

## **Research in Nanosciences and Nanotechnologies**

*Dr Nicholas Deliyannis, Unit Nano- and Converging Sciences and Technologies,  
DG Research, European Commission*

Nanotechnology has a two-fold potential, in offering solutions to many current problems and expectations of citizens; and in opening up opportunities for sustainable wealth creation and new employment by turning basic research into successful innovations. The European Union has long supported Nanosciences and Nanotechnologies (N&N).<sup>1</sup> Under FP6, the Commission continued and strengthened its support for R&D in this area. In total, almost 1.4 billion Euro has been committed to more than 550 projects dedicated to N&N. (This is to be compared to about 120M€ over FP4 and about 220M€ over FP5.) Of this amount, some 75% originated from calls of the third and second thematic priorities of FP6,<sup>2</sup> which had calls specifically addressing N&N, whilst almost 25% originated from “bottom-up” or other programmes of FP6 which did not make explicit provisions for N&N. Most notable amongst the latter is the programme for Human Resources and Mobility, the Marie Curie actions, in which some 150M€ was committed to projects in N&N. Within the third thematic priority (NMP), the participation of industry was somewhat lower in projects related to N&N than in the other projects within this industry-targeted priority. However, in the course of FP6, the industrial participation in N&N projects has doubled, from 18% in 2003-04, to 37% in 2006. The proportion of SMEs within the industrial participation was in the region 35-40%.

Under FP7,<sup>3</sup> it is expected that the EC funding of R&D in N&N will increase significantly and is likely to more than double on a yearly basis. This is thanks to increases in the overall budgets of relevant themes, as well as expected increases in the share of N&N in “bottom up” programmes, notably the Ideas and People programmes. The first calls of FP7 were published on 22 December 2006. The wide coverage of FP6, in terms of subject area and type of funding, is expected to continue. Overall, some 60 calls and topics opened in the first year of FP7, in all specific programmes, are directly relevant to R&D in N&N, with many more being potentially relevant. These cover research activities in nanoscience, technology development, impact assessment and societal issues, nanomaterials, nanoelectronics, nanomedicine, as well as in training and frontier research.

Collaborative R&D into the potential impact of nanotechnologies is being boosted significantly in FP7, both in budgetary terms and in terms of scope. Relevant topics, addressed by both collaborative projects and co-ordination and support actions, are included in the first calls. The choice of topics followed a public consultation undertaken in 2006, as well as wide consultation within the Commission services, involving the DGs engaged in work on safety and regulatory issues. In addition to this support, the Commission’s Joint Research Centre (JRC) planned relevant work in its multi-annual Work Programme.

Several European Technology Platforms (ETPs) are dedicated to themes directly relevant to Nanotechnology, most notably one on Nanomedicine and one on Nanoelectronics (ENIAC), and have produced Strategic Research Agendas (SRAs). Other ETPs relevant to N&N include Sustainable Chemistry; and Hydrogen and Fuel Cell Technology. The priorities set out by these ETPs have already been taken into account in the first calls of FP7, in the NMP, IST, Health and Energy themes.

*Note that the views expressed in this paper are those of the author, do not necessarily represent those of the European Commission and do not engage the European Commission in any way.*

---

<sup>1</sup> <http://cordis.europa.eu/nanotechnology/>

<sup>2</sup> Respectively, “Nanotechnologies and nano-sciences, knowledge-based multifunctional materials and new production processes and devices” (NMP); and “Information Society Technologies” (IST)

<sup>3</sup> <http://cordis.europa.eu/fp7>