



7th WORKSHOP IRE ON TRANSLATIONAL ONCOLOGY
**CHALLENGES AND ADVANCES IN DRUG
RESISTANCE AND TOLERANCE IN CANCER**

ROME, OCTOBER 20-21, 2025
IRCCS REGINA ELENA NATIONAL CANCER INSTITUTE

ORGANIZING COMMITTEE

**ANNA BAGNATO, GIOVANNI BLANDINO, FEDERICO CAPPUZZO, GENNARO CILIBERTO, SIMA LEV,
PAOLA NISTICÒ, EYTAN RUPPIN, YARDENA SAMUELS**

WORKSHOP OVERVIEW

Resilience to anticancer drugs is an increasingly critical challenge in precision oncology. Over time, cancer cells can develop drug resistance or tolerance, significantly impacting therapy outcomes. The multifactorial mechanisms underlying tolerance, resistance, and persistence are being actively investigated, highlighting the urgent need to bridge research from the bench to the clinic—and back again. Addressing the intricate interplay between cellular evolution, metabolism, and plasticity is essential to overcoming therapy resistance. A deeper understanding of these mechanisms holds the promise of developing novel therapeutic strategies that are less susceptible to drug resistance. It also advances our knowledge of both genetic and non-genetic factors driving resistance and tolerance. This workshop will bring together leading experts in therapeutic resistance, fostering an interactive environment where senior and junior scientists, as well as clinicians, can exchange the latest breakthroughs. Discussions will focus on the mechanisms underlying drug resistance, the phenotypic trajectories of resistant cells, and the role of the tumor microenvironment in resistance and tolerance. Through insights from cancer biology, translational research, and clinical studies, this workshop will showcase cutting-edge advances in understanding cellular adaptation to anticancer drugs. By unraveling these complexities, we aim to pave the way for more effective cancer therapies that can ultimately improve patient outcomes.





ORGANIZING COMMITTEE

ANNA BAGNATO

IRCCS Regina Elena National Cancer Institute
Rome, Italy

GIOVANNI BLANDINO

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SECRETARIAT

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MARIA VINCENZA SARCONE**



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PROGRAM

MONDAY, 20 OCTOBER 2025

11.00-11.30

Welcome address

Livio De Angelis

General Manager
Istituti Fisioterapici Ospitalieri
Rome, Italy

Giovanni Blandino

Scientific Director
IRCCS Regina Elena National Cancer Institute
Rome, Italy

Eytan Rupp

Director of Cancer Data Science Laboratory
National Cancer Institute
Bethesda, USA

Yardena Samuels

Director of the Moross Integrated Cancer Center (MICC)
Weizmann Institute of Science
Rehovot, Israel

THE ROLE OF AIFA IN PRECISION ONCOLOGY

Robert Nisticò

President AIFA
Rome, Italy

SESSION I

Chairpersons:

Sima Lev

Weizmann Institute of Science
Rehovot, Israel

Oreste Segatto

IRCCS Regina Elena National Cancer Institute
Rome, Italy

11.30-12.00

INNOVATIVE APPROACHES TO FIGHT CANCER DRUG RESISTANCE

Rene Bernards

Netherlands Cancer Institute
Amsterdam, The Netherlands

12.00-12.30

THE VARIOUS LAYERS OF INTRATUMOR HETEROGENEITY AND THEIR IMPACT ON TUMOR IMMUNITY

Yardena Samuels

Weizmann Institute of Science
Rehovot, Israel

12.30-13.30 Light lunch

SESSION II

Chairpersons:

Anna Bagnato

IRCCS Regina Elena National Cancer Institute
Rome, Italy

Silvia Soddu

IRCCS Regina Elena National Cancer Institute
Rome, Italy

13.30-14.00

INSIGHTS INTO MULTIFACETED MECHANISMS UNDERLYING DRUG TOLERANCE AND RESISTANCE IN ONCOGENE-DRIVEN NSCLC

Trever Bivona

University of California San Francisco
San Francisco, USA

14.00-14.30

TARGETING DNA MISMATCH REPAIR FOR THERAPEUTIC PURPOSES

Alberto Bardelli

University of Turin - School of Medicine
Turin, Italy

14.30-15.00
**THE DAY AFTER THE DRUG INVESTIGATING
DRUG-INDUCED CELLULAR MEMORY**
Yaara Oren
Tel Aviv University - School of Medicine
Tel Aviv, Israel

15.00-15.30 Coffee break

SESSION III
Chairpersons:
Paola Nisticò
IRCCS Regina Elena National Cancer Institute
Rome, Italy

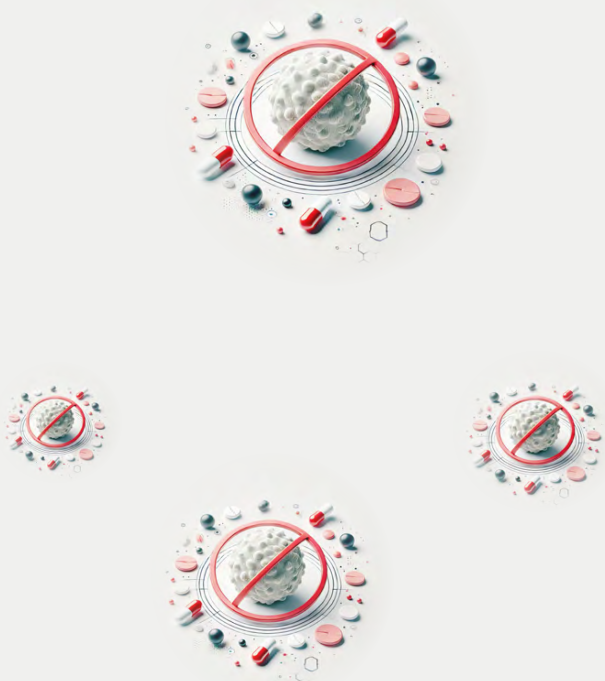
Edoardo Mercadante
IRCCS Regina Elena National Cancer Institute
Rome, Italy

 15.30-16.00
Lecture sponsored by the
Italian Foundation for Cancer Research
**CELLULAR ADAPTATION TO
CANCER THERAPY AND THE TUMOR
MICROENVIRONMENT**
Itai Yanai
New York University,
Grossman School of Medicine
New York, USA

16.00-16.30
IMMUNOTHERAPY IN UROTHELIAL CANCER
Fabio Calabrò
IRCCS Regina Elena National Cancer Institute
Rome, Italy

16.30-17.00
**DECIPHERING SPATIAL HETEROGENEITY
OF THE STROMA AND IMMUNOSUPPRESSION
IN BREAST CANCER**
Fatima Mechta-Grigoriou
Institut Curie
Paris, France

17.00-17.30
**TUMOR ADAPTIVE RESPONSE AND
RESISTANCE TO THERAPY**
Maurizio Scaltriti
AstraZeneca
Gaithersburg, USA



TUESDAY, 21 OCTOBER 2025

YOUNG INVESTIGATOR SESSION
Chairpersons:
Eleonora Petti
IRCCS Regina Elena National Cancer Institute
Rome, Italy

Claudio Pulito
IRCCS Regina Elena National Cancer Institute
Rome, Italy

9.15-9.45
**EXPLOITING AUTOANTIBODIES FOR
CANCER IMMUNOTHERAPY**
Jakub Abramson
Weizmann Institute of Science
Rehovot, Israel

9.45-10.00
**DATA-DRIVEN APPROACHES TO REVEAL
SECRETED PROTEIN REGULATORS OF
ANTI-TUMOR IMMUNE RESPONSE**
Peng Jiang
National Cancer Institute
Bethesda, USA

10.00-10.15
**TARGETING THE BCL-2 REGULATORY
NETWORK TO ADDRESS IMMUNOTHERAPY
RESISTANCE IN PRECLINICAL MELANOMA
MODELS**
Marta Di Martile
IRCCS Regina Elena National Cancer Institute
Rome, Italy

10.15-10.30
**H-MENA REGULATED SECRETORY
AUTOPHAGY MEDIATES UNCONVENTIONAL
COMMUNICATION BETWEEN CAFs AND
CANCER CELLS CONTRIBUTING TO
IMMUNOTHERAPY RESISTANCE IN NSCLC**
Annalisa Tocci
IRCCS Regina Elena National Cancer Institute
Rome, Italy

10.30-11.00 Coffee break

11.00-11.15
**TARGETING ENDOTHELIN-1 RECEPTOR/PIEZO1
MECHANOSIGNALING TO TACKLE DRUG
RESISTANCE IN HIGH-GRADE SEROUS
OVARIAN CANCER**
Piera Tocci
IRCCS Regina Elena National Cancer Institute
Rome, Italy

11.15-11.30
**HIGH-THROUGHPUT SCREENING ON ORGANOID
PLATFORMS: TARGETING CANCER-ASSOCIATED
FIBROBLASTS TO OVERCOME RESISTANCE
IN ENDOMETRIAL CARCINOMA**
Sebastiano Vaccarella
IRCCS Regina Elena National Cancer Institute
Rome, Italy

11.30-11.45
**FERTILITY SPARING TREATMENTS RESPONSE
PREDICTION IN YOUNG WOMEN TO PRESERVE
REPRODUCTIVE CHANCES: UNRAVELING
IMMUNE-MUTATIONAL PATHWAYS FOR
RESISTANCE IN ENDOMETRIAL CANCER**
Valentina Bruno
IRCCS Regina Elena National Cancer Institute
Rome, Italy

11.45-12.00
DRUG RESISTANCE IN GENITO-URINARY MALIGNANCIES: TREATMENT OPTIONS FOR BCG UNRESPONSIVE BLADDER CANCER AND CASTRATION RESISTANT PROSTATE CANCER
Marilia Consiglia Ferriero
IRCCS Regina Elena National Cancer Institute
Rome, Italy

12.00-13.00
THE DRUG RESISTANCE MARKET LANDSCAPE: UNDERSTANDING THE BUSINESS DRIVERS
MEET THE EXPERT
Luca Quagliata
Thermo Fisher Scientific
Zurich, Switzerland

13.00-14.00 Light lunch

SESSION IV
Chairpersons:
Gennaro Ciliberto
Takis Biotech
Rome, Italy

Maurizio Fanciulli
IRCCS Regina Elena National Cancer Institute
Rome, Italy

14.00-14.30
REPROGRAMMING THE COLD PROSTATE TUMOR MICROENVIRONMENT AS AN ACTIONABLE TARGET FOR CANCER THERAPY
Andrea Alimonti
Institute of Oncology Research (IOR)
Bellinzona, Switzerland

14.30-15.00
TOWARDS FAST AND ACCESSIBLE PRECISION ONCOLOGY
Eytan Rupp
National Cancer Institute
Bethesda, USA


15.00-15.30
Lecture sponsored by
Aurora Tomaselli Association
MULTI-OMIC INTERROGATION OF PRIMARY AND ACQUIRED IMMUNE RESISTANCE
Lillian Siu
University of Toronto,
Toronto, Canada

SESSION V
15.30-17.00
ROUND TABLE
BREAKING BARRIERS: ADVANCING CLINICAL TRIALS TO TACKLE DRUG RESISTANCE IN CANCER
Chairperson:
Eytan Rupp
National Cancer Institute
Bethesda, USA

Discussants:
Anna Mondino
Scientific Director Fondazione AIRC
Milan, Italy

Yardena Samuels
President EACR
Weizmann Institute of Science
Rehovot, Israel

Maurizio Scaltriti
Vice President Astrazeneca
Gaithersburg, USA

Lillian Siu
President AACR
University of Toronto
Toronto, Canada

17.00- 17.30
CLOSING REMARKS
Giovanni Blandino
Scientific Director
IRCCS Regina Elena National Cancer Institute
Rome, Italy

Eytan Rupp
Director of Cancer Data Science Laboratory
National Cancer Institute
Bethesda, USA



FACULTY

Jakub Abramson
Weizmann Institute of Science
Rehovot, Israel

Andrea Alimonti
Institute of Oncology Research (IOR)
Bellinzona, Switzerland

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San Francisco, USA

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Rome, Italy

Robert Nisticò
President AIFA
Rome, Italy

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Tel Aviv University - School of Medicine
Tel Aviv, Israel

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Rome, Italy

Piera Tocci
IRCCS Regina Elena National Cancer Institute
Rome, Italy

Sebastiano Vaccarella
IRCCS Regina Elena National Cancer Institute
Rome, Italy

Itai Yanai
New York University, Grossman School of Medicine
New York, USA

VENUE

via Fermo Ognibene, 23 - Rome



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