

VISITING SCHOOLS IN WANGARATTA, WODONGA and BENALLA – JUNE 17 AND 18
Touring scientists talk to local students on HIV/AIDS, PARKINSON'S, EPILEPSY and TWINS

Plight of Africa prompts AIDS Research Career

When Jessica Wade went to Cameroon in central-west Africa four years ago she saw the devastating effects of HIV with her own eyes. This life-changing visit strengthened her decision to research AIDS - the infectious disease caused by HIV and killing many people in developing countries every year. *"In Africa, the people have very limited access to health care and HIV drugs. I have traveled to Africa and witnessed the magnitude of the problem so I felt that by becoming a medical researcher I could somehow make a difference".* Now, beginning her PhD training at the Burnet Institute, Wade is investigating how HIV destroys the cells of the immune system and causes AIDS. She explains, *"The HIV-infected person is left susceptible to other, potentially fatal, infections. By researching changes in the virus throughout the infection, we aim to gain a greater understanding of how the virus is killing the cells of the immune system and causing AIDS."*

Twins aid in understanding low birth weight

When babies of very low birth weight are born, they can have continuing health problems in later life. Ms Bobbie Andrionikos, a PhD scholar at the Murdoch Childrens Research Institute, aims to identify the genetic cause of low birth weight by studying identical twins. When one twin is of low birth weight and the other is of normal weight, the cause can be found in which genes are turned on and off. Andrionikos loves the challenges and opportunities that research provides, and will share her enthusiasm with local students on the Australian Society for Medical Research's 2008 Regional Schools tours. *"Research is really exciting because there's always an element of discovery involved – you never know what's going to happen or how an experiment is going to turn out. Medical researchers are a really diverse group of people, and I've enjoyed meeting interesting people from all over the world, from as close as New Zealand and Indonesia, and as far away as Serbia and Finland."*

Gene in men may contribute to Parkinson's disease

Mr Daniel Czech, a PhD student at Prince Henry's Institute for Medical Research, is investigating why men are more likely than women to develop neurological disorders such as Parkinson's disease. *"When a particular gene doesn't function, rats develop neurological problems resembling the symptoms of Parkinson's disease. This gene is only expressed in men."* In his PhD research, Czech will disrupt this gene in human neurons and see how their function is affected. *"I think my research has a lot of practical applications. We'd like to use this gene to experimentally reverse the symptoms of Parkinson's disease, which might one day lead to human trials. I love being one of the first people in the world to know about novel discoveries."* Czech is keen to encourage teenagers in regional areas to consider a career in medical research. *"I spent a lot of time growing up at my holiday house near Bright. I still love it to this day. I'm very passionate about the country and want to inspire kids to make it work having a career in medical research and still being able to enjoy the lifestyle of the region."*

Epilepsy Researcher conducts study of Brain Electricity

The accidental discovery of the highly effective, anti-epileptic drug, Valproate, was made over 35 years ago. Amazingly, doctors still do not know how this drug works to stop epileptic fits. Ms Johanna Elms, from Royal Melbourne Hospital (University of Melbourne), is attempting to find out. *"One of the ways Valproate may work is through inhibiting the brain's electrical circuit. It may increase the level of a chemical molecule, called a neurotransmitter that, in turn, acts on neurons in the brain to inhibit epileptic seizures."* Commenting on what motivates her research, Elms says, *"Medical science is always exciting, especially working with living systems - you never know what is going to happen with your experiments. Sometimes the results are unexpected and overwhelming and require lots of thinking and troubleshooting. Other days they are exciting and inspire you to keep going."*

INTERVIEW AND PHOTO OPPORTUNITIES - Contact Shahan Campbell 0433 113 454 or Hilary Hoare 0401 240 772. High-resolution photographs are available upon request.

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