

MEDIA RELEASE – Immediate

Breakthroughs signal new era for motor neurone disease research

Recent breakthroughs in motor neurone disease research are providing clearer direction for scientists to find a cause and cure for this disease and paving the way for future research into other neurodegenerative diseases.

Researchers have discovered a second gene linking motor neurone disease (MND) to the protein recycling system in our cells. It is the third major MND breakthrough since August and provides further evidence that a common biological mechanism is involved in all forms of motor neurone disease.

Research led by Professor Teepu Siddique, from Northwestern University in Chicago USA, reports that genetic mutations in a gene called SQSTM1 have been found in 2 to 3% of all cases of MND. The findings were published in the November edition of the *Archives of Neurology*.

In August, Professor Siddique's team caused excitement amongst scientists after identifying that mutations in a gene called UBQLN2, a protein involved in cell recycling, were pivotal to motor neurone disease (MND).

Professor Dominic Rowe, a neurologist and Chairman of the MND Research Committee says, 'This is the first time scientists have had proof of a common process in all types of MND – these discoveries highlight protein recycling and disposal as two of the key degenerative processes occurring in the disease. Other neurological conditions such as Parkinson's disease and Huntington's disease appear to involve similar problems so hopefully this will encourage pharmaceutical companies to pursue treatment strategies.'

'Therapies to slow or stop the progression of MND are few, and new therapies based on the biology of MND are required to change the disease completely. While the genetic changes may not be applicable to all patients with MND, novel therapies targeted on the abnormalities that occur as a result of these changes are required. It is only by understanding the biology of MND that we will have therapies to slow or stop this disease,' says Professor Rowe.

Despite being described over 140 years ago, there remains no known cause or cure for the disease that kills an average of 12 Australians each week.

Carol Birks, Executive Director at Motor Neurone Disease Australia says, 'Australia is a key player in MND research – for the second year running, Australians donated a record \$1.4 million for research into a cause and cure of MND.'

MND is a rapid progressing, terminal disease in which nerves weaken and waste, causing near-total paralysis of the body. The mind is usually unaffected, leaving people trapped in their body. Average survival time after diagnosis is just 2-3 years.

Professor Siddique and other leading researchers will share the latest findings when Sydney hosts the 22nd International Symposium on ALS/MND this week. For more information about Motor Neurone Disease visit www.mndaust.asn.au

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For more information or to interview Professor Dominic Rowe, contact:

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Professor Dominic Rowe

Professor Dominic Rowe is Chairman of the MND Research Committee of Motor Neurone Disease Australia and a leading expert on motor neurone disease and Parkinson's Disease. Dominic is available for interview on research developments in MND and Australia's involvement in neurological disease research.

Patient available for interview on request to Carol Birks:**Dr Paul Brock**

Dr Paul Brock AM was diagnosed with motor neurone disease at the age of 53, when his youngest daughter was one year old. He was given an expected life span of three years. Fourteen years later much of his body is paralysed, but he continues to live life to the fullest with his wife and three daughters. Paul has been an education advisor to both state and federal governments and is currently Director of Learning and Development Research with the NSW Department of Education and Communities. Paul is available for interview about the experience of living with MND and the urgent need for research into finding a cure and providing greater support for people with MND and their families.