



## Monday, 15 January

- 8am **Registration**  
*Welcome Desk*
- 8:50am **Opening Session**  
*Auditorium*
- 9am **Plenary Session 1**  
*Auditorium*  
Chaired by: Prof. Giuseppe Battaglia
- 9am **A platform nanotechnology: the creation of a biotech company.**  
» [Dr. Francesca Crawford](#)
- 9:40am **Clinical Translation of Graphene & Lessons Learnt**  
» [Prof. Kostas Kostarelos](#)
- 10:15am **Coffee break**  
*Poster Area*
- 10:45am **Plenary Session 2**  
*Auditorium*  
Chaired by: Prof. Lorena Ruiz Perez
- 10:45am **Multimodal Polypeptide-based Therapeutics bypassing Challenging Biological Barriers**  
» [Prof. Maria Vicent](#)
- 11:25am **Protocells and Therapeutics: Harnessing Biomimicry with Self-Assembled Polymersomes and Bioconjugates**  
» [Prof. Sebastien Lecommandoux](#)

12pm **Lunch Break**  
*Partners Restaurants*

1:30pm **Poster Session**  
*Poster Area*

**Innovative drug-loaded and hybrid-coated nanoparticles for multiple myeloma treatment**

» [Mr. Nicolò Maria Percivalle](#), Dr. Marco Carofiglio, Ms. Marzia Conte, Prof. Valentina Cauda

**Chitosan-stabilized metallic nanoparticles as nanosystems to support proton radiotherapy of cancer - in vitro studies**

» [Dr. Bartosz Klebowski](#), Dr. Joanna Depciuch-Czarny, Prof. Magdalena Parlińska-Wojtan

**Bacteriophage Encapsulation for Treating Infections in Cystic Fibrosis Patients**

» [Dr. Lorena García Hevia](#), Mr. Alexis Dorta

**Engineering Dynamic Lipid Vesicles with Programmable Lifetime**

» [Mr. Akhil Venugopal](#), Prof. Lorena Ruiz Perez, Dr. Mohit Kumar, Prof. Giuseppe Battaglia

**On the surface charge of PEG-PLA Polymersomes and micelles: Implications for Biomedical Applications**

» [Mr. Peter Pfeifer](#), Mr. Marco Basile, Dr. Subhadip Ghosh, Mr. Jose Muñoz-López, Prof. Giuseppe Battaglia, Dr. Yangwei Deng, Dr. Denis Checchin, Dr. Aleksandar Ilchev, Dr. Virginia M Gouveia

**Innovative strategy of highly permeable and highly deliverable nanomedicine based on gold nanoparticles**

» [Ms. Miao Feng](#)

**Nano-Ghost: an innovative drug delivery platform for healing cardiac tissue.**

» [Ms. Anastasia Brandis](#), Dr. Marcelle Machluf



Continued from Monday, 15 January

**A CXCR4-targeted nanoconjugate for precise drug delivery: Proof of Concept in an Acute Myeloid Leukemia Mouse Model**

» [Ms. Annabel Garcia León](#), Dr. Julián I. Mendoza, Ms. Ariana Rueda Matas, Mr. Luis Carlos Navas, Ms. Vanessa Huaca, Dr. Ugutz Unzueta, Dr. Jorge Sierra, Dr. Josep F. Nomdedéu, Dr. Esther Vazquez, Dr. Antonio Villaverde, Dr. Ramon Mangues, Dr. Isolda Casanova

**Evaluating the formation of Protein corona on nanoparticles with different surface chemistry**

» [Ms. Chenxi Yang](#), Dr. Florian Schulz, Prof. Wolfgang Parak

**Combinatorial screening of biscarbamate ionizable lipids identifies a low reactogenicity lipid for lipid nanoparticle mRNA delivery**

» [Ms. Heleen Lauwers](#)

**The development of multifunctional lipid nanocomposites in reprogramming M2 macrophage polarization and inducing apoptosis for an enhancement in anticancer effects**

» Dr. Kamonlatth Rodponthukwaji, Dr. Ladawan Khowawisetsut, Dr. Nathachit Limjunyawong, Dr. Sith Sathornsumetee, Dr. Chatchawan Srisawat, [Dr. Primana Punnakitikashem](#)

**Antibody functionalized nanogels with high loading of anesthetic nanocrystals for the treatment of osteoarthritis**

» [Ms. Cristina Ramirez de Ganuza](#), Ms. Marta Sainz, Dr. Manuel Arruebo, Dr. Gracia Mendoza

**Advancing beyond PEG: Exploring alternative shielding in lipid nanoparticles**

» [Dr. Silvia Alonso de Castro](#), Ms. Paula Martínez Colomina, Ms. Verónica Serrano, Dr. Sergio Esteban, Ms. Inés García, Dr. Lidia Herrera, Dr. Josep Garcia Garcia, Dr. Aroa Duro-Castaño, Dr. Vicent J. Nebot

**Development of a novel hydrogel-coated micro-needle platform for the diagnosis of skin cancer**

» [Mr. Connor Daniels](#)

**Conjugation of aptamers and proteins to lithium niobate harmonic nanoparticles for targeted cancer bioimaging**

» [Mrs. Alessandra Spada](#), Mr. Adrian Gheata, Prof. Sandrine Gerber

**Drug-loaded Urease-powered nanomotors for the potential treatment of bladder cancer**

» [Ms. kristin fchna](#), Dr. Valerio Di Carlo, Ms. Ines Marcias, Dr. David Esporin Ubieto, Dr. Maria Crespo, Prof. Samuel Sánchez

**The potential of nanomedicine in obesity: crosslinked polymeric micelles targeting CPT1A in brain cells to modulate feeding**

» Mr. Jesus García-Chica, Dr. West Kristian Paraiso, [Mr. Carlos Palacin](#), Ms. Ana Cristina Reguera, Dr. Sebastian Zagmutt, Mr. Shigeto Fukushima, Dr. Núria Casals, Prof. Kazunori Kataoka, Dr. Xavier Ariza, Dr. Sabina Quader, Dr. Rosalía Rodríguez Rodríguez

**Versatile biocompatible silica nanoparticles for cancer theragnosis**

» [Dr. Esperanza Medina-Gutiérrez](#), Ms. Marina Llenas Martínez, Mr. Ruben Garcia Fontarosa, Dr. Raúl Herance Camacho, Dr. Gerard Tobías Rossell

**Live cell imaging of LRP1 trafficking**

» [Mr. Alessandro Ronzoni](#), Mr. Víctor Mejías Pérez, Dr. Joana Fort, Dr. Cátia Lopes, Dr. Iris Batalha, Dr. Manuel Palacin, Prof. Giuseppe Battaglia

**A dose-controlled comparative assessment of the differential pulmonary immune response induced by instilled or inhaled nanoparticles**

» [Mr. Penghang Chen](#), Dr. Pramod Kumar, Mr. David kutschke, Dr. Carola Voss, Dr. Tobias Stoeger, Dr. Lin Yang, Dr. Otmar Schmid

**Modulating macrophage polarization with magnetic nanoparticles containing toll-like receptor agonist: an alternative approach to enhance anticancer treatment**

» [Dr. Kamonlatth Rodponthukwaji](#), Dr. Nathachit Limjunyawong, Dr. Ladawan Khowawisetsut, Dr. Chatchawan Srisawat, Dr. Sith Sathornsumetee, Dr. Primana Punnakitikashem



Continued from **Monday, 15 January**

**Development of novel nanoemulsions with hydrophilic and lipophilic surfaces for nose to brain delivery of multiple antiseizure compounds**

» [Ms. Jawza Almutairi](#), Dr. Hossam Tayeb, Dr. Haythum Tayeb, Prof. Badrah Alghamdi, Prof. Hussam Murad

**Tuneable Artemisia absinthium loaded nanoemulsions for antimicrobial applications**

» [Mrs. Nojod Hasaballah](#), Dr. Shareefa AlGhamdi, Prof. Adeel Chaudhary, Dr. Hossam Tayeb

**Locked Nucleic Acid (LNA) modified DNazymes for the specific recognition of double-stranded DNA**

» [Mr. Muhannad Ateiah](#), Mr. Aleksandr A. Bushaev, Ms. Maria S. Rubel, Prof. Dmitry M. Kolpashchikov

**Synthesis of gemcitabine conjugated graphene oxide as a multifunctional theranostic nanoprob**

» Mr. Riza Acar, [Mrs. Zeynep Yarar](#), Mrs. Ozge Kozgus Guldu, Prof. Emin Ilker Medine

**Colloidal Silver Nanoclusters as Antimicrobials**

» [Ms. India Cook](#)

**Real time in line size monitoring with the commercially available DLS system: Accuracy and Repeatability assessment**

» [Dr. Hanna Anop](#)

**2:30pm Nanomedicine mechanisms of actions - I**

*Auditorium*

Chaired by: Prof. Giuseppe Battaglia

**2:30pm How to overcome the fundamental challenges in bioimaging and nanomedicine**

» [Prof. Hak Soo Choi](#)

2:47pm

**Correlative super resolution and electron microscopy methods for nanomedicine**

» [Dr. Silvia Pujals](#), Dr. Teodora Andrian, Dr. Lorenzo Albertazzi

3:04pm

**Integrating phenotypic targeting in physiologically-based pharmacokinetics modeling**

» [Mr. Zhendong Xie](#), Prof. Giuseppe Battaglia, Ms. Silvia Acosta Gutiérrez, Prof. Xiaohu Tian, Prof. Lorena Ruiz Perez, Prof. Giancarlo Franzese

3:21pm

**Predicting cellular uptake of nanoparticles with machine learning**

» Ms. Aparna Loecher, Dr. Michael Bruyins-Haylett, Dr. Pedro Ballester, Prof. Salvador Borros, [Dr. Nuria Oliva](#)

3:38pm

**Machine learning-guided high throughput nanoparticle design**

» [Ms. Ana Ortiz-Perez](#), Mr. Derek van Tilborg, Dr. Roy van der Meel, Dr. Francesca Grisoni, Dr. Lorenzo Albertazzi

2:30pm

**Nano-oncology - I**

*Room 507*

Chaired by: Dr. Iris Batalha

2:30pm

**Engineering multivalent protein nanoconjugates for targeted drug delivery in CXCR4+ tumours.**

» [Dr. Ugutz Unzueta](#), Dr. Maria Virtudes Céspedes, Dr. Isolda Casanova, Dr. Ramon Eritja, Dr. Ramon Mangués, Dr. Esther Vazquez, Dr. Antonio Villaverde

2:47pm

**Slow and sustained delivery of Gemcitabine and Curcumin using biodegradable polymer gel lead to enhanced anti-tumor efficacy against pancreatic cancer**

» [Ms. Archana Kumari](#), Dr. Arijit Mal, Prof. Rajdip Bandyopadhyaya, Dr. Abhijit De



Continued from **Monday, 15 January**

3:04pm **Investigating the relevance of H-ferritin nanocages in improving tumor-targeted delivery of Indocyanine Green: combined analysis involving UHPLC-MS/MS and fluorescence determinations on murine tissue homogenates**

» [Dr. Marta Sevieri](#), Dr. Cristina Sottani, Dr. Arianna Bonizzi, Dr. Arianna Chesi, Dr. Leopoldo Sitia, Dr. Saverio Robustelli, Dr. Elena Grignani, Prof. Fabio Corsi, Dr. Serena Mazzucchelli

3:21pm **Developing cisplatin-cross-linked DNA nanostructures for cancer therapy**

» [Dr. Leo Sala](#), Dr. Jaroslav Kočišek

3:38pm **Towards Translation of Nanoparticle-Mediated Histotripsy for the Treatment of Breast Cancer**

» [Ms. Sarah Hall](#), Mr. Waleed Mustafa, Mr. Khan Imran, Dr. Jeremy Brown, Dr. Irving C Allen, Dr. Yasemin Yuksel Durmaz, Dr. Eli Vlasisavljevich

3:55pm **An inverted cell culture model to study magnetic hyperthermia for the treatment of colorectal cancer**

» [Ms. Yuming Zhang](#), Mr. Shaquib Rahman Ansari, Ms. Qianying Chen, Dr. Alexandra Teleki

2:30pm **Nanosensors**

*Room 608*

Chaired by: Dr. Daniel Gonzalez-Carter

2:30pm **Biomimetic photonic sensors for immunotherapy evaluation**

» [Dr. Maria Soler](#), Ms. Razia Batool, Prof. Laura Lechuga

2:47pm **Exploiting the antithrombin biomolecular corona of extracellular vesicles for augmented antithrombin deficiency diagnostics**

» [Prof. Annalisa Radeghieri](#), Dr. Andrea Zendrini, Ms. Silvia Alacqua, Dr. Giuliana Martini, Prof. Paolo Bergese

3:04pm **DNA biodetection assay based on Whispering Gallery Mode Energy Transfer**

» [Ms. Nour Alkastntini](#), Mr. Thomas PONS, Mr. subha Jana, Mr. Andrey klymchenko, Mr. Andreas Reisch, Mrs. Elisabete Cruz da silva, Mrs. Nina Melnychuk, Mrs. Xiangzhen Xu

3:21pm **Multiplex Detection of Cancer Protein Biomarkers Using SERS-Based Immunoassay on a Natural Diatomite Strip**

» [Mr. Mehmet Kahraman](#), Ms. Ayse Mine Saridag, Mrs. Isik Didem Karagoz

3:38pm **SERS-based bacterial biosensors with multiplexing capabilities**

» [Ms. Lara Costas-Ríos](#), Dr. Daniel García-Lojo, Mr. Artai Toba-Pérez, Prof. Jorge Pérez-Juste, Dr. Isabel Pastoriza-Santos, Dr. Gustavo Bodelón

3:55pm **Pushing the detection limits in lateral flow immunoassays through the digital SERS approach: Ultralow detection of SARS-CoV2 N-protein in real samples**

» [Ms. Lara González Cabaleiro](#), Dr. Lorena Vázquez Iglesias, Dr. Carlos Fernández Lodeiro, Prof. Jorge Pérez Juste, Dr. Isabel Pastoriza Santos

4:10pm **Coffee Break**

*Poster Area*

4:30pm **Group photo**

*Auditorium*

4:40pm **Coffee Break**

*Poster Area*

4:50pm **Nanomedicine mechanisms of actions - II**

*Auditorium*

Chaired by: Prof. Giuseppe Battaglia

4:50pm **Embryonic stem cell-derived human lung organoids for nanosafety testing**

» Dr. Rahaf Issa, Dr. Neus Lozano Valdés, Prof. Kostas Kostarelos, [Dr. Sandra Vranic](#)



Continued from **Monday, 15 January**

5:07pm **Computational study of the low-density lipoprotein receptor-related protein 1 (LRP1) structure and dynamics**

» [Mr. Gian Marco Tuveri](#), Dr. Silvia Acosta Gutierrez, Prof. Giancarlo Franzese, Prof. Lorena Ruiz Perez, Prof. Giuseppe Battaglia

5:24pm **Super-resolution microscopy to monitor the protein release from PLGA nanocarriers**

» [Mrs. Anna Solé Porta](#), Mr. Martí Milozzi Nomdedeu, Dr. Silvia Pujals, Prof. Anna Roig

5:41pm **AI-powered 3D imaging reveals innovative insights into pulmonary nanoparticle delivery and lung geometry in health and disease**

» [Dr. Lin Yang](#), Dr. Pramod Kumar, Dr. Qiongliang Liu, Mr. Penghang Chen, Ms. Chenxi Li, Mr. Carsten Lüth, Mr. Lars Krämer, Ms. Christina Gabriel, Dr. Aicha Jeridi, Dr. Marie Piraud, Dr. Tobias Stoeger, Dr. Claudia Staab-Weijnitz, Dr. Jäger Paul, Prof. Markus Rehberg, Dr. Fabian Isensee, Dr. Otmar Schmid

5:58pm **4D bioprinted dynamic cardiopulmonary in vitro models**

» Mrs. Uxue Aizarna Lopetegui, Mrs. Ane Urigoitia Asua, Dr. Malou Henriksen Lacey, [Dr. Dorleta Jimenez de Aberasturi](#)

6:15pm **Addressing Replication Challenges in Nanoscience Research: The Curious Case of Nanoparticles Endosomal Escape**

» [Dr. Mustafa ElGharib](#), Dr. Maha Said, Prof. Raphaël Levy

4:50pm **Nano-oncology - II**

Room 507

Chaired by: Dr. Iris Batalha

4:50pm **FerOX: doxorubicin loaded ferritin nanocages reduce toxicity against T-lymphocytes in breast cancer treatment**

» [Dr. Serena Mazzucchelli](#), Dr. Marta Sevieri, Dr. Francesco Andreata, Dr. Francesco Mainini, Dr. Lorena Signati, Dr. Francesca Piccotti, Dr. Marta Truffi, Dr. Arianna Bonizzi, Dr. Leopoldo Sitia, Dr. Carlo Morasso, Dr. Barbara Tagliaferri, Prof. Fabio Corsi

5:07pm

**Combined action of zinc oxide-based nanoconstructs and external acoustic stimuli against colorectal cancer: from 2D culture to 3D bioprinted models.**

» [Ms. Giada Rosso](#), Prof. Valentina Cauda, Dr. Giulia Mesiano, Mr. Alessandro Bentivogli, Ms. Giorgia Savino, Dr. Marco Carofiglio, Ms. Marzia Conte

5:24pm

**Two fronts of attack: modeling the tumor microenvironment and targeting CEA-expressing colorectal cancer cells using a combinatory nano-strategy**

» [Ms. Maria Silveira](#), Prof. Maria Oliveira, Prof. Jai Prakash, Prof. Bruno Sarmento

5:41pm

**Trojan horse H-Ferritin nanocages improve photodynamic therapy efficiency of ICG in breast cancer cells**

» [Dr. Leopoldo Sitia](#), Prof. Paola Saccomandi, Dr. Marta Sevieri, Dr. Leonardo Bianchi, Dr. Cristina Sottani, Dr. Raffaele Allevi, Dr. Elena Grignani, Dr. Serena Mazzucchelli, Prof. Fabio Corsi

5:58pm

**Immunoliposomes targeting TROP-2 to enhance the treatment of triple negative breast cancer: co-delivery of metformin and doxorubicin**

» [Ms. Daiva Vozgirdaite](#), Dr. Katel Hervé-Aubert, Dr. Florence Velge-Roussel, Dr. Nicolas Aubrey, Prof. Igor Chourpa, Prof. Emilie Allard-Vannier

6:15pm

**Double porosity nanoassemblies for selective depletion of macrophages and restoration of normoxia in the tumoral tissue.**

» [Mr. Jorge Parra](#), Mrs. Alicia Arroyo-Nogales, Mrs. Diana Marcos-Fernández, Ms. Sandra Jiménez-Falcao, Ms. Carmen Arribas, Mr. Diego Megías, Prof. Manuel Ramirez-Orellana, Prof. Alejandro Baeza

4:50pm

**Nanomedicine for topical delivery**

Room 608

Chaired by: Dr. Daniel Gonzalez-Carter

4:50pm

**DELOS nanovesicles incorporated into thermo-reversible hydrogels as promising subcutaneous drug delivery systems**

» [Mrs. Carla Castellar Álvarez](#), Dr. Lidia Ballell-Hosa, Mrs. Yolanda Ronda, Mr. Aniol Gimó Santamaria, Dr. Santi Sala, Prof. Nora Ventosa, Dr. Elisabet Gonzalez-Mira, Dr. Lidia Ferrer-Tasies



Continued from **Monday, 15 January**

- 5:07pm **Wound recovery efficacy of retinol based-micellar formulations in an organotypic skin wound model**  
» [Dr. David O. Oluwole](#), Dr. Lian X. Liu
- 5:24pm **Optimizing inhaled nanomedicines through the use of metallic nanoparticles**  
» [Dr. Susana Carregal Romero](#), Ms. Marina Piñol-Cancer, Ms. Laura Fernández-Méndez, Dr. Hugo Groult, Ms. Ainhize Urkola-Arsuaga, Prof. Jesús Ruíz-Cabello
- 5:41pm **New plant-based nanovesicles based on alkyl polyglucosides surfactants and  $\beta$ -sitosterol as topical drug delivery systems**  
» [Ms. Marta Alcaina Hernando](#), Dr. Ivana Malvacio, Ms. Ilaria Ferraboschi, Dr. Cristian Huck Iriart, Dr. Annalisa Bianchera, Dr. Santi Sala, Prof. Jan Skov Pedersen, Dr. Lidia Ferrer-Tasies, Prof. Silvia Pescina, Prof. Cristina Sissa, Prof. Nora Ventosa, Dr. Alba Cordoba
- 5:58pm **Microneedle skin patches to improve diagnosis of skin cancer patients in primary care**  
» Dr. Ahmad Kenaan, Dr. Oliver Teenan, Mr. Connor Daniels, Dr. Claire Higgins, [Dr. Sylvain Ladame](#)
- 6:15pm **DEVELOPMENT OF INNOVATIVE DRUG-ELUTING MULTILAYER ELECTROSPUN NANOSTRUCTURED PATCHES FOR THE ORAL MUCOSA**  
» [Prof. Jose M. Lagaron](#)
- 6:30pm **Short Break : Beer and tapas**  
*Poster Area*
- 7pm **Theatre : Live Show by "Spill the tea"**  
*Auditorium*

**Tuesday, 16 January**

- 8:30am **Registration**  
*Welcome Desk*
- 9am **Plenary Session**  
*Auditorium*  
Chaired by: Prof. Giuseppe Battaglia
- 9am **Sensitizing P-selectin-expressing brain malignancies to immune checkpoint modulators.**  
» [Prof. Ronit Satchi-Fainaro](#)
- 9:40am **(SUPER-) SELECTIVE BIOMATERIALS: A BALANCING ACT OF RIGIDITY AND GEOMETRY AT THE NANOSCALE**  
» [Prof. Maartje Bastings](#)
- 10:15am **Coffee Break**  
*Poster Area*
- 10:45am **Plenary Session**  
*Auditorium*  
Chaired by: Dr. Iris Batalha
- 10:45am **Designing nanomaterials for advanced therapeutics and ultrasensitive biosensing.**  
» [Prof. Molly Stevens](#)
- 11:25am **Chemically powered nanobots: swimming nanoparticles for biomedicine**  
» [Prof. Samuel Sánchez](#)
- 12pm **Lunch Break**  
*Partners Restaurants*



Continued from **Tuesday, 16 January**

1:30pm

**Poster Session**

*Poster Area*

**Journey through the Gut: Nanoparticle dynamics in the healthy and diseased state of the gastrointestinal tract**

» [Mrs. Yael del Carmen Suarez Lopez](#), Mrs. Qianying Chen, Dr. Alexandra Teleki

**Examining the interaction between thiolate protected metal clusters and lipid bilayers**

» [Ms. Merve Örer](#), Dr. Plinio Maroni, Prof. Thomas Bürgi

**Improving Risk Stratification of Preterm Birth via a Screening Blood Test at First Antenatal Appointment**

» [Mr. Marc Soler](#), Dr. Sylvain Ladame

**Versatile Gallium-based Nanoparticles as Antibacterial Agents**

» [Mr. Shengtao Yu](#), Prof. Georgios Sotiriou

**Utilizing the characteristic aminoglycoside-RNA binding for the preparation of a unit poly-ion complex-type siRNA delivery platform**

» [Dr. West Kristian Paraiso](#), Dr. Sabina Quader, Dr. Kotaru Hayashi, Dr. Kazuko Toh, Mr. Shigeto Fukushima, Prof. Kazunori Kataoka

**On the Amyloid- $\beta$  transcytosis across the blood-brain barrier**

» [Mr. Marco Basile](#), Dr. Cátia Lopes, Mr. Peter Pfeifer, Mr. Jose Muñoz-López, Dr. Matilde Ghibaudi, Prof. Lorena Ruiz-Perez, Prof. Giuseppe Battaglia

**Enzymatic degradation of amphiphilic copolyester for biomedical applications**

» [Mrs. Maryam Alghamdi](#), Prof. Giuseppe Battaglia

**Tuning the size, shape and pore structure of mesoporous silica nanoparticles**

» [Ms. Marina Llenas Martínez](#), Ms. Marta Florensa Marquez, Mr. Ruben Garcia Fontarosa, Dr. Stefania Sandoval Rojano, Dr. Gerard Tobías Rossell

**Design of phenotypic anti-inflammatory nanomedicines**

» [Ms. Claudia Codano](#), Mr. Peter Pfeifer, Prof. Lorena Ruiz Perez, Prof. Giuseppe Battaglia

**Designing Enzymatically-Powered PLGA Nanobots and Exploring their Swarming Behavior**

» [Mr. Carles Prado](#), Dr. Juan Fraire, Dr. Maria Crespo, Ms. kristin fichna, Prof. Samuel Sánchez

**High-Z nanoparticles for enhanced radiation therapy**

» [Mr. Ruben Garcia Fontarosa](#), Ms. Marina Llenas Martínez, Dr. Esperanza Medina-Gutiérrez, Dr. Stefania Sandoval Rojano, Mr. Manuel Altas González, Dr. Xavier Maldonado, Dr. Jordi Giralt, Dr. Gerard Tobías Rossell

**RNase enzyme functionalized Vaults for the treatment of Pancreatic cancer**

» [Mr. Pablo Caruana](#), Mr. Roger Fernandez Palomeras, Dr. Jessica Castro, [Ms. Maria Edwards](#), Dr. Josep Balart, Mr. Francisco Rodriguez Lozano, Dr. Antoni Benito, Dr. Jose Luis Corchero, [Dr. Maria Virtudes Céspedes](#)

**Development of a proteoliposome-based therapy for Chronic Granulomatous Disease**

» [Ms. Perrine Rochas](#), Ms. Isabelle Petit-Hartlein, Mr. Sylvain Beaumel, Ms. Bénédicte Vigne, Dr. Michel Thépaut, Prof. Franck Fieschi, Dr. Marie José Stasia

**PSar-VitE compounds as non-immunogenic alternative to PEG**

» [Mr. Rafael Miravet-Martí](#), Ms. Laura Bano-Benito, Ms. Lucía Barahona, Dr. Teresa Pellicer, Dr. Daniel Morelló-Bolomar, Dr. Irene Dolz, Dr. Josep Garcia Garcia, Dr. Aroa Duro-Castaño, Dr. Vicent J. Nebot



Continued from **Tuesday, 16 January**

#### **Phenotypic targeting of the LRP5 receptors**

» [Dr. Matilde Ghibaudi](#), Dr. Virginia M Gouveia, Dr. Ned Hoyle, Dr. Denis Cecchin, Dr. Cátia Lopes, Ms. Claudia Codano, Mr. Marco Basile, Ms. Giulia Maria Porro, Dr. Valentino Barbieri, Mr. Alessandro Ronzoni, Mr. Xie Zhendong, Prof. Giuseppe Battaglia

#### **Targeting cells through their unique metabolic phenotype**

» [Mr. Víctor Mejías Pérez](#), Dr. Joana Fort, Dr. Manuel Palacin, Prof. Giuseppe Battaglia, Dr. Iris Batalha

#### **3D Printing of Capsular shell for The Delivery of Cyclosporin-loaded Solid Self-nanoemulsifying Drug Delivery Systems**

» [Dr. Mohammed Algahtani](#), Dr. Javed Ahmed, Mr. Abdul Aleem Mohammed

#### **Evaluation of the toxicity of graphene oxide and its pegylated conjugate in human endothelial cells.**

» [Dr. Arisbel Cerpa naranjo](#), Ms. Niza Albo, Dr. Mariana P. Arce, Dr. Javier Perez-Piñeiro, Dr. María Fuencisla Gilsanz, Dr. Darío Gallach, Dr. Marisol Fernández-Alonso, Ms. Marta Sanz-Gómez, Dr. Elvira Bragado-García

#### **Portable biosensor for easy pathogen detection in aquaculture using Electrochemical Impedance Spectroscopy**

» [Mr. Piotr Poreba](#), Ms. Paulina Janicka, Mrs. Michalina Alicka, Mr. Tomasz Filip, Dr. Katarzyna Pala, Mr. Marcin Prządka

#### **Plant-On-A-Chip: Studying Plant cell-Nanomaterial Interactions using Microfluidics**

» [Mr. Jordi Floriach-Clark](#), Mr. Martijn van Galen, Prof. Joris Sprakel, Prof. Ben Scheres, Prof. Viola Willemsen

#### **Design and characterization of novel cinnamyl-modified copolymer micelles for cannabidiol delivery**

» [Prof. Denitsa Momekova](#), Dr. Natalia Toncheva-Moncheva, Dr. Erik Dimitrov, Dr. Georgi Grancharov, Prof. Petar Petrov, Prof. Stanislav Rangelov

#### **Design and evaluation of cannabidiol-loaded sterically stabilized niosomes**

» [Dr. Viliama Gugleva](#), Dr. Rositsa Mihaylova, Dr. Natalia Toncheva-Moncheva, Prof. Stanislav Rangelov, Dr. Aleksander Forsys, Prof. Barbara Trzebicka, Prof. Denitsa Momekova

#### **Design and optimization of an innovative lipid nanosystem for encapsulation of a novel FXa inhibitory molecule**

» [Ms. Karla López](#), Dr. Andrea Ravasio, Dr. José Vicente González, Dr. Flavia Zacconi

#### **Simultaneous Dual-Colour Imaging and Polarity Assessment in Organelles Using a Single Fluorescent Probe**

» [Mr. Lei Hu](#), Ms. Dandan Chen, Dr. Hui Wang, Prof. Xiaohe Tian, Prof. Lorena Ruiz Perez, Prof. Giuseppe Battaglia

#### **Covalent organic framework nanosheets for diabetes: unveiling the molecular mechanism of glucose-induced insulin release**

» [Ms. Seoyoung Lee](#), Dr. Farah Benyettou, Prof. Ali Trabolsi, Prof. Serdal Kirmizialtin

#### **Real time in line size monitoring with the commercially available DLS system: Accuracy and Repeatability assessment**

» [Dr. Hanna Anop](#)

2:30pm

#### **Desing of novel nanomedicines - I**

*Auditorium*

Chaired by: Prof. Lorena Ruiz Perez

2:30pm

#### **Nano-Ghosts: Cell-Free nano-vesicles for off-The-shelf cancer targeting and Immunotherapy**

» [Prof. Marcelle Machluf](#)

2:47pm

#### **Low molecular weight hydrogelators as nanocarriers for drug delivery**

» [Ms. Eleonora Calicchia](#), Prof. Giuseppe Portale, Prof. Anna Salvati





Continued from **Tuesday, 16 January**

3:04pm **Unlocking the potential of Janus micelles: a multivalent platform for precision nanomedicines with dual phenotypical targetings**

» [Mr. Jose Muñoz-López](#), Prof. Lorena Ruiz Perez, Prof. Giuseppe Battaglia

3:21pm **Design of a microfluidic platform to study the stability of therapeutic protein formulations (TPFs)**

» [Dr. Osvaldo Bortone](#), Dr. Samuele Fiorenza, Dr. Maurizio Baldassarre, Dr. Nunzia Falco, Prof. Paolo Antonio Netti, Prof. Enza Torino

3:38pm **Nanosized delivery systems for therapeutic proteins and drugs via multifunctional (co)polymer engineering**

» [Prof. Francesco Cellesi](#)

3:55pm **Surface functionalization of polyimide-based intraneural devices with covalently bonded dexamethasone to develop innovative drug delivery systems.**

» [Dr. Giulia Turrin](#), Dr. Chiara Bisquoli, Dr. Fernanda Narvaez, Dr. Davide Barboni, Dr. Martina Catani, Prof. Stefano Caramori, Prof. Claudio Trapella, Prof. Maria Asplund, Dr. Stefano Carli

2:30pm **Nanomedicine for Gene Therapy and Genomics**

Room 507

Chaired by: Dr. Daniel Gonzalez-Carter

2:30pm **Nanozyme catalysed CRISPR assay for preamplification-free detection of non-coding RNAs and low-resource multi-omic diagnostics**

» [Mr. Schan Perera](#), Dr. Pargat Singh, Dr. Leah Frenette, Dr. Marta Broto, Prof. Molly Stevens

2:47pm **Bioconjugation of the Adeno-Associated Virus (AAV) capsid: improving the tissue-specific gene delivery**

» [Ms. Maia Marchand](#), Dr. Pierre-Alban Lalys, Mr. Mohammed Bouzelha, Dr. Juliette Varin, Dr. Audrey Bourdon, Dr. Dimitri Alvarez-Dorta, Ms. Karine Pavageau, Mr. Anthony Mellet, Mr. Mickaël Guilbaud, Dr. Sébastien G. Guoin, Dr. Thibaut Larcher, Dr. Oumeya Adjali, Dr. Caroline Le Guiner, Dr. Thérèse Cronin, Prof. David Deniaud, Dr. Mathieu Mével

3:04pm **coupled Hydrodynamic flow focusing for optimal design of microRNAs-materials complexation to improve their bio-nano interactions**

» [Dr. Felicia Roffo](#), Dr. Francesca Maria Orlandella, Ms. Neila Luciano, Prof. Giuliana Salvatore, Prof. Paolo Antonio Netti, Prof. Enza Torino

3:21pm **Amphiphilic Poly-(β-amino ester)s as a siRNA nanocarrier system for the treatment of pulmonary diseases**

» [Mr. Joschka Müller](#), Mr. Adrian Kromer, Ms. Katharina Steinegger, Prof. Olivia M. Merkel

3:38pm **Excision tissue regeneration potential of Lysinibacillus fusiformis-formulated silver nanoparticles cream against multidrug-resistant Pseudomonas aeruginosa-infected wounds in Wistar rats**

» [Dr. Richard Omole](#), Dr. Nkem Torimiro, Dr. Oluwole Adeyemi, Prof. Saravanan Muthupandian, Dr. Karthik Ganesh

3:55pm **Engineering stealth mRNA nano-vaccines for antitumor prophylaxis and therapeutics**

» Dr. Coral Garcia-Fernandez, Dr. Tommaso Virgilio, Dr. Irene Latino, Prof. Marta Guerra-Rebollo, Dr. Santiago G. Fernandez, Prof. Salvador Borrós, [Prof. Cristina Fornaguera](#)

2:30pm **Imaging, diagnostics and theragnostic**

Room 608

Chaired by: Dr. Iris Batalha



Continued from **Tuesday, 16 January**

- 2:30pm **Chitosan luminescent rare-earth doped nanoparticles as cancer cell tracking for imaging tumors**  
 » [Dr. Patricia Juarez Camacho](#), Ms. Rodrigo Osorio-Arciniega, Ms. Eduardo Lucero-Meza, Dr. Bonifacio Can-Uc, Dr. Pierrick GJ Fournier, Dr. Israel Rocha, Dr. Gustavo Hirata
- 2:47pm **Low dimensional carbon-materials doped with metals as safe nanoparticles for medical imaging and temperature sensing.**  
 » [Dr. Lucia Cardo](#), Mr. Michele Cesco, Dr. Cecilia Wetzl, Prof. Jesús Ruíz-Cabello, Prof. Maurizio Prato
- 3:04pm **Dual Functional Nanocone Clusters as Cavitation Nuclei for Nanoparticle-Mediated Histotripsy**  
 » Mr. Mohammad Abou Chakra, Mr. Waleed Mustafa, Ms. Sarah Hall, Ms. Cemran TOYDEMIR, Prof. Ozge SENSOY, Dr. Eli Vlaisavljevich, [Dr. Yasemin Yuksel Durmaz](#)
- 3:21pm **Application of  $\lambda$ -Carrageenan oligosaccharides as innovative sugar-based biofunctional coating for theranostic ferrite nanoparticles**  
 » [Dr. Manon Porta Zapata](#), Dr. Susana Carregal Romero, Mr. Clément Daviaud, Dr. Lydia Martinez-Parra, Dr. David Castejón, Ms. Ainhize Urkola-Arsuaga, Ms. Chanez Manseur, Prof. Jean-Marie Piot, Prof. Ingrid Fruitier-Arnaudin, Prof. Jesús Ruíz-Cabello, Dr. Hugo Groult
- 3:38pm **Designing hybrid polymersomes for intracellular thermoplasmonics**  
 » [Dr. Valentino Barbieri](#), Mr. Javier González Colsa, Dr. Diana Matias, Dr. Aroa Duro Castaño, Ms. Anshu Thapa, Dr. Pablo Albella, Prof. Lorena Ruiz Perez, Prof. Giorgio Volpe, Prof. Giuseppe Battaglia
- 3:55pm **Porphyrin-Based Single-Chain Polymer Nanoparticles for Photodynamic Therapy**  
 » [Prof. Binnur Aydogan Temel](#), Ms. Zehra Demir, Ms. Esmá Samuk, Prof. Gokhan Temel, Dr. Dilek Ozturk Civelek, Prof. Demet Karaca Balta
- 4:10pm **Coffee Break**  
 Poster Area

- 4:50pm **Nanorobotics and Biomimetics**  
 Auditorium  
 Chaired by: Prof. Lorena Ruiz Perez
- 4:50pm **NanoSwimmers: Precision Navigation & Amyloid Protein Repair**  
 » [Prof. Mónica L. Fanarraga](#)
- 5:07pm **Self-powered nanoparticles for smart cancer therapy: Design, functionalisation, and in vitro studies**  
 » [Dr. Arathyram Ramachandra kurup Sasikala](#)
- 5:24pm **Chemotaxis of asymmetric liposomes**  
 » [Ms. Barbara Borges Fernandes](#), Dr. Subhadip Ghosh, Dr. Ian Williams, Dr. Joe Forth, Prof. Lorena Ruiz Perez, Prof. Giuseppe Battaglia
- 5:41pm **Swarms of enzyme powered nanomotors with photothermal and magnetic properties for immunogenic cell death**  
 » [Dr. Juan Fraire](#), Ms. Lena Kesio, Dr. Anna Bakenecker, Dr. Maria Guix, Prof. Samuel Sánchez
- 5:58pm **Cellsomes as novel biomimetic nanocarriers for the treatment of cardiovascular diseases**  
 » [Prof. Pablo Taboada](#), Ms. Mariangel Luna, Ms. Alba Costa, Mr. Osvaldo Beltrán, Mr. Alejandro Varela, Mr. Oscar Abelenda, Mr. Noé Escareño, Dr. Silvia Barbosa
- 6:15pm **DNA origami directed virus capsid polymorphism**  
 » [Prof. Mauri Kostianen](#)
- 4:50pm **Nano-immunology - I**  
 Room 507  
 Chaired by: Dr. Daniel Gonzalez-Carter
- 4:50pm **Targeting macrophage polarization states for precision immunotherapy**  
 » [Ms. Lara Victoria Aiassa](#), Dr. Pablo Scodeller, Mr. Peter Pfeifer, Prof. Loris Rizzello, Prof. Giuseppe Battaglia



Continued from **Tuesday, 16 January**

- 5:07pm **Development of gold nanoparticle-bacterial biohybrids for biomedical applications**  
 » Dr. Lorena Vázquez-Iglesias, Ms. Lara González Cabaleiro, Dr. Gustavo Bodelón, Prof. Jorge Pérez-Juste, Dr. Isabel Pastoriza-Santos
- 5:24pm **The importance of nanoparticle coating structural design in the development of nanovaccines**  
 » Dr. Maria Morbidelli, Dr. Ander Eguskiza Bilbao, Dr. Federico Luchi, Dr. Samuel Tanner Pasco, Dr. Cinzia Franchin, Prof. Giorgio Arrigoni, Prof. Juan Anguita, Prof. Roberto Fiammengo, Prof. Regina Tavano, Prof. Emanuele Papini
- 5:41pm **Beyond DDS: immunomodulatory layered double hydroxides NanoAlum for cancer metalloimmunotherapy**  
 » Dr. Lingxiao Zhang
- 5:58pm **Interaction of Hollow Gold Nanoshells with NK cells**  
 » Mr. Noé Escareño, Dr. Antonio Topete, Prof. Adrián Daneri Navarro, Prof. Pablo Taboada
- 6:15pm **A pre-targeted nanomedicine strategy for in vivo CD8+ T-cell engineering**  
 » Ms. Justine Aelvoet, Prof. Bruno De Geest
- 4:50pm **Destination brain**  
 Room 608  
 Chaired by: Prof. Giuseppe Battaglia
- 4:50pm **A new approach to target Diffuse Midline Gliomas (DMG) cell receptor using the molecularly-imprinted nanosized synthetic antibodies (SA-NPs) and their in-vitro activities**  
 » Dr. Damla ULKER, Prof. Dmitry Pshezhetskiy, Mr. Adem Ozleyen, Prof. Chris Jones, Prof. Sergey Piletsky
- 5:07pm **Anti-glioblastoma nanochemotherapy via PLGA nanoparticles for extended survival rate in animal model**  
 » Mrs. Fatemeh Madani, Dr. Masood Khosravani, Dr. Mahdi Adabi

- 5:24pm **Nanoparticle-based approach for blood-brain-barrier crossing and glioblastoma treatment**  
 » Ms. Júlia German Cortés, Ms. Raquel Herrero, Dr. Diana Rafael, Dr. Ibane Abasolo, Dr. Fernanda Andrade
- 5:41pm **Precision radiotherapy by Thera -cHANPs to obtain novel therapeutic vulnerabilities in Glioblastoma Multiforme (GBM)**  
 » Mrs. ANGELA COSTAGLIOLA DI POLIDORO, Prof. Paolo Antonio Netti, Prof. Enza Torino
- 5:58pm **Identification of Peptides Selectively Retained on Brain Endothelial Cells as Artificial Targets for Specific Brain Delivery**  
 » Ms. Giulia Maria Porro, Dr. Daniel Gonzalez-Carter, Prof. Giuseppe Battaglia, Mr. Italo Lorandi
- 6:15pm **Defect-free graphene enhances enzyme delivery to fibroblasts derived from the patients with lysosomal disorders**  
 » Dr. Sandra Vranic, Dr. Ana Jovanovic, Prof. Simon Jones, Prof. Kostas Kostarelos, Prof. Cinzia Casiraghi

7pm **Drinks and Tapas**  
 Club 23

**Wednesday, 17 January**

- 8:30am **Registration**  
 Welcome Desk
- 9am **Plenary Session**  
 Auditorium  
 Chaired by: Dr. Iris Batalha
- 9am **Supramolecular Broad-Spectrum Antivirals.**  
 » Prof. Francesco Stellacci



Continued from **Wednesday, 17 January**

9:40am **Nanoengineering for the Detection and Treatment of Cancer**  
» [Prof. Daniel Heller](#)

10:15am **Coffee Break**  
*Poster Area*

10:45am **Plenary Session**  
*Auditorium*  
Chaired by: Dr. Daniel Gonzalez-Carter

10:45am **New Approaches for Therapeutic Pulmonary RNA Delivery.**  
» [Prof. Olivia M. Merkel](#)

11:25am **Rapid Amyloid-Beta Clearance through Blood Brain-Barrier in Alzheimer's Disease.**  
» [Prof. Xiaohe Tian](#)

12pm **Lunch Break**  
*Partners Restaurants*

2pm **Desing of novel nanomedicines - II**  
*Auditorium*  
Chaired by: Prof. Lorena Ruiz Perez

2pm **Stimuli-responsive Supramolecular Polymers based on benzene-1,3,5-tricarboxamide hydrophobic core as promising self-assembled nanocarriers for drug delivery**  
» [Dr. Mónica Martínez-Orts](#), Dr. Edgar Fuentes, Mr. Yeray Gabaldon, Dr. Lorenzo Albertazzi, Dr. Silvia Pujals

2:17pm **An inline microfluidic-based real-time screening approach for enhancing bench-to-bedside translation of biopharmaceuticals**  
» [Dr. Samuele Fiorenza](#), Dr. Osvaldo Bortone, Dr. Maurizio Baldassarre, Dr. Nunzia Falco, Prof. Paolo Antonio Netti, Prof. Enza Torino

2:34pm **Pressure-based Microfluidics for the high-throughput isolation and loading of small Extracellular Vesicles (sEVs).**  
» [Dr. Simona Silvestri](#), Dr. Osvaldo Bortone, Dr. Samuele Fiorenza, Prof. Paolo Antonio Netti, Prof. Enza Torino

2:51pm **Lipo-polymers with shielding properties as PEG alternatives for Lipid Nanoparticle (LNP) components.**  
» [Dr. Josep Garcia Garcia](#), Mr. Rafael Miravet-Martí, Dr. Silvia Alonso de Castro, Ms. Inés García, Ms. Paula Martínez Colomina, Ms. Gloria Sogorb, Dr. Lidia Herrera, Dr. Sergio Esteban, Dr. Aroa Duro-Castaño, Dr. Vicent J. Nebot

3:08pm **CD300f derived F7 peptide: a powerful tool to facilitate drug delivery systems to cross biological barriers**  
» [Dr. Ibane Abasolo](#), Dr. Diana Rafael, Dr. Águeda Martínez-Barriocanal, Mr. Marc Moltó-Abad, Mr. Vincenzo Montanarella, Ms. Júlia German Cortés, Mr. Diego Baranda-Martínez-Abascal, Ms. Sujey Palma Florez, Dr. Anna Lagunas, Dr. Andrés Crespo, Dr. Vanessa Díaz-Riascos, Dr. Fernanda Andrade, Dr. Joaquin Seras-Franzoso, Dr. Josefina Casas, Dr. José L. Corchero, Dr. Miriam Royo, Dr. Mònica Mir, Dr. Joan Sayós, Dr. Simo Schwartz

2pm **Nano-Oncology - III**  
*Room 507*  
Chaired by: Prof. Giuseppe Battaglia

2pm **Hybrid nanoassemblies for neuroblastoma therapy**  
» [Prof. Alejandro Baeza](#), Mr. Jorge Parra-Nieto, Prof. Manuel Ramirez-Orellana

2:17pm **A new ML/AI proposed approach for the identification of transport delivery efficiency of nanoparticles according to the targeted tumor**  
» [Dr. Enza Cece](#), Dr. Samuele Fiorenza, Prof. Paolo Antonio Netti, Prof. Enza Torino

2:34pm **Targeted anti-cancer drug delivery using apoferritin-based protein nanocages**  
» [Prof. Neil Thomas](#), Ms. Isobel Holden, Dr. Lei Zhang, Dr. Kaouthar Bouzinab, Dr. Tracey Bradshaw, Dr. Lyudmila Turyanska



Continued from **Wednesday, 17 January**

2:51pm **Nanoparticle-based drug delivery to brain tumor to overcome standard of care resistance**

» [Dr. Meser Ali](#), Dr. Tobias Walbert, Dr. James Snyder, Dr. James Ewing

3:08pm **Engineering of glioblastoma-derived biomimetic vesicles**

» [Ms. Noelia Hernandez Lobato](#), Dr. Marilena Hadjidemetriou, Dr. Neus Lozano Valdés, Prof. Kostas Kostarelos

2pm **Nano-immunology - II**

Room 608

Chaired by: Dr. Iris Batalha

2pm **Polymersomes Regulating Immune Microenvironment Reduces Inflammation and Alleviates Idiopathic Pulmonary Fibrosis (IPF) by Phenotypic Targeting**

» [Ms. Jiangqi Feng](#), Prof. Giuseppe Battaglia

2:17pm **Calcium phosphate nanoparticles as potential carriers for vaccines**

» [Ms. Anshika Maheshwari](#), Dr. Rebecca Dookie, Prof. Birgitta Henriques-Normark, Prof. Georgios Sotiriou

2:34pm **Inexpensive antibacterial nanofibrous wound dressing with flame-made Ag/SiO<sub>2</sub> nanoparticles**

» [Dr. Reshma Vasantha Ramachandran](#), Prof. Georgios Sotiriou

2:51pm **Click chemistry-based bioconjugation of iron oxide nanoparticles for diagnosis of inflammatory bowel disease**

» [Ms. Shno Asad](#)

3:08pm **ibi**

» [Mr. Victor Passos Gibson](#), Dr. Houda Tahiri, Dr. Chun Yang, Dr. Xavier Banquy, Dr. Pierre Hardy

3:30pm **Closing Ceremony**

Auditorium