

## **Mobility most wanted in EU-Latin American nanocooperation**

Latin American nanoscientists want to cooperate with European colleagues in nanoresearch. Access to high quality research infrastructure and equipment not available in their country is an important reason for cooperation. Training students and working with relevant European experts were other reasons.

Nine out of sixteen visitors who came to Europe with support from the EU funded NanoforumEULA project, are planning to continue collaborating by exchanging students and researchers with their European counterparts. Six of them are planning a formal research project. Even though twelve of the sixteen suggest they would be interested in applying for FP7 funding; only some of them give evidence of clear plans. Most nanoscientists in Latin America are engaged in basic research. The EU FP7 funds mainly applied research, which does not seem to be very relevant to their needs. Latin American researchers and students are likely to benefit most from the opportunities for non-Europeans in the PEOPLE programme of FP7, and from Specific International Cooperation Actions and International Cooperation activities funded in the CAPACITIES programme. Apart from EU funding, they can also benefit from national funding from EU member states or bilateral agreements between these countries and their own government. Many of them already use these national and bilateral funds. In four out of sixteen cases, NanoforumEULA enabled the first contact between their home organisation and the European host organisation; the other twelve visits were part of existing collaborations.

The topics worked on during the visits varied considerably. Physics oriented topics were optoelectronics / photonics and quantum computing, as well as modelling and theory. Materials science included polymer-CNT composites, meta-fullerenes, catalysis, ink-jet printing and surface changes under irradiation. Biomineralisation in plants and biological membranes were also studied, as well as socio-economic aspects of nanotechnology for development. Most of the foreseen societal benefits were rather long term generic influences, e.g. by building up a solid basic science community in the country. Other mentioned benefits included research and innovation-system aspects (learning technology transfer, better embedding nanotechnology in the socio-economic development of the country, exploiting natural resources). Foreseen industrial and economic benefits included applications in building / construction, stimulating a solar energy local industry and applications of catalysis in nuclear energy and aerospace. Medical benefits included a cure for Parkinson patients and cancer therapy. Environmental benefits included catalysis to reduce air pollution (by cars). Mostly the scientists did not show evidence of cooperating with companies or experts in other disciplines, so these potential benefits are mainly contributed to indirectly by the research done with NanoforumEULA support.

### **Some statistics**

During the NanoforumEULA project, in 2008, 21 (out of 29) researchers from Latin America were invited up to three months in a European nanotechnology research centre. The visiting researchers came from Mexico (fourteen out of fifteen applicants), Argentina (three out of three), Brazil (two out of five), Chile (one out of one) and Colombia (one out of three) (two Venezuelan researchers had also applied). Among the invited researchers were six physicists, six engineers, five materials scientists, two chemists, one biologist and one social scientist. Eight of them were professors, six postdocs and researchers with a PhD, and seven PhD students or lecturers without PhD. Fifteen men (out of nineteen) and six women (out of ten) were invited. The low number of applicants can be explained because only funding was available for additional costs of mobility, not for salaries. Other schemes tend to offer more. Furthermore, this project was relatively short, which means relatively much time was needed for building up visibility. A number of researchers would have liked to apply for the support after the deadline.

### **Relevant policies**

The European Commission proposed a new joint international research cooperation strategy in a communication to the European Council and Parliament on 24 September 2008. The EC proposed better coordination between the EU FP7 and national funding from EU Member states. Research cooperation between Europe and third countries should be focused on priorities where a critical mass can be achieved. Cooperation with scientifically advanced partners and with countries developing their research base is both needed, but requires different instruments and priorities. E.g. Brazil may be considered an emerging economy, whereas Argentina is developing its research base.

### **Links**

NanoforumEULA interviews with visiting researchers:

[http://www.mesaplus.utwente.nl/nanoforumEULA/interviews\\_visiting\\_researcher/](http://www.mesaplus.utwente.nl/nanoforumEULA/interviews_visiting_researcher/)

EC Communication COM(2008) 588 Final:

<http://ec.europa.eu/research/index.cfm?pg=newsalert&lg=en&year=2008&na=na-240908>