

## **TENTATIVE PROGRAM**

## Last Update - November 17, 2016

|             | Tuesday November 22, 2016  |    |
|-------------|--|----|
| 08:00-09:00 | Registration   |    |
| 09:00-09:15 | Opening Ceremony   |    |
| 09:15-09:45 | Samuel Sánchez (IBEC, Spain)   |    |
|             | Chemical Nanomachines as active drug nanovehicles                                      | K  |
| 09:45-10:15 | Mika Lindén (Ulm University, Germany)  |    |
|             | Intracellular drug release using mesoporous silica nanoparticles as drug vectors       | K  |
| 10:15-10:30 | Antonios Kanaras (University of Southampton, United Kingdom)                           | 0  |
|             | Synergistic actions of colloidal nanoparticles: sensing and drug delivery              |    |
| 10:30-11:15 | Coffee Break, Poster Session & Exhibition  |    |
| 11:15-11:45 | Yuval Ebenstein (Tel Aviv University, Israel)  | K  |
|             | Genome mapping in nanochannel arrays   | ., |
| 11:45-12:00 | Juan Pablo Agusil Antonoff (IMB-CNM (CSIC), Spain)                                     | 0  |
|             | Suspended planar-array chips for molecular multiplexing at the microscale              |    |
| 12:00-12:30 | Georg Fantner (EPFL, Switzerland)  | K  |
|             | Up Close and Personal: The Process of Mycobacterial Cell Division                      |    |
| 12:30-13:00 | Pascal Jonkheijm (University of Twente, The Netherlands)                               | K  |
|             | Dynamic cell-material interactions   |    |
| 13:00-13:15 | Judith Guasch (Materials Science Institute of Barcelona (ICMAB-CSIC)/CIBER-BBN, Spain) | 0  |
|             | Nanostructured functionalized surfaces for adoptive cell therapy                       |    |
| 13:15-14:30 | Cocktail Lunch - Poster Session & Exhibition   |    |
| 14:30-15:15 | Poster Session & Exhibition  |    |
| 15:15-15:45 | Daniel Navajas (Universitat de Barcelona / IBEC, Spain)                                | K  |
|             | Nanomechanics of Soft Biological Tissues Probed with Atomic Force Microscopy           |    |
| 15:45-16:00 | Lisa Almonte (Universidad de Murcia, ClOyN , Spain)                                    | 0  |
|             | Ideal Atomic Force Microscopy imaging of heterogeneous biological samples in liquids:  |    |
|             | Topography and Chemical information  |    |
| 16:00-16:15 | Fernando Herranz (Centro Nacional de Investigaciones Cardiovasculares (CNIC), Spain)   | 0  |
|             | Radioisotope Core-doped Magnetic Nanoprobes; a chelator-free approach for PET/MR       |    |
|             | molecular imaging with extremely small nanoparticles                                   |    |
| 16:15-16:45 | Lorenzo Albertazzi (Institute for Bioengineering of Catalonia (IBEC), Spain)           | K  |
|             | Nanoscopy for Nanomedicine: looking at nanomaterials one molecule at a time            | '` |
| 16:45-17:15 | Coffee Break, Poster Session & Exhibition  |    |
|             | Parallel Session I   |    |
| 17:15-17:30 | Lide Arana (Instituto Biofisika (UPV/EHU, CSIC), Spain)                                | 0  |
|             | Solid lipid nanoparticles for delivery of calendula officinalis extract                |    |

| Ana Rita Rodrigues (University of Minho, Portugal)   | 0   |
|--|---|
| Magneto-sensitive liposomes containing manganese ferrite nanoparticles as nanocarriers     | ~   |
| for new promising antitumor thienopyridin-amine derivates                                  |   |
| Gianluca Arauz Garofalo (Universitat de Barcelona, Spain)                                  | 0   |
| Prospects of Microwave Spectrometry for vascular stents monitoring: Towards a non-         | ~   |
| invasive and non-ionizing follow-up alternative  |   |
| Inmaculada Campos Sanchez (Universitat Autónoma de Barcelona, Spain)                       | 0   |
| Voltammetric sensor based on Molecularly Imprinted Polymers for 4-Ethylphenol              | ~   |
| detection  |   |
| Alexandre Chicharo (INL - International Iberian Nanotechnology Laboratory / IST-UL,        | 0   |
| Portugal)  |   |
| Lab-on-a-chip for purification and automated counting of Circulating Tumor Cells from      |   |
| peripheral blood of metastatic cancer patients   |   |
| Silvina Samy (INL - International Iberian Nanotechnology Laboratory, Portugal)             | 0   |
| Microfluidic isolation of cancer cells from blood: towards point-of-care liquid biopsy     |   |
| Gavin Coleman (Centre for BioNano Interactions, UCD Dublin, Ireland)                       | 0   |
| Study of Shape-dependent Nanoparticle Interactions   | ~   |
|  |   |
|  | 0   |
|  |   |
|  |   |
| Salima Nedjari (Institute for Bioengineering of Catalonia (IBEC), Spain)                   | 0   |
| Geometry of electrospun nanofibers determine the initial interaction and subsequent        |   |
| osteogenic differentiation of mesenchymal stem cell  |   |
| Mafalda Rodrigues (Universitat de Barcelona, Spain)  | 0   |
| Nanostructured materials for intracellular sensing and delivery                            |   |
| Neus Feliu (Karolinska Institutet, Sweden)   | 0   |
| Interaction of Nanoparticles with Cells: Nanomaterials For Stem Cell Tracking Applications |   |
| Nagamalai Vasimalai (INL-International Iberian Nanotechnology Laboratory, Portugal)        | 0   |
| Facile one-pot synthesis of highly luminescent carbon dots from food and its application   |   |
| of in-vitro cancer growth inhibition   |   |
| Juan Gallo (International Iberian Nanotechnology Laboratory, Portugal)                     | 0   |
| Magnetic Solid Lipid Nanocomposites as ultra-high MRI contrast enhancers and magnetic      |   |
| hyperthermia induced drug delivery vehicles  |   |
| Ilaria Pezzini (Scuola Superiore Sant´Anna, BioRobotic Institute, Italy)                   | 0   |
| Cerium oxide nanoparticles, a promising powerhouse in bioenergetic imbalance               |   |
|  | Magneto-sensitive liposomes containing manganese ferrite nanoparticles as nanocarriers for new promising antitumor thienopyridin-amine derivates  Gianluca Arauz Garofalo (Universitat de Barcelona, Spain) Prospects of Microwave Spectrometry for vascular stents monitoring: Towards a non-invasive and non-ionizing follow-up alternative  Inmaculada Campos Sanchez (Universitat Autónoma de Barcelona, Spain) Voltammetric sensor based on Molecularly Imprinted Polymers for 4-Ethylphenol detection  Alexandre Chicharo (INL - International Iberian Nanotechnology Laboratory / IST-UL, Portugal) Lab-on-a-chip for purification and automated counting of Circulating Tumor Cells from peripheral blood of metastatic cancer patients  Silvina Samy (INL - International Iberian Nanotechnology Laboratory, Portugal) Microfluidic isolation of cancer cells from blood: towards point-of-care liquid biopsy  Gavin Coleman (Centre for BioNano Interactions, UCD Dublin, Ireland) Study of Shape-dependent Nanoparticle Interactions  Parallel Session II  Maria de la Fuente (Fundación Ramón Domínguez / Health Research Institute of Santiago de Compostela, Spain) Nanotheranostics to interfere the process of metastasis  Salima Nedjari (Institute for Bioengineering of Catalonia (IBEC), Spain) Geometry of electrospun nanofibers determine the initial interaction and subsequent osteogenic differentiation of mesenchymal stem cell  Mafalda Rodrigues (Universitat de Barcelona, Spain) Nanostructured materials for intracellular sensing and delivery  Neus Feliu (Karolinska Institutet, Sweden) Interaction of Nanoparticles with Cells: Nanomaterials For Stem Cell Tracking Applications  Nagamalai Vasimalai (INL-International Iberian Nanotechnology Laboratory, Portugal) Facile one-pot synthesis of highly luminescent carbon dots from food and its application of in-vitro cancer growth inhibition  Juan Gallo (International Iberian Nanotechnology Laboratory, Portugal) Magnetic Solid Lipid Nanocomposites as ultra-high MRI contrast enhancers and magnetic hyperthermia induced |

|   | Wednesday November 23, 2016  |                  |
|---|--|------------------|
| 09:00-09:30   | Wolfgang Parak (Philipps University of Marburg, Germany)   | К                |
|   | Interaction of colloidal hybrid nano- and microparticles with cells  | .`.              |
| 09:30-10:00   | Maurizio Prato (CIC biomaGUNE, Spain)  | К                |
|   | Novel Functional Carbon Bio-Interfaces   |                  |
| 10:00-10:30   | Jose Antonio Garrido (ICREA-ICN2, Spain)   | К                |
|   | Graphene flexible electronics for neuroprosthetics   |                  |
| 10:30-11:00   | Ester Vazquez Fernandez-Pacheco (University of Castilla La Mancha, Spain)  | K                |
| 11.00.11.15   | Graphene for Bioapplications: Preparation, Cytotoxicity and Integration in 3D-scaffolds.   |                  |
| 11:00-11:15   | Mattia Bramini (Istituto Italiano di Tecnologia/Center for Synaptic Neuroscience and   | 0                |
|   | Technologies & Graphene Labs, Italy)   |                  |
| 11:15-11:30   | Towards graphene for biomedical applications: evaluation of neuronal biocompatibility  |                  |
| 11.15-11.50   | Lucia Delogu (University of Sassari, Italy)  | 0                |
|   | Immune characterization of graphene oxide and amino functionalized graphene using new high-throughput analysis   |                  |
| 11:30-12:00   | Coffee Break, Poster Session & Exhibition  |                  |
| 12:00-12:30   | Didier Letourneur (Inserm U1148/CNRS, France)  | 1/               |
|   | Design and in vivo Validations of Nanosystems in Cardiovascular. Tissue Engineering and  | K                |
|   | Molecular Imaging  |                  |
| 12:30-13:00   | Meital Reches (The Hebrew Univ of Jerusalem, Israel)   | К                |
|   | Interactions between peptides and inorganic matter: From basic science to applications   |                  |
| 13:00-13:30   | Tal Dvir (Tel Aviv University, Israel)   | К                |
|   | Engineering strategies for building hearts   |                  |
| 13:30-14:45   | Lunch  |                  |
|   |  |                  |
| 14:45-15:15   | Arben Merkoçi (ICREA/ICN2, Spain)  | К                |
|   | Arben Merkoçi (ICREA/ICN2, Spain) Paper-based nanobiosensors in diagnostics: from health, safety and security to   | К                |
| 14:45-15:15   | Arben Merkoçi (ICREA/ICN2, Spain) Paper-based nanobiosensors in diagnostics: from health, safety and security to environment monitoring  | К                |
|   | Arben Merkoçi (ICREA/ICN2, Spain) Paper-based nanobiosensors in diagnostics: from health, safety and security to environment monitoring Ana I. Ballestar Balbás (GPNT, Spain)  | К                |
| 14:45-15:15<br>15:15-15:30  | Arben Merkoçi (ICREA/ICN2, Spain) Paper-based nanobiosensors in diagnostics: from health, safety and security to environment monitoring Ana I. Ballestar Balbás (GPNT, Spain) Highest Quality Graphene for bio-sensing   |                  |
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|  | Thursday November 24, 2016   |     |
|--|--|-----|
| 09:00-09:30  | Bruno De Geest (Ghent University, Belgium)   | K   |
|  | Biomimetic nanoparticles for lymphe node focused immune activation   | '`  |
| 09:30-10:00  | Andreas Manz (KIST Europe, Germany)  | К   |
|  | Biomimetic channels and channel networks for microfluidics   |     |
| 10:00-10:30  | Arnaud Gissot (Bordeaux University, France)  | К   |
|  | Nucleic acid based supramolecular systems: a route to biomedical applications  | IX  |
| 10:30-11:00  | Coffee Break, Poster Session & Exhibition  |     |
| 11:00-11:30  | Gianni Ciofani (Polytechnic Univ. of Torino & IIT, Italy)  | K   |
|  | Smart materials for nanomedicine   |     |
| 11:30-12:00  | Avi Schroeder (Technion, Israel)   | K   |
|  | Personalized Cancer Nanomedicine   |     |
| 12:00-12:30  | Frederique Cunin (Institut Charles Gerhardt Montpellier-CNRS, France)  |     |
|  | Porous silicon: a biodegradable semiconductor for nanomedecine   | K   |
| 12:30-13:00  | Véronique Gigoux (LPCNO/INSA - INSERM ERL1226, France)   |     |
|  | Targeted nanotherapy of endocrine tumors by magnetic intra-lysosomal hyperthermia  | K   |
|  | (MILH)   |     |
| 13:00-13:30  | Ronit Satchi-Fainaro (Tel Aviv University, Israel)   |     |
|  | Identifying molecular signatures of tumor dormancy as a basis for the rational design of   | K   |
|  | precision nanomedicines  |     |
| 13:30-14:45  | Lunch  |     |
| 14:45-15:15  | Danny Porath (The Hebrew University of Jerusalem, Israel)  |     |
| 1  | Dailing Foracti (The Hebrew Oniversity of Jerusalem, Israel)   | K   |
|  | Charge Transport in single DNA-Based Molecules   | K   |
| 15:15-15:30  |  |     |
|  | Charge Transport in single DNA-Based Molecules   | О О |
| 15:15-15:30  | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia  |     |
|  | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  | 0   |
| 15:15-15:30  | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  Contribution of Water to Protein Stability and Strategies for Protein Design  |     |
| 15:15-15:30  | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  Contribution of Water to Protein Stability and Strategies for Protein Design  Sylwia Sekula-Neuner (Karlsruhe Institute of Technology / Institute of Nanotechnology,  | 0   |
| 15:15-15:30  | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  Contribution of Water to Protein Stability and Strategies for Protein Design  Sylwia Sekula-Neuner (Karlsruhe Institute of Technology / Institute of Nanotechnology, Germany)   | 0   |
| 15:15-15:30<br>15:30-15:45                               | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  Contribution of Water to Protein Stability and Strategies for Protein Design  Sylwia Sekula-Neuner (Karlsruhe Institute of Technology / Institute of Nanotechnology, Germany)  Interdigitated Bioink Micropatterns Generated by Multiplexed Polymer Pen Lithography   | 0   |
| 15:15-15:30<br>15:30-15:45                               | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  Contribution of Water to Protein Stability and Strategies for Protein Design  Sylwia Sekula-Neuner (Karlsruhe Institute of Technology / Institute of Nanotechnology, Germany)  Interdigitated Bioink Micropatterns Generated by Multiplexed Polymer Pen Lithography  Giada Graziana Genchi (Istituto Italiano di Tecnologia, Italy)   | 0   |
| 15:15-15:30<br>15:30-15:45                               | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  Contribution of Water to Protein Stability and Strategies for Protein Design  Sylwia Sekula-Neuner (Karlsruhe Institute of Technology / Institute of Nanotechnology, Germany)  Interdigitated Bioink Micropatterns Generated by Multiplexed Polymer Pen Lithography  Giada Graziana Genchi (Istituto Italiano di Tecnologia, Italy)  Arrays of titanium dioxide nanotubes with different diameter and surface chemistry   | 0 0 |
| 15:15-15:30<br>15:30-15:45<br>15:45-16:00                | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  Contribution of Water to Protein Stability and Strategies for Protein Design  Sylwia Sekula-Neuner (Karlsruhe Institute of Technology / Institute of Nanotechnology, Germany)  Interdigitated Bioink Micropatterns Generated by Multiplexed Polymer Pen Lithography  Giada Graziana Genchi (Istituto Italiano di Tecnologia, Italy)  Arrays of titanium dioxide nanotubes with different diameter and surface chemistry influence C2C12 skeletal myoblast adhesion and differentiation  | 0   |
| 15:15-15:30<br>15:30-15:45<br>15:45-16:00                | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  Contribution of Water to Protein Stability and Strategies for Protein Design  Sylwia Sekula-Neuner (Karlsruhe Institute of Technology / Institute of Nanotechnology, Germany)  Interdigitated Bioink Micropatterns Generated by Multiplexed Polymer Pen Lithography  Giada Graziana Genchi (Istituto Italiano di Tecnologia, Italy)  Arrays of titanium dioxide nanotubes with different diameter and surface chemistry influence C2C12 skeletal myoblast adhesion and differentiation  Imma Ratera (Nanomol Group/Institut de Ciencia de Materials de Barcelona (CSIC),  | 0 0 |
| 15:15-15:30<br>15:30-15:45<br>15:45-16:00                | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  Contribution of Water to Protein Stability and Strategies for Protein Design  Sylwia Sekula-Neuner (Karlsruhe Institute of Technology / Institute of Nanotechnology, Germany)  Interdigitated Bioink Micropatterns Generated by Multiplexed Polymer Pen Lithography  Giada Graziana Genchi (Istituto Italiano di Tecnologia, Italy)  Arrays of titanium dioxide nanotubes with different diameter and surface chemistry influence C2C12 skeletal myoblast adhesion and differentiation  Imma Ratera (Nanomol Group/Institut de Ciencia de Materials de Barcelona (CSIC), Spain)   | 0 0 |
| 15:15-15:30<br>15:30-15:45<br>15:45-16:00<br>16:00-16:15 | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  Contribution of Water to Protein Stability and Strategies for Protein Design  Sylwia Sekula-Neuner (Karlsruhe Institute of Technology / Institute of Nanotechnology, Germany)  Interdigitated Bioink Micropatterns Generated by Multiplexed Polymer Pen Lithography  Giada Graziana Genchi (Istituto Italiano di Tecnologia, Italy)  Arrays of titanium dioxide nanotubes with different diameter and surface chemistry influence C2C12 skeletal myoblast adhesion and differentiation  Imma Ratera (Nanomol Group/Institut de Ciencia de Materials de Barcelona (CSIC), Spain)  Organic Radical Nanoparticles for Bioimaging Applications  | 0 0 |
| 15:15-15:30<br>15:30-15:45<br>15:45-16:00<br>16:00-16:15 | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain)  Contribution of Water to Protein Stability and Strategies for Protein Design  Sylwia Sekula-Neuner (Karlsruhe Institute of Technology / Institute of Nanotechnology, Germany)  Interdigitated Bioink Micropatterns Generated by Multiplexed Polymer Pen Lithography  Giada Graziana Genchi (Istituto Italiano di Tecnologia, Italy)  Arrays of titanium dioxide nanotubes with different diameter and surface chemistry influence C2C12 skeletal myoblast adhesion and differentiation  Imma Ratera (Nanomol Group/Institut de Ciencia de Materials de Barcelona (CSIC), Spain)  Organic Radical Nanoparticles for Bioimaging Applications  Francesca Peiro (Institute of Nanoscience and Nanotechnology (In2UB), University of               | 0 0 |
| 15:15-15:30<br>15:30-15:45<br>15:45-16:00<br>16:00-16:15 | Charge Transport in single DNA-Based Molecules  Giancarlo Franzese (Universitat de Barcelona / Institut de Nanociencia i Nanotecnologia (IN2UB), Spain) Contribution of Water to Protein Stability and Strategies for Protein Design  Sylwia Sekula-Neuner (Karlsruhe Institute of Technology / Institute of Nanotechnology, Germany) Interdigitated Bioink Micropatterns Generated by Multiplexed Polymer Pen Lithography  Giada Graziana Genchi (Istituto Italiano di Tecnologia, Italy) Arrays of titanium dioxide nanotubes with different diameter and surface chemistry influence C2C12 skeletal myoblast adhesion and differentiation  Imma Ratera (Nanomol Group/Institut de Ciencia de Materials de Barcelona (CSIC), Spain) Organic Radical Nanoparticles for Bioimaging Applications  Francesca Peiro (Institute of Nanoscience and Nanotechnology (In2UB), University of Barcelone, Spain) | 0 0 |