

The Australian Society for Medical Research

ASMR Medical Research Week® June 2 – 9 2006

ASMR Medical Research Week®

Media Release Wednesday 14th June 2006

Scientists visit Vic Regional Schools June 14 and 15

GEELONG – DERRINALLUM – BALLARAT – BAIRNSDALE – SALE – SOUTH GIPPSLAND

Our speakers:

- Marina Alexander investigating HIV.
- Senem Eren examining cognitive and emotional difficulties in children and adolescents.
- Belinda McClaren looking at community attitudes to genetic carrier screening.
- Alex Umbers understanding and treating infertility.
- Michelle Bishop midwifery practice around genetics.
- Fatan Zaibak using cord blood to treat inherited disease.

BAIRNSDALE BOYS MAKE A DIFFERENCE IN MEDICAL RESEARCH

Adam Bilney – creating interventional devices for use in heart surgery!

Brian Drew – explores the role of good cholesterol in the treatment of heart disease and diabetes

For more information or to speak to the researchers, please contact Nicola Smith (0412 101 871) or Shahan Campbell (043 311 3454). High resolution photographs are available on request.

Speaker stories follow for Marina Alexander, Senem Eren, Belinda McClaren, Alex Umbers, Adam Bilney, Brian Drew and Faten Zaibak

Victorian Sponsor State Government Department of Victoria Human Services

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Marina Alexander Young researcher tackles HIV/AIDS epidemic

HIV/AIDS remains a major global killer. Unearthing just how the HIV virus destroys the human immune system is what Marina Alexander, a talented PhD student from Melbourne University, is doing.

On tour with the Australian Society for Medical Research's Regional School Visits, Alexander will be speaking to high school students in western Victoria about her work on HIV and how she has become engrossed in medical research.

"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. There she met Professor Richard Dawkins, evolutionary biologist and celebrated author of "The Selfish Gene", solidifying her resolve to pursue medical research as a career.

"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. Her work will aid in designing new therapies to treat HIV infection.

Derrinallum, Ballarat and Geelong on Wednesday 14th June and Thursday 15th June.

Senem Eren

Medical research into child head injuries

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. This causes cognitive and emotional complications in the child or adolescent that Senem Eren, a trainee psychologist and PhD student at the Murdoch Childrens Research Institute in Melbourne, is trying to understand.

Using functional magnetic resonance imaging (MRI), to see parts of the brain used for particular tasks, Eren is investigating the underlying structure of these injured children's brains. Eren's work is ground breaking and she adds,

"This is the first time functional MRI has been used in this way to look at post-traumatic stress symptoms after a child head injury. Using this cutting edge brain imaging technology I hope to contribute to our understanding, management and treatment of head injuries in children and adolescents."

As part of the Australian Society for Medical Research's 2006 Regional School Visits, Eren will be sharing her enthusiasm for medical research with high school students in western Victoria.

"I enjoy the stimulating and challenging nature of medical research and thrive on the learning opportunities. I gain immense personal satisfaction from working in a field that applies knowledge to better our understanding and treatment of illnesses."

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Belinda McClaren

Does the community want a test for Cystic Fibrosis carriers?

Cystic fibrosis (CF) is an often fatal inherited disease that affects the body's lungs and digestive system. Caused by a defect in a single gene, CF occurs in about 20 Victorian births each year. For a child to be born with CF both parents must be carriers of this gene and even then, the chance of CF occurring is 25%.

Belinda McClaren, a PhD student from the Murdoch Childrens Research Institute, is uncovering just what people think about a test for determining their CF carrier status. This will aid couples planning a family to make knowledgeable decisions,

"I would love to see an enthusiastic and educated community making informed choices about genetic screening, for their own benefit and for the benefit of the wider population. It is an important step, taking science from the lab and into the everyday lives of people."

McClaren will be sharing her passion for medical research with high school students in western Victoria as part of the Australian Society for Medical Research's 2006 Regional School Visits.

"I have always had a fascination with science and love to know "why". Every step forward in medical research contributes to a growing wealth of knowledge and I love that I am contributing."

McClaren adds, "There's something for everyone, no matter what your interests, you always encounter medical research. It's an exciting and ever changing world and community involvement is not only desired, it is essential for medical research to continue to thrive."

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Alex Umbers

Top Victorian research attracts overseas scientist

Based upon her parents' difficulty conceiving children, talented New Zealand scientist, Alex Umbers, knew she wanted to pursue a career in fertility research.

Having heard of Victoria's reputation for internationally-regarded research, Umbers moved to Melbourne to work on infertility at Prince Henry's Institute.

Speaking to high school students in western Victoria as part of the Australian Society for Medical Research's 2006 Regional School Visits, Umbers spoke of the need for infertility research,

"The special thing about infertility is that it is a disease of couples, not singles, because it affects both people".

By looking at how hormones act on the ovary, Prince Henry's researchers strive to identify 'biomarkers' or hallmarks of infertility.

"Using gene technology, our group hopes to find new ways to treat infertility so couples can avoid the sometimes long and expensive process of existing fertility treatments".

Ms Umbers joins three other leading young researchers on a tour of high schools in Derrinallum, Ballarat and Geelong on Wednesday 14th June and Thursday 15th June.

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Brian Drew and Adam Bilney

Bairnsdale boys make a difference in medical research

Growing up in Bairnsdale, medical researchers Brian Drew and Adam Bilney never dreamt that their careers would take them around the world and at the cutting edge of science.

This is the message that young scientists will be sharing with high school students as part of the Australian Society for Medical Research's 2006 Regional Schools Visits. Drew and Bilney join 16 enthusiastic scientists on tours to regional Victorian secondary colleges, where they will discuss career opportunities and what lead them to come to the 'big smoke' to study.

Drew says, "I wasn't too sure what I wanted to do....I went to Uni to study marine science and then worked for a few years on human disease in a lab. It was there that I realized medical research is fun and something that makes a difference to people's lives".

Drew is looking at the difference between 'good' and 'bad' cholesterols in diabetes and heart disease, with the hope of identifying new targets for drugs. Speaking of his research at the Baker Heart Research Institute, Drew adds,

"For a long time, we thought that cholesterol, or fat, was all bad. Now we know that there is bad fat and good fat. Our challenge is to work out how to balance the good versus the bad".

Bilney's pathway to medical research was more surprising. Now working as a Mechanical Design Engineer at the Baker Heart Research Institute, Bilney trained as a mechanical engineer. He tells of how he is constantly surprised by the new places medical engineering takes him,

"I moved to Switzerland for a year to join a Mechatronics Institute where I expected to be working with robotics. Instead, I ended up designing tools for open heart surgery and working with heart surgeons!

"I enjoyed that work so much that I decided to continue working on that area when I returned to Australia. Now I talk to doctors, cardiologists and researchers here to try to develop new devices to put in diseased heart to deliver treatments straight to the damaged area."

The scientists will return to their old high school, Bairnsdale Secondary College, and schools in Sale and Foster on Wednesday 14th June and Thursday 15th June as part of the Australian Society for Medical Research's Medical Research Week.

Faten Zaibak

Pregnancy by-products may hold key to inherited diseases

After the birth of a baby, the blood left in the umbilical cord and placenta contains primitive (stem) cells that can become almost any tissue in the body, such as the lung. It is these cells that now may hold the key to treating many illnesses by replacing diseased tissue.

Faten Zaibak, a talented post-doctoral scientist from Melbourne University, was only 2 years old when her family immigrated to Australia from Lebanon. Her fascination with biology began when several members of her family were diagnosed with haemophilia, an inherited bleeding disorder.

Now, Zaibak devotes her energy to researching how stem cells from cord blood can be used to treat such inheritable diseases, including cystic fibrosis. Zaibak says, "Today something I do in the lab could make a significant difference to the health of thousands of people around the world."

On tour with the Australian Society for Medical Research's 2006 Regional School Visits, Zaibak will be encouraging secondary school students to consider a future career in medical science,

"It is truly an international career. I've had the opportunity to travel to Finland, Holland, Germany and the United Kingdom with my research and I am working with experts from all around the world."

Zaibak comments, "It is an interesting, rewarding, but competitive world (in research). You really have to love it to succeed, because at times it is a very tough world."

Dr Zaibak joins three other inspirational young researchers to speak at high schools in Bairnsdale, Sale and Foster on Wednesday 14th June and Thursday 15th June.

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Full Program available from <u>www.asmr.org.au/media/index.html</u>



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