

SYMPOSIUM

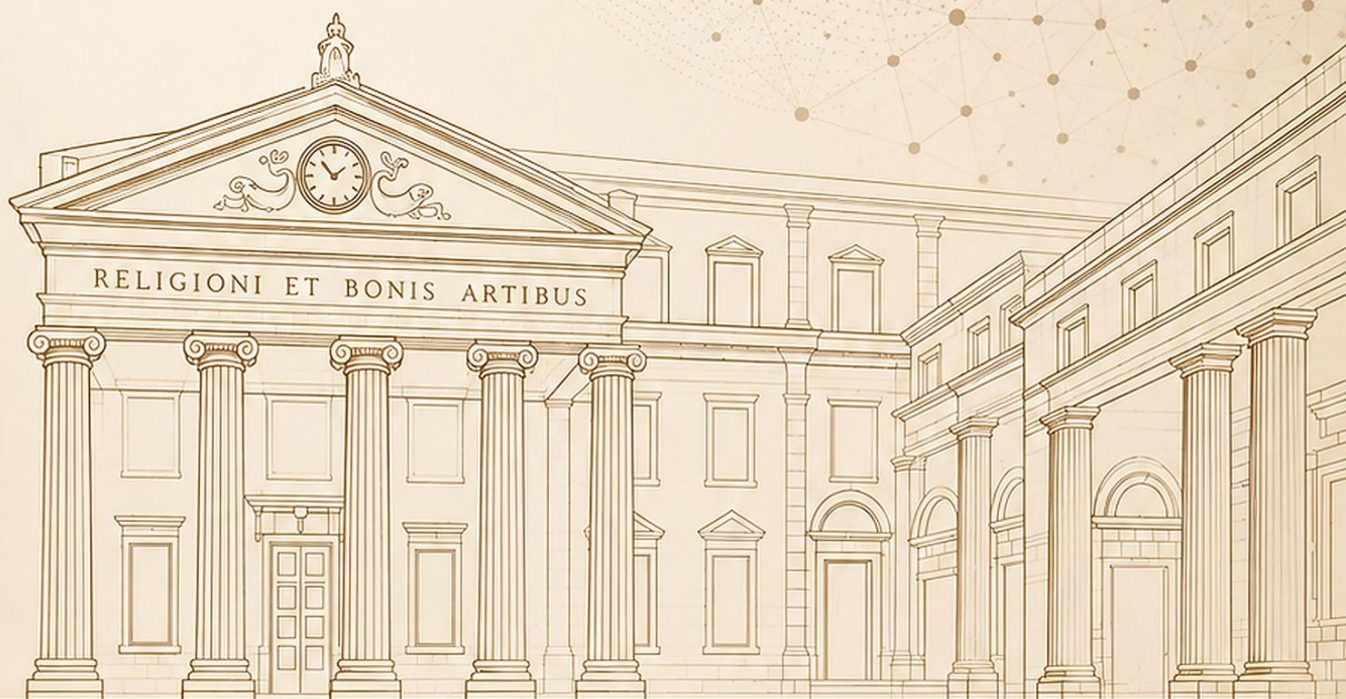
Nano-Biotechnology for Precision Medicine

2nd Edition

Lecce (Italy)

10–12 June 2026

Ex Convitto Palmieri



SCIENTIFIC COMMITTEE

MARIA SERENA CHIRIACÒ (CNR-NANOTEC)
LORETTA L. DEL MERCATO (CNR-NANOTEC)
FRANCESCO FERRARA (CNR-NANOTEC)
FRANCESCA GERVASO (CNR-NANOTEC)
GIUSEPPE GIGLI (UNISALENTO; CNR-NANOTEC)
ILARIA E. PALAMÀ (CNR-NANOTEC)
ALESSANDRO POLINI (CNR-NANOTEC)
GABRIELLA ZAMMILLO (CNR-NANOTEC)

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TECHNICAL AND ORGANIZING COMMITTEE

GIANVITO DE IACO (CNR-NANOTEC)
IOLENA TARANTINI (UNISALENTO)
ALESSANDRA VALLERI (CNR-IRSA)

WEDNESDAY, JUNE 10, 2026

13:00	REGISTRATION AND WELCOME COFFEE
14:00	OPENING SESSION PRESENTATION OF TECNOMED PUGLIA AND THE INSTITUTIONAL WEB PORTAL GIUSEPPE GIGLI (Scientific Director, TecnoMed Puglia)
14:15	Next-generation animal house (An example of an MSA-like neurodegeneration model generated in the facility) FRANCESCO DE NUCCIO (Associate Professor, DiMeS - Unisalento)
14:30	SESSION 1 – ADVANCED BIOSENSING AREA Chair: MARIA SERENA CHIRIACÒ (Senior Researcher, CNR-NANOTEC Lecce)
14:30	PLENARY KEYNOTE TALK Liquid biopsy for miRNAs GENNARO CILIBERTO (President of the Italian Society of Liquid Biopsy (SIBIL))
15:00	SPiRAL: Real-Time Monitoring of Cytokines and Oxygen in Organ-on-Chip Devices via a Microfluidic Optical Platform ADRIANO COLOMBELLI (Researcher, CNR-NANOTEC CNR-IMM Lecce)
15:15	HiSENSE4MED: High Resolution Smart ENgineered Sensing for Precision MEDicine VALENTINA ONESTO (Researcher, CNR-NANOTEC Lecce)
15:30	COFFEE BREAK
16:00	SESSION 2 - LIQUID BIOPSY AREA Chair: MARIA SERENA CHIRIACÒ (Senior Researcher, CNR-NANOTEC Lecce)
16:00	EVIDENCE: Unravel EVs Diagnostic and Therapeutic Potential in Liquid Biopsy and Cell-Free Therapies ALESSIA FOSCARINI (Post-doc, DiMeS - Unisalento)
16:15	VIBRANT: Vesicle and cell behaviour in non-standard conditions via BReakthrough lAb-on-chip Technologies ALFREDO DE CILLIS (PhD student, DII – Unisalento)
16:30	CAMCAN: Engineered Carbon based materials for Advanced Manufacturing in Chip-bAsed Neurotechnology: From Electrochemical Sensing to Neural Stimulation ANTONIO TURCO (Senior Researcher, CNR-NANOTEC Lecce)
16:45	LIQUID: Development of Lab on Chip and Sensing Strategies for Liquid Biopsy GIULIA SICILIANO (Post-doc, DiMeS - Unisalento)
17:00	ROUND TABLE Bridging the Technological Gap: From Advanced Biosensing to Liquid Biopsy for Precision Diagnostics Panelists: GENNARO CILIBERTO (President of SIBIL), LORETTA L. DEL MERCATO (Research Director, CNR-NANOTEC Lecce), ELISABETTA PRIMICERI (Senior Researcher, CNR-NANOTEC Lecce), ANGELO QUATTRINI (Head of the Experimental Neurology Lab Unit, San Raffaele Hospital, Milano), FLORA GUERRA (Associate Professor, DiSTeBA - Unisalento) Moderator: MARIA SERENA CHIRIACÒ (Senior Researcher, CNR-NANOTEC Lecce)

THURSDAY, JUNE 11, 2026

09:00	SESSION 3 - DRUG & GENE DELIVERY AREA Chair: ILARIA PALAMÀ (Senior Researcher, CNR-NANOTEC Lecce)
09:00	PLENARY KEYNOTE TALK CAR-T cells treatment in pediatrics brain tumors (<i>online</i>) ANGELA MASTRONUZZI (Head of the Neuro-Oncology Department, Bambino Gesù Children’s Hospital, Roma)
09:30	CARE: Clinically oriented nAnodeliveRy systems for advancEd immunotherapy GABRIELLA LECCESE (Post-doc, DiMeS - Unisalento)
09:45	DRUG & GENE DELIVERY: Nano-enabled Drug Delivery for Advanced Therapeutics GABRIELE MAIORANO (Technologist, CNR-NANOTEC Lecce)
10:00	GLYCO-ID: Understanding the glycosylation barcode of pathogenic markers in diseases ANTONIO GALEONE (Researcher, CNR-NANOTEC Lecce)
10:15	nanoCDT - In vitro validation of nanopharmaceutical formulations for chemodynamic therapy of solid tumors ELEONORA MELLO (Post-doc, CNR-NANOTEC Lecce)
10:30	COFFEE BREAK

11:00	SESSION 4 - 3D VITRO MODELS AREA Chair: FRANCESCA GERVASO (Senior Researcher, CNR-NANOTEC Lecce)
11:00	PLENARY KEYNOTE TALK Going bold: modeling immunotherapy response on chip LUIGI NEZI (Grup leader "Microbiome and Antitumor Immunity" - IEO, Milano)
11:30	EMC ³ : Targeting Glioblastoma Adaptation through Engineered Microenvironments and Field-Assisted Nanomedicine BARBARA CORTESE (Senior Researcher, CNR-NANOTEC Roma)
11:45	MIDAS - The importance of mechanical milieu for advanced in vitro models FRANCESCO BISCONTI (Researcher, CNR-NANOTEC Lecce)
12:00	FLUENCE: FLUIdic ENgineered Cerebral Endothelium for Vasculo/Angiogenesis Studies VITA GUARINO (Researcher, DiMeS - Unisalento)
12:15	SPHERE: Smart 3D Platform for Hybrid Engineered mateRIals/moleculEs validation VIVIANA VERGARO (Associate Professor, DiMeS – Unisalento)
12:30	OCELOT: Organ-on-chip systems for modelling heterotypic cell interaction LAURA SERCIA (Post-doc, DII - Unisalento)
12:45	BIOFIT-PRO: Bioactive scaffolds for skin-implants integration in intraosseous transcutaneous amputation prostheses ILARIA SERGIO (PhD Student, DiMeS – Unisalento)
13:15	MIND: MIcrophysiological modeling of Neurovascular Dysfunctions under flow: advanced microenvironmental imaging and therapeutic screening ELISA DE LUCA (Researcher, CNR-NANOTEC Lecce)
13:30	LUNCH SESSIONE POSTER
15:00	SESSION 5 - MOLECULAR & CELLULAR MECHANISMS AREA Chairman: ANTONIO GALEONE (Researcher, CNR-NANOTEC Lecce)
15:00	STORM HOPE: Membrane Trafficking: Therapeutic Targets in Cancer and Genetic Disorders RICCARDO RIZZO (Senior Researcher, CNR-NANOTEC Lecce)
15:15	TEOREMA: The role of the NDRG1 gene in regulating Mechanotransduction processes and tumor Metastasis in Breast Cancer ROBERTO MESSINA (PhD Student, DiMeS – Unisalento)
15:30	BIOPRO-AD: New Biomarkers in Neurodegenerative Diseases FRANCESCA MALERBA (Researcher, CNR-NANOTEC Lecce)
15:45	COM.FU.C.I.O.: Animal models, comparative functional genomics and cross-kingdom strategies for biomedicine TIZIANO VERRI (Full Professor, DiSTeBA – Unisalento)
16:00	FIBROMEg: Defining the Role of Megakaryocyte Abnormalities in the Progression of organ fibrosis ANNA RITA MIGLIACCIO (Associate Researcher, CNR-NANOTEC Lecce)
16:15	ROUND TABLE Engineering Biology: From Therapeutics Delivery to 3D Disease Models and Molecular Targets Panelist: LUIGI NEZI (Grup leader ‘Microbiome and Antitumor Immunity’ - IEO, Milano), ALESSANDRO POLINI (Researcher, CNR-NANOTEC Lecce), GABRIELE MAIORANO (Technologist, CNR-NANOTEC Lecce), ANNA RITA MIGLIACCIO (Associate Researcher, CNR-Nanotec Lecce), MARCELLO CHIEPPA (Associate Professor, DiMeS – Unisalento) Moderator: ALESSANDRA QUARTA (Senior Researcher CNR-NANOTEC Lecce)

FRIDAY, JUNE 12, 2026

09:00	SESSION 6 - ADVANCED BIOIMAGING AREA Chair: LORETTA L. DEL MERCATO (Research Director, CNR-NANOTEC Lecce)
09:00	PLENARY KEYNOTE TALK Ai driven multimodal microscopy: the foundation for digital twins GIULIO LAMEDICA (Microscopy Director, Carl Zeiss Italia)
09:30	AXIS-NET: Exploring the Gut-Brain Axis and Connectome Architecture in Dementia Through Multimodal Correlation Imaging ALESSIA CEDOLA (Research Director, CNR-NANOTEC Roma)
09:45	CAPTURE: Correlative Advanced microscopy Platform for Tumor and neUrodegenerative diseases Research MASSIMO CUSCUNÀ (Research Director, CNR-NANOTEC Lecce)
10:00	TRIGGER: Trimodal imaging of brain tumors through Gd-based nanoparticles ALESSIA NITO (PhD Student, DII Unisalento)

10:15 SmartMind: From Prevention to Diagnosis: A Year of Clinical AI at CNR-NANOTEC
GIAN PAOLO MARRA (Senior Technologist, CNR-NANOTEC Lecce)

10:30 COFFEE BREAK

10:45 **VISIT TO THE 'BIODIVERSITY DEMO CENTER'**

13:00 Lunch | Sessione Poster

ROUND TABLE

Advanced Bioimaging Meets AI: Multimodal Approaches for Neuroscience and Oncology

14:30 Panelist: **GIULIO LA MEDICA** (Microscopy Director | Carl Zeiss Italia), **GIUSEPPE CICCARELLA** (Full Professor DiSTeBA-Unisalento), **GIUSEPPE GIGLI** (Scientific Director, TecnoMed Puglia), **ALESSIA CEDOLA** (Research Director, CNR-NANOTEC Roma), **MASSIMO CUSCUNÀ** (Research Director, CNR-NANOTEC Lecce)
Moderator: **LORETTA L. DEL MERCATO** (Research Director, CNR-NANOTEC Lecce)

15:30 **SESSION 7 – ORGANIZATIONAL AND MANAGEMENT ASPECTS**
(Dedicated to the internal staff of the Tecnomed Centre)

15:30 Presentation of the Regulations
GIUSEPPE GIGLI (Scientific Director, TecnoMed Puglia)

17:00 **POSTER AWARD**

17:30 Closing Remarks

18:00 **TRANSFER AND SOCIAL EVENT AT LIDO BASSA MAREA - PORTO CESAREO (LE)**

SYMPOSIUM OVERVIEW

Precision medicine represents one of the most promising frontiers in contemporary biomedical research, aiming to develop increasingly personalized diagnostic and therapeutic strategies based on the molecular and cellular characteristics of each individual. In this context, nanobiotechnologies play a key role, offering innovative tools capable of operating with high precision at the subcellular level and opening new perspectives for the early diagnosis, monitoring, and treatment of complex diseases.

The **Nanobiotech for Precision Medicine Symposium – 2nd Edition** is confirmed as a leading multidisciplinary event dedicated to the latest advances in nanobiotechnology applied to precision medicine. The Symposium brings together researchers, clinicians, and industry representatives to foster scientific exchange and share updates on the most recent developments in the field.

The scientific program is structured around six key thematic areas:

- **Liquid Biopsy** – Technologies for the detection and analysis of circulating biomarkers, with applications in oncology and chronic diseases.
- **Advanced Bioimaging** – Imaging approaches for the dynamic study of biological processes at the cellular and tissue levels.
- **3D In Vitro Models** – Physiologically relevant models for preclinical research and the validation of novel therapeutic strategies.
- **Drug & Gene Delivery** – Targeted and controlled delivery strategies for drugs and gene therapies.
- **Molecular & Cellular Mechanisms** – Key processes underlying disease progression and treatment response.
- **Advanced Biosensing** – Highly sensitive systems for early diagnosis and real-time monitoring.

Through plenary lectures, oral presentations, poster sessions, and roundtable discussions, the Symposium provides a structured environment for scientific exchange and updates, promoting integration between basic research, translational research, and clinical practice, while fostering the development of new scientific synergies.