



Australian Government

**OPENING OF AUSTRALIAN CENTRE FOR
NANOMEDICINE (ACN)**

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Australia's Chief Scientist

**University of New South Wales
2:30pm, Wednesday, 20 July 2011**

Ladies and Gentlemen, thank you for inviting me to speak to you today as Australia's Chief Scientist, and to open formally the Australian Centre for Nanomedicine.

Nanoscience and the applications of it in many areas, but especially medicine, will open up new opportunities to make the world a better place. Healthier, more prosperous, wiser – we hope. I have no doubt about any of that.

But we will have to work at it to make sure that the full potential is realised.

Let me first state the obvious – the world faces many challenges. If I were to try to list them, I would not do justice to them all. But let me name just a few: Climate change; The impact of changed rainfall patterns; reduced arable land and soil fertility; food supply; water both potable and that used for irrigation and other uses; Pandemics; ageing populations; a global population of ~9 billion by 2050.

The real question for all of us is almost as obvious: how do we face them, face them down, really? Just doing more of what we do now will not be the answer. We can barely do all that is necessary to be healthy and wise and well fed in 2011 let alone the prepare ourselves for a world with another 2 billion people by 2050

Like many of you in this room, I can argue that it will be science that provides the answers – or at least many of them: good science, relevant science and ethical science. Science conducted with integrity and science that responds to critique made with integrity. It will be science that meets broadly acceptable community standards – ones that are clearly designed to meet expectations while advancing knowledge and its application in the public interest.

It is imperative that we invest in our wit, and build our capacity, to develop our scientific research and our industry for our future.

Science for the sake of expanding our knowledge of what we are, why we are what we are; and how we got to be here is important. Indeed, it is one of the great challenges of humanity – learning the very nature of things.

But so, too, is taking what we have learnt and applying it to some of the other great challenges that confront humanity.

I am pleased to note that the ACN is bridging the gap between academic research, industries and clinical applications. By combining science, engineering, and

medicine along with the Children's Cancer Institute Australia and Centre for Advanced Macromolecular Design, you are essentially creating a critical mass that spans the research spectrum. You are developing the benefits that come from cross-disciplinary or interdisciplinary research and using the same disciplines to turn knowledge into application.

There are examples of remarkable work being done all around the world that to me, from the outside, seems almost limitless when we think of the potential applications to medicine. Now I am sure that if there are limits, we will find them.

But I congratulate scientists here in NSW for their work that includes uses for nanotechnology in new delivery systems, biosensing systems, in repairing damaged cells with the potential, for example, to improve outcomes for spinal cord injuries, for the targeting of vaccines. And I am sure there are many more.

All this work, indeed, the work of scientists everywhere, will help lead to a better future.

As we look towards securing a healthier a future, and as we seek to extend the local economic benefits, we must

accept the need to get better at what we do. We won't get there if we stay in our discipline silos, or think that some forms of research have a higher value than others.

But we will in this area with the nanotechnology industry and the R&D sector working together, because when they do that well, good things happen. And good things lead to products and services that make people's lives better, healthier and safer.

In turn, I might add, this will help ensure Australia's future prosperity by helping to retain high-quality, high-value jobs and improve our health, wellbeing and environment.

In order to encourage this innovation, the Australian Government has established the 4 year \$38.2 million National Enabling Technologies Strategy (NETS) which focuses on biotechnology and nanotechnology.

The Strategy will run until the end of the 2012/13 financial year. It includes six themes:

1. A national approach
2. Balancing risk and reward
3. Developing measurement capabilities
4. Engaging with the public
5. Using technology for a better future

6. Planning for the Future

The Strategy has a strong focus on public engagement to encourage greater community participation in debates about the development and use of enabling technologies. Not all are instantly accepted. And getting acceptance is an important part of the work.

It is important that the public know that there is a serious regulatory and ethical environment within which scientists work. Why? Well when we look around us right now, we see scare campaigns being run for whatever purpose but probably to stop something. If the public is not well informed – because we have not been doing that part of our job well – it is easy to persuade that fear is justified.

Science must be seen in context and when controversial or difficult issues arise, we need to involve the public in order for them to be able have their concerns dealt with correctly, weighing up both the pros and the cons of the issue.

In order to ensure our R&D effort continues we need, all of us, to be advocates for science. It is important that the community realises the value of science and its impact on their lives.

I think that people take for granted the very worthwhile outcomes of science – or they are at least put off by those who live by the mantra that you don't have to be right, sowing doubt is enough.

It's incumbent on all of us to ensure that we raise the profile of science. And that our children and grand children have a level of science literacy that far exceeds the norm today.

In turn this will encourage more people to embrace the notion that a career in science is highly worthwhile.

Can I ask that you join with me, and that you work at all levels, to engage with your industry partners in Australia and overseas, with the community and with your local schools to remind them just how important science is to their lives; to their lifestyle and particularly, their health.

I also ask you to be vocal in your communities in your support for science and particularly in this area of science where you have special expertise. The reality is that if we don't tell people about the importance of science and what it means to them, the importance of what you do, how will they ever really know? And it is too important simply to think that they will find out somehow. Too important to leave to others to get the message across, we must own that responsibility.

With that in mind, it is with great pleasure that I open the Australian Centre for Nanomedicine. I wish it every success and look forward to the life altering discoveries that come out of this fantastic multidisciplinary workplace.