

Workshop on:

## RESPONSIBLE RESEARCH AND INNOVATION: *TOWARDS A BEST NANO PRACTICE*

MESA+, University of Twente, Enschede (NL) - 18<sup>th</sup> December 2007, 10:00 – 16:15

Ideas of responsible development of nanotechnology have been in circulation for a while now, but only recently are they solidifying into policy and regulation. Amidst the recent spate of work on Nano Codes of Conduct, EU Responsible Innovation drive and the emphasis on inclusion of Ethics and Societal Aspects in ongoing research and development, *it is time to take stock of how to handle this new emphasis.*

Where should responsibilities lie? How should regulation manifest itself? Should researchers, industrial actors and/or political institutions take the burden of nanocodes and inclusion of ethical and societal aspect reflection? How should such responsible development **actually** be enacted/enforced with regards to nanotechnology, safety and optimal societal embedment of nano-enabled products.

A one day workshop was organized to explore the increasing emphasis of **Responsible Research and Innovation in nanoscience and nanotechnology R&D** as part of FRONTIERS Nanotechnology Network of Excellence ([www.frontiers-eu.org](http://www.frontiers-eu.org)) in conjunction with NanoNed ([www.nanoned.nl](http://www.nanoned.nl)).

There is increasing scrutiny (and pressure) to explore ways of managing the development of new technologies with a view to both environmental and health risks as well as more broad societal effects. Moreover, there is pressure to do so at all stages of the innovation process (pressure of responsible research in laboratories, manufacturing legislature on nanoparticles, corporate social responsibility in industry etc.)

With current explorations of means of achieving a responsible approach to nanotechnology (EU Action Plan & EU Open Consultation), principles for the oversight of nanotechnology 2007 (Greenpeace, Friends of the Earth and others) and codes of conduct (European Nanotechnology Trade Alliance, Du Pont, the Nano Industries Association and others) it is time to take stock and look deeper into the notion of responsible research and development along the innovation chain.

The **objective** of this meeting was to explore and develop possible elements of a “Best Nano Practice” at each stage of the innovation chain (from laboratory to society) in anticipation of the increased emphasis on Responsible Research and Innovation. This increased emphasis can be seen in government funding programmes, the move towards corporate and social responsibility and pressures from other non-governmental actors such as NGOs and re-insurance groups.

The **workshop** was divided into two parts, the first was on articulating what are key elements in a “Best Nano Practice” exploring issues of technology research, development and embedment into society. The second part focussed on

suggestions of implementation and attribution of such nano practices in research, corporate sphere and in more formal regulation processes.

The workshop was augmented by pre-circulated case studies and scenarios and drawn on representatives from research, industry, regulatory bodies, trade union representatives and NGOs to explore and develop suggestions for, and implementation of, a "Best Nano Practice". The group consisted of 14 participants coming from the Dutch Ministry of Health, DSM and the OECD Working Group on Nano, Technology Assessment Programme of the NanoNed consortium, FRONTIERS partners and DEEPEN projects.

For more information, please get in touch with Douglas Robinson, [d.k.r.robinson@utwente.nl](mailto:d.k.r.robinson@utwente.nl), or Monique Snippers of the FRONTIERS office, [m.a.b.snippers@utwente.nl](mailto:m.a.b.snippers@utwente.nl).

<b>Prof. Arie Rip</b>	Technology Assessment programme coordinator within NanoNed, University of Twente (NL)
<b>Prof. Vinod Subramaniam</b>	Professor of Biophysical Engineering, MESA+ Institute of Nanotechnology (NL)
<b>Mr. Douglas Robinson</b>	Technology Assessment programme coordinator within FRONTIERS NoE, University of Twente (NL)