

## 'Switch' could block Huntington's

**A "molecular switch" that can prevent Huntington's disease from developing has been found in mice.**

A US study concluded the mutated huntingtin protein, which causes the disease, could be stopped in its tracks by a subtle chemical modification.

It is hoped the work could lead to much-needed treatments for the inherited disorder.

The study, by the University of California, Los Angeles, is published in the journal *Neuron*.

It is thought between 6,000 and 8,500 people in the UK have Huntington's disease - a neurological condition that starts to show in mid-life and slowly impairs a person's ability to walk, talk and reason.

Children who have one parent with the condition have a 50% chance of developing it themselves and often it is passed on before people are aware that they have it.

There is no cure for the illness and treatment focuses on managing the symptoms.

**"This finding suggests an exciting new avenue to develop therapeutics for Huntington's disease"**

Study leader Dr William Yang

Although it is known that a protein mutation underpins the disease, it is not exactly clear how that mutation causes the damage seen in those with the condition.

In the latest study, researchers found a small section of the mutated protein that can be modified by phosphorylation - a chemical process in the body that alters how proteins function.

In mice they found blocking this phosphorylation caused the animals to develop disease symptoms.

But when they tried to mimic the process the disorder did not develop.

**" This research offers an exciting avenue of exploration in the quest to prevent or slow down the disease process "**

Cath Stanley Huntington's Disease Association

It follows previous work showing phosphorylation reduced the tendency of the mutant huntingtin protein to form clumps and another study showing it could help cells get rid of the toxic version of the protein.

Study leader Dr William Yang said together the studies suggested a new direction of research into the formation and clearance of the huntingtin protein in the disease process.

"We were surprised to find that subtle modification of only two amino acids in this very large protein can prevent the onset of disease.

"This finding suggests an exciting new avenue to develop therapeutics for Huntington's disease."

Huntington's Disease Association head of care services Cath Stanley said: "Although in the very early stages, this research offers an exciting avenue of exploration in the quest to prevent or slow down the disease process."

Story from BBC NEWS:

<http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/8428051.stm>

Published: 2009/12/24 23:59:56 GMT

© BBC MMX