



## **Under the Microscope**

### **With Lung Transplant Consultant Dr Dan Chambers**

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Lung Transplant Consultant Dr Dan Chambers has received \$12,000 from the Medical Research Foundation to study the cells in the lungs which cause lung failure after a transplant.

“Over half of all lung transplant recipients actually develop some lung dysfunction after five years,” Dr Chambers said.

“The lungs fail because the tiny airways of the lungs become injured by several causes including rejection, bacterial and viral infections and acid reflux.”

Dr Chambers said the aim of the study is to determine why these cells have such an abnormal reaction to these injuries compared with cells from the larger airways.

“We are very excited about this project because we are the first research group in the world to extract this type of cell during a bronchoscopy and then culture these cells in the lab.”

Lung transplant recipients have around seven bronchoscopies in their first year post transplant, and for this study a tiny brush is used during the bronchoscopy to extract the cells inside the lung.

The cell extraction is performed at Royal Perth Hospital and then cultured in the lab at Princess Margaret Hospital (PMH).

“We are studying these cells in particular as when they are injured they scar and don’t heal, which then leads to lung failure.”

There is only a 40 per cent survival rate of lung transplant recipients ten years post transplant – mostly because of scarring in the tiny airways.

“If we can solve this problem we can ultimately dramatically improve survival.”

Dr Chambers will be leaving RPH early next year to work in the Queensland Lung Transplant Program, however he will still be supervising the project and extending the existing collaborations interstate.

The project is a collaboration between RPH and PMH including WA Heart & Lung Transplant Foundation Masters Scientist Balarka Banerjee, Dr Anthony Kicic, and RPH Lung Transplant Consultant Dr Michael Musk.