

**Control of Breathing during Sleep and Sleep Apnea** (Thursday 8.20-10.00)

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- 8.20-8.40 • Input from the carotid body chemoreceptors determines the sensitivity of the medullary chemoreceptors. Gregory M. Blain, University of Wisconsin-Madison (J. Dempsey).
- 8.40-9.00 • Protein kinase A modulates the transmission of the respiratory drive to hypoglossal motoneurons in vivo. Marq-Andre DuBord, University of Toronto (R. Horner).
- 9.00-9.20 • On the Role of Pedunculopontine Tegmental Neurons in the Modulation of the REM sleep State and its Respiratory Phenotype. Kevin Grace, University of Toronto (R. Horner).
- 9.20-9.40 • State-dependent modulation of respiratory activity by perfusion of neuropeptides into the pre-Botzinger Complex of the adult rat in-vivo. Gaspard Montandon, University of Toronto (R. Horner)
- 9.40-10.00 • Neurotrophic factors may play a role in development of the carotid body (CB). Eric W. Kostuk, Johns Hopkins University (M. Shirahata).

**Impact of Sleep Apnea on the CNS** (Thursday 10.30-11.10)

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- 10.30-10.50 • Dynamic changes in brain oxygen partial pressure during obstructive apneas. Isaac Almendros, CIBER Enfermedades Respiratorias (J Montserrat).
- 10.50-11.10 • Changes in Cerebellum and Cortical Grey Matter Volume in Obstructive Sleep Apnea. Melinda L. Jackson, Austin Health (M. Morrell).

**Obesity, Genetics, and Sleep Apnea** (Thursday 11.10-11.50)

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- 11.10-11.30 • Gene Networks and Biological Pathways in Bone Marrow-Derived Very Small Embryonic Stem Cells (VSEL) from Mice Following Intermittent Hypoxia (IH). Sina Gharib, University of Washington (V. Kapur).
- 11.30-11.50 • Contribution of genetic risk variants associated with obesity to risk of obstructive sleep apnea. Hafdis Helgadóttir, deCODE Genetics (T. Gislason).

**Sleep Apnea and Cardiovascular Disease** (Thursday 1.00-3.50)

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- 1.00-1.30 • **Mark Gladwin, University of Pittsburgh – NO and nitrates**
- 1.30-1.50 • Xanthine oxidase inhibition preserves endothelial function during chronic intermittent hypoxia in rats. John M. Dopp, University of Wisconsin-Madison (B. Morgan).
- 1.50-2.10 • Role of Leukotriene B4 in Intermittent Hypoxia-Induced Atherogenesis. Richard C. Li, University of Chicago (D. Gozal).
- 2.10-2.30 • Modulation of NF- $\kappa$ B Signaling during Intermittent Hypoxia by Nitric Oxide. John F. Garvey, St. Vincent's University Hospital (W. McNicholas).
- 2.50-3.10 • Excessive Daytime Sleepiness Does Not Predict Sleep-Disordered Breathing in Patients with Atrial Fibrillation. Felipe N. Albuquerque, Mayo Clinic (V. Somers).
- 3.10-3.30 • Obstructive Sleep Apnea and Masked Hypertension: Dependent and Independent Blood Pressure Effects on Arterial Stiffness in Men. Luciano F. Drager, Heart Institute University of Sao Paulo (G. Lorenzi-Filho).
- 3.30-3.50 • Sleep Disordered Breathing and Pro-thrombotic Biomarkers: Cross-Sectional Results of the Cleveland Family Study. Reena Mehra, Case Western Reserve University (S. Redline).

**Sleep Apnea and Metabolic Dysregulation** (Friday 8.00-10.30)

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- 8.00-8.30 • **Bret Goodpaster, University of Pittsburgh – Insulin Resistance in Obesity, Diabetes, and Aging**
- 8.30-8.50 • Intermittent hypoxia (IH) causes insulin resistance and impaired insulin secretion in C57BL/6J mice. E. John Lee, University of Pittsburgh (C. O'Donnell).
- 8.50-9.10 • Effect of acute graded hypoxia on fat and cholesterol metabolism in mice. Jonathan Jun, Johns Hopkins University (V. Polotsky).
- 9.10-9.30 • Impact of Untreated Obstructive Sleep Apnea on Glucose Control in Type 2 Diabetes. Renee S. Aronsohn, University of Chicago (E. Tasali).
- 9.30-9.50 • Experimental reduction of sleep duration or quality is associated with impaired insulin signaling in the adipocyte. Josiane Broussard, University of Chicago (E. Tasali).
- 9.50-10.10 • Electrocardiogram-based sleep spectrogram measures of sleep stability and glucose disposal in sleep disordered breathing. Melanie S. Pogach, Beth Israel Deaconess Medical Center (R. Thomas).
- 10.10-10.30 • Effects of Sleep Fragmentation on Glucose Metabolism in Normal Subjects. Katherine A. Stamatakis, Washington University (N. Punjabi).

**Sleep Apnea in Comorbid Conditions and Special Populations** (Friday 10.50-12.40)

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- 1.50-11.20 • **Dan Buysse, University of Pittsburgh – Sleep apnea and co-morbid insomnia**
- 11.20-11.40 • Restless Legs Symptoms in Obstructive Sleep Apnea: The ISAC Cohort. Bryndis Benediktsdottir, University of Iceland (A. Pack).
- 11.40-12.00 • Sleep-disordered breathing is associated with fatigue rather than excessive sleepiness in multiple sclerosis. Marta Kaminska, McGill University Health Center (R.J. Kimoff).
- 12.00-12.20 • Sleep disordered breathing and sleep fragmentation in COPD. Christian Reinke, Johns Hopkins University (H. Schneider).
- 12.20-12.40 • Standard Anthropometric Measurements Predict Sleep-Disordered Breathing in Active NFL Players. Tom Rice, University of Pittsburgh (P. Strollo).

**Obesity and Pathogenesis of Sleep Apnea** (Friday 1.40-5.00)

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- 1.40-2.00 • Peri-pharyngeal Tissue Movement and Morphology with Tracheal Traction. Jason Amatoury, Ludwig Engel Centre for Respiratory Research (K. Kairaitis).
- 2.00-2.20 • Genioglossus motoneuron activity: firing behavior of single motor units in quiet breathing, CO<sub>2</sub> and CPAP in humans. Julian P. Saboisky, Brigham and Women's Hospital (A. Malhotra).
- 2.20-2.40 • Genioglossus activity in obese adolescents with and without obstructive sleep apnea syndrome during sleep. Jingtao Huang, The Children's Hospital of Philadelphia (C. Marcus).
- 2.40-3.00 • Effect of Neuromuscular Activity on Upper Airway Mechanics during Sleep. Abdul Ghani Sankri-Tarbichi, Wayne State University (S. Badr).
- 3.20-3.40 • Lung Volume, tracheal traction and upper airway function. Amit V. Patel, New York University School of Medicine (D. Rapoport).
- 3.40-4.00 • Weight loss improves upper airway mechanical loads and neuromuscular responses during sleep. Susheel P. Patil, Johns Hopkins University (A. Schwartz).
- 4.00-4.20 • A Technique for Measuring Ventilatory Control Stability (Loop Gain) During Sleep. Andrew Wellman, Brigham and Women's Hospital (D. White).
- 4.20-4.40 • Nocturnal Rostral Fluid Shift: A Unifying mechanism for the Pathogenesis of Obstructive and Central Sleep Apnea in Heart Failure. Dai Yumino, University of Toronto (T.D. Bradley).
- 4.40-5.00 • Identifications of upper airway cranial facial risk factors. Luqi Chi, University of Pennsylvania (R. Schwab).

**Free Radical Generation and Inflammation in Sleep Apnea** (Saturday 8.00-9.50)

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- 8.00-8.30 • **Bruce Freeman/Bruce Pitt, University of Pittsburgh – The World of Free Radicals**
- 8.30-8.50 • The effect of obstructive sleep apnea and obesity on interleukin-6 and leptin levels: The Icelandic Sleep Apnea Cohort. Erna S. Arnardottir, Lansdpitali University Hospital/University of Pennsylvania (A. Pack).
- 8.50-9.10 • Recurrent airway obstructions enhance the migration and endothelium-adherence of bone marrow mesenchymal stem cells. Alba Carreras, University of Barcelona-IDIBAPS (R. Farre).
- 9.10-9.30 • Altered neurotransmitter synthesis during intermittent hypoxia: Role of reactive oxygen species-dependent post-translational protein modifications. Gayatri Raghuraman, University of Chicago (G. Kumar).
- 9.30-9.50 • Reactive Oxygen Species dependent Ca<sup>2+</sup> Signaling mediates enhanced exocytosis by Intermittent Hypoxia. Dangjai Souvannakitti, University of Chicago (N. Prabhakar).

**Diagnosis and Treatment of Sleep Apnea** (Saturday 10.10-11.50)

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- 10.10-10.30 • Marked reduction in obstructive sleep apnea severity in slow wave sleep. Peter Catcheside, Repatriation Hospital (R.D. McEvoy).
- 10.30-10.50 • Do cognitive perceptions influence CPAP Use? Amy M. Sawyer, University of Pennsylvania (T. Weaver).
- 10.50-11.10 • Should mixed apnea be classified with obstructive sleep apnea? Motoo Yamauchi, Nara Medical University (K. Strohl).
- 11.10-11.30 • Diagnostic accuracy of a single-channel portable monitor in the diagnosis of obstructive apnea in primary care. Keith KH Wong, Woolcock Institute of Medicine Research and Royal Prince Albert Hospital (R. Grunstein and B. Yee).
- 11.30-11.50 • The Effect of a High Flow Open Nasal Cannula System on Obstructive Sleep Apnea in Children. Brian M. McGinley, Johns Hopkins University (H. Schneider).