



FACT SHEET

The Australian Motor Neuron Disease DNA Bank

The University of Sydney and Royal Prince Alfred Hospital

Motor neuron disease

Motor neuron disease (MND) is a term that covers a group of disorders in which motor neurons are progressively lost. MND usually leads to death in 3-5 years from muscle weakness. It is suspected that MND arises in people who have a genetic susceptibility to some environmental agent such as a toxin or a virus. An Australia-wide DNA Bank was set up in 2000 to look for this genetic susceptibility to the disease. This is a first step to finding the cause and potential cure for MND.

Features of the Australian MND DNA Bank

The Australian MND DNA bank has been set up to look specifically for gene-environment interactions in MND. (1) People fill in a detailed questionnaire outlining previous environmental exposures to a variety of agents. (2) At any one time 1,200 people in Australia suffer from MND. We aim to obtain DNA samples from the majority of these people. (3) Neurologists in all states provide the Bank with clinical details so that the type of MND can be assessed. (4) The MND Associations in each state support the DNA bank and encourage their members to donate samples. (5) MND patients, their families and friends have given vital support to the Bank by donating blood samples in large numbers. We have over 900 samples in the Bank at present (one third from people with MND), enough to do a number of studies, but more samples are needed for large-scale gene searches.

Sample collection

People with and without MND are encouraged to donate a blood sample to the Bank. The Bank collects samples from people in Sydney, Newcastle, Melbourne, Adelaide, Brisbane, Canberra and Perth, as well as from those living in country areas.

Genes being examined

We are presently looking for differences in genes that protect motor neurons against heavy metals, pesticides and viruses. We have found that people with one form of MND are more likely to have a genetic variant that would make their motor neurons more susceptible to certain viral infections.

Contributing to the DNA Bank

If you would like to contribute your DNA to the Bank, please contact Dr Roger Pamphlett at the Department of Pathology D06, The University of Sydney, NSW 2006. Phone 02 9351-3318, fax 02 9351-3429, email rogerp@med.usyd.edu.au

The Australian MND DNA Bank is supported by the MND Research Institute of Australia, The Aimee Stacey Memorial Fund and the Ignatius Burnett Bequest

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