

1st Meeting of the International Society of Cancer Metabolism (ISCAM)

5th Meeting of the International Society for Proton Dynamics in Cancer (ISPD)

CANCER METABOLISM: MECHANISMS, CONSEQUENCES AND THERAPEUTIC OPPORTUNITIES

Congress center of the Slovak Academy of Sciences, Smolenice castle near Bratislava, Slovakia

October 8 - 11, 2014

Program

October 8 (Wednesday)

14:00-17:30 Arrival and registration

17:30-17:45 Invitation

17:45-18:30 Opening lecture:

Angela Otto: *Warburg effect(s): Life and work of Otto Warburg*

19:00-22:00 Welcome dinner

October 9 (Thursday)

Session 1:

Pathways and regulators of cancer metabolism

Chairman: **Robert Gillies**

09:00-10:45 Invited talks (35 min including discussion)

Nicholas Denko: *Hypoxic regulation of glutamine metabolism through HIF1 and SIAH2 supports lipid synthesis that is necessary for tumor growth*

David Grahame Hardie: *AMPK: a key regulator of cellular energy homeostasis, but also a tumor suppressor?*

Eyal Gottlieb: *Alternating nutritional sources of cancer*

10:45-11:15 Break for coffee and cake

11:15-12:30 Talks selected from the abstracts (25 min including discussion)

Cyril Corbet: *Metabolic adaptation of tumor cells under chronic acidosis: A shift towards reductive glutamine metabolism driven by the SIRT1/HIF2 α axis*

Silvia Lemma: *Lactate uptake through MCT-1 shuttle promotes oxidative phosphorylation in osteoclasts and offers as a promising target in osteolytic bone metastases*

Kevin Hardonniere: *Benzo[a]pyrene promotes ATP inhibitor Factor 1-mediated metabolic reprogramming leading to survival and migration in F258 cells*

12:30-13:30 Lunch

Session 2:

Cancer metabolism, pH regulation and mechanisms of cancer progression

Chairman: **Christian Stock**

13:45-15:30 Invited talks (35 min including discussion)

Anna Haeger: *Imaging cancer invasion and experimental therapy response: How to overcome resistance niches*

Eliska Svastova: *CA IX - a multitasking component of the metastatic cascade*

Angelo De Milito: *Acidosis and autophagy: a malignant interplay with therapeutic implications*

15:30-16:00 Break for coffee and cake

16:00-17:15 Talks selected from the abstracts (25 min including discussion)

Susie Qian Tan: Effect of pantoprazole to enhance activity of docetaxel against human tumor xenografts by inhibiting autophagy

Nathalie Meo-Evoli: V-ATPase, a master effector of E2F1-mediated lysosomal trafficking, mTORC1 activation and autophagy

Shigekuni Hosogi: Cytosolic chloride ion is a key factor in lysosomal acidification and function of autophagy in human gastric cancer cells

17:30-18:30 ISPDC/ISCAM General assembly

18:45-19:45 Dinner

20:00-21:30 Wine tasting

21:30-22:30 ISCAM board meeting

October 10 (Friday)

Session 3:

Signaling between tumor microenvironment and cancer cells

Chairman: **Nicolas Denko**

09:00-10:45 Invited talks (35 min including discussion)

Pierre Sonveaux: *Lactate dehydrogenase B promotes autophagy-dependent tumor cell proliferation*

Clemens Schmitt: *Metabolic implications of cancer cell senescence and their utilization for conceptually novel cancer therapies*

Maria Letizia Taddei: *Role of cancer associated fibroblasts in the control of acidity and metabolism of prostate cancer cells*

10:45-11:15 Break for coffee and cake

11:15-12:05 Talks selected from the abstracts (25 min including discussion)

Sofia Avnet: Acidic microenvironment reprograms mesenchymal stromal cells to a metastasis-promoting phenotype through the activation of an inflammatory pathway

Lucia Csaderova: New aspects of the regulation of function of tumor-associated carbonic anhydrase IX

12:10-13:10 Lunch

Session 4:

Proton dynamics in cancer

Chairman: **Jacques Poyusségur**

13:30-15:15 Invited talks (35 min including discussion)

Jacques Pouysségur: *Targeting pHi control and bioenergetics in rapidly growing hypoxic tumours*

Pawel Swietach: *Intracellular carbonic anhydrase activity sensitizes cancer cell pH-signaling to dynamic changes in CO₂ partial pressure*

Christian Stock: *How NHE1 takes a hand in different steps of the metastatic cascade*

15:15-15:45 Break for coffee and cake

15:45-16:10 Invited talk (35 min including discussion)

Stine Falsig Pedersen: *pH regulatory transporters in control of breast cancer cell growth and survival*

16:10-17:25 Talks selected from the abstracts (25 min including discussion)

Laurent Counillon: *Capturing intracellular pH dynamics by coupling its molecular mechanisms within a fully tractable mathematical model*

Joachim Deitmer: *Metabolic membrane transport networks in glycolytic and tumor tissue*

Holger M. Becker: *Hypoxia-induced carbonic anhydrase IX facilitates lactate transport by non-catalytic interaction*

Session 5:

Targeting cancer metabolism and pH regulation

Chairman: **Sofia Avnet**

17:30-18:05 Invited talk (35 min including discussion)

Robert Gillies: *Modulation of tumor acidosis to enhance immunotherapy*

18:05-19:20 Poster viewing and discussion

19:30-24:00 Barbecue and folk music/dancing

ISCAM award for the best abstract/poster

October 11 (Saturday)

09:00-10:10 Invited talks (35 min including discussion)

Thomas Kafka: *Potassium Ascorbate (KAsc): A phase I/IIa study of a novel approach to enhance buffer therapy and improve cancer cure*

Stefano Fais: *A nonmainstream approach against cancer and the role of tumor acidity*

10:10-10:40 Break for coffee and cake

10:40-11:30 Talks selected from the abstracts (25 min including discussion)

Francesca Perut: *Carbonic anhydrase IX inhibitors as effective therapeutic tools for osteosarcoma*

Katsuyuki Kusuzaki: *Intraoperative photodynamic theragnostics with acridine orange in musculoskeletal sarcomas*

11:30-11:40 Conclusion and perspectives

11:40-11:50 **Sofia Avnet:** *Announcement of the next ISCAM meeting*

12:00 Departure (Lunch packets)