



**IRCCS REGINA ELENA NATIONAL CANCER INSTITUTE, ROME** in collaboration with  
**CHARITÉ UNIVERSITÄTSMEDIZIN BERLIN**

**6<sup>th</sup> WORKSHOP IRE ON TRANSLATIONAL ONCOLOGY**  
**CANCER ORGANOIDS AS RELIABLE DISEASE**  
**MODELS TO DRIVE CLINICAL DEVELOPMENT**  
**OF NOVEL THERAPIES**

**ROME, SEPTEMBER 23-24, 2024**

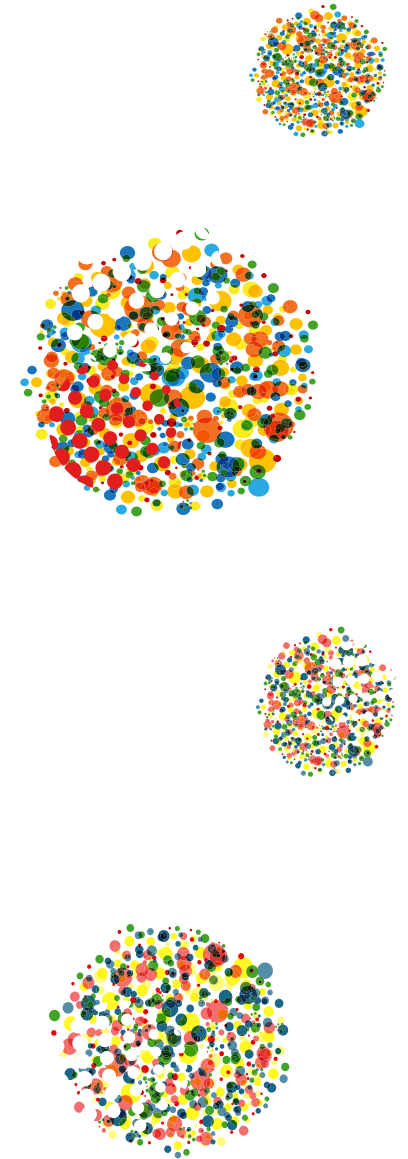
**IRCCS REGINA ELENA NATIONAL CANCER INSTITUTE**

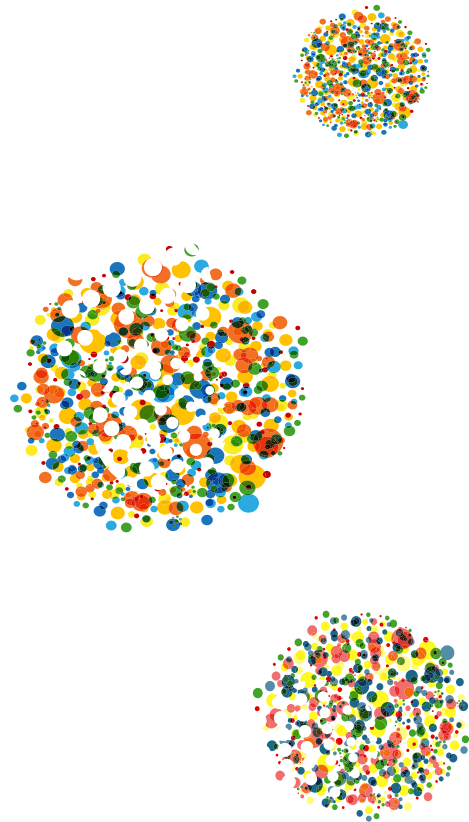
Organizing committee

**ANNA BAGNATO, GIOVANNI BLANDINO, FEDERICO CAPPUZZO, GENNARO CILIBERTO,**  
**ULRICH KEILHOLZ, PAOLA NISTICÒ, INGEBORG TINHOFFER**

## WORKSHOP OVERVIEW

Modelling the dynamic tumor ecosystems with many elements that display spatial and temporal evolution represents a central challenge in precision oncology. Patient-derived 3D culture models, including organoids, explants, and engineered or bioprinted models, have recently emerged as sophisticated viable systems for studying complex and diverse populations of cancer cells interacting within their microenvironments that can address a myriad of unmet needs in precision medicine for clinical decision making. There has been a recent explosion of techniques and platforms of these human tissue avatars that enable modeling cellular alterations in disease states and screening of compounds and molecules to discover new pathways. This workshop will bring together experts in 3D models from various tissues and will create valuable cross-fertilization of ideas and approaches that will benefit many fields, providing a critical overview at both clinical and preclinical levels. The workshop program will also include engineering approaches that will highlight next generation 3D model technology to recapitulate the complexity of human cancer. An additional aim of this workshop is to evaluate 3D models in the immuno-oncology field as a way to study the interaction of the immune system with epithelial tumors to develop new diagnostic and therapeutic tools. As a result of this meeting, it is anticipated that both senior and junior participants will have a much better understanding of the capabilities of 3D model systems and see new avenues for drug screening exploration.





## ORGANIZING COMMITTEE

### ANNA BAGNATO

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

### GIOVANNI BLANDINO

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

### FEDERICO CAPPUZZO

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

### GENNARO CILIBERTO

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

### ULRICH KEILHOLZ

Charité Comprehensive Cancer Center  
Berlin, Germany

### PAOLA NISTICÒ

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

### INGEBORG TINHOFER

Charité - Universitätsmedizin Berlin  
Berlin, Germany

## SECRETARIAT

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## PROGRAMME

### MONDAY, 23 SEPTEMBER 2024

13.30-14.00

#### Welcome Address

##### Livio De Angelis

CEO Istituti Fisioterapici Ospitalieri  
Rome, Italy

##### Gennaro Ciliberto

Scientific Director  
IRCCS Regina Elena National Cancer Institute  
Rome, Italy

##### Ulrich Keilholz

Director Charité Comprehensive Cancer Center  
Berlin, Germany

## SESSION I

### ORGANOIDS IN CANCER MODELING

Chairperson:

##### Daniela Corda

IEOS National Research Council of Italy - CNR  
Naples, Italy

##### Silvia Soddu

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

14.00-14.30

### 3D-BIOPRINTED CANCER MODELS FOR TARGET DISCOVERY, DRUG DEVELOPMENT, AND PERSONALIZED THERAPY

##### Ronit Satchi-Fainaro

Cancer Biology Research Center, Tel Aviv University  
Tel Aviv, Israel

14.30-15.00

### ADVANCES OF PATIENT-DERIVED ORGANOIDS IN PERSONALIZED RADIOTHERAPY

##### Ingeborg Tinhofer

Charité - Universitätsmedizin Berlin  
Berlin, Germany

15.00-15.30

### A 3D CULTURE PLATFORM FOR HIGH-THROUGH PUT DRUG SCREENINGS AND MULTIDIMENSIONAL OMICS AND IMAGING ASSAYS ON PATIENT- DERIVED ORGANOIDS

##### Giovanni Tonon

Vita Salute San Raffaele University, Center for Omics Sciences,  
IRCCS San Raffaele Scientific Institute  
Milan, Italy

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15.30- 16.00 Coffee break  
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## SESSION II

### NEXT GENERATION 3D CANCER MODELS

Chairperson:


##### Anna Bagnato

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

##### Claudio Sette

IRCCS Fondazione Policlinico Agostino Gemelli  
Catholic University of the Sacred Heart  
Rome, Italy

16.00-16.30

Lecture sponsored by the  
 Italian Foundation for Cancer Research  
**ADVANCING TUMOROID MODELS THROUGH  
BIOPRINTING AND BIOMATERIALS DESIGN**  
**Sarah C. Heilshorn**  
Stanford University  
Stanford, California, USA

16.30-17.00

**MODELING AND MODULATING ANTITUMOR IMMUNITY IN HUMAN CANCER TISSUES**

**Daniela S. Thommen**

Division of Molecular Oncology & Immunology  
The Netherlands Cancer Institute  
Amsterdam, The Netherlands

17.00-17.30

**PERSONALIZED FUNCTIONAL PROFILING**

**Yong-Jun Kwon**

Luxembourg Institute of Health  
Luxembourg

17.30-18.00

**SUPPORT OF MOLECULAR TUMOR BOARD RECOMMENDATIONS THROUGH INSIGHTS FROM ORGANOID**

**Ulrich Keilholz**

Director Charité Comprehensive Cancer Center  
Berlin, Germany

**TUESDAY, 24 SEPTEMBER 2024**

**YOUNG INVESTIGATOR SESSION**

Chairperson:

**Sara Donzelli**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

**Pasquale Zizza**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

09.15-09.27

**PRECLINICAL MODELS FOR RARE TUMOURS TO ADVANCE PRECISION ONCOLOGY**

**Ana Pestana**

Charité - Universitätsmedizin Berlin  
Berlin, Germany

09.27-09.39

**BLADDER-DERIVED TUMOR ORGANOID PLATFORM TO TEST CANCER PRECISION MEDICINE**

**Carlotta Frascolla**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

09.39-09.51

**GENETICALLY ENGINEERED LIVER ORGANOID AS PRE-CLINICAL MODELS IN INTRAHEPATIC CHOLANGIOCARCINOMA**

**Luca Pompili**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

09.51-10.03

**DEVELOPING 3D-PRINTED OSTEOSARCOMA MODELS TO COMPREHENSIVELY CHARACTERIZE MOLECULAR TRAITS AND EVALUATE THE EFFICACY OF NOVEL THERAPEUTIC STRATEGIES**

**Aurora Puce**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

10.03-10.15

**CANCER SPHEROIDS AS RELIABLE MODELS FOR DRUG SCREENING: FUNCTIONAL CHARACTERIZATION OF A NEW CLASS OF G-QUADRUPLEX LIGANDS**

**Sara Iachettini**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

10.15-10.27

**HMECA-MEDIATED AUTOPHAGY IN THE DIALOGUE AMONG CAFs AND CANCER CELLS IN NSCLC: ORGANOTYPIC TISSUE SLICES AS A PRECLINICAL TOOL**

**Annalisa Tocci**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

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10.30-11.00 Coffee Break  
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11.00-11.12

**IDENTIFYING DRUG SENSITIVITY OF MULTIFOCAL PRIMARY PROSTATE CANCER**

**Sofia Karkampouna**

Department for Bio Medical Research  
University of Bern  
Bern, Switzerland

11.12-11.24

**ENHANCED PARP INHIBITOR EFFICACY IN 3D HIGH- GRADE SEROUS OVARIAN CANCER MODELS**

**Piera Tocci**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

11.24-11.36

**INTEGRATING SPATIAL TRANSCRIPTOMICS AND ORGANOTYPIC TISSUE SLICES TO UNVEIL THE TUMOR IMMUNE MICROENVIRONMENT IN NON-SMALL CELL LUNG CANCER**

**Nicla Porciello**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

11.36-11.48

**AN ORGANOTYPIC 3D MODEL TO STUDY THE HUMAN LIVER FIBROSIS INDUCTION**

**Klizia Maccaroni**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

11.48-12.00

**UNRAVELING THE COMPLEXITY OF METASTATIC BREAST CANCER. INSIGHTS FROM ORGANOID CULTURES AND MULTI-OMICS PROFILING**

**Daniela Rutigliano**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

12.00-13.00

**MEET THE EDITOR**

**Gerry Melino**

Editor in Chief  
Cell Death & Differentiation  
Rome, Italy

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13.00-14.00 Light lunch  
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**SESSION III**  
**TOWARDS PRECISION ONCOLOGY**  
**WITH 3D MODELS**

Chairperson:

**Federico Cappuzzo**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

**Maurizio Fanciulli**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

14.00-14.30

**DRUG SCREENING IN TUMOR ORGANIDS**

**Giovanni Blandino**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

14.30-15.00

**DISSECTING PLASTICITY DURING METASTASIS**

**Karuna Ganesh**

Memorial Sloan Kettering Cancer Center  
New York, NY, USA

15.00-15.30

**INTEGRATION OF MACHINE LEARNING AND**  
**PATIENT- DERIVED ORGANIDS INSTRUCTS**  
**NEXT-GENERATION PRECISION**  
**CANCER MEDICINE**

**Antonio Iavarone**

The Sylvester Comprehensive Cancer Center  
University of Miami  
Miami, Florida, USA

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15.30-16.00 Coffee break  
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**SESSION IV**  
**3D MODELS IN IMMUNO-ONCOLOGY**

Chairperson:

**Paola Nisticò**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

**Silvia Piconese**

Sapienza University of Rome  
Rome, Italy

16.00-16.30

**CONNECTING TOPOLOGY TO FUNCTION IN**  
**THE TUMOR ECOSYSTEM**

**Massimiliano Pagani**

IFOM ETS - The AIRC Institute of Molecular Oncology  
Milan, Italy

16.30-17.00

**UNCOVERING TREATMENT-DRIVEN CHANGES IN**  
**BLADDER CANCER: A COMPREHENSIVE OMICS ANALYSIS**

**Marianna Kruthof-de Julio**

Department for Bio Medical Research - University of Bern  
Bern, Switzerland

17.00-17.30

**PATIENT-DERIVED MICRO-ORGANIDS**  
**ENABLE PRECISION ONCOLOGY**

**Xiling Shen**

Department of Biomedical Engineering - Pratt School of Engineering  
Duke University - Durham, NC, USA

17.30- 18.00

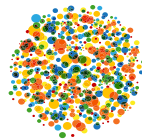
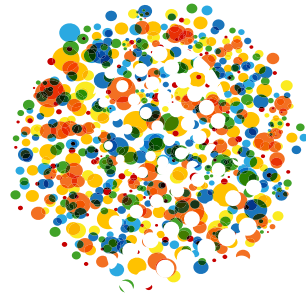
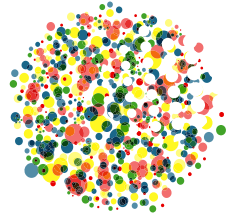
**CLOSING REMARKS**

**Gennaro Ciliberto**

Scientific Director  
IRCCS Regina Elena National Cancer Institute  
Rome, Italy

**Ulrich Keilholz**

Director Charité Comprehensive Cancer Center  
Berlin, Germany



## **FACULTY**

### **Anna Bagnato**

IRCSS Regina Elena National Cancer Institute  
Rome, Italy

### **Giovanni Blandino**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy

### **Federico Cappuzzo**

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### **Carlotta Frascolla**

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Rome, Italy

### **Karuna Ganesh**

Memorial Sloan Kettering Cancer Center  
New York, NY, USA

### **Sarah C. Heilshorn**

Stanford University  
Stanford, California, USA

### **Sara Iachettini**

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Rome, Italy

### **Antonio Iavarone**

University of Miami  
Miami, Florida, USA

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Bern, Switzerland

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Charité Comprehensive Cancer Center  
Berlin, Germany

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Bern, Switzerland

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Luxembourg Institute of Health  
Luxembourg

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Cell Death & Differentiation  
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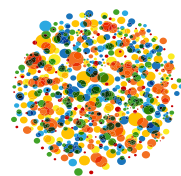
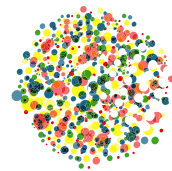
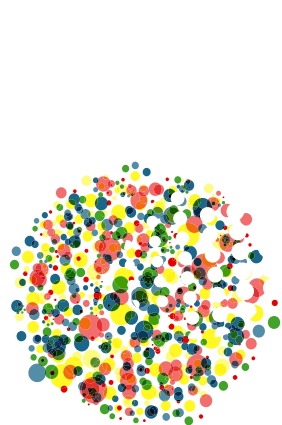
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Rome, Italy

### **Giovanni Tonon**

Vita Salute San Raffaele University  
Center for Omics Sciences  
IRCCS San Raffaele Scientific Institute  
Milan, Italy

### **Pasquale Zizza**

IRCCS Regina Elena National Cancer Institute  
Rome, Italy



## GENERAL INFORMATION

### VENUE

**Regina Elena National Cancer Institute - Centro formazione Bastianelli**

via Fermo Ognibene, 23 - Rome



### REGISTRATION

Registration is free of charge. Please complete the process to register at our site [www.mitcongressi.it](http://www.mitcongressi.it)

## CME INFORMATION

The event will be accredited by the Italian Ministry of Health.

The CME Provider is Ifo -Istituti Fisioterapici Ospitalieri (ID 1270).

Course ID: 427739.

This CME event will be held in presence (CME - RES).

**The scientific sessions will be accredited for ALL THE MEDICAL SPECIALTIES**

## HOW TO GET CME CREDITS

- Register on <https://ifo.sailportal.it/>
- Select the course from the catalogue.
- Click on "Access the course".
- Participants are required to attend at least 90% of the accredited sessions and the detection of the presence.
- At the end of the event, you will receive 2 paper questionnaires (satisfaction and evaluation questionnaire). You will need a score of 75% or higher on the learning assessment questionnaire.
- CME Certificate will be available on the Educational Platform in your personal area.

For any further information please contact [dirscire@ifo.it](mailto:dirscire@ifo.it)

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