet know why people get the condition.

The Freemasons' Grand Charity has funded Parkinson's UK since 1981 and in 2010, finished funding £177,000 into a three-year study into a gene involved in Parkinson's called PINK1. The research has been carried out by Professor Nick Wood at University College London. The research team aimed to find out more about how mutations in the PINK1 gene might be linked to the death of specific nerve cells within the brain, and they have had some major breakthroughs.

PINK1 is a gene that is involved in some cases of Parkinson's. Understanding how the gene works, and how this can be changed in Parkinson's, has helped scientists to unravel further the puzzle of why nerve cells die. The PINK1 gene gives rise to a protein that usually keeps nerve cells healthy. But the protein needs to be changed from its original form before it can work. Through their research, Professor Wood's group have discovered new factors that work with PINK1 to alter it to allow it to work correctly. Mutations in the PINK1 gene prevent that interaction, and this eventually leads to nerve cell death. But scientists still need to understand more about how this happens and how they can prevent the death of nerve cells occurring.

However, the team's discovery is a significant step towards understanding how the nerve cells die in Parkinson's and to finding out whether and how the cells can be rescued.

*For further information about Parkinson's UK please visit:  
[www.parkinsons.org.uk](http://www.parkinsons.org.uk)*



*Parkinson's UK Information and Support Worker*



*Parkinson's UK lab worker*

*Major breakthroughs have occurred, bringing scientists closer to understanding Parkinson's disease and how to combat it*



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*Parkinson's UK Nurse Specialist*