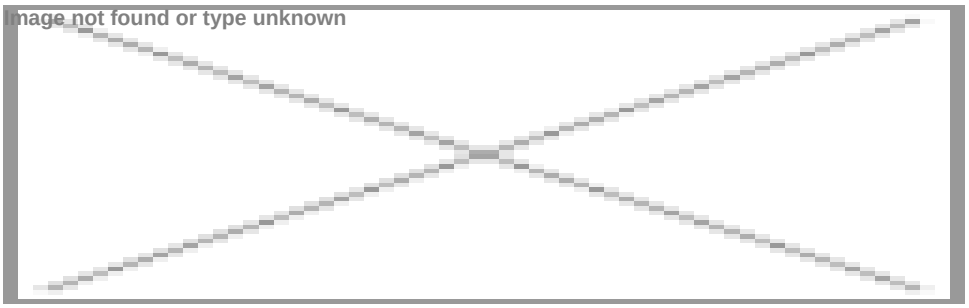
SFRRI 2018 Lisbon



19th SFRRI Biennial Meeting [1]

4-7 June 2018, Lisbon, Portugal

Congress Center in Lisbon [2] • Praça das Indústrias 1, Lisbon, Portugal

Committees [3] • Chair: João Laranjinha – SFRRE and SPB/PT

Summary of the Meeting:

The 19th biennial meeting for the Society for Free Radical Research International (SFRRI) has been held at the Lisbon Conference Centre, nearby the Tagus River from where many of the great Portuguese explorers embarked on their sea voyages of discovery.

Lisbon, Europe's Westernmost and sunniest capital, is able to transmit a feeling of community across borders and across continents. SFRRI 2018 has been a universal event in a universal city.

This meeting has been a prominent forum for the latest advances in the fundamentals of Redox Biology and Free Radical Research and its Clinical and Biotech/Pharmaceutical applications. Also, recent (bio)technological developments and analytical strategies to tackle the role of redox Biology in health and disease, aiming at preventing, cure and delaying disease have been discussed.

The SFRRI 2018 started on Monday, June 4 and ended on Thursday, June 7. The scientific program included daily parallel thematic sessions and plenary lectures, as well as poster presentations, scientific societies meetings and commercial exhibitions and workshops, organized in an open space fashion to stimulate networking and discussions during the four days.

The final program, including session and oral presentation titles and speakers, is available at the following links: Scientific Programme [4] - Detailed Scientific Programme [5].

‘Crosstalk between oxidative stress and inflammation in cerebrovascular disease [6]’

Tuesday, 5 June 2018

Topics:

Oxidative stress, inflammation and endothelial dysfunction in cerebrovascular disease: role of NADPH oxidase, Nrf2 and NF-?B signalling pathways, and related therapeutic intervention

Proposer:

Saverio Francesco Retta (Univ. Torino, Italy)

Chairs:

Saverio Francesco Retta (Univ. Torino, Italy)

Kathy Griendling (Emory Univ., Georgia, USA)

Speakers:

Chris Sobey (La Trobe Univ., Melbourne, Australia)
‘Inflammation and immune mechanisms of brain damage after stroke category: Vascular diseases involving oxidative stress, inflammation and immunity’

Kathy Griendling (Emory Univ., USA)
‘Nox4, Poldip2 and vascular function’

Masuko Ushio-Fukai (Medical College of Georgia, Augusta, USA)
‘ROS-induced ROS release orchestrated by Nox4, Nox2 and mitochondria in VEGF signaling and angiogenesis’

Saverio Francesco Retta (Univ. Torino, Italy)
‘Altered redox homeostasis and signaling in Cerebral Cavernous Malformation disease: towards a complex but unifying pathogenic mechanism and therapeutic implications’

Summary:

Cerebrovascular diseases are the second leading cause of death and the main cause of adult long-term disability in developed countries, posing as significant unmet clinical needs, as there are limited therapeutic options for many of these disorders. Accumulating evidence demonstrates that an interplay between oxidative stress and inflammation contributes significantly to the onset, progression and severity of various cerebrovascular diseases, raising the possibility that the underlying mechanisms are interconnected. NADPH oxidases, originally identified in immune cells as playing an important role in the inflammatory response, is now recognized to play a major role in oxidative stress, vascular inflammation and endothelial dysfunction that underlie cardiovascular disease onset and development, suggesting a pivotal role in mediating the crosstalk between oxidative stress and inflammation

involved blood-brain barrier endothelial dysfunction. On the other hand, there is a growing body of evidence that NADPH oxidases have extensive functional crosstalk with nuclear factor (erythroidderived 2)-like 2 (Nrf2) and nuclear factor-?B (NF-?B), the two key transcription factors that regulate cellular responses to oxidative stress and inflammation respectively, thus depicting an intricate signaling network. A more comprehensive understanding of the complex molecular landscape underlying the functional crosstalk among these three major redox regulatory proteins in multiple aspects of vascular physiology and pathophysiology should enable the development of novel compounds and selective drugs with endothelial barrier-enhancing and anti-inflammatory effects to prevent or treat cerebrovascular diseases. This symposium will highlight current knowledge and future prospects on the characterization of redox-sensitive mechanisms that mediate cellular response to oxidative stress and inflammation in blood-brain barrier endothelial dysfunction and cerebrovascular diseases, including the role of NADPH oxidase, Nrf2 and NF-?B signalling pathways, and related therapeutic intervention.

Abstracts

All abstracts submitted and accepted under SFRRI 2018 are available online in Free Radical Biology and Medicine – Volume 120, Supplement 1 [7]

Lingua
Italiano

Links
[1] https://sfrri2018lisbon.organideia.pt/en/
[2] https://sfrri2018lisbon.organideia.pt/en/venue/
[3] https://sfrri2018lisbon.organideia.pt/en/committees/
[4] https://sfrri2018lisbon.organideia.pt/en/scientific-programme-2/
[5] https://sfrri2018lisbon.organideia.pt/wp-content/uploads/2018/06/sfrri_programme_final.pdf
[6] http://www.ccmitalia.unito.it/images/Meetings/2018_SFRRI_meeting/sfrri%20lisboa%202018_symposium%20accept
[7] https://www.sciencedirect.com/journal/free-radical-biology-and-medicine/vol/120/suppl/S1