

**FIND OUT HOW SMART QUEENSLAND REALLY IS!**

**The Enemy Within - Bacteria Wars!!!**

Melina Georgousakis at QIMR is working on a vaccine to stop **Group A Streptococcus (GAS)** in its tracks. GAS causes many diseases from less severe 'strep throat' to life threatening Rheumatic Heart Disease. It is particularly rife in our indigenous population. This unique approach is encouraging, through trickery, the good bacteria in our bodies to produce its own vaccine to wipe out the bad bacteria!!!

**Smelling the roses!**

Did you know that the olfactory system is one of the few regions in the mature nervous system which has a continual turnover of neurons and regenerative capacity??? Louisa Windus at Eskitis, The National Centre for Adult Stem Cell Research says this capacity is attributed to olfactory ensheathing cells which may have *therapeutic possibilities for spinal cord injuries!*

**Flower Power** - A mini-protein found in sunflower seeds could be the key to stopping tumours spreading in prostate cancer. The inhibitor is currently awaiting pre-clinical trials. Joakim Swedburg, QUT

**WORM SPIT!**

What in parasitic 'worm spit' causes 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. Michael Smout from the QIMR is looking for the specific molecules responsible to understand how this worm causes cancer in so many people in South East Asia.

**RENOVATE OR DETONATE!!!! Malarial invaders renovating your blood.....**

The malaria parasite lives within the red blood cell, a cell which doesn't contain a nucleus and is missing many of the cellular components essential for growth and development. In order for the parasite to survive within this inert cell it exports a large number of proteins into the red blood cell establishing the missing cellular components and remodeling the cell to allow the parasite to grow and develop!!!!. These studies will allow mechanisms employed by the parasite during its "renovation" to be better understood. Without this remodeling the parasite is unable to survive and replicate. A greater understanding of these processes may lead to NEW anti malaria treatments, which are essential due to the recent resurgence of resistance to the more commonly used drugs for malaria. Matthew Dixon, QIMR.

**To sit up straight, or not to? That is the question! A. Claus, UQ**

People often think that sitting-up is good posture for computer work. Changes in back posture were measured by injecting "hair-like" fine-wire electrodes into muscles. Results suggested that the deep back muscles can be as relaxed either sitting up or slumping. *"Our work is leading to a better understanding of what is a good sitting posture for computer work".*

**On the Nose! Are you depressed, anxious, lost your sex drive?**

You may be suffering from chronic stress! For centuries odours derived from plants have been used in aromatherapy for relieving stress, anxiety and depression – most of the evidence for these remedies is anecdotal with minimal evidence based research. This study (P T Choy, University of Queensland) has shown that using Praescent™ (a mixture of plant derived green odours) has moderated the effects of stress on mice. These results are an important step toward developing a novel therapeutic product to combat the effects of chronic stress and reduce the prevalence of stress related illnesses.

**Congratulations Queensland Premier's Awards Student Semi-Finalists**

Matthew Dixon, QIMR - Brett G Hollier, Queensland University of Technology.  
Nirmala Pandeya, QIMR - Rebecca Pelekanos, Institute for Molecular Bioscience, University of Queensland  
Erin Rayment, Queensland University of Technology. - Nadia Whitelaw, QIMR...

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ABSTRACTS AVAILABLE ON REQUEST