



PRESS RELEASE

Empoli: new applications of nanotechnology in medicine.

In Empoli, a meeting of European experts of the transnational project “Nano4m – Nanotechnology for Market” was held, of which Circondario Empolese Valdelsa and ASEV are partners.

New medical applications of nanotechnology.

Important innovations have emerged during the meeting held on 1st and 2nd July in Empoli at ASEV within the European project “Nano4m – Nanotechnology for Market”, which involves 12 partners from the regions of North Rhine-Westphalia in Germany, Lorraine in France, Asturias in Spain and Tuscany with Circondario Empolese Valdelsa and Development Agency E.V.

The project is part of the European Community Programme Interreg IVC. It started in October 2008 and will end in September 2011.

Significant attention was focused on the application of nanotechnology in medicine (“Health - Biocidal Nanocarriers”), where it appears to play a key role in the near future. The “Nano4m” initiative has been able to connect various research and technology transfer centres of the four European regions, with the aim of improving strategies and building networks for the design of nanotechnology for the market, in particular for the market segments concerning health, energy and security/defense. Known international experts attended the meeting to discuss key aspects of the path to market. These were previously identified as key issues to be dealt with in order to arrive at industrial production of the selected nanotechnology applications.

Four groups of experts have been created: one studying dental implants, the second studying health applications of biocidal nanocarriers, another the inclusion of nanotechnology in photovoltaics and another on the use of nanotechnology in the improvement of transparent armors. Each group has analyzed currently available research opportunities, as well as processes and market opportunities.

These experts debated various kinds of practical difficulties, ranging from issues in biological testing to production at the laboratory scale to upscaling production to industrial scales. They also studied medical aspects, as well as those related to market policies: various issues to be analyzed in view of the long and expensive required series of *in vivo* tests, as well as the obtaining of funds that would support testing of nanomaterials *in vivo* and in animals. They also discussed the potential requirements that nanotechnology products will have prior to entering pre-clinical testing stage. Among the issues taken into account: developing European legislation regarding the production of nanomaterials and nanopowders, the assessment of the benefits and risks in applying “nano” technologies, the methods of administration and the different treatment strategies induced by nanomedicine. Also discussed was the determination of the production volume of new nanomedicines,

issues related to introduction into the market, intellectual property issues, and the difficulty and length of clinical and pre-clinical testing.

The technical knowledge acquired in the groups of experts will then be used for developing strategic plans for research and technology transfer centres which take part in the project.

By the end of the project partners will formulate guidelines for regional or local authorities with the aim of improving technology transfer policies. Opportunities for future cooperation between regional governments in the technology transfer sector will also be explored.

Nanotechnology is an economic sector that has very promising perspectives for boosting the competitiveness of industry, but also for creating new products that will introduce positive changes in medicine, energy, electronics and other fields.

In this sense, “Nano4m - Nanotechnology for Market” aims at improving strategies and creating networks for the design of nanotechnology for the market.

Partners of the project “Nano4m - Nanotechnology for market”

Regional/local authorities:

Instituto de Desarrollo Económico del Principado de Asturias IDEPA (Lead Partner)
www.idepa.es

Conseil Régional de Lorraine
www.lorraine.eu

Stadt Dortmund
www.wirtschaftsfoerderung-dortmund.de

Technologieförderung Münster GmbH
www.technologieforderung-muenster.de

Circondario Empolese Valdelsa
www.empolese-valdelsa.it

Research and technology Centres:

Centro de Investigación en Nanomateriales y Nanotecnología CINN-CSIC
www.cinn.es

Fundación PRODINTEC
www.prodintec.com

UMI GeorgiaTech-CNRS
www.georgiatech-metz.fr

Institut Jean Lamour, UMR 7198
www.ijl.nancy-universite.fr

TechnologieZentrumDortmund Management GmbH (TZM)

www.tzdo.de

CeNTech GmbH
www.centech.de

Agenzia per lo Sviluppo Empolese Valdelsa Spa
www.asev.it

www.nano4m.eu