Mercedes-Benz Australian Environmental Research Award winner announced

Press Information

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- **CSIRO scientist Dr. Amanda Barnard announced as the 2009 winner**
- **Mercedes-Benz continues commitment to local environmental research**

Melbourne – CSIRO scientist Dr Amanda Barnard has been awarded the prestigious Mercedes-Benz Environmental Research Award at the 21st annual Banksia Foundation Awards, held on Friday evening, 24 July, at the new six star environmentally rated Melbourne Convention and Exhibition Centre.

The $30,000 cash prize, which is one of the largest of its kind in Australia, was awarded to Dr Barnard for her work in using nanotechnology to predict the interaction of artificial nanoparticles with the natural environment. These microscopic nanoscale materials, only millionths of a millimetre in size, may offer solutions to some of mankind's biggest environmental problems.

David McCarthy, Senior Manager for Corporate Communications, Mercedes-Benz Australia Pacific, presented the esteemed award to Dr Barnard, and spoke of the importance of research and supporting those individuals who work tirelessly to make a difference.

"Without research there will be no answers and no solutions to problems. All of us, individuals, private industry and every level of government have an obligation. Rather than pay lip service to research, let's reward it, encourage it, mentor it and support it.

"The Mercedes-Benz Environmental Research Award program recognises that there are significant issues to be addressed and that they will only be solved with research. That's why we as the company that invented the motor car have environmental sustainability as a central focus in our research perspective. This has been the case for a long time, and not just since the topic hit the headlines.

“Mercedes-Benz, through its parent Company Daimler, invests approximately $20 million dollars in research and development every day. A large part of that investment is spent on technologies for clean and environmentally friendly vehicles.

“Locally in a partnership with Climate Positive we have developed an innovative program that incorporates 115% carbon offset with renewable energy and tree planting and an education program through Mercedes-Benz passenger car ownership,” said McCarthy.

Now in its fourth year, the Mercedes-Benz Environmental Research Award attracts the crème of Australia’s researchers working on initiatives with the potential to make a significant difference to sustainability. The award is presented to the submission entry deemed to demonstrate significant contribution to understanding, or resolving local or global environmental problems through research.

The Banksia Environmental Foundation

The Banksia Environmental Foundation is a not for profit organisation that promotes environmental excellence and sustainability through its award program and other associated events. The Banksia Environmental Foundation was founded in 1989 by a diverse group of 44 Australians who shared a common goal to ‘do more’ to support and recognise members of the community for their positive contribution to the environment.

The Banksia Foundation’s mission is to achieve a sustainable Australia through recognising and rewarding environmental excellence, promoting best practise principles, and contributing to action learning and education.

Dr. Amanda Barnard, CSIRO
Environmental Nanotechnology: Predicting the Interaction of Artificial Nanoparticles with Natural Environments

As we search for solutions to our future energy needs, carbon emissions, global warming, industrial toxins, and disease, it is clear that keeping the balance between technological development and environmental protection has never been harder.

Nanoscale materials, only millionths of a millimetre in size, may offer solutions to our biggest problems. However, care is needed as these new 'nanoparticles' are largely untested, are (literally) unique on an atomic scale, and we have little or no historical data to guide assumptions regarding the possible risks.

Using highly accurate supercomputer simulations, Dr Amanda Barnard's research focuses on predicting the environmental stability of nanoparticles, to understand how these tiny artificial pieces of matter interact with natural ecosystems.

Dr Amanda Barnard is an internationally renowned scientist, with many years experience in predicting the properties of dozens of different nanoparticles. Her ground-breaking theoretical models can see a path through the complexity of this problem, and investigate situations that experiments cannot.

As more and more nanoparticles are produced in laboratories, and introduced into everyday products, Dr Barnard's predictive model will be in great demand, but priority number one is to understand what happens when nanoparticles are exposed to our most precious resources, air and water.

Comments from the Research Award Judging Panel

Developments with nano particles present very exciting opportunities for new technologies, materials and products, with great potential to make a significant contribution to environmental problems. But nano-materials are not without some direct risks to human health and the environment.

Dr. Barnard has developed a very important approach to the study of these risks that may enable modelling of specific risks for the expanding array of nano-

materials. Perhaps more importantly her approach may provide a way to utilise the advantages of nano-materials in ways that avoid the risks. Dr. Barnard is a young scientist who has not been afraid to publicly discuss the potential risks as well as the advantages and to communicate her work to non-specialist audiences, engaging in an open dialogue that will be essential if the potential new industries from nano-materials are to gain market acceptance.

Past winners of the Mercedes-Benz Environmental Research award include:

- 2008 - Professor Matthew England, University of New South Wales
- 2007 - Molectra Technologies
- 2006 - Professor David Lindenmayer, Australian National University

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