

Quest'anno la sesta edizione del Workshop "Ricerca e Nanomedicina" è organizzata in modalità ibrida: sia in presenza nell'Aula Maggiore del Dipartimento di Chimica (Viale Taramelli 12, Pavia) che in diretta streaming (YouTube). Oltre ai giovani ricercatori dell'Università di Pavia, sono stati invitati altri giovani ricercatori di altri Atenei al fine di promuovere la conoscenza e l'incontro tra i vari gruppi che svolgono attività di ricerca nell'area della nanomedicina e delle 3R, nell'ottica di consentire la nascita di collaborazioni scientifiche, sinergie e partecipazioni a progetti futuri. Due "invited talk" rispettivamente dell'Università di Bari e dal Consiglio Nazionale delle Ricerche (CNR) di Genova. Inoltre, il workshop si articola in 2 sessioni: la sessione mattutina è dedicata alle Nanoterapie e alla Nano-diagnostica mentre la sessione pomeridiana è incentrata sulla Medicina Rigenerativa.

This year, the sixth edition of the "Research and Nanomedicine" Workshop is organized in hybrid format: both in presence in the lecture hall (Aula Maggiore) of the Chemistry Department (Viale Taramelli 12, Pavia) and live-streaming (YouTube). In addition to the young researchers from the University of Pavia, other young scientists from other universities have been invited in order to promote the knowledge and the meeting between various groups that carry out research in the area of nanomedicine and 3Rs, with a view to enabling the birth of scientific collaborations, synergies, and participation in future projects. Two "invited talks" from the University of Bari and the National Research Council (CNR) of Genoa, respectively. Furthermore, the workshop is divided into 2 sessions: the morning session is dedicated to Nanotherapies and Nano-diagnostics while the afternoon session is focused on Regenerative Medicine.

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RICERCA E NANOMEDICINA

Sesta Edizione

A cura di P. Pallavicini e L. Visai

Martedì, 14 Giugno 2022

ore 8:45 > 18:15

WORKSHOP IN LINGUA INGLESE

8:45 - Short introduction to the workshop:
Piersandro Pallavicini and Livia Visai

First Session: Nano-diagnostics and Nano-therapeutics
– **Chairman Piersandro Pallavicini**

9:00 - **Invited speaker:** Nicola Cioffi, (online) Dept. of Chemistry and Bari Unit of CSGI consortium, University of Bari “Aldo Moro”, Bari, Italy
“New frontiers in Nanoantimicrobials Research: development of efficient materials fighting the spread and persistence of SARS-CoV-2”

9:30 - Yuri Diaz Fernandez (Dept. of Chemistry, University of Pavia, Pavia, Italy) “Engineering bacterial biofilms by controlling surface nanotopography”

9:50 - Mohammad Okkeh (Dept. of Molecular Medicine, Biochemistry Unit, University of Pavia, and ICS Maugeri, Pavia, Italy) “Photodynamically activated gold nanostars as a novel antibiofilm therapeutic treatment”

10:10 - Elena Rosini (online) (Dept. of Biotechnology and Life Sciences, University of Insubria, Varese, Italy)
“The oxidative therapy: experimental strategies for a targeted antitumor enzyme treatment”

10:30 - Ioritz Sorzabal-Bellido (online) (Solid Tumors and Biomarkers Program, IDISNA, and Ciberonc, Center for Applied Medical Research, University of Navarra, Pamplona, Spain) “ECM induced epithelial-to-mesenchymal transition of early-stage pancreatic adenocarcinoma organoids”

10:50 - Cecilia Contardi (Dept. of Drug Sciences, University of Pavia, Pavia, Italy) “Molecularly Imprinted Nanogels for the specific recognition of tumor-associated biomarkers”

11:10 - 11:30 *Coffee break*

11:30 - Maria Paola Demichelis (Dept. of Chemistry, Unit of physical chemistry, University of Pavia, Pavia, Italy)
“Development of B4C based composite nanomaterials for BNCT applications”

11:50 - Giorgia Pellavio (Dept. of Molecular Medicine, Human Physiology Unit, University of Pavia, Pavia, Italy)
“Cerium Oxide Nanoparticles may regulate oxidative stress by increasing the aquaporin-mediated hydrogen peroxide permeability”

12:10 - Sara Bozzini (Cell Biology and Immunology Laboratory, IRCCS San Matteo Polyclinic Foundation, Pavia, Italy) “Development of a new liposomal formulation: XHALIP for the treatment of pulmonary fibrogenic disorders”

12:30 - Letizia Nicoletti (Dept. of Mechanical and Aerospace Engineering, Politecnico di Torino, Torino, Italy) “Nanomedicine-based advanced approaches for direct cardiac reprogramming”

12:50 - Cristina Volpini (Dept. of Molecular Medicine, Biochemistry Unit, University of Pavia, and ICS Maugeri, Pavia, Italy) “Application of nanomedicine in endometriosis disorder”.

13:10 - 14:30 *Lunch break*

Second session: Regenerative Medicine – Chairman Livia Visai and Nora Bloise

14:30 - Marco Bellotti (Dept. of Civil Engineering and Architecture, University of Pavia, Pavia, Italy) “Desing and Prototyping of a microfluidic device for the generation of nanoparticles”

14:50 - Lucia Salvioni (NanoBioLab, Dept. of Biotechnology and Bioscience, University of Milano-Bicocca, Milano, Italy) “In-deep investigation of Mn/H-Ferritin nanocomplex as tumor-targeted contrast agent for Magnetic Resonance Imaging”

15:10 - Valentina Bello (Dept. of Industrial and Information Engineering, University of Pavia, Pavia, Italy)
“Artificial nutrition at home: monitoring the compliance of the therapy with a smart opto-fluidic sensor”

15:30 - **Invited speaker:** Silvia Scaglione, Chief Scientist of React4life S.r.l, National Research Council (CNR),

Genoa, Italy
“3D tissue models and organ on chips technologies for more predictive in vitro assays”

16:00 - Silvia Pisani (Dept. of Otolaryngology-IRCCS San Matteo Polyclinic Foundation, Pavia, Italy)
“Versatility of engineered electrospun scaffolds in tissue regeneration and drug delivery”

16:20 - Giulia Maria Di Gravina (Dept. of Industrial and Information Engineering, University of Pavia, Pavia, Italy) “Towards a 3D bioprinted in vitro model for liver”.

16:35 - 16:50 *Coffee break*

16:50 - Flaminia Aliberti (Center for Inherited Cardiovascular Diseases, Transplant Research Area, IRCCS San Matteo Polyclinic Foundation, Pavia, Italy) “Different 3D Bioprinted scaffold and hydrogel designs for skeletal muscle tissue engineering”

17:10 - Giada Loi (Dept. of Civil Engineering and Architecture (DICAR), University of Pavia, Pavia, Italy)
“Bioreactor design to burst in-vitro skeletal muscle differentiation of 3D bioprinted constructs”

17:30 - Franca Scocozza (online) (Dept. of Civil Engineering and Architecture (DICAR), University of Pavia, Pavia, Italy) “3D Bioprinted Scaffolds Containing Mesenchymal Stem/Stromal Lyosecretome: Next Generation Controlled Release Device for Bone Regenerative Medicine”

17:50 - Federica Barbugian (online) (Dept. of Biotechnology and Biosciences, University of Milano-Bicocca, Milan, Italy) “Hybrid Glyco-Biomaterials to Modeling in vitro glioblastoma ECM microenvironment”

18:10 - Francesca Cadamuro (online) (Dept. of Biotechnology and Biosciences, University of Milano-Bicocca, Milan, Italy) “3D bioprinted colon cancer models: the glycosignature effect”

18.30 - *Conclusions and end of the workshop*