UNCONDITIONALLY SUPPORTED LECTURE

With the unconditional support of Astrazeneca

Neuronal basis for blunted glucocorticoid circadian rhythms in breast cancer. Jeremy Borniger (Cold Spring Harbour Laboratory, Cold Spring Harbour, NY, USA)

OTHER LECTURES

Brain aging in cancer patients.

Lara Barazzuol (University of Groningen, Groningen, The Netherlands)

Hijacking of developmental processes in diffuse midline glioma invasion. David Castel (Gustave Roussy, Université Paris-Saclay, Villejuif, France)

Neural environment of cancer.

Claire Magnon (INSERM, Paris, France)

The Neuroscience of brain cancer.

Michelle Monje (Stanford University, Stanford, CA, USA)

IDH inhibition in gliomas: from preclinical models to clinical trials. Riccardo Soffietti (University of Torino & IRCCS Candiolo)

Fixing the brain to challenge metastasis.

Manuel Valiente (CNIO, Madrid, Spain)

Characterizing and targeting brain tumor networks in glioblastoma and beyond. Varun Venkataramani (Heidelberg University, Heidelberg, Germany)

Astroglia atrophy in diseases of mood and cognition.

Alexei Verkhratsky (Manchester, UK)

The impact of tumor-infiltrating nerves on the brain and behavior.

Paola Vermeer (Sanford Research, Sioux Falls, South Dakota, USA)



The nervous system is currently emerging as a key regulator of cancer. Mounting evidence indeed support that nervous system-cancer interactions play a central role in tumour initiation, growth and invasion of other tissues. In turn, cancer has the ability to hijack and/or remodel nervous system functions and structures for its own advantage and growth. Several studies demonstrate that interactions between the nervous system and cancer can occur both locally and at distance.

Neural cells (neurons, glia, stem cells) may communicate directly with malignant cells in the local tumour microenvironment through paracrine factors and even through neuron-to-cancer cell synapses. In addition in a wide range of malignancies outside the nervous system cancer-nervous tissue interactions occur at a distance through both circulating signalling molecules and influences on immune cells with relevant consequences on anti-cancer immunity and treatment responsivity, including immunotherapy in responsive tumours (lung, renal cell carcinoma, melanoma, etc.).

The emerging field of cancer neuroscience aims at identifying key signalling pathways of cancer-nervous system crosstalk and to evaluate these modulators as novel targets for anticancer therapies. Targeting the tumor-nerve axis holds the potential for advancing effective therapies for many of the most difficult to treat malignancies.

Expanding current knowledge on neuroscience of cancer requires multidisciplinary efforts and collaboration among scientists working in the fields of neuroscience, cancer biology, evelopmental biology, immunology. Our new Conference Series (More than Neurons Conference: Breaking Borders Series) aims at fostering discussion on the burgeoning field of cancer neuroscience and its related anticancer therapies.

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- PHARMACIST
- BIOLOGIST
- NEUROPHYSIOPATHOLOGY TECHNICIAN
- BIOMEDICAL LABORATORY HEALTHCARE TECHNICIAN

EVENT ID: 426446

CME credits: 11.9

Italian CME credits will be granted to those participants who attend at least 90% of scientific works, fill in the questionnaire assessment of perceived quality and duly fill in the evaluation questionnaires answering correctly 75% of the questions. At the end of the scientific work. an e-mail with the link to access the CME questionnaire will be sent.

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SOCIETÀ ITALIANA DI FARMACOLOGIA











October 2-4, 2024 | San Lazzaro di Savena (Bologna), Italy

Unahotels San Lazzaro - Via Luigi Fantini, 1

Breaking Borders Series

"More than Neurons" Conference

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Pier Luigi Canonico

Scientific Board:

Monica Di Luca (Milano, Italy) Tullio Florio (Genova, Italy) Patrizia Hrelia (Bologna, Italy) Neibla Priego (Madrid, Spain) Maria Angela Sortino (Catania, Italy)



Mariagrazia Grilli University of Piemonte Orientale, Italy

Alex Verkhratsky (Manchester, UK)



10.00 Onsite registration and badge distribution

13.00 Welcome & Keynote Address



THE NEUROSCIENCE OF CANCER: PRIMARY CNS TUMOURS

Introduced by Maria Angela Sortino

13.15 INVITED LECTURE: Hijacking of developmental processes in diffuse midline glioma invasion.

David Castel (Gustave Roussy, Université Paris-Saclay, Villejuif, France)

13.45 Q&A Session

1.1 Primary CNS tumors: mechanistic studies.

Oral communications selected from abstracts Chairpersons: Patrizia Hrelia. Tullio Florio

Contribution of concurrent RB1 and p53 pathway disruption to the development of the Primitive Neuronal Component in Glioblastoma. Elena Somenza (Brescia, Hamburg, Milano)

14.10 Involvement of DNA repair in high-grade glioma recurrence: mechanistic insights into the nucleotide excision repair pathway in glioma stem cells. Elena Cerutti (Genova)

14.25 Investigating the role of PTX3 in the biology of glioblastoma. Camilla Tavani (Brescia, Hamburg, Milano, Candiolo)

14.40 Study on the contribution of neuronal environment in glioblastoma malignancy. Chiara Saulle (Milano)

Coffee break

Introduced by Monica Di Luca

15.30 HONORARY LECTURE: The Neuroscience of brain cancer. Michelle Monje (Stanford University, Stanford, CA, USA)

16.15 Q&A Session

1.2 Primary CNS tumours: therapeutic targeting.

Oral communications selected from abstracts Chairpersons: Patrizia Hrelia, Tullio Florio

16.30 Investigating the role of voltage-gated sodium channels in glioblastoma stem cells: implications for therapeutic targeting. Federico Brandalise (Milano, Pavia, Pisa, Padova)

16.45 Targeting Citron Kinase catalytic activity for high grade brain tumors treatment. Alessia Ferraro (Torino Milano)

Introduced by Pier Luigi Canonico

17.00 HONORARY LECTURE: IDH inhibition in gliomas: from preclinical models to clinical trials.

Riccardo Soffietti (University of Torino & IRCCS Candiolo)



THE NEUROSCIENCE OF CANCER: FOCUS ON BRAIN METASTASIS

Introduced by Riccardo Soffietti 18.00 HONORARY LECTURE: Fixing the brain to challenge metastasis.

Manuel Valiente (CNIO, Madrid, Spain)

18.45 Q&A Session

Oral communications selected from abstracts Chairperson: Riccardo Soffietti

STAT3 expression in brain metastases from breast cancer: correlations with different molecular subtypes and clinical outcome. Alessia Pellerino (Torino, Candiolo, Madrid)

19.15 Brain metastasis in a model of canine haemangiosarcoma: investigating the

Corinne Quadalti (Bologna) 20.00 Welcome reception

DAY 2 - THURSDAY - OCTOBER 3rd 2024



NEURAL REGULATION OF CANCER IN PERIPHERY

Introduced by Mariagrazia Grilli

08.30 HONORARY LECTURE: Neural environment of cancer. Claire Magnon (INSERM, Paris, France)

09.15 Q&A Session

Oral communications selected from abstracts Chairpersons: Filippo Caraci, Maurizio Memo

Molecular mechanisms of perineural invasion in pancreatic adenocarcinoma. Federica Greco (Milano, Munich)

09.45 Characterization of CD271+ Schwann Cells as an in vitro model of schwannomatosis. Valerio Magnaghi (Milano)

10.00 Calcitonin gene-related peptide (CGRP) as possible key factor for neuroinflammatory modulation of in vitro neuroblastoma growth and migration. Donato Colangelo (Novara)

10.15 Deciphering the connection between neurodegeneration and cancer via IncRNAs: a role for MINCR.

Cecilia Pandini (Milano, Pavia)

10.30 Coffee break

Introduced by Alex Verkhratsky

HONORARY LECTURE: The impact of tumor-infiltrating nerves on the brain

Paola Vermeer (Sanford Research, Sioux Falls, South Dakota, USA)

11.45 Q&A Session

12.00 **11** Lunch



THE NEUROSCIENCE OF CANCER: FOCUS ON TME. INNERVATION. TISSUE REMODELING AND NEUROIMMUNE AXIS

Oral communications selected from abstracts Chairpersons: Valerio Magnaghi, Ilaria Decimo

The intricate cross-talk between neuronal and vascular system in the control of tumour development; a reappraisal of published data to define novel pharmacological strategies. Lucia Morbidelli (Siena)

13.45 Tumor-Associated Macrophages promote tumor innervation and neural regeneration. Ilaria Decimo (Verona, Leipzig, Milano, London)

14.00 Microglia-neuron crosstalk in the remodelling of peritumoral circuits. Frika Di Pietro (Roma, Pozzilli)

14.15 Understanding the role of astrocyte-mediated phagocytosis in brain tumors. Erika Coletto (Venezia, Padova, Roma)

14.30 Inflammatory dynamics in schwannomatosis: interactions between Schwann cells and monocytes. Tasnim Mohamed (Milano)

14.45 Natural killer cells modulate peri-tumoral neuron activity in glioblastoma. Letizia Mazzarella (Roma, Pozzilli)

15.00 Effects of endocrine disruptors chemicals on miRNAs dysregulation and neuronal cells proliferation Giulia Sita (Bologna) 15.15 Poster session (with coffee break) Introduced by Carlo Riccardi 16.30 HONORARY LECTURE: Neuronal basis for blunted glucocorticoid circadian rhythms in breast cancer. Jeremy Borniger (Cold Spring Harbour Laboratory, Cold Spring Harbour, NY, USA) 17.15 Q&A Session

DAY 3 - FRIDAY - OCTOBER 4th 2024



CANCER- AND CANCER THERAPY-ASSOCIATED ISSUES

Introduced by Nicoletta Brunello

08.15 INVITED LECTURE: Brain aging in cancer patients Lara Barazzuol (University of Groningen, Groningen, The Netherlands)

08.45 Q&A Session

Oral communications selected from abstracts Chairpersons: Ambra Grolla, Patrizia Romualdi

09.00 How to prevent chemobrain: a systematic preclinical study to support predictive models for human patients.

Laura Calzà (Bologna, Ferrara)

09.15 Cancer-specific association between neurodegenerative-related genes and cellular pathways, clinical outcome, and drug response. Luca Colnaghi (Milano, Bellinzona)

09.30 The role of prokineticins and histone demethylase KDM6A in bortezomib-induced painful neuropathy and mood disorders. Laura Rullo (Bologna, Milano)

09.45 Vulnerability of white matter to chemotherapy drugs: focus on oligodendrocytes and oligodendrocyte precursor cells. Vito Antonio Baldassarro (Bologna)

10.00 The role of oncological infrastructures on the mood disorders experienced by cancer patients.

Rafael Jamie William Salas Carretero (Bologna)



12.15 **11** Lunch

NOVEL THERAPFLITIC AND DIAGNOSTIC STRATEGIES

Oral communications selected from abstracts Chairpersons: Neibla Priego, Laura Calzà

13.45 Antitumour potential of targeting glutamatergic signaling in patient-derived glioblastoma cell lines. Beatrice Tremonti (Genova)

11.45 "MTN" INVITED LECTURE: Astroglia atrophy in diseases of mood and cognition.

Alexei Verkhratsky (University of Manchester, Manchester, UK)

14.00 Ketogenic diet induces an inflammatory reactive astrocytes phenotype reducing glioma growth.

Maria Rosito (Roma, Pozzilli)

10.15 Poster session (with coffee break)

Introduced by Dmitry Lim

Q&A Session

14.15 Using a rational approach for drugs and diagnostics tools development to selective targeting human aldehyde dehydrogenase 1A3 in gliomas. Silvia Garavaglia (Novara, Pisa, Pavia)

14.30 Blood-Brain Barrier Penetrating and Promising Drug Delivery Systems in Glioblastoma Therapy: Exosome-Nanoliposome Hybrid

Burcak Yavuz (Istanbul)

Introduced by Neibla Priego 14.45 INVITED LECTURE: Characterizing and targeting brain tumor networks in glioblastoma and beyond.

Varun Venkataramani (Heidelberg University, Heidelberg, Germany)

15.15 Q&A Session

15.30 Wrap up & Closing remarks

16.00 Closure

