

MEDIA RELEASE

VICTORIA – A STATE OF MIND!

ASMR Vic hosts some brilliant young minds at the - Annual Victorian Early Career Researcher Symposium!

Where: Bio21 Institute, University of Melbourne, Parkville
When: June 4, 2012

PATIENTS HOLD CELLULAR KEY TO THEIR OWN TREATMENT

CELL THERAPY DELIVERED BY CONTACT LENSES – THE EYES HAVE IT!

A novel approach to transfer a patient's own cells to treat corneal damage

Limbal stem cells can repair damaged tissue on the surface of the eye. However, limbal stem cells may be deficient in a number of conditions, preventing repair and causing vision disturbances. Karl Brown and colleagues at The University of Melbourne and Centre for Eye Research have cultivated stem cells on the surface of contact lenses that can be delivered to the surface of the eye. This work provides vital proof of concept that a patient's own cells can be grown on a contact lens and delivered to the eye to repair their damaged tissue.

USING FAT TO TREAT DIABETES

Connective tissue cells engineered to produce insulin

Michael Williams, a PhD student at The O'Brien Institute and The University of Melbourne has isolated connective tissue cells, also known as mesenchymal cells, from fat tissue and has been successful in converting them into cells that produces insulin. Insulin-producing cells are lost in diabetes and current therapy involves daily insulin injections or transplantation of cadaveric pancreas. The latter is limited by the availability of suitable donors. Michael's preliminary studies suggest that cells isolated from patient's own fat, can be engineered to make insulin. These insulin-producing cells could then be re-delivered to the patient to control their blood sugar levels.

NEW MARKER DETECTS HEART ATTACKS EARLY

A new blood test can confirm a heart attack and predict the extent of damage

David White, a PhD student at the Baker IDI Heart and Diabetes Research Institute, has discovered that a molecule in the blood called *macrophage migration inhibitory factor* is elevated in patients following a heart attack. The levels of this molecule are also predictive of tissue damage caused by the heart attack. These findings have significant implications for how heart attack patients are managed.

IMMUNE MOLECULE PREVENTS WEIGHT GAIN

An unexpected role

PhD student Agnieszka Pindel of the Monash Institute of Medical Research has found that a molecule called protein kinase R (PKR) can prevent diet-induced weight gain. PKR has traditionally been associated with the immune response. However, when PKR was deleted in mice, Agnieszka surprisingly found that their metabolism was affected. Given the increasing incidence of obesity in Australia, Agnieszka's findings could increase our understanding of weight gain and lead to the development of new therapies.

Interview and Photo Opportunities
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The ASMR Medical Research Week® undertaken by The Australian Society for Medical Research is supported by funding from The Australian Government Department of Health and Ageing



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