

# COPENHAGEN 2022

## VIII workshop on Nitric Oxide and Cancer

Special focus: **Metabolism and Aging**

8-10 June, 2022



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June 8<sup>th</sup> – Room 5.S.A-C

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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**

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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**

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June 9<sup>th</sup> – Room 5.S.A-C

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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 [Mattias Carlström](#)  
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)  
**Modulating amino acid cross-talks with the host for cancer diagnosis and therapy**

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**

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June 10<sup>th</sup> – Room 5.S.A-C

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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 H<sub>2</sub>S 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 H<sub>2</sub>S-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**