

***Investment Brief for  
A Treatment of Multiple Sclerosis (MS)***

**NSW  
AREA HEALTH  
SERVICES**

***Office of Commercialisation***

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# Treatment for Multiple Sclerosis (MS)

## Summary

A genetic indicator for Primary Progressive Multiple Sclerosis (PPMS) has been identified. Methods to manipulate the genetic indicator as a polypeptide or nucleic acid or inhibitor, or combined with a carrier, potentially offer a novel method to treat MS. This technology offers the opportunity for the rapid development of a marker for MS and the potential development of novel therapeutic agents.

The technology has been developed by Professor Graeme Stewart, Director, Institute for Immunology & Allergy Research, Westmead Hospital, Sydney, Australia and key researcher Dr David Booth, and has been protected by patent. Animal trials are currently being completed in vivo in a highly regarded PPMS mouse model for the disease.

## Market

PPMS is diagnosed in approximately 10% of MS patients, with diagnosis usually occurring after the patient has been living for a period of time with progressive but not acute attacks. Of the estimated 3 million MS patients worldwide (350,000 in US, or 1 in 1000 over age 30) women are twice as susceptible as men. The incidence or prevalence of PPMS is between 450,000 to 960,000 people worldwide.

In 2003 56% of MS drug global sales were in the US (US\$1.9 billion) and the remainder largely in Europe (43%, US\$1.4 billion). Analysts expect market growth from US\$3.5 billion currently to US\$6 billion over the next few years. Global sales of leading drugs include:

Avonex (Biogen/Idec)	-	US\$1.16 billion
Betaseron/Betaferon (Berlex Labs/Schering AG)	-	US\$ 870 million
Rebif (Serono)	-	US\$ 819 million
Copaxone (Teva)	-	US\$ 720 million

## Benefits

The technology would allow PPMS sufferers to be diagnosed immediately and then potentially treated for the protein down regulated in the disease, to modulate disease activity rather than just treat symptoms.

Currently no treatment for MS is uniformly effective and most only treat symptoms. Corticosteroids used to shorten the duration of relapses can only be used for short periods due to severe side-effects. The typical cocktail of drugs to treat symptoms such as muscle spasms, urinary incontinence, pain, tremors, fatigue and depression are relatively ineffective.