

**CASE STUDY**

# ENHANCING MEDICAL RESEARCH AT THE LYELL MCEWIN HOSPITAL

**Professor James McWha, the Vice-Chancellor and President of the University of Adelaide, officially opened specialised wet laboratories at Adelaide's Lyell McEwin Hospital on Tuesday 30 March.**

The site hosts the Robinson Institute's Pregnancy and Development Group led by Associate Professor Vicki Clifton. The redevelopment was significantly supported by the University of Adelaide's School of Paediatrics and Reproductive Health.

The research group focuses on the health of pregnant women and the growth of unborn babies, with ongoing work monitoring the health of the children throughout their lives.

**The group has a particular interest around pregnant women with asthma, half of whom are likely to have an asthma attack during their pregnancy.**

Research has shown that the human fetus is able to deliberately slow and modify its development in response to a suboptimal maternal environment, such as if the mother has a pre-existing disease or suffers extreme stress. This action increases its chances of survival. But remarkably, only female fetuses use the ability. Males instead "roll the dice" and attempt to continue growing at their normal rate, placing them at greater risk should further complications arise.

"What we hope to do is actually look at how we treat pregnant women, through understanding when their babies are at risk and when they are not. Asthma worsens in reproductive-aged women and just being pregnant can make women more susceptible to an asthma attack," says Associate Professor Vicki Clifton.

Vicki says many women with asthma are not being identified during pregnancy. "It's being under-reported during antenatal visits and therefore under-treated. There is also a misconception with pregnant women that their asthma medication may harm the baby. In fact, the asthma is much more likely to be harmful than the preventive medicine," she says.

She says that **55% of women with asthma will have at least one acute asthma attack during pregnancy** and that can lead to detrimental effects on the baby including growth restriction, preterm delivery or even stillbirth.

The research shows that if asthma is managed properly there is less risk of an acute attack and therefore reduced risk of poor outcomes for the baby.

In 2010, Vicki discussed this fascinating growth mechanism and its possible implications for managing pregnancy in a University of Adelaide Research Tuesdays presentation.



*Associate Professor Vicki Clifton and Pratiti Nath (courtesy The Messenger)*