











#### **SECOND INTERNATIONAL CONFERENCE**

# Therapeutic Applications of Nitric Oxide in Cancer and Inflammatory-related Diseases



Institute of Biomedicine of Seville March 3-5, 2022, Seville, Spain



Organizing Committee:

Jordi Muntané, PhD

Associate Professor

Department of Medical Physiology and Biophysics

University of Seville

Lucia Morbidelli, Ph.D

Professor of Pharmacology

Department of Life Sciences

University of Siena





Research Professor

Department of Microbiology, Immunology, and Molecular Genetics

University of California

#### Web page International Society for Nitric Oxide and Cancer:

https://isnoc.org/

#### Secretariat:

**Reyes Belinchon** 

Viajes Atlanta (congresssvq@atlanta.es)

#### Main sponsors:

International Society of Nitric Oxide and Cancer (ISNOC)
Institute of Biomedicine of Seville (IBiS)
Società Italiana di Farmacologia (SIF)
Elsevier/AP Publishing Company

Registration and abstract submission at the link <a href="https://isnoc.org/ii-therapeutic-application-of-no-in-cancer-and-inflammatory-diseases/">https://isnoc.org/ii-therapeutic-application-of-no-in-cancer-and-inflammatory-diseases/</a>

The meeting program, abstracts and proceedings of the meetings will be published in a special book by Academic Press.

The congress will be hybrid on-site/virtual meeting.

#### **REGISTRATION FEES**

- -Senior and postdoctoral researchers, on-site attendance: 100 Euros
- -Predoctoral fellows, on-site attendance: 50 Euros
- -Online attendance: 50 Euros
- -Speakers: free

#### INFORMATION FOR ABSTRACT SUBMISSION

DEADLINE: February 1, 2022

Please email your abstract to congresssvq@atlanta.es

Abstract instructions: No longer than 1 page DIN A4

- Letter: Times New Roman 12
- Margins: Sup/Low 1.5 cm; Left/Right: 2.5 cm
- Title: Low case (except first letter), bold and centered
- Authors and affiliation: Peter Selleck<sup>1</sup>, Andrew Corvin<sup>1,2</sup>.... (The presenter must be underlined)
- Affiliation: Department, Institute, Country
- Structured abstract including: Objectives/Hypothesis, Introduction, Aims, Experimental design, Results, Conclusions

#### PRIZES FOR YOUNG INVESTIGATORS

- -Three awards are established by ISNOC. All three prizes receive the same amount (100 Euros), free registration to the meeting, and one-year ISNOC membership for 2022. When sending an abstract please indicate if you want to present a poster or oral communications. In both cases the presenter can be considered for prizes. The Organizing Committee will select the candidates.
- -Two additional awards (in the form of reimbursement) are reserved by SIF to SIF young investigators presenting an abstract (see SIF call)

#### **PROGRAM**

#### Day 1: March 3, 2022

#### 16:00-16:15

#### Welcome and opening the meeting from the authorities

Rafael Fernández Chacón (Scientific Director of the Institute of Biomedicine of Seville) Benjamin Bonavida (International Society of Nitric Oxide and Cancer) Jordi Muntané (Local Organizing Committee, Institute of Biomedicine of Seville)

## OPENING SESSION I KEYNOTE LECTURE 1

Moderator: Dr. Benjamin Bonavida

#### 16:15-17:00

Dennis J Stuehr (Department of Inflammation and Immunity, Lerner Research Institute, The Cleveland Clinic, Cleveland, USA)

Nitric oxide synthase enzymology in the 20 years after the Nobel Prize

<u>17:00-17:30</u> *Coffee break* 

#### **SESSION 2**

#### DEVELOPMENT OF NITRIC OXIDE DONORS IN TARGETING DISEASE MANAGEMENT

Moderator: Dr. Lucia Morbidelli

#### 17:30-18:00

Amedea B Seabra (Nanomedicine Research Unit, Federal University of ABC, Santo André, Brazil)

Nanomedicine allied to nitric oxide donors in cancer: Where are we and where can we go?

#### 18:00-18:30

Chang-Ming Dong-School of Chemistry and Chemical Engineering, Shanghai Jiao Tong University, Shanghai, China

Photoresponsive polypeptide nanomedicines: from rational design to efficient NO gas delivery and cancer therapy

#### 18:30-19:00

Arduino A. Mangoni (University of Sassari, Sassari, Italy)

Targeting dimethylarginine dimethylaminohydrolase to suppress vasculogenic mimicry in cancer: current evidence and future directions

<u>19:00-19:30</u> *Coffee break* 

#### Young investigators session

19:30-20:00

Two young oral communications (10+5 min) (To be selected)

21:00-23:00 *Dinner* 

#### Day 2: March 4, 2022

#### **SESSION 3**

#### NITRIC OXIDE DISTURBANCES IN METABOLIC AND CARDIOVASCULAR DISORDERS

Moderator: Dr. Sharon Glynn

#### 8:00-8:30

Sruti Shiva (University of Pittsburgh, Pittsburgh, USA)

Regulation of mitochondria and metabolism by NO and myoglobin in cancer and inflammation

#### 8:30-9:00

Alia Shatanawi (School of Medicine, The University of Jordan, Amman, Jordan)

The role of the arginase-Nitric Oxide pathway in vascular dysfunction and inflammation

#### 9:00-9:30

Jean-Luc Balligand (Institut de Recherche Experimentale et Clinique (IREC) and Cliniques Universitaires Saint-Luc, Université Catholique de Louvain, Brussels, Belgium)

Nitric oxide signaling in cardiovascular health and disease

<u>9:30-10:00</u> *Coffee break* 

#### Young investigators session

10:00-10:30

Two young oral communications (10+5 min) (To be selected)

#### **SESSION 4**

#### NITRIC OXIDE IN HYPERTENSIVE-RELATED DISEASES

Moderator: Dr. Stéphanie Plenchette

#### 10:30-11:00

Claudiu T. Supuran (University of Florence, Florence, Italy)

Advances in the discovery of novel agents for the treatment of glaucoma

#### 11:00-11:30

Alma Martelli (University of Pisa, Pisa, Italy)

The value of sulfur nutraceuticals for the cardiovascular inflamm-ageing: possible role of hydrogen sulfide

11:30-12:00

María M. Miranda (Universidad CEU Cardenal Herrera, Alfara del Patriarca, Valencia, Spain) **Nitric oxide roles in retinal pathologies** 

<u>12:00-12:30</u> *Coffee break* 

#### Young investigators session

12:30-13:00

Two young oral communications (10+5 min) (To be selected)

13:00-15:00 *Lunch* 

# SESSION 5 NITRIC OXIDE AND NEURODEGENERATION

Moderator: Dr. Giuseppe Filomeni

<u>15:00-15:30</u>

João Laranjinha (Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal

Modulation of neurovascular coupling in the brain by nitric oxide and cognitive enhancement

15:30-16:00

Michael T Heneka (German Center for Neurodegenerative Diseases, Bonn, Germany)
Inflammation in neurodegenerative disease: Role of iNOS and nitric oxide

16:00-16:30

Joern Steinert (Division of Physiology, Pharmacology and Neuroscience. Faculty of Medicine and Health Sciences, University of Nottingham, UK)

NO-mediated neuroinflammatory pathways as treatment targets in neurodegeneration

<u>16:30-17:00</u> *Coffee break* 

#### Young investigators session

17:00-17:30

Two young oral communications (10+5 min) (To be selected)

# SESSION 6 ACUTE AND CHRONIC INFLAMMATORY-RELATED DISEASES

Moderator: Dr. Khosrow Kashfi

Lisa A Ridnour (National Cancer Institute, Frederick, USA)

NOS and COX Inhibition Augments Immune Polarization and Improves Survival in Radiotherapy: Are NSAIDs and NOS inhibitors a New Approach to Immunotherapy?

18:00-18:30

Chiara Riganti (Università degli Studi di Torino, Torino, Italy)

Nitric oxide-releasing gemcitabine: a new weapon against pancreatic cancer?

18:30-19:00

Daniel W McVicar (National Cancer Institute, Frederick, USA)

Nitric Oxide in Macrophage Immunometabolism: Hiding in Plain Sight

19:00-19:30 *Coffee break* 

Young investigators session

19:30-20:00

Two young oral communications (10+5 min) (To be selected)

21:00-23:00 *Dinner* 

#### Day 3: March 5, 2022

#### **SESSION 7**

# PROTECTIVE EFFECTS OF NUTRACEUTICALS: FOCUS ON NITRIC OXIDE AND OTHER GASOTRANSMITTERS

Moderator: Dr. Valentina Rapozzi

8:30-9:00

Alex Dyson (Bloomsbury Institute of Intensive Care Medicine, University College London, London, UK)

Selenium and hydrogen selenide: essential micronutrient and the fourth gasotransmitter?

9:00-9:30

José M Palma (Food and Agriculture, Department of Biochemistry, Estación Experimental del Zaidín, CSIC, Granada, Spain)

Does nitric oxide potentiate the anti-tumoral activity of pepper fruit extracts?

#### 9:30-10:00

Cyrille Boyer, Australian Centre for NanoMedicine (ACN) and Centre for Advanced Macromolecular Design (CAMD), School of Chemical Engineering, University of New South Wales, Sydney, Australia)

More than skin deep: using polymers to facilitate topical delivery of nitric oxide

#### <u>10:00-10:30</u> *Coffee break*

#### Young investigators session

10:30-11:00

Two young oral communications (10+5 min) (To be selected)

## SESSION 8 KEYNOTE LECTURE 2

Moderator: Dr. Jordi Muntané

#### 11:00-11:45

David A Wink (National Cancer Institute, Frederick, USA)

NO-based therapeutic intervention in cancer

#### 11:45-12:30

**Round Table** 

#### NO-based therapeutic strategies in diseases

Dennis J Stuehr

Amedea B Seabra

Sruti Shiva

Vincenzo Calderone

João Laranjinha

Lisa A Ridnour

Alex Dyson

David A Wink

#### **CLOSING SESSION 8**

#### 12:30-13:00

#### **Concluding remarks and Rewards by the Organizing Committee**

Jordi Muntané

Lucia Morbidelli

Ben Bonavida

13:00-15:00: **Lunch**