

Four young scientists bring medical research to life, inspiring students in
BENALLA, COBRAM, WANGARATTA - - JUNE 26 AND 27
Talking Manpower, Genetic disorders, Heart Disease and HIV/AIDS

USA attracts local talent

Returning to Wangaratta with the Australian Society for Medical Research's 2007 Regional Schools Tours, Dr Cathryn Hogarth will be visiting her former high school to motivate young, up-and-coming scientists to consider a career in medical research.

Hogarth, now based at Monash's Institute of Medical Research in Clayton, grew up with a keen love of biology.

"I was always interested in science but it was learning that my father had a rare genetic disorder that made me want to know more about how our genes influence our development and our health."

Hogarth was recently awarded her PhD qualifications for investigating how sperm matures in the testis and invited to do a two-year placement with the School of Molecular Biosciences at Washington State University, USA. She will continue her fascinating research and learn new techniques to broaden her scientific skills, *"This is a very exciting opportunity for me. I'll be working with an international expert in testis development. I'll also get to experience living in a different country which I am really looking forward to."*

Manpower needed in medical research

Did you know women outnumber men in medical research jobs? You only have to walk into a lab to see two or three gals for every bloke. Mr John-Luis Moretti from the Baker Heart Research Institute will point this out when speaking to high school students about pursuing a rewarding medical research career.

"A turning point for me was when my university lecturers would talk about the research they were doing - it was so new, even the textbooks hadn't caught up! It felt really exciting to be learning up to the point where the lecturers said... *and we don't know why that happens but we are currently investigating A, B and C and that might come up with an answer.*"

Moretti is Investigating how the nervous system is involved in the development of high blood pressure - a condition suffered by one in three Australians. Moretti comments, *"Hypertension is a very exciting area of research and understanding its causes will most likely shake some of the traditional ideas on treating high blood pressure."*

Myrtleford researcher follows her heart

Growing up in Myrtleford Ms Melanie Ivey was inspired by her high school science teachers to pursue a career in biological science. Ivey is bringing this message home as she promotes medical research careers to local students

Ivey investigates the process where "bad" cholesterol sticks to blood vessels and blocks them, called atherosclerosis, at the Baker Heart Research Institute, Melbourne. Remarking on her work,

"It is estimated that 40% of Australians over 65 are affected by cardiovascular disease. Knowing that the research I do may one day lead to a better treatment to reduce atherosclerosis, and thus lower morbidity and mortality, is a huge motivation to continue my research."

So far, Ivey's medical research career has taken her to Holland, Italy and USA to attend scientific conferences. She has also been fortunate to work for 3 months in a laboratory in Seattle.

"I hope in 5 years time, we would have enough evidence that a particular family of sugar-containing proteins in the blood vessel, that bind and retain cholesterol causing atherosclerosis, are able to be modified with specific drugs, so we can begin doing patient trials in order to reduce atherosclerosis."

Young researcher fights HIV/AIDS epidemic

HIV/AIDS has killed more than 25 million people worldwide since its discovery. Unearthing just how the HIV virus destroys the human immune system is what Ms Marina Alexander, a talented PhD student from The University of Melbourne, does.

"I love putting all the bits of the puzzle together so we can get a clearer picture of the very tiny world of viruses....medical research offers many exciting puzzles."

After completing her VCE, Alexander travelled overseas to work at the renowned Oxford University.

"The stimulating learning environment at Oxford inspired me to pursue a career in science. I have always been fascinated by DNA and how it determines how and why our bodies work, it may also hold a clue to solving the HIV/AIDS epidemic."

Now studying in the Department of Microbiology and Immunology, Alexander is investigating how HIV makes its proteins or "building blocks" that allow this virus to spread throughout the body. She adds,

"This understanding will help us design new drugs to treat HIV, and as a bonus, will tell us a lot about how our own cells work which has benefits for treating cancer and genetic disorders."

INTERVIEW AND PHOTO OPPORTUNITIES

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High resolution photographs are available upon request.