



## ISAC XXI Meeting 2020

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

### *Mal(adaptive) responses of peripheral chemoreceptors: O<sub>2</sub> dependent and independent mechanisms*

**Jun 29-Jul 2, 2020, Lisbon, PORTUGAL**

**29<sup>th</sup> 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)

### **30<sup>th</sup> 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

### **1<sup>st</sup> July**

#### **9.00-10.45 Symposium - (Mal)adaptive responses to chronic sustained hypoxia: heart failure, COPD and altitude**

Chair: *Rodrigo del Rio*

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- **O<sub>2</sub> 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

## **2<sup>nd</sup> 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 O<sub>2</sub> and CO<sub>2</sub> sensing and transduction**

Chair: Jose Lopez-Lopez

11:30 - 12:00 O<sub>2</sub> 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 O<sub>2</sub> and CO<sub>2</sub> 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 CO<sub>2</sub> 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

**3<sup>rd</sup> 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

**Organizing Committee**

Emilia C. Monteiro

Silvia V. Conde

Fátima Martins

Bernardete F. Melo

Joana Sacramento

Nuno Coelho  
Maria João Correia

**Administrative Office**

Teresa Bastos Lopes  
Sofia Ramos

**Website and social media support**

George Kim

**Sponsors**

