

TALL POPPY CAMPAIGN

Investing in Australia's Future

- MEDIA RELEASE -

International Women's Day: Women scientists to inspire a new generation

Three of New South Wales' most prominent young female scientists will visit Lindfield on Wednesday to mark International Women's Day and inspire high school girls about careers in science.

Across Australian high schools, enrolments in senior chemistry, physics and maths classes are in freefall decline; currently the lowest they've been in over 20 years¹.

While in New South Wales enrolment in these science subjects has increased in recent years², there is concern that young women are particularly in need of encouragement, as they are under-represented in key areas such as Physics, where they are outnumbered by boys at a ratio of approximately 4 to 1¹.

"Physics is what we call an 'enabling science' - a subject which provides students with a foundational skills set that enables them to take up tertiary courses and careers in science," says Glen Sawle, CEO of the NSW Department of Education's Science Unit, Curriculum Directorate.

"While we are very pleased that science enrolments in our state are improving in a number of subject areas, we want to build on this trend, and encourage young women into science-based areas of study and careers," says Sawle.

"These school visits target year 10 and 11 students who are beginning to think seriously about their tertiary education and career choices.

"International testing shows that at the 15 year old level, Australian students have one of the highest levels of scientific literacy among OECD countries. However, we are seeing low levels of student interest in undertaking senior science subjects which has enormous implications for the science professions of the future," explains Sawle.

"Science is traditionally a male-dominated area and many young women may still see it that way," says Nikki Sullings, Acting Director of the Tall Poppy Campaign.

"We believe that good role models, such as the extraordinary women scientists who will present at this seminar, can act as role models to inspire young women about the possibilities that careers in science have to offer," says Nikki Sullings, Acting Director of the Tall Poppy Campaign, which works to increase young people's interest in science.

This year's International Women's Day theme, *Shaping Progress*, couldn't be more apt when it comes to science.

The three presenters at Wednesday's 'NSW Women in Science' seminar will demonstrate to the girls that women can be leaders in some of the most significant scientific developments of our time.

References

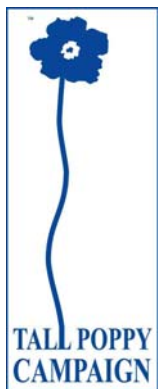
¹ Report commissioned by the Australian Council of Deans of Science (2002).

² NSW Board of Studies http://www.boardofstudies.nsw.edu.au/ebos/static/EN_SX_2006_12.htm

Founded by the Australian Institute of Policy and Science

PO Box 145, BALMAIN NSW 2041 Ph: +61 2 9810 5642 Fax: +61 2 9810 2406 email: info@aips.net.au Internet: www.tallpoppies.net.au

The Tall Poppy is a metaphor for excellence and endeavour and symbolises Australia's pride in its outstanding achievers - in all fields.



Dr Vanessa Hayes, Dr Emma Johnston and Dr Kate Jolliffe are multi award winning scientists in the fields of cancer genetics, marine ecology and organic chemistry.

Recently awarded 'Young Tall Poppy Awards' by the Australian Institute of Policy and Science, these young scientists are part of an educational program in which they present their research and act as role models to high school students.

Dr Vanessa Hayes' research focuses on understanding genetic differences between individuals and how these differences influence the risk of developing common human cancers. She has recently embarked on an urgent project to save the Tasmanian Devil from 'Devil Facial Tumour Disease' which threatens the devils with extinction.

"Working on a project like this demonstrates the difference that scientists can make in our world. Without scientists conducting urgent research to understand the cause of this cancer and how to stop it, at the current rate this Australian icon will be extinct within 10 years," explains Dr Hayes.

Dr Emma Johnston researches the impact of human activities on marine life. Investigating the effects of contaminants and introduced species on the structure and diversity of indigenous marine species, Emma works in places as diverse as the Great Barrier Reef and Antarctica.

"The diversity of Australia's tropical, temperate and polar marine communities is integral to their stability and function. I am lucky enough to work in some beautiful underwater places and I see first-hand that when marine communities are subject to human disturbance it makes them even more vulnerable to other stresses," says Dr Johnston.

Dr Kate Jolliffe designs and synthesises molecules to perform specific tasks. Her work has implications for improved transportation of cancer drugs within the body to treat cancer cells, better screening of new anti-cancer drugs and development of new drugs to treat fungal diseases.

"If I said to a young person, 'I am an organic chemist' it might sound a bit obscure, but it is incredibly rewarding to know that through my expertise in chemistry and physics, I am contributing to much-needed solutions to some serious problems in today's world," says Dr Jolliffe.

The seminar is a joint initiative of the Tall Poppy Campaign, and the NSW Department of Education and Training.

The NSW Women in Science seminar will be held:

Date: Wednesday March 12

Time: 9.00am – 2.00pm

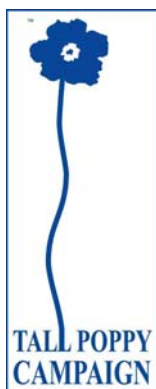
Venue: National Measurement Institute

Address: Bradfield Road, Lindfield, 2070

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About the presenters:



Dr Vanessa Hayes – Cancer Genetics

Group Leader - Cancer Genetics, Children's Cancer Institute Australia

Vanessa's research focuses on understanding genetic differences between individuals and how these differences (variations or mutations) influence the risk of developing common human cancers. She is also interested in the rate of cancer development, patient outcomes and individual responses to therapeutic intervention. Her most significant work has been in understanding what predisposes men to prostate cancer.

Vanessa regularly presents her research to Cancer Support Groups and Rotary Club meetings. She has also talked to high school children about science including at Science Summer Schools for Year 11 and 12 children from disadvantaged communities in South Africa.

Vanessa has attracted over \$3 million in research grants, established a centre of genetics excellence within the Garvan Institute and has won numerous Australian and international awards for outstanding cancer research.



Dr Emma Johnston - Marine Ecology

Senior Lecturer, Centre for Evolution and Ecology, School of Biological, Earth and Environmental Sciences, The University of New South Wales

Emma researches the impact of human activities on marine communities. In particular, she investigates the effects of contaminants and introduced species on the structure and diversity of indigenous marine species in places as diverse as the Great Barrier Reef and Antarctica.

A recognised marine science expert, Emma has been an invited expert on federal and state government marine projects and has been featured on ABC digital TV's Love ya work and Channel 9 News, as well as in The Weekend Australian and The Sydney Morning Herald. She has also coordinated exhibitions for the Australian Museum, given lectures to high school students and presented a marine environmental science program on community radio for five years.



Dr Kate Jolliffe - Organic Chemistry

Senior Lecturer, School of Chemistry, The University of Sydney

Kate's research involves designing and synthesising molecules to perform specific tasks. Her work has implications for improved transportation of cancer drugs within the body to treat cancer cells, better screening of new anti-cancer drugs and development of new drugs to treat fungal diseases.

Kate has communicated her research to high school students through science presentations and careers talks as well as being a mentor in chemistry as part of the University of Sydney Talented Students Program.

Kate's research excellence has been recognized with a number of significant awards for her research and academic achievement, including a Biota Medal for Medicinal Chemistry in 2006. She has also attracted over \$3 million in research funding and holds 2 patents.

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