

# FIRST ANNOUNCEMENT

Secretariat: G. Bartolomei & M. Cimino, phone: +39.06.94005605 --+390694005754

Email: [giulia.bartolomei@enea.it](mailto:giulia.bartolomei@enea.it)

## EC Project-Bonsai Symposium Breakthroughs in Nanoparticles for Bio-Imaging Frascati – Rome, Italy April 8 - 9, 2010



### Topics of the Symposium

#### *Development of nanoparticles for bio-imaging*

- Synthesis and characterization of metallic, semiconductive and magnetic nanoparticles
- Surface functionalization of nanoparticles
- Preparation of smart, multifunctional nanoparticles

#### *Cellular interaction and toxicity of nanoparticles*

- Nanoparticles and membrane interaction
- Cellular uptake of nanoparticles
- Modelling the effect of shape and size in nanoparticle bio-distribution

#### *Bio-imaging using nanoparticles*

- Cell labelling and design of nanoparticles
- Optical imaging
- MR (Magnetic Resonance) contrast imaging



### SYMPOSIUM ORGANIZERS:

E. Borsella-ENEA, Italy ([elisabetta.borsella@enea.it](mailto:elisabetta.borsella@enea.it)); N. Herlin-CEA, France; S. Veintemillas Verdaguer-CSIC, Spain; M. Garcia-UCM, Spain; G. Mattei-Univ. of Padova, Italy; D. Wang-MPIKG, Germany, F. Huisken-MPIA, Germany; G. Miserocchi & I. Rivolta-Univ. of Milan Bicocca, Italy; J. M. Idee-GUERBET, France; V. Pustovoy & V. Loschenov-GPI, Russia; K. Palme-Univ. of Freiburg, Germany; P. Gasco-NANOVECTOR, Italy; R. Uhl-TILL, Germany; R. Alexandrescu & I. Morjan-INFLPR, Romania.

<http://www.bonsai-project.eu/>

### SCOPE OF THE CONFERENCE:

Particles on the nanoscale exhibit extraordinary physical, chemical and biological properties significantly different from their conventional formulation on the micro-scale. These unique properties offer exciting opportunities and potential benefits in a wide range of applications, including visualization of cellular structures (in tissues and organs), receptors, inflammation, and characterisation of suspect lesions.

In order to take full advantage of nanoparticles for developing truly innovative bio-imaging techniques, it is necessary to address challenging questions, including surface functionalization, biocompatibility, cellular interaction and uptake of nanoparticles, effect of shape, size and coating in nanoparticle bio-distribution.

The FP6 Project BONSAI (Bio-imaging with smart multi-functional nanoparticles) was funded by EC in the fall 2006 with the objective of contributing to the progress in this key research area and it is now approaching its conclusion.

This Symposium will gather the BONSAI Partners and scientists active in the field (chemists, material scientists, physicists, engineers, clinicians and biochemists) to discuss new ideas, experimental results and perspectives ranging from the preparation to the applications of functional nanoparticles for bio-imaging and cell labelling.

**Leading experts from the field will give key-notes and invited talks. Contributed talks and posters will be accepted without any registration fee.**

### INVITED SPEAKERS INCLUDE:

Prof. W. Parak-Univ. of Marburg, Germany; Prof. F. Gazeau-Univ. of Paris-Diderot, France; Dr. M. T. Swihart-Univ. of Buffalo, US; Prof. M. Taupitz-Charité Hospital of Berlin, Germany; Prof. A. Douplik-Univ. of Erlangen, Germany; Prof. P. Decuzzi-Univ. of Magna Grecia, Italy; Dr. T. Pellegrino-Univ. of Lecce, Italy.

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