ISAC XXI Meeting 2020

International Society of Arterial Chemoreception in collaboration with the Portuguese Society of Pharmacology

Mal(adaptive) responses of peripheral chemoreceptors: O₂ dependent and independent mechanisms

Jun 29-Jul 2, 2020, Lisbon, PORTUGAL

29th June

13.00 - Registration and coffee

13:45 -14:00 Opening session – Emilia Monteiro (ISAC President, NOVA Medical School, Portugal)

14:00 – 14:30 Celebrating 40 years of carotid body research in Portugal – Alexandre Ribeiro (Portugal)

14:30- 16.00 Plenary sessions

14.30-15.15 Emerging molecular and physiological perspectives in chronic intermittent hypoxia - Nanduri Prabhakar (Director of the Institute for Integrative Physiology and the Center for Systems Biology of Oxygen Sensing at the University of Chicago, USA)

15.15 - 16.00 Adaptive responses to chronic intermittent hypoxia: contributions from the European Sleep Apnea Cohort (ESADA) - Maria Bonsignore (University of Palermo, Italy)

16:00 – 16:30 Coffee-break

16.30 - 18.30 Symposium- Chronic intermittent hypoxia and systemic arterial hypertension

Chair: Davi Moraes

16.30 - 17.00 New molecular players in hypertension induced by Chronic Intermittent Hypoxia: evidence from animal models - Emilia Monteiro (NOVA Medical School, Portugal)

17.00 - 17.30 Chronic Intermittent Hypoxia a trigger for hypertension development: Mechanisms and implications for hypertension management – Jean Louis Pepin
(Service EFCR/Pneumologie, CHU de Grenoble site Nord - Hôpital Albert Michallon, Grenoble, France)

17.30  (4 oral presentations)
18.30-19.30 Poster presentations with wine and cheese (chaired by Angela Gomez-Niño)

30th June

9.00-12.00 Symposium - Chronic intermittent hypoxia and metabolic dysfunction
Chair: Claudia Cavadas
9.00 - 9.30 Sex-specific metabolic responses to intermittent hypoxia in mice – Vincent Joseph (Université Laval, Quebec, Canada)
9.30 - 10.00 Intermittent hypoxia and lipid metabolism – Seva Polotsky (Johns Hopkins Bayview Medical Center, Baltimore, USA)

10.00-10.30 Coffee

10.30 -12.00 (6 oral presentations)

12.00- 13.30 Lunch

13.30-15.30 Symposium- Chronic intermittent hypoxia and cancer
Chair: Tiago Oliveira de Sá
13.30-14.00 Evidence from animal models- Ana Obeso (University of Valladolid, Spain)
14.00- 14.30 Sleep Apnoea and Cancer: An Illicit and Unpredictable Relationship? – David Gozal (School of Medicine, University of Missouri, USA)
14.30-15.30 (4 oral presentations)

15.30-16.30 Poster presentations and coffee (chaired by Andrea Porzionatto)
16.30-17.30: Scientific speed dating: networking and benchmarking - organized by Maria Guarino (ciTechCare, Leiria, Portugal) and by David Burns (University of Cork, Ireland)

17:30- 20:00 Lisbon downtown guided tour

1st July

9.00-10.45 Symposium - (Mal)adaptive responses to chronic sustained hypoxia: heart failure, COPD and altitude
Chair: Rodrigo del Río
9.00 - 9.30 Chemoreflexes in Heart Failure: “Same Same But Different” – Harold Schultz
(University of Nebraska Medical Center, USA)

9.30-10.15 3 oral presentations

10.15-10.45 Coffee

10.45 -12.30
Chair: António Morais
10.45 - 11.15 Endothelin-1 in the carotid body: from genetic to physiopathology - Rodrigo Iturriaga (Pontifical Catholic University of Chile, Chile)
11.15 - 11.45 New insights in COPD: data from clinical studies (Portuguese Society of Pneumology guest)
12.45-12.30 3 oral presentations

12.30-14.00 Lunch

14.00-16.30 Symposium- O2 independent mechanisms of chemoreceptor function
Chair: Isabel Rocha
14.00 - 14.30 Neurogenic hypertension and autonomic function - Julian Paton (The University of Auckland, New Zealand)
14.30 - 15.00 Role of carotid bodies in the management of salt overload - Eduardo Colombari (São Paulo State University, Brasil)
15.00 – 15.30 Neuronal mechanisms involving the carotid body in asthma – Richard Wilson (University of Calgary, Canada)
15.30 - 16.30 (4 oral presentations)

16.30 - 17.30 Poster presentations and coffee (chaired by Trevor Day)
17.30 - 18.30 Symposium Career Roundtable (organized by Silvia V. Conde)
18.30 ISAC Assembly Meeting

2nd July

9.00-11.00 Symposium - Chemoreceptor function through the life span and sex differences
Chair: Aida Bairam
9.00 - 9.30 – Comorbidities of hypoxia in neonates - Estelle Gauda (The Hospital For Sick Children, Toronto, Canada)
9.30-10.00 – Sex-specific effects of early life stress on the hypoxic chemoreflex: new insights into the origins of sleep apnea – Richard Kinkead (Université Laval, Quebec, Canada)
10.00-11.00 4 oral presentations
11.00-11.30 Coffee

11.30 - 13.00 Symposium Mechanisms of O₂ and CO₂ sensing and transduction
Chair: Jose Lopez-Lopez
11:30 - 12:00 O₂ sensing in the carotid body – José Lopez Barneo (Instituto de Biomedicina de Sevilla, Spain)
12.00-13.00 4 oral presentations

13.00 – 14.30 Lunch

14.30-16.00 Symposium- Mechanisms of O₂ and CO₂ sensing and transduction
Chair: Mark Evans
14.30 – 15:00 Cell-cell interactions in the carotid body: Evidence for a tripartite synapse– Colin Nurse (McMaster University, Hamilton, Canada)
15.00-16.00 (4 oral presentations)

16.00 – 16.30 Coffee

16.30-18.00 New insights in CO₂ control of breathing
Chair: Andrew Holmes
16.30 - 17.00 Gut microbiota and ventilatory response to hypercapnia – Ken O’Halloran (University College Cork, Ireland)
17.00 - 18.00 4 oral presentations
18.30 Reception and Gala Dinner

3rd of July
Free Lisbon Museums pass - optative

Scientific Committee
Emilia C. Monteiro
Silvia V. Conde
Estelle Gauda
Rodrigo Iturriaga
Rodrigo del Rio

Machiko Shirata Grants to PhD and Post-doc Students
Estelle Gauda

DeCastro-Heymans-Neil-Award Committee
Ana Obeso
Camilo Di Giulio
Richard Wilson

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