Engineering advanced polymeric surfaces for smart systems in biomedicine, biology, material science and nanotecnology: A cross-disciplinary approach of Biology, Chemistry and Physics

Fact Sheet

Project Information

BIOPOLYSURF

Grant agreement ID: 5516

Start date
6 October 2004

End date
30 September 2008

Funded under
FP6-MOBILITY

Overall budget
€ 0

EU contribution
€ 3 473 926

Coordinated by
UNIVERSIDAD DE VALLADOLID
Spain

Objective

The enormous potential of Biology in combination with Chemistry and Physics will lead to break-through advances in material science and to an abundant wealth of exploitable developments, Chemistry and Physics offer advanced tools for synthesis, characterization, theoretical understanding and manufacture of materials and devices, while Biology offer a window into the most sophisticated collection of functional nanostructures that exist. The inspiration searched in Nature will expand not only lo the use of the characteristics of the biological molecules but also to the clean, self-sustainable and efficient way that Nature produces such sophisticated molecules, The project of Biopolysurf aims at providing a platform for research and

training In this multidisciplinary field. Biopolysurf is a RTN planned to facilitate the exchange of expertise and knowledge between top-notch groups coming from these three traditional disciplines as a way to achieve a privileged excellence in Nanobiotechnology and to establish a high quality training and truly multidisciplinary platform for young and experienced researches. Our main goal will be the engineering of advanced nanofunctionalized polymeric surfaces for smart systems in biomedicine, biology, material science and nanotechnology by assembling molecules and nano-objects into functional patterns. Biopolysurf is intended as an application-oriented research network. All the tools and knowledge developed within the network will be focused on marketable products. The aimed tasks are designed to be used in tissue engineering, drug (gene) delivery, nanobiotechnology, lab-on-a-chip systems and advanced smart materials and devices for agriculture, food packaging, cosmetics, etc. The interdisciplinary approach of Biopolysurf will establish a complete chain of knowledge: It ranges from innovative concepts for the design and the (bio) synthesis of novel materials to the fabrication of controlled (ordered) nanostructures via self-assembly.

Programme(s)

Topic(s)

Call for proposal

FP6-2002-MOBILITY-1

Funding Scheme

RTN - Marie Curie actions-Research Training Networks

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