National search for proteins that cause MS

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Australian researchers will aim to discover the proteins that cause multiple sclerosis (MS), thanks to a new nationwide research effort.

The national research project is the first of its kind in Australia and one of the first of its kind in the world.

"This collaborative research project has the potential to find crucial answers about a debilitating disease that affects millions of people worldwide," says the Hon. Mark Butler MP, Parliamentary Secretary for Health.

More than 2.5 million people worldwide have MS, with the disease costing the Australian community alone an estimated $2 billion each year. Despite considerable research efforts so far, there are few effective treatments for MS.

The new research project will receive funding of $1 million over four years, starting this year, under the Australian Research Council's Linkage Projects funding scheme and from MS Research Australia (MSRA), the research arm of MS Australia.

The research is a major national collaboration between the University of Adelaide, Monash University, University of Queensland and the Sir Charles Gairdner Hospital, with the University of Adelaide as lead institution.

"With MS, there are a number of major stages that occur in the disease,

including activation and remission," says the lead investigator, Professor Shaun McColl (School of Molecular & Biomedical Science, University of Adelaide).

"At each of these major stages, certain genes are activated. Those genes express proteins, and we believe these could have the effect of switching the disease on and off. If we can discover the key proteins and their roles in the development of MS, we could go a long way towards finding potential treatments or cures for the condition," he says.

The area of research involved in discovering such proteins is known as proteomics.

"There is no doubt that identification of a set of proteins that are specifically linked to different stages and pathological processes in MS will provide insight into the disease," says Professor Claude Bernard (Multiple Sclerosis Research Lab, Monash University). "It will also help evaluate the prognosis of patients with MS, guide their treatment and provide novel therapeutic approaches," he says.

Mr Jeremy Wright, Executive Director of MS Research Australia, says: "This is a natural step for MSRA to help researchers make important new discoveries that will translate into real outcomes for people with MS. Together with the ARC, we are investing $1 million into this promising new area for MS research."

Facts about MS

• Multiple sclerosis is an autoimmune disease in which the body's own immune cells attack a person's central nervous system. MS affects the ability of nerve cells in the brain and spinal cord to communicate with each other.
• More than 2.5 million people around the world have MS.

• Three out of every four people diagnosed are women.
• MS is the most common neurological disease in young adults. It often strikes when a person is at their most active, usually in their early 20s, with increasing professional, social and/or family responsibilities.

Source: University of Adelaide (news : web)