Therapeutic Applications of Nitric Oxide in Cancer and Inflammatory-related Disorders
Accademia dei Fisiocritici (Siena),
October 4th-5th, 2018

Day 1: Thursday, October 4th

10-10:30am  Greetings from the Authorities
Francesco Frati, Rector of University of Siena
Cosima Baldari, Director of Dept. Life Sciences
Alessandro Mugelli, SIF President
Carlo Riccardi, Salvatore Cuzzocrea, Gruppo di lavoro SIF Infiammazione

Opening address: Lucia Morbidelli
General introduction of the meeting: Benjamin Bonavida

I. Nitric Oxide and Cancer

Session 1

Nitric Oxide roles in tumor progression and regression
Chairs: Jordi Muntane, Marina Ziche

10:30-11:00am
John Wallace – University of Calgary
Plenary lecture: Potential for Chemoprevention with Nitric Oxide and Hydrogen Sulfide-Releasing Drugs

11:00-11:15am
Salvatore Rizza – Danish Cancer Society Research Center
The Roles of the Denitrosylase GSNOR in Tumor Progression

11:15-11:30am
Khosrow Kashfi – University of New York School of Medicine
Nitric oxide and cancer: To inhibit or to induce iNOS – That is the Question?

11:30-11:45am
Karim Zuhra – Sapienza University of Rome
H₂S Metabolism in Colon Cancer Cells Exposed to Hypoxia

11:45-12:15pm Coffee Break
Session 2

Nitric Oxide and Cancer Cell Death

Chairs: Sharon Glynn, Cristiana Perrotta

12:15-12:30pm
Moran Benhar – Technion-Israel Institute of Technology
Characterization of Nitroso-Redox Stress-Induced Cancer Cell Death

12:30-12:45pm
Arnold Stern – New York University School of Medicine
Pro-Apoptotic Effects of S-Nitrosothiols O-Chloro and M-Chloro S-Nitroso-Aryl-Amides in Human Breast Cancer Cell Lines

12:45-1:00pm
Valerio Ciccone – University of Siena
Antitumor Effect of a Metal Nonoate Through Angiogenesis Impairment

1:00-1:15pm
Lorenzo Cinci – University of Florence
New NO-Releasing Doxorubicins as Targeted Therapy Against Chemoresistance in Castration-Resistant Prostate Cancer: In Vitro and in Vivo Evaluations

1:15 -1:45pm General discussion (Chairs: Jordi Muntane, Marina Ziche, Sharon Glynn, Cristiana Perrotta)

1:30-2:30pm Lunch

Session 3

Nitric Oxide and therapy (I)

Chairs: Carlo Riccardi, Stefan Chlopicki

2:30-2:45pm
Greta Varchi – University of Bologna
Light Guided Production of Nitric Oxide and Singlet Oxygen for the Multi-modal treatment of cancer

2:45-3:00pm
Claudiu T Supuran – University of Florence
Carbonic Anhydrase Inhibitor – NO Donor Hybrids and Their Pharmacologic Applications

3:00-3:15pm
Massimo Venturelli - University of Verona
The Role of Nitric Oxide on Vascular Dysfunction During Aging and Alzheimer’s Disease

3:15-3:45pm Coffee break

Session 4

Nitric Oxide and Therapy (II)

Chairs: Valentina Rapozzi, Andreas Papapetropolous

3:45-4:00pm
Stavroula Baritaki – University of Crete
Nitric Oxide (NO): A Multifaceted Target for Reversal of Cancer Cell Pleiotropic Properties by NO-modulating Therapies
4:00-4:15pm
Cristiana Perrotta - Università degli Studi di Milano

Nitric Oxide in Cancer Resistance to Cisplatin: Tumor Associated Macrophages as Key Players
4:15-4:30pm
Joanna Kopecka – University of Torino

Nitric Oxide Re-Instates Doxorubicin Cytotoxic and Pro-Immunogenic Effects in Refractory Breast Cancer
4:30-4:45pm
Alma Martelli – University of Pisa

Anti-Cancer Activities of Erucin a H₂S-donor Isothiocyanate from Eruca Sativa Mill.: Is H₂S the Real Player?
4:45-5:00pm
Valentina Citi – University of Pisa

Anticancer Effect of a Novel H₂S-Hybrid Molecule on Human Breast Adenocarcinoma (MFC-7) and Human Breast Epithelial (MCF-10A) Cell Lines

5:00-5:30pm  General discussion (Chairs: Carlo Riccardi, Stefan Chlopicki, Valentina Rapozzi, Andreas Papapetropolous)

8:00pm  Dinner in Contrada

Day 2: Friday, October 5th

II. Nitric Oxide and Inflammatory Related Disorders
Session 5
Nitric oxide and cardiovascular diseases
Chairs: Maria Foti, Giuseppe Cirino

9:15-9:30am
Perwez Hussain – National Cancer Institute, Bethesda, Maryland

Nitric oxide (NO•)/kynurenine/AHR signaling enhances disease aggressiveness in pancreatic cancer
9:30-9:45am
Miriam Durante – University of Siena

In vitro Assessment of NitDox Toxicity Towards Vasculature
9:45-10:00am
Asghar Ghasemi - Shahid Beheshti University of Medical Sciences

Effects of long-term nitrate supplementation on gene expressions of GLUT2, GLUT4 and glucokinase in male obese type 2 diabetic rats
10:00-10:15am
Zahra Bahadoran - Shahid Beheshti University of Medical Sciences
Serum Nitric Oxide Metabolites and The Incidence of Metabolic Syndrome and Its Phenotypes: A Population-Based Prospective Study

10:15-10:45am Coffee break

Session 6
Nitric oxide and Non-Cardiovascular Diseases
Chairs: Lucia Morbidelli, Vincenzo Calderone

10:45-11:00am Andreas Papapetropolous - National and Kapodistrian University of Athens Hydrogen Sulfide as a Signaling Molecule in The Cardiovascular System: Actions and Interactions with NO.
11:00-11:15am Josef Dulak - Jagiellonian University Heme Oxygenase-1 In Duchenne Muscular Dystrophy: Interaction with Nitric Oxide Synthase Pathway in Satellite Cells Differentiation
11:15-11:30am Stefan Chlopicki - Jagiellonian University Pharmacology of Hepatoselective Nitric Oxide - Donors in NAFLD in Mice
11:30-11:45am Giuseppe Filomeni - Danish Cancer Society Research Center The Regulation of GSNOR Expression Discloses the Role of S-nitrosylation in Aging and Disease

12:00-12:30pm Coffee break & snacks

Session 7
Nitric Oxide and Therapeutic Applications
Chairs: Benjamin Bonavida, Salvatore Cuzzocrea

12:30-12:45pm Chiara Platania – University of Catania Therapeutic Potential of Nitric Oxide Modulation in Ocular Diseases: A Focus on Novel NO-Releasing Molecules
12:45-1:00pm Rosana Pinto – University of Lisboa Emerging Nitric Oxide-releasing Porous Materials for Therapeutic Applications
1:00-1:15pm Jan Scicinski - Avicenna Therapeutics, Inc Cancer and Beyond: Discovery and Development of NO-releasing Therapeutics

1:15-1:45pm General discussion and concluding remarks (all chairs of sessions 1-7)