



# CASE STUDY

# Multiple Sclerosis

## MEDICAL BREAKTHROUGH

### Research funded by The Freemasons' Grand Charity leads to treatment for multiple sclerosis

On 14 November 2011, it was announced that trials into a new drug, alemtuzumab, have been successful - a significant development for those suffering from multiple sclerosis (MS).

The Freemasons' Grand Charity gave £100,000 towards this research in 2010, at the University of Cambridge. The grant specifically helped fund research into the side effects of a drug called "alemtuzumab", for the treatment of multiple sclerosis.

Multiple sclerosis is one of the most common neurological conditions among young adults, affecting around 100,000 people in the UK. It is an autoimmune disease, in which the body's immune system mistakes friend as foe. Immune cells mistakenly attack nerve fibres and their protective insulation, the myelin sheath, in the central nervous system. The resulting damage prevents the nerves from 'firing' properly and ultimately leads to their destruction, resulting in physical and intellectual disabilities.

Since 1991, research has taken place at the University of Cambridge on the development of the revolutionary drug alemtuzumab as a treatment for multiple sclerosis. Results have shown that alemtuzumab is a much more effective treatment for early stage relapsing-remitting multiple sclerosis than the currently approved drug. The results also show it may repair damaged brain tissue, enabling the recovery of neurological functions, an unprecedented finding.



Dr Alasdair Coles, who has led the research, said: *"Three important results emerge from these trials. First, they show that just eight days of alemtuzumab significantly reduces the risk of having another relapse of multiple sclerosis or becoming disabled over the next 3 to 5 years, compared to the standard active drug, interferon-beta. Secondly, many patients on alemtuzumab experience an improvement in disability, which is not seen after standard treatment. Finally, although alemtuzumab causes potentially serious side-effects, these can be identified and treated provided a monitoring schedule is carefully followed."*

These recent findings illustrate the promise that alemtuzumab holds as a transformative treatment for a broad range of people with relapsing multiple sclerosis. It is hoped the drug will be approved by the UK and US regulatory bodies in the next two years, concluding the 36 year epic journey from fundamental research to a new, effective treatment for MS.

*For further information, please visit:*

<http://www.cam.ac.uk/research/news/new-treatment-for-multiple-sclerosis-cambridge-university-translates-research-at-the-bench-into-a-drug-at-the-bedside/>

