



## **Garvan Tall Poppy explores new territory in search of a prostate cancer gene**

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Dr Vanessa Hayes, head of the Cancer Genetics Group at the Garvan Institute of Medical Research, today received a prestigious New South Wales Young Tall Poppy Science Award in recognition of her research in prostate cancer.

“I regard this area as very exciting because we know so little about what predisposes men to prostate cancer,” she said. “We know the disease runs in families. We also know it’s associated with certain ethnic backgrounds. Both of these things tell us there has to be a genetic element involved. While we have identified a region of a chromosome that appears to be linked to prostate cancer, we have not yet isolated a single prostate cancer gene. In that sense, we are working in uncharted territory.”

Hayes and her team are starting to map out the territory, with the help of very large samples of genetic and epidemiological data collected by Professor Graham Giles, Melbourne-based epidemiologist. This collaboration gives her access to collections of DNA from over 1,600 Australian men with prostate cancer, and 2,600 without.

In addition to taking a history of prostate cancer within the families of these men, Giles and his team collect information about their balding patterns, sexual habits, sexually transmitted diseases they have had, presence of acne (or not) in their teenage years, when they had their growth spurts and how many ejaculations they had in their 20s, 30s and 40s. Hayes and her team are able to correlate genetic signatures to these traits, and ultimately to prostate cancer predisposition.

Another project, even more ambitious in its scope, has had to be put on hold while Hayes attempts to source funding from various government and philanthropic agencies. She hopes to analyse DNA samples taken from a large ‘admixed population’, a racially mixed group (in this case African and European), where the ethnic populations have differences in disease risk for prostate cancer. The plan is to use “admixture mapping” to identify unusual patterns of inherited genetic variation when compared with what is expected. This will help explain the increased incidence of prostate cancer in this unique population group.

Collaborating with a team at the Broad Institute in Boston, who have developed very powerful software to analyse data such as this, Hayes is optimistic that the value of the project will be recognised. “I have access to some unique material,” she said. The African populations are much older than the Caucasian populations – so they can teach us a lot more genetically.”

Earlier this year, Vanessa Hayes was presented with The Premiers Award for Outstanding Cancer Research 2007. This also recognised her contributions towards furthering our understanding of prostate cancer.

## **ABOUT GARVAN**

The Garvan Institute of Medical Research was founded in 1963. Initially a research department of St Vincent's Hospital in Sydney, it is now one of Australia's largest medical research institutions with approximately 400 scientists, students and support staff. Garvan's main research programs are: Cancer, Diabetes & Obesity, Arthritis & Immunology, Osteoporosis, and Neuroscience. The Garvan's mission is to make significant contributions to medical science that will change the directions of science and medicine and have major impacts on human health. The outcome of Garvan's discoveries is the development of better methods of diagnosis, treatment, and ultimately, prevention of disease.

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