

IRCCS REGINA ELENA NATIONAL CANCER INSTITUTE, ROME in collaboration with CHARITÈ 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 TINHOFER



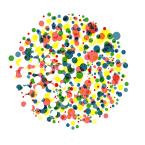
#### **WORKSHOP OVERVIEW**

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 modelling 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 - Universitätsmedizin Berlin Berlin, Germany

# **PAOLA NISTICÒ**

IRCCS Regina Elena National Cancer Institute Rome, Italy

# **INGEBORG TINHOFER**

Charité - Universitätsmedizin Berlin Berlin, Germany

# **SECRETARIAT** TANIA MERLINO, CATIA MINUTIELLO, ROBERTO BERNARDI

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# LOGISTIC SECRETARIAT

MI&T srl - Centro Direzionale Bolomnia

via Guelfa 5 - 40138 Bologna, Italy

www.mitcongressi.it

# **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

Charité - Universitätsmedizin Berlin 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 PER-**SONALIZED 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

15.30-16.00 Coffee break

# **SESSION II NEXT GENERATION 3D CANCER MODELS**

Chairperson:

# Anna Bagnato

IRCSS Regina Elena National Cancer Institute Rome, Italy

#### Claudio Sette

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

#### 16.00-16.30

# 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 Luxembourgh

17.30-18.00

**TITLE TBD** 

Ulrich Keilholz

Charité Universitätsmedizin Berlin 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

09.30-09.45

TITLE TBD

1rst speaker affiliazione

09.45-10.00

**TITLE TBD** 

2nd speaker affiliazione

10.00-10.15

**TITLE TBD** 

3rd speaker affiliazione

10.15-10.30

**TITLE TBD** 

4th speaker

affiliazione

10.30-11.00

Coffee break

11.00-11.15

TITLE TBD

5th speaker

affiliazione

11.15-11.30

TITLE TBD

6th speaker

affiliazione

11.30-11.45

TITLE TBD

7th speaker

affiliazione

11.45-12.00

TITLE TBD

8th speaker

affiliazione

12.00-13.00

**MEET THE EDITOR** 

Gerry Melino

Editor in Chief,

Cell death & Differentiation

Rome, Italy

13.00-14.00

Light lunch

**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 ORGANOIDS

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 ORGANOIDS INSTRUCTS NEXT-GENERATION PRECISION CANCER MEDICINE

Antonio lavarone

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

15.30-16.00

Coffee break

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

TITLE TBD

Massimiliano Pagani

 ${\sf IFOM\ ETS\ -\ The\ AIRC\ Institute\ of\ Molecular\ Oncology}$ 

Milan, Italγ

16.30-17.00

TITLE TBD

Marianna Kruithof-de Julio

Department for Bio Medical Research

University of Bern

Bern, Switzerland

#### 17.00-17.30

# PATIENT-DERIVED MICRO-ORGANOIDS 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

Charité - Universitätsmedizin Berlin 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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#### Sara Donzelli

IRCCS Regina Elena National Cancer Institute Rome, Italy

#### Maurizio Fanciulli

IRCCS Regina Elena National Cancer Institute Rome, Italy

#### Karuna Ganesh

Memorial Sloan Kettering Cancer Center New York, NY, USA

# Sarah C. Heilshorn

Stanford University Stanford, California, USA

# Antonio lavarone

University of Miami Miami, Florida, USA

#### Ulrich Keilholz

Charité Universitätsmedizin Berlin Berlin, Germany

# Marianna Kruithof-de Julio

University of Bern Bern, Switzerland

# Yong-Jun Kwon

Luxembourg Institute of Health Luxembourg

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# Ingeborg Tinhofer

Charité - Universitätsmedizin Berlin Berlin, Germany

# 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 Roma, Italy



#### **REGISTRATION**

This event will be held in presence.
Please complete the process to register at our site
www.mitcongressi.it

#### **CME INFORMATION**

The scientific sessions will be accredited for the following professionals Medical specialties:

XXXXXXX

# **CME INSTRUCTIONS**

The CME Questionnaire and Certificate of Participation will be available online by accessing our platform in the "My courses" section of your reserved area. To qualify for CME Credits, participants are required to attend at least 90% of the accredited sessions and the detection of the presence and the compilation of the satisfaction questionnaire of the event will also be mandatory. The deadline for the completion of the CME assessment questionnaire and the course approval questionnaire is set within 72 hours from the end of the course. You will need a score of 75% or higher on the learning assessment questionnaire.

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