

## **YOUNG INVESTIGATOR AWARD - NO JARGON SCIENCE EXCELLENCE**

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### **Abstract**

The Children, Youth and Women's Health Service, in collaboration with the Faculty of Health Sciences at the University of Adelaide, holds an annual Young Investigator Award. This highly successful award, now in its seventh year, rewards excellence in South Australia's young researchers in both science and their ability to communicate and 'sell' that science in lay language. The event is believed unique in involving the media in the final judging of the young scientist's ability to communicate to a general audience. Through this experience young scientists are exposed to a world beyond the laboratory and must communicate to an audience with little knowledge about their area of expertise. There are up to 20 applicants annually and they are judged, over a period of five months, firstly by a panel of senior researchers on the quality of their science. The process culminates at the Award finals when three finalists have to convince the media judges (from TV, press and radio) of the importance of their research in front of a general audience. The skills learned through this process hold the young scientists in good stead for all their careers. The Award finals are targeted towards staff and students of associated organisations, the general public, corporates, donors to research and the media. Since the Award's inception in 2000, the audience has almost doubled and increasingly higher profile venues are being used for the Award final. In 2005, the South Australian Minister for Science and Information Economy attended the finals, giving the opening address and presenting prizes. All finalists receive a prize with the two runners-up each receiving \$A500 and the winner receiving \$A1000 untied plus \$A1500 to attend and present at a relevant conference during the following year. Considerable media publicity for research results from the Award.

**Keywords:** Science communication, Science excellence, Lay language, Media, Competition, Award

### **1. Introduction**

Scientists the world over are undertaking research in many important fields, communicating the findings of this research to their peers through a number of avenues including reviewed publications and conference papers. In the main, most of their research findings will never be known by the wider public. This stems from a number of reasons, including the complexity of the findings, the enormous volume of data, and of great significance, the relative inability of scientists to communicate with the wider public.

The wider public has an enormous hunger to learn about the results of scientific endeavour. Scientists have an obligation to tell them; after all so much scientific research is publicly funded. At the same time, the wider public has difficulty understanding science and scientific research as many scientists lack adequate skills to communicate their complex fields to an audience with little knowledge or understanding of the area.

Scientists want to 'educate' the public, but the public generally wants to know 'how does this relate to me?'. Communicating science to the wider public is a skill that needs to be learned, and unfortunately still not considered an important component of most university degrees.

Once a scientist has learned the skills of communicating simply and in lay language [1], it is not sufficient to use just the media to get the message across. Scientists need to work independently of the media through, for example, giving jargon-free oral presentations in plain language to the wider community or writing copy for specific newsletters and the web [2].

This paper describes the Young Investigator Award, an event which not only rewards scientific excellence, but also helps teach the 'art' of science communication and rewards communication excellence. Through participating in the Award, young scientists are exposed to the world of the media and to communicating in plain jargon-free language.

## 2. The Young Investigator Award

### 2.1. Background

The Young Investigator Award, now in its seventh year, is a joint initiative of the Children, Youth and Women's Health Service and the Faculty of Health Sciences, University of Adelaide. In 2000, the year of its inception by the Women's and Children's Hospital (part of the Children, Youth and Women's Health Service since July 2004), the Award won national and state awards for business and public relations excellence – Diamond and Gold National Serifs from the Australian Institute of Professional Communicators and Highly Commended Award from the Public Relations Institute of Australia (SA). The Award is believed unique – senior scientists judge the quality of the science but communication skills are judged at the finals by a panel of media judges from TV, radio and press.

In 2003 the Award was extended through collaboration between the Women's and Children's Hospital and Faculty of Health Sciences at the University of Adelaide. New initiatives included opening the Award event to the general public, a change to a larger venue and eligibility of University of Adelaide young researchers in children's, young people's or women's health.

Funding for the Award has been through annual sponsorship. The Award is organised by a small committee with representatives from host organisations and includes staff from public relations, communications and academia. This committee has been responsible for organising all aspects of the Award – sponsorship, judging, event management, marketing and communications.

The Award has grown considerably since its inception:

- The number of applicants has almost doubled from 11 in 2000 to 20 in 2005.
- The audience has steadily increased from 100 in 2000 reaching 170 in both 2003 and 2004.
- Sponsorship has doubled.
- The winner's prize of \$A1000 increased in 2003 to \$A2500 with the inclusion of a conference prize
- Media interest has grown with a South Australian TV station - Channel 9 - becoming official media sponsor from 2003 onwards. Local press - *The Advertiser* and *Sunday Mail* - have also provided good coverage.

### 2.2. Objectives

- To increase awareness of the excellence of research into children's, youth and women's health undertaken in the host organisations.
- To recognise the contribution made by younger researchers to this research effort.
- To reward and encourage research excellence in younger researchers.
- To provide an opportunity for young researchers to learn the skills needed to present their research in lay language.
- To promote media interest in scientific research especially that of younger scientists.

### 2.3 Target Publics

- Staff and students from the two host organisations.
- Those with a past association with the host organisations, for example alumni, past trainees, retired staff.
- Those with an existing relationship with the host organisations, for example current donors to research
- Potential donors to research, for example corporates.
- General public with an interest in scientific research.
- Media.
- Sponsors.

### 2.4 The process

A brand for the Award has been developed of a consistent high quality and denoting excellence. The logo in the shape of a 'Y' (Fig 1) depicts a young person with an element of the Women's and Children's Hospital logo as the head. This logo has remained unchanged throughout the life of the Award and is incorporated into the mast head (Fig 1) and other graphics (Figs 2-4).



Figure 1. Logo and Mast Head

Science is represented in the graphic design using a molecular structure and the involvement of young people by using a silhouette of a person (Figs 2– 4). These design elements are utilised in posters, invitations, adverts and the Award website ([www.health.adelaide.edu.au/via2005](http://www.health.adelaide.edu.au/via2005)) and are now widely recognised.



Figure 2. Poster

Eligibility to participate has required applicants to fulfil the following criteria: they should be either studying for a higher research degree – Masters by research, PhD, MD (other higher qualifications may also be acceptable), or have been awarded this degree no more than 48 months before the closing date for the Award. The work presented for the Award need not necessarily have formed part of that degree.

Applicants are first judged on a written application by up to six senior clinical or laboratory-based research scientists engaged in ‘active’ research who have no link to the applicants. From there, eight applicants proceed to the second stage of judging. At the semi-finals these eight applicants are required to give an oral presentation on their work to a general scientific audience who are not necessarily specialists in the applicant’s area of work. The judging panel is comprised of four scientists of whom at least one is involved in assessment of first round applications and at least one is not involved in the initial selection process. Judging is weighted towards the quality of the science, but presentation skills are assessed.

Three finalists are chosen for the Award finals. They are required to give presentations in lay language to a general audience, many of whom have no science background. They are judged by a panel of three members of the media (from TV, press and radio) and a scientific moderator. The presentations are assessed on the finalist’s ability to make the research understandable and relevant to the general public, the ability to make the research attractive to the media, and presentation skills, engagement with audience and professionalism. The scientific moderator ensures that genuine scientific responses to questions are given by the finalists (Fig 5).

The three finalists receive media training prior to preparing for the Award finals and they are also often interviewed by the media before and after the finals. The complete Award process takes around five months.

The Award finals are promoted through the media publicity (TV, press and radio), press advertising, posters, invitations (hard copy and emails), newsletters and a dedicated website.

An invited guest speaker is an additional drawcard. Free refreshments and networking opportunities are appreciated by the audience. Over the years, the profile of the finals event has risen, with the South Australia Minister for Science and Information Economy attending the finals in 2005 and presenting prizes (Fig 6).

All finalists receive a prize with the two runners-up each receiving \$A500 and the winner receiving \$A1000 untied plus \$A1500 to attend and present at a relevant conference during the following year.

Interested in medical research but confused by the jargon?  
Our young researchers will tell you the latest in everyday language

# Young Investigator Award

An initiative of the Children, Youth and Women's Health Service and Faculty of Health Sciences, University of Adelaide

## 2005

Guest speaker: A/Prof Michael James,  
"Drug development: Where commerce meets ethics"

8-10th November 2005  
Art Gallery of South Australia, North Terrace

No cost but bookings essential!  
RSVP by October 28th  
Phone 8111 7115 or email [damoc@adelaide.gov.au](mailto:damoc@adelaide.gov.au)

Experience in science and communication  
[www.health.adelaide.edu.au/yia2005/](http://www.health.adelaide.edu.au/yia2005/)

Bringing women's and children's health research to the public

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Figure 3. Example of press advertising



Figure 4. Award website – <http://www.health.adelaide.edu.au/yia2005>



Figure 5. Media judges and scientific moderator discuss the finalists presentations at 2005 Award finals



Figure 6. Award Final in 2005 - the Minister for Science and Information Economy, The Hon Karlene Maywald (second from left) with the three finalists

## 2.5 Evaluation

The success of the event has been evaluated using a combination of measures - the results of questionnaires given to all members of the audience at the Award finals; the numbers who attend the finals; media coverage and feedback from the finalists themselves.

### 2.5.1 Questionnaire

Feedback has been, in general, excellent. Notably in 2005,

- 88% of respondents enjoyed the format of the Award finals;
- 100% of respondents learned something new about research in women's and children's health;
- 100% said they would like to attend next year's Young Investigator Award;
- Over 50% had not attended the previous year's Award finals.

Comments included: "presentations are outstanding every year" and "fascinating research from our young scientists".

### 2.5.2 Media coverage

This has generally consisted of a substantial press article either before or after the Award finals (Fig 7, a –c) plus a second brief article. In addition, Channel 9, as TV sponsor, usually airs a news story on all three finalists in the week preceding the finals, and a second story the night after the finals announcing the winner. Additional coverage has resulted from media interest in the work of a number of the applicants who did not reach the finals. This has involved press, radio and other TV stations.

### 2.5.3 Feedback from finalists

The overall experience has been considered useful by the finalists. Some individual comments have included:

- "The main thing I got (out of the Award) was practise with public speaking. I found it very harrowing to get up and talk in front of so many people, but the experience was good. Also the task of having to put my work into general terms was a challenge, but it is a very important thing to be able to communicate to the general public".
- "I've been trying to explain my research to my family for years and now my mum finally gets it!".
- "I think that part of having a career in research is the responsibility to keep the public informed about what we do, and to help keep the trust the public has in scientists as leaders".

- “My advice to next year’s applicants is to firstly throw out the jargon and scientific correctness and concentrate on making a story which can be understood by lay people. Then think about why the research is relevant to anyone other than scientists and what hook you can use to get the audience’s attention”.
- “I don’t think I appreciated how difficult it is to give a truly lay presentation until the Young Investigator Award”.

### **3. Conclusion**

The Young Investigator Award, now in its seventh year, is a highly successful award which rewards science excellence and teaches young scientists to communicate with the general public through the media. It is believed unique through its involvement of the media in the judging of ‘communication excellence’.

### **4. Acknowledgements**

Many people have contributed to the success of the Young Investigator Award over the years. They cannot all be mentioned individually by name here. However, I would like to particularly acknowledge the significant and highly valued contributions of David Ellis and Simon Brennan from the University of Adelaide and A/Prof Jozef Gécz from Children, Youth and Women’s Health Service. In addition, I would like to thank my husband Dr David Bates for designing and maintaining the website each year and providing expert audiovisual assistance annually at both the semi-finals and finals events.

### **5. References**

- [1] J MacNamara, “Writing for the Media” in *Public Relations Handbook for Managers and Executives*, ed E Thomas, published by Prentice Hall Australia Pty Ltd, pp. 81-113, 1996.
- [2] J MacNamara, “New Media and Communications Technologies” in *Public Relations Handbook for Managers and Executives*, ed E Thomas, published by Prentice Hall Australia Pty Ltd, pp.191-213, 1996.

# Baby Blaise has lifeline for others



**DONATION:** New mum Lauren Kent has given the blood from the umbilical cord of her baby son, Blaise Hill.

Pictures: SARAH REE

By Medical Writer  
JILL PENGELLEY

WHILE Lauren Kent was eagerly awaiting the arrival of her baby, a young Adelaide researcher was pacing the hall, waiting for the umbilical cord.

Jonathon Hutton is growing stem cells from cord blood in a bid to produce enough to treat older children and adults suffering from leukaemia and other blood disorders.

Soon after Miss Kent, 20, was handed baby Blaise last Wednesday, Mr Hutton was given the placenta with the umbilical cord still attached and clamped.

He thanked the new mother and left with 90ml of stem-cell rich blood which would otherwise have been destined for medical waste.

"It's not as if I was going to keep it," Miss Kent said of her donation to science.

"One of my friends has just been diagnosed with leukaemia and he's only 16.

"If this could help people like him it would be really good."



**RESEARCH:** Haematologist Jonathon Hutton.

The liver cells contain a growth factor - a protein produced by one cell to trigger growth in another.

It has been discovered that the growth factor obtained from the mice is exactly the same as that found in humans.

Mr Hutton has been looking

can hope to grow enough stem cells to successfully treat older children and adults.

Stem cell therapy is a relatively new addition to cancer treatment for children up to the age of about seven.

A transplant of cord blood which is rich in immature cells is given after the cancerous blood cells have been attacked by chemotherapy.

"The chemo wipes out their stem cells so this is like a new blood system they're getting," Mr Hutton said.

"The stem cells migrate to the bone marrow where they divide and form more stem cells.

"What we want to do now is to be able to increase the number of stem cells so this process can be used to treat older children and adults.

"When people think that this (research) could actually help someone, they are so happy to be involved in it."

A presentation of Mr Hutton's research last week saw him pick up the Young Investigator of the Year Award.

# Rosa's dream ready for a lucky break

By CARA JENKIN

REPAIRING a broken arm or leg could become less painful for children, thanks to stem cell research by an Adelaide University PhD student.

Rosa McCarty, 26, is one of three finalists for the 2004 Young Investigator Award, which recognises South Australia's best young talent in developing major breakthroughs in medical science.

The awards are open to students or recent graduates of research degrees at University of Adelaide and the Women's and Children's Hospital.

The finalists were selected on their projects being among the best in current science research, but the winner will also have to be able to clearly explain their work to someone outside the field.

Ms McCarty has been working on her non-embryonic stem cell research for more than two years and said it might eventually lead to advances in treating sports injuries and osteoarthritis.

"Twenty per cent of bone fractures in children can lead to some sort of limb deformity - when the bone can stop growing or grows at an angle and corrective procedures can be painful and invasive," she said.

"Cartilage is one of the hardest tissues to repair.

"It is a very new field and I have just finished the first trial using animal material. It usually takes 10 years before there can be a clinical application - there is a lot of repetition to optimise the research and ensure it works."



RESEARCHER: Rosa McCarty at work yesterday.

Picture: TRICIA JOHNSON

Her research aims to find a natural and biological way of repairing fractures so children can avoid painful surgery.

"Because it is transplanting the patient's own cells, there is no rejection," Ms McCarty said. The Young Investigator will be announced at the Napier Lecture Theatre at the University of Adelaide tonight.

## The other finalists are:

□ Masters student **Rebecca Dragovic**, who is doing research into a non-steroidal contraceptive for women at the Queen Elizabeth Hospital. She is looking at how the egg interacts with neighbouring cells that support its growth and maturation.

□ PhD student at the University of Adelaide **Amanda Sferruzzi-Perri** is researching pregnancy disorders. It is hoped her findings will lead to tests to diagnose women at risk. Pregnancy disorders affect one in four expectant women.



**JOIN THE RESISTANCE:** Award-winner Branka Grubor-Bauk with a mouse used in her ground-breaking research. **Picture:** Jo-Anna Robinson

# Supermouse fights virus

## Branka's X-factor a world first

**Brad Crouch**

A **WORLD-FIRST** breakthrough using a mysterious substance dubbed Treatment X offers new hope for people suffering cold sores and other afflictions caused by the herpes virus.

PhD candidate at the University of Adelaide and Institute of Medical and Veterinary Sciences Branka Grubor-Bauk has created mice with "super cells" able to fight the herpes simplex virus, found in around 95 per cent of the adult population.

The virus is a widespread curse - it is the world's second most common cause of blindness and is linked to organ failure and birth defects.

It has no cure and can be passed on for life by a simple kiss between mother and child.

The virus lives in nerve roots but returns to the skin in the form of cold sores, while one in six adult Australians suffers genital herpes.

The first line of defence against viruses is immune cells, but these do not always recognise individual viruses.

Recently discovered "natural killer T-cells" (NKT cells) are more successful in targeting

proval. Ms Grubor-Bauk, 28, found mice lacking NKT cells suffered extreme cases of herpes compared to normal mice.

However, when given NKT cells their resistance to the virus was restored to normal levels.

In the next stage of her research, normal mice were given a compound known as Treatment X to boost their NKT cell count to super levels.

"In normal mice with the virus 70 per cent had lesions, while among those given Treatment X only 20 per cent had lesions," she said.

"The amount of the virus in those given the compound was reduced 100-fold.

"This has tremendous implications for reducing the toll of a virus.

"This is the first study that shows that NKT cells are vital in the control of this type of infection.

"The information gained from the project should lead to treatments that reduce the severity of such infections in children, reduce the incidence of dormant infections and contain the spread of infection in the community.

"It is not a cure, but has potential to be a very effective therapy."

The contents of Treatment X

hoped it eventually will be developed into a medicine suitable for injection into humans.

There are no immediate plans for human trials, but NKT cells already are being used in human trials to boost the immune system against cancer, with no sign of side effects.

The cells may also have a role in fighting diabetes and diseases such as malaria.

Serbian-born Ms Grubor-Bauk arrived in Australia in 1995 as a refugee from the Balkan war with her parents and younger sister Mirjana, who is now a teacher at Whyalla.

"This is now my home - I love this country," she said.

This week Ms Grubor-Bauk won the Young Investigator Award run by the Women's and Children's Hospital and the Faculty of Health Sciences at the University of Adelaide.

Joint runners-up were Brooke Summers, for work showing the damaging effects on unborn babies of binge drinking by pregnant women may be offset by zinc, and Adeline Lau, whose gene therapy research may eventually protect children

Figure 7c. Press publicity post - 2005 Award finals- *Sunday Mail*