

“Bio-medical applications of micro- and nanotechnologies”

Bucharest, Romanian Academy, 4th of December, 2007

PRO-BIOSYS project promote the Romanian competences, by intensifying the cooperation of the Romanian research organisations and private companies in the micro-nano-biosystems domain (“bio-chips”) with the European research and industry area, stimulate the formation of new collaborations and partnerships and is open to cooperate with other networks or projects in the field.



Prof. Dan Dascalu

The workshop organized by the National Institute for R&D in Microtechnologies IMT-Bucharest, with the support of Pro-Biosys project “**PROMotion of Romanian competences for the European co-operation in micro-nano-BIOSYSStems**”, followed the developing of relationships between scientific networks and consortium existent in Romania with the European networks.

30 people attended the event: representatives from the Romanian scientific community, including young researchers, but also participants from private industrial sectors. National Research institutes also manifested their interest to participate, institutes of Romanian Academy, commercial companies with research activities and also Public Health institutes (University Hospital of Bucharest and Oncology Institute of Bucharest).

The presentations were especially focused on the results of the researches from micro-nano-biosystems domain, results obtained from European projects. Romanian researchers delivered oral presentations, researchers with activities in nano-bio medical field recognized on national and international field (National R&D Institute for Microtechnologies, Institute of Biochemistry of the

Romanian Academy and National R&D Institute for nonferrous and rare metals) and also from Europe (VTT



Prof. Shimshon Belkin

Technical Research Centre of Finland, Microelectronics Laboratory Université catholique de Louvain, Politecnico di Milano Dip. Elettronica e Informazione si Institute of Life Sciences The Hebrew University of Jerusalem).

The workshop was open by Prof. Dan Dascalu, National Institute for R&D in Microtechnologies IMT-Bucharest, Pro-Biosys project coordinator.

The **first section** of presentations delivered by the foreign guests, was started by **Prof. Shimshon Belkin**, from Institute of Life Sciences, The Hebrew University of Jerusalem, “**Whole-cell biochips for toxicity detection**”, followed by **Prof. Inger Vikholm-Lundin**, VTT Technical Research Centre of Finland with the presentation “**Resonator based biosensor system for DNA and protein detection in medical applications: Concept, state of development and future aspects**”. Also from the bio-sensor domain for DNA was the presentation of Dr. **Luis Moreno Hagelsieb**, from Microelectronics Laboratory, Université catholique de Louvain, Louvain, Belgium, “**Al/Al₂O₃ Biosensors for DNA and Medical Applications: Materials and Design Concepts, Methodology and Perspectives**”. The first section was



Prof. Inger Vikholm-Lundin



Dr. Luis Moreno Hagelsieb

closed with the presentation “**Single photon avalanche diode for genetic diagnostics**” of **Dr. Ivan Rech** from Politecnico di Milano, Milano, Italy.

The **second part** of the event was dominated by presentations of Romanian researchers: Dr. Irina Kleps, National Institute for R&D in Microtechnologies, Bucharest, Romania, “**Micro/nano-fabrication of Si-based drug delivery systems**”, Math. Oana Nedelcu, National Institute for R&D in Microtechnologies, Bucharest, Romania, “**Lab-on-chip for medical diagnosis**”; Dr. Mihaela Trif, Institute of Biochemistry, Romanian Academy, Bucharest, “**Liposome-based anti-inflammatory molecules: new strategy for a local therapy**”; Dr. Roxana M. Piticescu, National Institute for Non-Ferrous and Rare Metals, Bucharest, Romania, “**Hybrid Materials with potential use in biosensors**” and Dr. Eng. Carmen Moldovan, National Institute for R&D in Microtechnologies, Bucharest, Romania, “**Sensors and implantable devices for biomedical applications**”.

All the presentations from this workshop can be found on the page www.imt.ro/probiosys.



Dr. Ivan Rech

The discussions during the event resulted in establishing of new contracts and cooperation at international level in the nano-bio medical field and also possible new proposals of projects for FP7.

Contact: Future information on web <http://www.imt.ro/probiosys/eng/>