

Nanobio-RAISE First Meeting

12-13 November 2005, Club de la Fondation Universitaire, Brussels

Report

Present: Mike Adcock, David Bennett, Henriette Bout, Donald Bruce, Brian Heap, Richard Hayhurst, George Khushf, Karel Luyben, Patricia Osseweijer, Lino Paula, Johan Vanhemelrijck, Klaus Michael Weltring, Daan Schuurbiens.

Work-package discussions

Agreements on the work packages are summarised here.

WP 1: Co-ordination activities

Steering Group Meetings

- the Co-ordination Office will regularly organise a telephone conference for the Steering Group (every three months)
- the second Steering Group Meeting will be held in conjunction with the second Horizon Scanning Workshop in October 2006
- work package leaders will inform the Steering Group of their specific planned activities for the next six months based on the Description of Work
- Daan will find out about possibilities to set up an internet forum for exchange of documents, news, etc. between project partners;
 - documents sent round to partners will be accompanied by a short background and instruction: "for your information" / "invited to comment" / "comment before" / etc;
 - all e-mail correspondence will carry 'Nanobio-RAISE' in the title

Multi-disciplinary Expert Working Group

The Expert Working Group will focus on human enhancement. Working group candidates:

- Richard Jones (Professor of Physics, University of Sheffield)
<http://www.shef.ac.uk/physics/people/rjones/>
- Ottilia Saxl (Institute of Nanotechnology) http://www.nano.org.uk/ottilia_saxl.htm
- Onora O'Neill (Onora O'Neill is principal of Newnham College, University of Cambridge but has indicated her wish to withdraw from the project because of changed interests)
- Joyce Tate
- Paul Galvin
- a person from the US

WP2: Horizon scanning workshops

1st Workshop: Nano2Life/Nanobio-RAISE joint workshop

This first workshop will take place 19-21 January in Munster. The programme will be based on previous work from the Nano2Life ethics board: the horizon-scanning exercises and its recent survey.

Day 1: present survey: did we cover all topics?

Day 2: human / machine interface; science; ethics(George Khushf + Ethics Working Group)

Day 3: Public Communication and Recommendations for further research

STATUS: 18 people have agreed to join, 8 more are to be invited. From the Nanobio-RAISE participants, Henriette Bout, Sven Ove Hansson, Richard Hayhurst, Christoph Steinbach, David Bennett and Daan Schuurbiens will join)

2nd Workshop: organised by DECHEMA

The second workshop will be organised together with the 2nd Steering Group Meeting around Month 12 (October 2006), somewhat later than originally planned. More nanotechnologists should be encouraged to join for this workshop, which should convince them of the importance of the subject matter.

If the budget allows a third workshop could be organised if further important subjects have not been sufficiently covered by the first two workshops.

WP3: Focus Groups

Daan will organise a pre-meeting with Sven Ove Hansson, Donald Bruce, Henriette Bout, and David Bennett to discuss the focus group methodology, expected results, organisation, which countries etc. It should be discussed how the DEMOCS card game will be used, and how Henriette Bout, who has kindly expressed her interest to help, can be involved.

The focus group discussions should be held in the local language. It will probably be easiest to organise the English focus group first. Participants should be told their voices will be heard, and their opinions do matter (and the organisers ensure that this is the case)

WP 4: Information & Dissemination

A: Briefings

The EFB Task Group on Public Perceptions of Biotechnology briefing papers will be used as the example for the Nanobio-RAISE briefings.

B: Ethics lecturers

Ethicists will speak during nanotechnology conferences to raise awareness of ethical, legal and social issues in nanobiotechnology and their importance.

Potential targets: EuroNanoForum, NanoBioEurope, Nano2Life meetings and other conferences in the broader Nanotech area (Daan will shortly send round a list of possible conferences)

C: Public Relations

- public relations activities could be carried out simultaneously with the planned focus group discussions (WP3) in the various European countries.
- publications, news items etc. could be created in conjunction with EuropaBio
- Richard Hayhurst will put together a list of journalists and send it around and will think about press releases.

D: Website

- forum, publications database, and links will be created for the website beginning 2006
- the 'events' could be connected to 'list of participants' accessible by project partners to see which partners will attend which events

Other suggestions

- organise sessions / workshops during well known events like Biotechnica or BioVision (March 2007). This will attract an audience and media attention, with most facilities free of charge
- organise local public talks with direct interaction between speakers and the audience
- the European Biotech News is an accessible and widely read journal for PR purposes
- PR activities and programmes should reach beyond the 2 year Nanobio-RAISE period. This is relevant to activities in FP7 as well.

Budget & Reporting (for contractors)

- decisions on changes in the budget can only be made by the Steering Group (and in agreement with the Commission)
- the yearly financial statements (form C, cost statements, receipts and time sheets) will be sent in draft to the Co-ordination Office well before the deadline, checked and modified if necessary before being sent to the Commission
- DECHEMA may make changes to the distribution of the budget for WP2 with Westfälische Wilhelms Universität (within limits and with prior approval from WWU and the Steering Group).
- an advance payment of 221,551.00 EUR corresponding to the first reporting period and the first six months of the subsequent reporting period will be made within 45 days following the date the Commission is informed of accession to the contract of all the contractors (in accordance with the provisions of Article II.28 and other conditions in the contract)

Relations with other projects

- Nano2Life: a pool of nanotechnologists and potential speakers in meetings
- Nanologue (Donald Bruce is a member of the Advisory Committee) have done some horizon scanning on medical diagnostics. Volker Türk / Hugh Knowles is in contact with Nanobio-RAISE.

- Nanojury are carrying out a citizens jury in the UK (Robert Doubleday is in contact with Nanobio-RAISE)
- European Technology Platforms: public communication and ethical, legal and social aspects should be built into the nanotechnology-related TPs right from the outset.
- DEMOS (Jack Stilgoe is in contact with Nanobio-RAISE)
- European Group on Ethics (Julian Kinderlerer is a member) have initiated a study in nanobiotechnology for the publication of an eventual Opinion
- Nano-Ned, Frontiers etc should be involved through Delft University of Technology Nanoscience Department.

General discussion

One of the main aims of Nanobio-RAISE is to engage nanobiotechnologists and to raise awareness of the importance of ethics and communication with nanobiotechnologists.

- The consortium presently consists mostly of participants from the biotechnology field; more active participants from the nanotechnology field are needed. Perhaps a catchy, immediately evident subtitle to Nanobio-RAISE (which is not immediately clear) could help to raise their interests.
- There is a danger that without nanotechnologists, we will speak about things we don't know anything about with misrepresentation of their science. Nanotechnologists could feel intimidated in the presence of only biotechnologists.
- Nanotechnologists have thus far been totally focused on their science: research publications, research groups, research funding. All the 'horizontal issues' are at the bottom of the list.

Are nano(bio)technologies the new GM?

- There is a sense in which the nanotechnology debate resembles the GM debate about 15-25 years back: because of the immaturity of this area, people don't see the need to focus on these issues. This might change in a few years time.
- But we should not be too quick to reframe it as *the* new GM debate: there are similarities and differences. Some fear that a public nanotech-scare will backlash on biotechnology once more if the lessons learnt there are not taken into account. Others may think promoting the nanotech-debate as the new GM debate could be a self-fulfilling prophecy.

Too late or too early for public communication?

- There is currently no public awareness of nanotechnologies: to the extent that even '*grey goo*' is not a known term (see Ortwin Renn). This is corroborated by the interviews from TU Delft with people on the market: respondents have no idea what the technology is and link it with all kinds of unrelated things.
- If scientists anticipate ethical concerns, early discussions can prevent reactive public discussions to existing technologies. We cannot be too early in discussing the wider implications of nanobiotechnologies: rather than being an add-on the products once they are brought onto the market, ethical consideration must become part of the research design.
- Should we discuss *nanotechnology* or its applications? In talking about a technology as a whole instead of it's applications on a case-by-case basis, important distinctions will be blurred (or does this always happen in public discussions anyway?)

- Would differentiation in colours help? Should we consider talking in 'colors': red nano (pharma) / white nano (industrial) / green nano (agriculture) / blue nano (environmental). Colours can be helpful to make the necessary distinctions. On the other hand, transdisciplinarity is one of the things that characterise nanotechnologies. And to the general public it will all be one thing anyway.
- It could be better to wait with public discussion until there are some facts to transmit: to wait until it's less abstract, and real products are coming onto the market (and they should not be the 'wrong' products as happened with biotech).
- Two views on public engagement:
 - the public should be involved but this should not lead to unreasonable influences (tyranny of the majority).
 - it's crucial that public engagement of science is being taken seriously. (ethics is more than risk assessment.)

Other views and overviews:

- How to get scientists from very diverse fields (biologists, medical scientists, physicists) talking in the same language about the same subject matter when they are working / discussing together? (and even more so with betas and gammas around the table?)
- Also missing in the consortium: industry representatives, venture capitalists, economists / finance professionals (bringing in an 'investment opportunities' perspective public opinion and expected risk taking/avoidance).
- Simultaneous assessment of the different scientific levels. NBIC convergence: looking at the details in one area may distort a view on visionary projects on a more abstract level. Too much of a birds-eye view can lead to 'off the wall' conclusions (Grey Goo and trans-humanism). The real opportunities lie in visionary combinations of the possibilities in various disciplines and levels (the right combination of scientific and 'philosophical' perspectives).
- Is a European strategy required / desirable? Only if it is constructed 'bottom-up', a top-down strategy will not work (only produces report).

Risk assessment

- The questions here are: *who* should exercise control, and *how* to exercise control?
- Health risk assessments / nanoparticle toxicity: also in relation to assessment models: in how far do the 'old' models apply to the new products? Size range and distribution issues may demand completely different risk assessment procedures.
- The Royal Society report needs to be reconsidered, its recommendations revisited, and checked whether they have been taken up. It has listed 10 important issues that need to be addressed. There may be issues where it needs to be decided that more research is needed before companies should be allowed to produce certain products. (see report of Scientific Committee on Emerging and Newly Identified Health Risks - SCENIHR).
- These assessments should go beyond 1st level nanoparticles: the real issues might be in 2nd level applications (the integration of those nanoparticles in other applications).
- use as much as possible the European associations and conferences in conjunction with which to organize project meetings to reduce the cost and make it more efficient