

**MEDIA RELEASE May 31, 2011**

## **QLD'S YOUNG SCIENTISTS TACKLING THE HEALTH PROBLEMS OF A NATION!**

Who: Young Health and Medical Research Scientists  
What: ASMR Queensland Postgraduate Student Conference  
Where: Princess Alexandra Hospital  
When: Tuesday 31st May, 2011 (Awards Presentation 5:20 to 5:45)

### **BUILDING NEW BONES – SAVING PAIN AND MONEY!**

Bone disease and injury cost Australians physical and financial pain (over \$10B annually). Current treatments don't restore lost bone but *Kylie Alexander from UQ Centre for Clinical Research* has found that a population of immune cells are present in specialized tissues lining bones. *These cells promote normal bone formation and are pivotal for bone repair.* This discovery opens the door for new avenues in the development of bone building therapies.

### **SILKWORMS, STEM CELLS AND EYES**

A protein (fibroin) isolated from silkworm cocoons (*Bombyx mori*) in conjunction with limbal stem cells, display significant potential for ocular surface reconstruction; they can produce a corneal surface transplant equivalent. This work represents a step forward in the development of limbal tissue transplants and the quest for a whole transplantable ocular tissue grown from the patient's own cells. *Laura Bray, Institute of Health and Biomedical Innovation.*

### **CARTILAGE DUST - BETTER THAN PIXIE DUST?**

Cartilage is the highly organized connective tissue of the joints specialized for bearing weight. Once damaged, cartilage does not have the ability to properly regenerate. Cartilage tissue engineering combines the benefits of cells and scaffolds to make tissue transplants. *Mahboubeh Kabiri from QUT* and colleagues have exploited cartilage natural matrix (ground finely into micrometer sized particles – cartilage dust) along with mesenchymal stem cells to enhance the quality of generated tissue. The cartilage dust rapidly integrated with the cell mass making a continuous *de novo* cartilage tissue.

**This exciting work paves the way for potential benefits to 1.6M Australians suffering cartilage defects and osteoarthritis.**

### **SCHIZOPHRENIA AND THE IMMUNE SYSTEM**

Affecting 1% of the global population, schizophrenia is a severe and debilitating psychiatric disorder resulting from disrupted neurotransmission. *Amanda Jones from The University of Queensland Centre for Clinical Research* is focused on finding out if the immune system in some people with schizophrenia is attacking their brain instead of protecting it. Amanda and her colleagues found that around 20% of people with schizophrenia, versus 5% of healthy people, have evidence of a reaction against the brain. This research supports the hypothesis that there is an autoimmune basis for schizophrenia in a sub-population of patients, opening the way to more targeted treatment for many sufferers.

## **Photo and Interview Opportunities**

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