



Cancer dormancy and therapy resistance: from models to the clinic

May 5-7th, 2025

organized by

ISTITUTO SUPERIORE DI SANITÀ
Department of Oncology and Molecular Medicine

in collaboration with

Goethe University, Frankfurt (Germany)

sponsored by

Italian Association on Cancer Research (AIRC)

PROGRAMME

Monday, May 5th

12.30 Registration

1.30 Opening Ceremony

Rocco M. Bellantone, President, Italian National Institute of Health (ISS), Italy

Mauro Biffoni, Director of Oncology and Molecular Medicine Department, (ISS)

Vito D'Andrea, Dean of Full Professors of General Surgery and Deputy Director, (Sapienza University)

Ruggero De Maria, President, Alliance Against Cancer

SESSION 1 - JOINING FORCES TO UNDERSTAND AND MODEL CANCER DORMANCY

Chairs: **Guido Ferlazzo, Ruggero De Maria**

2.00 *Introduction to cancer dormancy*
Ann Zeuner

2.25 *Mathematical aspects of dormancy for non experts*
Frank den Hollander, Simone Baldassarri

2.50 *Population dynamics with dormancy*
Jochen Blath

3.15 *Overcoming drug resistance and persistence with PARP1 inhibitors*
Sara Soliman

3.30 *Breast Cancer Dormancy: A Link to the Past*
Luca Magnani



- 3.55 *Quantifying persister transitions in cancer cells and their implications for long-term fitness*
Simone Pompei
- 4.20 *A rapid autopsy program to advance our understanding of metastatic breast cancer and patients' recurrence*
Alessandra Riggio

*4.45 **Coffee Break**

*5.30 **Cluster session A (discussion groups):**
From Practice to Theory: Conceptualizing Cancer Dormancy

*7.00 **Welcome Cocktail and light dinner**
* **At Hotel Globus**

Tuesday, May 6th

SESSION 2 - CLINICAL IMPLICATIONS OF CANCER DORMANCY

Chairs: **Ilio Vitale, Joel Brown**

- 9.00 *Cancer dormancy as an evolutionary adaptation*
Kimberly Luddy
- 9.25 *Breast cancer dormancy: A silent threat in cancer progression*
Alice Turdo
- 9.40 *Is cancer cell dormancy really the reason we fail to cure cancer?*
Kenneth Pienta
- 10.05 *Therapeutic targeting of SETD8, a master regulator of proliferative plasticity, induces colorectal cancer stem cells versus a low-stemness dormant state*
Veronica Veschi
- 10.20 *Unveiling clinical cancer dormancy: mechanisms and implications for drug response*
Matilde Todaro
- 10.55 *Natural Killer lymphocytes as immunological gatekeepers of cancer cell dormancy*
Guido Ferlazzo
- 11.20 **Coffee Break**

SESSION 3 - KEY BIOLOGICAL ASPECTS OF CANCER DORMANCY

Chairs: **Gabriella Minchiotti, Marco Cosentino-Lagomarsino**

- 11.40 *The textures of the tumor microenvironment: An integrated imaging perspective*
José Javier Bravo-Cordero
- 12.05 *Endocycling: a novel mechanism for cancer cell dormancy*
Sarah Amend



- 12.30 *Preclinical testing of a candidate drug targeting dormant cancer cells*
Maria Laura De Angelis
- 12.45 *Epigenetic modulation of autophagy to induce cancer cell dormancy*
Ciro Isidoro
- 1.10 *Role of the tumor microenvironment in regulating cancer dormancy and chemoresistance*
Federica Francescangeli
- 1.25 Lunch Break

SESSION 4 - MODELLING CANCER DORMANCY: FROM THEORY TO PRACTICE

Chairs: **Jay Lennon, Alessandro Giuliani**

- 2.35 *Multi-omics analysis of cancer dormancy: From models to patients*
Devrim Gözüaçık
- 3.00 *Stochastic spatial population models for cancer*
Matthias Birkner
- 3.25 *Detection of very low-power signals by multidimensional approaches: a proposal for estimating the number of quiescent cells*
Alessandro Vici
- 3.40 *Dormancy in stochastic population dynamics: from competition models to cancer modelling*
Andras Tobias
- 4.05 *Making intractable dormancy tractable*
Dario Spanò

4.30 Coffee Break

***5:30 Cluster session B (discussion groups):
From Theory to Practice: Operationalizing Cancer Dormancy**

***At Hotel Globus**

7.30 Cocktail and Social Dinner at the Ministry of Aeronautics

Wednesday, May 7th

SESSION 5 - UNDERSTANDING AND TARGETING DORMANT/CHEMORESISTANT CANCER STEM CELLS

Chairs: **Ciro Isidoro, Sarah Amend**

- 9.00 *Harnessing chromosomal instability to overcome chemoresistance in cancer stem cells*
Ilio Vitale



- 9.25 *Targeting dormant cancer stem cells through virtual screening of targeted compounds*
Elena Petricci
- 9.50 *Anti-Cripto Antibody-Drug Conjugates: a novel strategy to target cells awakening from tumor dormancy*
Maria Ruggirello
- 10.05 *When bad proteins make good things: leveraging the potential of DNA endonucleases to trick chemoresistance of cancer cells*
Pietro Pichierri
- 10.30 *Quiescence as a Weapon: the effects of Fenretinide in Preclinical Cancer Models*
Paola Verachi
- 10.45 Coffee Break
- 11.15 *The Ecology and Evolution of Cancer Dormancy*
Joel Brown
- 11.40 *The Essential Role of Stress in Evolution and its Link to Cancer Resistance*
Emma Hammarlund
- 12.05 *The Toolbox of Adaptive Dynamics; Micro-, Meso- and Macroscopic Views on Evolution*
Manuel Esser
- 12.20 *Stem cell self-organization in development and cancer: insights into the mechanisms of cellular dormancy*
Gabriella Minchiotti
- 12.45 *The guardians of stability are the same that initiate revolutions: the peculiar character of dormancy-associated gene expression dynamics*
Alessandro Giuliani
- 1.10 Discussion and closing remarks, award for the best short presentation and lunch break
- 2.30 End of the meeting

SPEAKERS AND CHAIRPERSONS

Sarah Amend Johns Hopkins University School of Medicine, USA
Simone Baldassarri University of Leiden, The Netherlands
Matthias Birkner University of Mainz, Germany
Jochen Blath Goethe University, Germany
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ANN ZEUNER

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GENERAL INFORMATION

Conference venue

Aula Nitti-Bovet, Istituto Superiore di Sanità

Via del Castro Laurenziano, 10 - Roma

Official language

The official language is English. A simultaneous translation service will not be available.

Award

The best short presentation will be selected for the congress award.

Certificates

Upon request, a certificate of attendance will be provided to those who have attended at least 75% of the event.