

media release

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Public debate needs to move 'upstream'

The government must start a public debate about nanotech now to avoid another anti-science backlash, according to a new report

Nanotechnology could become the next GM, with a backlash against the scientists and technology companies who exploit it, according to a new **Demos** report on public engagement in science called **See-through Science**.

The report, produced in partnership with the **Environment Agency** and **Green Alliance**, looks at the lessons that the nanotechnology sector should learn from public outcry over genetic modification.

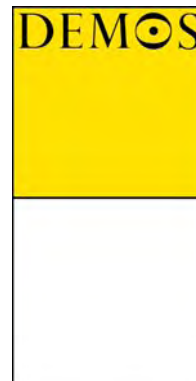
The GM controversy focused mainly on potential risks to human health and the environment. But the findings of last year's **GM Nation?** debate show that the public's biggest concern was that GM technology was being developed in the interests of large corporations, with no public accountability.

James Wilsdon and **Rebecca Willis**, the authors of *See-through Science*, believe that companies developing nanotechnology should be far more open about its implications if they are to avoid a GM-style backlash. They argue that public debate needs to move 'upstream', to an earlier stage of research and development, so that legitimate concerns over new technologies can be fully considered.

"Nanoparticles are already used in everyday products like sunscreens. But it's not clear that the lessons of GM have really hit home. The public wants to know that nanotechnologies are safe, but we also want to know who owns the technology, who will benefit from it, and how it will change our lives. Unless a meaningful debate starts soon, scientists could be facing another public backlash."

The controversy triggered by GM crops had several important characteristics:

- Public concern about corporate ownership of genetic material;
- Deep-seated anxiety that scientists were 'playing God' with nature;
- Media-fuelled panic about the health risks;
- Hype that GM crops were going to 'feed the world';
- NGO and civil society campaigns against GM commercialisation.



Some or all of these factors could combine to spark a wider public outcry over nanotechnology. Last month, **Prince Charles**, who was a high-profile opponent of GM crops, intervened in the nanotechnology debate.

The recent **Royal Society** report on nanotechnology contains hints of how the nanotechnology debate could explode in the face of scientists, government policy-makers and technology companies. The report contains two key findings that might alarm the public:

- Companies using nanoparticles in cosmetics such as sunscreen claim their products are safe but have so far refused to publish their testing data;
- Materials that are considered safe on a larger scale have dramatically different – and potentially harmful – properties when reduced to the nanoscale. This throws standard toxicology data into question;

In its report, the Royal Society acknowledged that it had not been able to review the testing data on nanoparticles produced by cosmetics companies. This data had been submitted to a science committee of the European Union, which regulates the cosmetics industry, but has not been put in the public domain.¹

“As the GM controversy showed, the perception that information is being held back from the public can be more damaging than the information itself,” say James Wilsdon and Rebecca Willis. “Companies developing nanotechnology must be as open as possible, or the public has every right to be concerned.”

See-through Science concludes that debates that focus exclusively on narrow questions of environmental and health risk can prevent a wider discussion of the social and economic trade-offs involved in any new technologies.

“In the past, public debates about new technologies have tended to get stuck on questions of risk,” say the authors. “As a result, much bigger questions about the ownership of a technology and the uses to which it will be put are ignored. But as the backlash triggered by GM showed, the public don’t just want to know if a technology is safe. They also want to know who will benefit from its use.”

¹ The Royal Society reported that its investigation turned up concerns about the use of nanoparticles in cosmetics, including sunscreen, but it was unable to review the safety data. Test results were submitted by cosmetics companies using nanoparticles to the Scientific Committee on Cosmetic and Non-food Products (SCCNFP), which advises the European Union on industry regulation. SCCNFP declared the use of titanium dioxide of any size – including nanoparticles – to be safe on the basis of these tests, but the results are not publicly available. The Royal Society called for safety assessments to be put in the public domain. (*Nanoscience and Nanotechnologies: opportunities and uncertainties*, Royal Society, July 2004, p.43-44).

The government's new 10-year strategy for science acknowledges the need for more 'upstream' public debate about science and technology. The authors welcome this, but say that the government must move quickly to initiate a public debate on nanotech – before it's too late.

“Scientists and companies with a vested interest in the technology need to talk to people about how it will affect their lives, and involve the public in the process of innovation,” say the authors. “The *GM Nation?* public debate took place far too late to influence the shape of the technology. If nanotech is to be any different, we need to start the debate now.”

The report outlines a new approach to upstream engagement, and includes practical guidance on how to involve the public in debates about science and technology. In particular, the authors recommend reforming the research councils, which allocate public research funding, so that they include more non-scientists and public representatives on their main boards.

Notes to Editors

1. *See-through Science: Why public engagement needs to move upstream* by James Wilsdon and Rebecca Willis is published by Demos in partnership with the Environment Agency, Green Alliance and the Royal Society for the encouragement of Arts, Manufactures and Commerce (RSA).
2. James Wilsdon is head of strategy at Demos where he leads a research programme on science and technology. He heads a major ESRC-funded project on public engagement in nanotechnology, in partnership with Lancaster University.
3. Rebecca Willis is associate director of Green Alliance and vice-chair of the UK's Sustainable Development Commission.
4. *See-through Science* will be launched at a high-profile debate at the Royal Society of Arts on Wednesday 1 September with speakers including: Lord May, President of the Royal Society; Jonathon Porritt, Chairman of the Sustainable Development Commission; and Barbara Young, Chief Executive of the Environment Agency.

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