

COPENHAGEN 2022

VIII workshop on Nitric Oxide and Cancer

Special focus: **Metabolism and Aging**

8-10 June, 2022



June 8th – Room 5.S.A-C

8:00-9:00 Arrival and registration

9:00-9:10 Welcome
[Giuseppe Filomeni and ISNOC executive committee](#)

9:10-9:15 Opening Session
[Jesper Fisker](#)
Director, Danish Cancer Society Research Center

9:15-10:10 **Lifetime Achievement Award**
[Prof. Jonathan Stamler](#)
The Harrington Discovery Institute, University Hospitals Cleveland Medical Center, Cleveland (OH, USA)

Keynote Lecture – **S-nitrosylation: mechanisms and effects on metabolism and tissue pathophysiology**

Introduction of Awardee: Moran Benhar

10:15-10:45 Coffee break with Poster Session

SESSION 1: S-nitrosylation in cancer development and treatment

Chairs: *Giuseppe Filomeni and Moran Benhar*

- 10:45-11:05 [Salvatore Rizza](#)
Danish Cancer Society Research Center, Copenhagen (Denmark)
S-nitrosylation of FAK1 sustains cancer resistance to anoikis
- 11:05-11:25 [Stephanie Plenchette](#)
Laboratoire d'Immunologie et Immunothérapie des cancers, Dijon (France)
Nitric oxide and proinflammatory cytokines: role of S-nitrosylation in the antitumor effects
- 11:25-11:45 [Elena Papaleo](#)
Danish Cancer Society Research Center, Copenhagen (Denmark)
Signaling of S-nitrosylation in cancer: from -omics to structures
- 11:45-12:05 [Fabiola Sánchez](#)
Universidad Austral de Chile, Valdivia, Chile
Signaling mechanisms regulated by S-nitrosylation in the endothelium and their contribution to tumor cell adhesion and extravasation during metastasis
- 12:05-13:20 Lunch

SESSION 2: Cancer metabolism, from prediction to detection and druggability

Chairs: *Józef Dulak and Elena Papaleo*

- 13:20-13:40 [Karen Vousden](#)
The Francis Crick Institute, London (United Kingdom)
The role of ROS in controlling pancreas cancer progression
- 13:40-14:00 [Thomas Sauter](#)
University of Luxembourg, Belvaux (Luxembourg)
Contextualization of metabolic network models and their applications to cancer biology
- 14:00-14:20 [Kevin Ryan](#)
Cancer Research UK Beatson Institute, Glasgow (United Kingdom)
Connecting autophagy and inflammation to regulate programmed cell death
- 14:20-14:40 [Simone Cardaci](#)
Ospedale San Raffaele IRCCS, Milan (Italy)
Harnessing metabolic dependencies in cancer and inflammation
- 14:40-15:10 Coffee break with **Poster Session**
- 15.10-16.10 **Women in Science**
Karen Vousden (Chief Scientist at CRUK) will give an inspiring overview of her career
- 30 minutes will be dedicated to reflect and discuss with Workshop attendees

SESSION 3: Nitric oxide and redox signaling in cancer

Chairs: *Khosrow Kashfi and Amadea Seabra*

- 16:10-16:30 [Hugo Monteiro](#)
Universidade Federal São Paulo, São Paulo (Brazil)
Interactions of nitric oxide and reactive oxygen species in the development of colon cancer, breast cancer and melanoma
- 16:30-16:50 [Moran Benhar](#)
Technion Israel Institute of Technology, Haifa (Israel)
Reactive sulfur species and redox regulation of cell death
- 16:50-17:10 [Elias Arnér](#)
Karolinska Institutet, Stockholm (Sweden)
Roles of the thioredoxin system in cancer cell signalling
- 17:10-17:30 [Józef Dulak](#)
Jagiellonian University, Kraków (Poland)
Redox signaling and microRNAs in stem cells differentiation and cancer
- 17:30 **Free time in Copenhagen**
- 19:30 **ISNOC Dinner and after dinner**

June 9th – Room 5.S.A-C

8:30-9:00 Coffee and fast breakfast

SESSION 4: Nitric Oxide, tumor microenvironment and immune response

Chairs: *Stephanie Plenchette-Colas and Jordi Muntané*

9:00-9:20 [David Wink](#)
National Institute of Health, Bethesda (MD, USA)
Spatial mapping the NOS2 COX2 interaction with the immune system.

9:20-9:40 [Sharon Glynn](#)
National University of Ireland Galway, Galway (Ireland)
Unravelling the role of human endogenous retrovirus-K in nitric oxide promotion of cancer progression

9:40-10:00 [Douglas Thomas](#)
University of Illinois at Chicago (IL, USA)
Nitric oxide is a master regulator of the cellular methylome in cancer

10:00-10:20 [Daniel McVicar](#)
National Cancer Institute, Bethesda (MD, USA)
Mechanisms of NO-mediated metabolic reprogramming of macrophages

10:20-10:40 Coffee break with Poster Session

SESSION 5: Metabolic targets and effects of nitric oxide

Chairs: *David Wink and Ayelet Erez*

10:40-11:00 [Sruti Shiva](#)
University of Pittsburgh, Pittsburgh (PA, USA)
Myoglobin regulates cancer cell mitochondrial function and metabolism

11:00-11:20 [Jordi Muntané](#)
Institute of Biomedicine of Seville (IBiS), Seville (Spain)
The induction of peroxynitrite generation by Sorafenib plays a relevant role during mitochondrial dysfunction in liver cancer cells

11:20-11:40 [John Corbett](#)
Medical College of Wisconsin, Milwaukee (WI, USA)
Beta-cell selective antiviral activities of cytokines and nitric oxide

12:00-12:15 **Short talk:** Selected poster for oral presentation

12:15-12:30 **Short talk:** Selected poster for oral presentation

12:30-13:30 Lunch

SESSION 6: Cellular stress and aging

Chairs: *Korsow Kashfi and Perwez Hussain*

13:30-13:50 [Lene Juel Rasmussen](#)
Center for Healthy Aging, University of Copenhagen (Denmark)
Metabolic control of DNA repair in age-related diseases

13:50-14:10 [Simon Bekker Jensen](#)
Center for Healthy Aging, University of Copenhagen (Denmark)
Oxidative stress responses in metabolism and aging

14:10-14:30 [Piergiorgio Mastroberardino](#)
Erasmus University Medical Center, Rotterdam (Netherlands)
Genome instability, metabolic reprogramming, and redox homeostasis control in health and disease

14:30-14:50 [Matthias Carlstöm](#)
Karolinska Institutet, Stockholm (Sweden)
The effects of dietary inorganic nitrate on cardio-metabolic health and oxidative stress during aging

14:50-15:10 Coffee break

15:10-16:00 **Poster session**

SESSION 7: Nitric oxide/metabolism interplay in cancer onset and progression

Chairs: *Ben Bonavida and Hugo Monteiro*

16:00-16:20 [Ayelet Erez](#)
Weizmann Institute of Science, Rehovot (Israel)
Nitric oxide metabolism in cancer

16:20-16:40 [Marie Celeste Simon](#)
University of Pennsylvania Perelman School of Medicine (PA, USA)
Arginine metabolism in liver and kidney cancers

16:40-17:00 [Perwez Hussain](#)
National Institute of Health, Bethesda, MD, USA
Nitric oxide reprograms the metabolic network in pancreatic cancer progression and disease aggressiveness

17:00-17:15 **Short talk:** Selected poster for oral presentation

17:15-17:30 **Short talk:** Selected poster for oral presentation

17:30 **Free time in Copenhagen**

19:30 **Gala Dinner**

June 10th – Room 5.S.A-C

8:30-9:00 Coffee and fast breakfast

SESSION 8: Propagation mechanisms and effects of nitric oxide

Chairs: *Salvatore Rizza and Sharon Glynn*

9:00-9:20 [Jack Lancaster](#)

University of Pittsburgh, Pittsburgh (PA, USA)

The dynamics of NO between and inside Cells: Where and why?

9:20-9:40 [Dennis Stuehr](#)

Lerner Research Institute, The Cleveland Clinic, Cleveland, (OH, USA)

Surprising relationships between heme, nitric oxide, and cancer

9:40-10:00 [Katrina Miranda](#)

University of Arizona, Tucson (AZ, USA)

Nitrogen oxide-releasing NSAIDs as anticancer agents

10:00-10:20 [Lucia Morbidelli](#)

University of Siena, Siena (Italy)

Role of the gasotransmitters NO and H₂S on endothelial dysfunction in aging, metabolic disorders and cancer

10:30-11:00 Coffee break

SESSION 9: Nitric Oxide-based drug design: new opportunities for cancer treatment

Chairs: *Valentina Rapozzi and Ben Bonavida*

11:00-11:20 [Salvo Sortino](#)

University of Catania, Catania (Italy)

Nitric oxide releasers activatable with green and red light

11:20-11:40 [Niharika Nath](#)

New York Institute of Technology (NY, USA)

The current landscape of NO releasing compounds against cancer

11.40-12:00 [Amedea Seabra](#)

Universidade Federal do ABC, Campinas (Brazil)

NO- and H₂S-releasing gasotransmitter platform: A crosstalk signaling pathway in the treatment of cancer and beyond

12:00-12:15 **Short talk:** Selected poster for oral presentation

12:15-12:30 **Short talk:** Selected poster for oral presentation

12:20-12:50 **Concluding remarks and Award ceremony**

12:50 **Fast lunch and regards**