

REPROGRAMMING CANCER CELLS VIA ANAKOINOSIS AS A NOVEL ANTICANCER APPROACH: FACTS, EXPECTATIONS AND OPEN QUESTIONS

March 7, 2016

Aula Magna Gismondi:

14:00 Welcome by the Dean of Department of Biology Prof. Antonella Canini

14:05 Lina Ghibelli

Dep. of Biology, University Tor Vergata, Rome, Italy

Cambiamento di paradigma nelle terapie antitumorali: verso un approccio generale, efficace e sicuro? (Change of paradigm in antitumor therapies: towards a general, safe and effective approach?)

14:10 Ferdinando Vicentini Orgnani

Mediating cancer views from lab and clinics to public conscience: the point of view of a film-maker

14:15 Lina Ghibelli

Dep. of Biology, University Tor Vergata, Rome, Italy

Biologic overview on tumor transformation, progression, therapy

14:30 Albrecht Reichle

Dep. of Internal Medicine III, Haematology & Oncology, University Hospital, Regensburg, Germany

Anakoinosis: Communicative Reprogramming of Tumor Systems - for Rescuing from Chemorefractory Neoplasia

15:00 Christopher Gerner

Dep. of Analytical Chemistry, University of Vienna, Austria

Tumor-stroma interactions investigated by proteomics and metabolomics

15:30 Francesco Lo-Coco and Maria Teresa Voso

Dep. of Biomedicine and Prevention, University Tor Vergata, Rome, Italy

Epigenetic treatment of myeloid tumors

16:00 Art meets Science Exhibition (with coffee)

Mario Pieroni (ZERYNTHIA) and Dora Stiefelmeier (RAM radioartemobile): developing a side view of illness through art. In the foyer artists' billboards & how primary school pupils see anti-cancer research: an exposition of future protagonists

Chairs: Lina Ghibelli, Albrecht Reichle

www.anakoinosis.org

16:45 Sebastian Klobuch

Dep. of Internal Medicine III, Haematology & Oncology, University Hospital of Regensburg, Regensburg, Germany

Anakoinosis: clinical trials on AML

17:00 Michael Rechenmacher

Dep. of Internal Medicine III, Haematology & Oncology, University Hospital of Regensburg, Regensburg, Germany

Anakoinosis inducing therapy for rescuing patients with cachexia -first data on metastatic melanoma

17:15 Emanuele Bruni and Milena De Nicola

Dep. of Biology, University Tor Vergata, Rome, Italy

Low doses of DNA damaging agents differentiate tumor cells: mechanisms and therapeutic strategies

17:40 Alessio Papi

Dep. of Biological, Geological, and Environmental Sciences, (BiGea), University of Bologna, Bologna, Italy

PPARgamma and RXR ligands disrupt the inflammatory cross-talk in the hypoxic breast cancer stem cells Niche

18:00 Patrizia Filetici

Institute of Molecular Biology and Pathology, CNR, Rome

Epigenetic and acetylation: from budding yeast to human cancer

18:15 José A Pariente and Ignacio Bejarano

Dep. of Physiology, Neuroimmunophysiology and Chrononutrition Research Group, University of Extremadura, Badajoz, Spain

Melatonin and tumor cells: apoptosis, Ca²⁺ and epigenetic modulation

March 8, 2016

Aula Seminari Dipartimento di Biologia

9:00 Albrecht Reichle

Dep. of Internal Medicine III, Haematology & Oncology, University Hospital of Regensburg, Germany

What does anakoinosis accomplish? Induction of anakoinosis in biology and tumor therapy

9:30 Lina Ghibelli

Dep. of Biology, University Tor Vergata, Rome, Italy

Anakoinosis: curing cancer patients by restoring the right epigenetic asset to reactivate senescence

10:00 Antonella Ragnini

Dep. of Biology, University Tor Vergata, Rome, Italy

Combined genomic strategies to enhance farnesyltransferase inhibitor anti-proliferative activity in cancer cells

10:20 Short communications

10:45 Coffee break

11:15-12:30 Round table

Chairs: Lina Ghibelli, Albrecht Reichle, Clara Nervi, Pier Giorgio Petronini, Antonio Procopio, Guy Haegeman

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coffee breaks offered by



University of Roma Tor Vergata

Macroarea Scienze, via Ricerca Scientifica, 1

March 7, 14:00 Aula Magna Gismondi

March 8, 9:00 Aula Seminari, Dep. of Biology

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AIM OF THE MEETING

The ancient Greek term "anakoinosis", means "communication"; induction of anakoinosis in tumors aims at establishing novel communicative behavior of tumor tissues or between tumor tissue and hosting organism by re-modulating gene expression. Similar to reprogramming somatic cells to induced pluripotent stem cells, tumor tissues may be therapeutically reprogrammed so that differentiation, senescence or apoptosis of the tumor cells is accessible even in heavily pre-treated and resistant tumors.

Anakoinosis with its communication redirecting intension is thus the opposite of classic targeted therapies, which aim at interrupting tumor-promoting pathways or eliminating single cell compartments with maximal tolerable doses.

The use of re-modulating active drugs in resistant metastatic neoplasias of quite different histologic origin unclosed the option for interfering with important communication rules within tumor tissues, for integrating palliative care into the trajectory of cancer care, and for identifying the procedure as generally applicable approach in chemorefractory tumors and hematologic malignancies.

The aim of this meeting is to communicate the clinical data on therapies inducing anakoinosis, and discuss the molecular basis of communication processes among cellular compartments in the tumor, which are still elusive, requiring cooperative efforts between different specialists to improve knowledge and clinical results.

We hope that this meeting will help also establish a positive "anakoinosis" between clinicians and experimental biologists, as well as between scientists and general public, which might be helped in understanding that cancer can be fought via modalities that are relatively well tolerated, efficacious and, via drug repurposing, less expensive for the patient and the community than multiple current approaches.

We particularly thank Anticancer Fund for patronizing the first Meeting on Anakoinosis in Roma.