

ERS Research Seminar

Targeting the detrimental effects of sleep disturbances and disorders – towards personalized treatment in respiratory diseases

24 – 25 January 2019; Dublin, Ireland

Day 1 – Thursday, 24 January 2019

08:00-08:15 Registration

08.15-08.30 Welcome

Session 1: Sleep in Health and Disease

Chairs: I. Almendros and J. Jun

08:30-09:15 Respiratory mechanics and ventilation during sleep (M. Morrell – UK)

09:15-10:00 The detrimental effects of abnormal sleep duration on glucose metabolism (S. Reutrakul – USA)

10:00-10:30 *Coffee break*

10:30-11:15 The circadian clock and regulation of immunity (H. Oster – Germany)

11:15-12:00 Pathophysiological responses to Sleep fragmentation (A. Gileles-Hillel – IL)

12:00-12:30 *Panel Discussion*

12:30-13:15 *Lunch*

13:15-14:00 Thematic Poster session

Chairs: R. Tamisier and S. Reutrakul

- TP_01: Hypertension in obstructive sleep apnea is associated with increased carbonic anhydrase activity – *Dr. Ding Zou*
- TP_02: Targeting the detrimental effects of sleep disturbances and disorders - towards personalized treatment in respiratory diseases – *Prof. Dr. Theodoros Vassilakopoulos*
- TP_03: The impact of obstructive sleep apnea on metabolic impairments in non-obese and obese subjects – *Dr. Masako Ueyama*
- TP_04: Decreased levels of anti-aging klotho in obstructive sleep apnoea – *Dr. Andras Bikov*
- TP_05: Features of circadian changes of biomarkers concentration in patients with obstructive sleep apnea syndrome – *Dr. Iana Andreieva*
- TP_06: Intermittent hypoxia activates the IL-1 β signaling pathway in primary murine macrophages – *Dr. Susan Fitzpatrick*

Session 2: New insights into the deleterious effects of Intermittent Hypoxia

Chairs: J.L Pepin and W. McNicholas

14:00-14:45 Cell culture and animal models of intermittent hypoxia – benefits and limitations (R. Farre – Spain)

14:45-15:30 Human models of IH: what can they add? (R. Tamisier – France)

15:30-16:00 *Coffee break*

- 16:00-16:45 Adaptive and maladaptive responses to IH: where is the threshold? (I. Almendros – Spain)
- 16:45-17:30 New insights into the deleterious effects of IH in OSA (J. Jun – USA)
- 17:30-18:00 *Panel Discussion*
- 19:30-22:00 *Participants' Dinner*

Day 2 – Friday, 25 January 2019

Session 3: Targeting the detrimental effects of sleep disturbances – The Future

Chairs: S. Ryan and R. Farre

- 08:30-09:15 The role of carbon dioxide in immunity and inflammation-a forgotten dimension (E. Cummins – Ireland)
- 09:15-10:00 Circadian regulation of inflammation and immunity (D. Ray – UK)
- 10:00-10:30 *Coffee break*
- 10:30-11:15 How to translate findings from experimental models into clinical studies in OSA (J.L. Pepin – France)
- 11:15-12:00 Targeting the detrimental effects of sleep disturbances in OSA: CPAP and what else? (M. Sanchez de la Torre - Spain)
- 12:00-12:30 *Panel Discussion*
- 12:30-13:00 Summing up and Conclusion
- 13:00-14:00 *Lunch and Departure*