

Three young scientists bring medical research to life for students in
BIRCHIP, WARRACKNABEAL AND NHILL - JUNE 26 AND 27
Talking Post-Traumatic Stress, HIV/AIDS and Heart Disease

Heart research to save lives!

Bill Li, from the Baker Heart Research Institute in Melbourne, is trying to understand how complications such as heart and kidney disease arise due to diabetes. Cardiovascular side-effects, such as heart attack and stroke, cause the significant mortality of diabetes sufferers due to years of uncontrolled blood sugars.

Li became convinced medical research was where he needed to focus his efforts when his mother did not recover from a straight forward heart operation.

"After open-heart surgery failed to cure my mum's coronary heart disease I wanted to find new ways of treating such health problems."

Li is investigating the roles of genes in the growth of fatty plaques on the walls of arteries in the heart (atherosclerosis). He adds, *"We have shown that a single gene change could significantly reduce arterial plaques forming under diabetic conditions."* This means that Li and his colleagues are one step closer to designing better therapeutics to treat diabetes-related atherosclerosis.

What happens to children with head injuries in the long run?

Suffering a head injury as a child, whether from a car accident or another circumstance, is a distressing experience. The head injury, in some cases, can lead to post-traumatic stress symptoms so Senem Eren, a trainee psychologist and PhD student at the Murdoch Childrens Research Institute in Melbourne, is investigating the issue further.

"I'm trying to understand the brain regions involved when a child or adolescent with a head injury displays symptoms of post-traumatic stress."

Using functional magnetic resonance imaging (MRI), to see parts of the brain used for particular tasks, Eren is investigating the underlying function of these injured children's brains.

"I hope that the research will guide health professionals' rehabilitation efforts to reduce the burden of disability by successful treatment of the emotional difficulties."

Tackling the HIV/AIDS epidemic

Young researcher Carly Siebentritt from the Microbiology and Immunology at The University of Melbourne, is investigating a HIV vaccine, *"so instead of giving a person a cocktail of drugs to fight their HIV virus we can give them a vaccine which helps their own immune system fight the virus and maybe even cure them"*.

"I had this wonderful biological sciences teacher in Year 10 who introduced me to genetics, then at uni it was immunology that caught my interest. When you've been leading up to a certain result for a long time and you know that you finally have a piece of data which will make or break your current hypothesis - then it's easy to rush into the lab on Monday!"

INTERVIEW AND PHOTO OPPORTUNITIES - contact Amy Nisselle 0404 942 577 or
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High resolution photographs are available upon request.