

**MEDIA RELEASE - 6<sup>th</sup> August, 2004**

Article published in the latest edition of The New England Journal of Medicine  
<http://content.nejm.org/cgi/content/short/351/6/560>

**Scientists A Step Closer to Finding A Cure For Asthma**

A major discovery by scientists at the Woolcock Institute of Medical Research could revolutionise the way asthma is treated and managed, and possibly lead to an eventual cure.

Released today in the *New England Journal of Medicine* the study has identified a factor that is normally present but missing in people with asthma.

Asthma is characterised by airway inflammation and an increased mass of bronchial smooth muscle cells. It is these muscle cells that cause the airways to narrow and make people feel like they can't breathe anymore.

Michael Roth, Cell Biology Unit, Woolcock Institute of Medical Research said We have discovered that a transcription factor known as C/EBP-alpha is missing in this cell type in people with asthma. C/EBP-alpha is responsible for stopping cells proliferating, explaining why the smooth muscle cells reproduce faster in people with asthma.

When we re-introduced the C/EBP-alpha into cell cultures taken from asthmatics we were able to re-establish the anti-proliferative effect and witness the reduction of cell growth.

For years scientists have been investigating asthma treatments, looking at whether they can reduce muscle growth.

We know that asthmatic drugs can inhibit inflammation in the lungs but we didn't understand why they couldn't prevent increased proliferation of bronchial smooth muscle cells.

At last, we understand why this is the case, taking us a step closer to finding a cure for asthma, Dr Roth concluded.

The National Health and Medical Research Council have supported the research of the Cell group headed by Professor Judy Black for more than 20 years.