



New hope for sufferers of rare lung disease

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Lymphangioleiomyomatosis or LAM, is a rare but devastating lung disease that most commonly affects women between the ages of 20 and 40.

There is currently no cure for LAM, but a new research initiative at the Malaghan Institute of Medical Research, Wellington, funded by the NZ LAM Trust and the LAM Australasia Research Alliance, offers the promise of more effective treatment options for sufferers of this complex disease.

LAM is characterised by the uncontrolled growth of abnormal, smooth muscle cells in the tissues of the lungs. Over time these cells develop into cysts in the lungs, making breathing a daily battle.

"What is needed is to understand the origins of the disease and to stop it in its tracks," said Prof Mike Berridge, who is overseeing the Malaghan Institute's LAM research programme.

Prof Berridge and Research Fellow Dr James Baty plan to do this by investigating similarities between LAM cells and cancer-forming cells.

The research will be carried out in collaboration with Dr Lyn Moir from the Woodcock Institute in Sydney, who will provide primary cells from LAM patients.

"While LAM is not presently classified as a cancer, LAM cells have cancer cell-like properties, including mutations, loss of cell growth control and spread to other tissues of the body," said Prof Berridge.

"We will investigate the cancer-like properties of LAM cells, and in particular, determine whether LAM is sustained by a small population of self-renewing cells that are responsible for disease persistence and progression."

The ability to self-renew is a hallmark feature of cancer stem cells - the cells that give rise to cancer.

A major focus of research at the Malaghan Institute is the development of strategies that train the immune system to target these cells and thereby destroy their ability to sustain tumour growth.



Prof Berridge hypothesises that this immune targeted approach could also be used to treat patients with LAM.

“This latest research is part of a larger study that will explore the feasibility of treating LAM using the immunological therapies currently being developed at the Malaghan Institute for the treatment of cancers such as glioblastoma, melanoma and breast cancer.”

Bronwyn Gray, Director of the New Zealand LAM Trust says that the NZ Trust is delighted to join with Heather Telford, President of the LAM Australasia Research Alliance in supporting this exciting, collaborative project.

“The two patient groups which have raised funds for the project, both here in NZ and in Australia, wish the research team well in this exciting initiative.”

The Malaghan Institute of Medical Research is New Zealand’s premier vaccine and immunology research centre and is based at Victoria University’s Kelburn campus, Wellington. The Institute operates independently and is a charitable trust. Researchers at the Malaghan Institute are focused on developing innovative ways to harness the strength and potency of the immune system, the body’s own natural defence against disease, to treat cancer, asthma, arthritis, multiple sclerosis and infectious disease.

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This media release is also available for viewing on our website www.malaghan.org.nz