

FIND OUT HOW SMART YOUNG QUEENSLANDERS REALLY ARE!

Inflammation, low birth weight and miscarriage!

This research supports the use of new anti-inflammatory drugs in treating women who suffer from multiple miscarriage and related diseases of pregnancy. Reducing inflammation has been shown to prevent miscarriage and low birth weights in mice this together with human data shows increased inflammation in women with poor pregnancy outcomes.

Kerina J Constantini, University of Queensland

It's all in your head

Rewiring your brain!!!

Brain re-wiring is a natural fact of life (learning and memory). For some people, abnormal rewiring interferes with everyday movements. Focal hand dystonia is a debilitating condition common in musicians and writers. It can have a devastating impact on professional careers when excessive movement makes everyday tasks difficult. This study has shown that electrical stimulation can normalize wiring and alleviate symptoms of focal hand dystonia. **These findings have implications for sufferers of movement disorders and offer hope for re-wiring following stroke or other brain injury!!!**

Siobhan Shabrun, University of Adelaide, University of Queensland.

A pain in the back, a change in the brain

Did you know that chronic back pain changes your brain?? Low back pain is the most common form of chronic pain in Australia and the most common work-related injury in Western society. Its also a major cause of disability and an economic burden second only to cardiovascular disease. Suffers of chronic back pain show reduced volume and alterations in sensory and motor regions of the brain. **The good news is, pain induced brain changes can be reversed with exercises specifically targeting movement impairment and this is accompanied by meaningful recovery in motor function!!**

Henry Tsao, University of Queensland

CANCER CAUSING WORM SPIT!

What in parasitic 'worm spit' causes cancer? Uncooked fish harbour the liver worm parasite *Opisthorchis viverrini* and one third of people infected develop liver cancer. There is no known stronger link between a parasite and cancer than that between liver cancer and the liver worm parasite found predominantly in Thailand. Molecules secreted by this worm cause cells to multiply faster than usual and in a human host, this is a key stage in the initiation of many cancers. Several likely candidate molecules have been uncovered with one in particular, granulin, similar to human growth factor associated with many aggressive human cancers in a wide range of cancers. Michael Smout from the QIMR hopes these investigations will lead to a blocking agent to save countless thousands of lives.

Congratulations Queensland Premier's Awards Student Semi-Finalists

Michael Smout "*What in parasitic worm spit causes cancer?*"

Henry Tsao "*Treating the brain in chronic low back pain*"

Geoffrey Faulkner, "*The regulated retrotransposon transcriptome of mammalian cells*"

Kate Markey "*Therapies targeting donor cells after bone marrow transplantation may improve patient donor outcomes*"

Brian Haluska "*Measurement of Arterial Distensibility and Compliance to Assess Prognosis*"

Jason Roberts "*An Investigation of the utility of continuous infusion vs intermittent bolus dosing of beta-lactam antibiotics in critically ill patients with sepsis*"

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ABSTRACTS AVAILABLE ON REQUEST