

**Dr. Patrick J. Hanly**  
**Curriculum Vitae**

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## CURRICULUM VITAE

Name Patrick Joseph Hanly

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University of Calgary  
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Calgary, Alberta T2N 4N1  
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Fax: (403) 283-6151

Date and place of Birth April 16, 1954; Cork, Ireland

Citizenship Canadian and Irish

### DEGREES

MB, BCh, BAO	1978	National University of Ireland
MRCPI	1980	Membership of the Royal College of Physicians of Ireland
LMCC	1983	Medical Council of Canada
FRCPC	1984	Fellowship of the Royal College of Physicians of Canada in the Specialities of Internal Medicine
		AND
	1985	Respiratory Medicine
Cert. Special	1988	Critical Care Medicine, Competence Univ. of Manitoba
MD (thesis)	1989	National University of Ireland
ABSM	1997	American Board of Sleep Medicine

## **HONOURS**

- 1972 – 1978 Honours in medical school courses: Anatomy, Biochemistry, Physiology, Pathology, Microbiology, Medicine, Psychiatry (National University of Ireland)
- 1986 - 1987 Manitoba Lung Association Research Fellowship
- 1986 Canadian Critical Care Society award for “Best original research by a young investigator” for presentation entitled “Effect of indomethacin on gas exchange in patients with extensive bacterial pneumonia.”
- 1991 Advancement to Fellowship (FCCP) of American College of Chest Physicians

## **MEDICAL EDUCATION**

### **Undergraduate**

- 1972 - 78 Faculty of Medicine, University College Dublin (National University of Ireland)

### **Post-graduate**

- 1978 - 1979 Internship, University College Dublin, Ireland
- 1979 - 1982 Medical Residency, University College Dublin, Ireland
- 1982 - 1983 Clinical Fellowship in Respiratory Medicine, University of Manitoba
- 1983 - 1984 Senior Medical Resident, University of Manitoba  
1984 – 1987 Research Fellowship in Respiratory Medicine, University of Manitoba
- 1987 - 1988 Clinical Fellowship in Critical Care Medicine, University of Manitoba

## **EMPLOYMENT**

### **Academic Appointments**

1988 - 1998                      Assistant Professor of Medicine, University of Toronto

1998 - 2004                      Associate Professor of Medicine, University of Toronto

1993 - 2000                      Associate Director, Centre for Sleep and  
Chronobiology, University of Toronto

2004 - Present                      Professor of Medicine, University of Calgary

### **Hospital Appointments**

1988 - 1998                      Active Staff, Department of Medicine  
The Wellesley Hospital, Toronto

1988 - 1995                      Consultant in Respiratory and Critical Care  
Medicine  
Princess Margaret Hospital, Toronto

1989 - 1998                      Director, Sleep Laboratory  
The Wellesley Hospital, Toronto

1995 - 1998                      Acting Head, Division of Respiratory and Critical  
Care Medicine  
The Wellesley Hospital, Toronto

1998 -                      2004                      Active Staff, Department of Medicine  
St. Michael's Hospital, Toronto

1999 -                      2004                      Director, Sleep Laboratory  
St. Michael's Hospital, Toronto

1999 - 2000                      Acting Head, Division of Respiratory  
St. Michael's Hospital, Toronto

2000 – 2004                      Head, Division of Respiratory  
St. Michael's Hospital, Toronto

2004 - Present                      Director, Sleep Centre  
Foothills Medical Centre, Calgary, Alberta

2004 - Present                      Active staff, Division of Respiratory  
Calgary Health Region, Alberta

## TEACHING ACTIVITIES

### Undergraduate Students

*(See Teaching Dossier for details)*

1981 - 1982	Medical Tutor, Royal College of Surgeons, Dublin, Ireland
1986 - 1987	Clinical Tutor, School of Respiratory Technology, University of Manitoba
1988 - 1989	Clinical Instructor, Introduction to Clinical Methods, University of Toronto
1988 - 1993	Clinical Instructor, Introduction to Respirology, University of Toronto
1990 - 1998	Tutor, Clerkship Seminar Series in Internal Medicine, University of Toronto
1993 - 1994	Clinical Instructor, Art and Science of Clinical Medicine (Year II), University of Toronto
1994 - 1995	Clinical Instructor, Art and Science of Clinical Medicine (Year I), University of Toronto
1993	Supervisor, Sleep Research Society Essay Contest for High School Students. First place awarded to Melanie Wong for essay entitled "Pathogenesis and Treatment of Cheyne-Stokes respiration in patients with Congestive Heart Failure"
1993	Supervisor, Medical Student (D. Ford) Elective for research paper entitled "Sleep apnea and aortic dissection" (Can Respir J, 2(1): 69-73, 1995)
1994/95	Supervisor, Summer Student Research project entitled "Right ventricular hypertrophy in patients with obstructive sleep apnea"
1996	Supervisor, Summer Student Research project entitled "Respiration, sleep and daytime function in adults with cystic fibrosis"
1997	Supervisor, Summer Student Research Project entitled "Natural history of mild, REM-dependant obstructive sleep apnea"
	Supervisor, Summer Student Research Project entitled "Effect of obstructive sleep apnea on left ventricular mass"

- Supervisor, Summer Student Research Project entitled “Sleep disruption in critically ill patients in the ICU”
- Supervisor, Summer Student Research Project entitled “Impact of the ICU environment on sleep in healthy subjects”
- 2000 Co-supervisor, Summer Student Research Project entitled “Effect of intermittent hypoxia on vascular smooth muscle”
- Supervisor, Summer Student Research Project entitled “Pathogenesis of sleep disruption in the ICU”
- Supervisor, Summer Student Research Project entitled “Effect of Kidney Transplantation on the Prevalence and Pathogenesis of Sleep Apnea”
- Supervisor, Summer Student Research Project entitled “Improvement of Cheyne-Stokes respiration following BiVentricular Pacing for Congestive Heart Failure”
- Supervisor, Summer Student Research Project entitled “Daytime symptoms in patients with REM dependant obstructive sleep apnea”
- Gold Star Award for excellence in small group teaching  
Respirology Course, University of Calgary
- 2008 Supervisor, Summer Student Research Project entitled “Prevalence of sleep apnea in patients with chronic kidney disease”
- 2008 Supervisor, Summer Student Research Project entitled “Sleep apnea in patients with transient ischemic attack and minor stroke”
- 2009 Supervisor, Summer Student Research Project entitled “Prevalence of sleep apnea in patients with chronic kidney disease”
- 2010 Supervisor, Summer Student Research Project entitled “Prevalence of sleep apnea in patients with chronic kidney disease”
- 2012 Supervisor, Summer Student Research Project entitled “Prevalence of restless legs syndrome in patient with chronic kidney disease”
- 2015 Supervisor, Summer Student Research Project entitled “Treatment of Obstructive Sleep Apnea in Patients with Chronic Kidney Disease – Pilot Study to assess the Feasibility of using CPAP”

2015 Supervisor, Summer Student Research Project entitled “Treatment of Obstructive Sleep Apnea in Patients with Chronic Kidney Disease”

### **Postgraduate Students**

1989 - 1994 Co-ordinator, Critical Care teaching, The Wellesley Hospital

1994 - 1995 Tutor, “Basics in Respiriology” course for Pulmonary Fellows, University of Toronto

1994 - 1995 Co-ordinator, Core Seminar Series on Respiratory Sleep disorders for Pulmonary Fellows, University of Toronto

1993 Supervisor, Medical Resident’s (J.M. Stal) research paper entitled, “Gastro-bronchial fistula: an unusual complication of esophagectomy” (Ann Thorac Surg 58:886-7, 1994)

1994 - 1995 Supervisor, Pulmonary Fellow (A. Soicher) for extended clinical training in respiratory sleep medicine

1995 - 1996 Supervisor, Pulmonary Fellow’s (K. Fraser) research project on sleep, respiration and daytime function in adult cystic fibrosis patients with severe lung disease

1995 - 1996 Supervisor, Medical Resident’s (J. Giustino) research project on the comparison of limited and comprehensive polysomnography for the diagnosis of obstructive sleep apnea

1995 - 1996 Supervisor, Family Practice Resident’s (S. Kingsley) research project on the spectral analysis of snoring

1996 - 1997 Supervisor, Resident Research Award, Wellesley Central Hospital, “Pulmonary hypertension and cardiac function in adult cystic fibrosis: role of hypoxemia.”

1997 - 1998 Co-supervisor, Medical Resident’s (N. Ferguson) research project on the long-term follow-up of survivors with ARDS

1997 - 1998 Supervisor, Research Fellow (C. O’Connor) for 1 year in the Sleep Laboratory, Wellesley Central Hospital

1997 - 1998 Co-supervisor, Research Fellow (A. Cooper) for 1½ years on the investigation of sleep disruption in critically ill patients on mechanical ventilation

- 1997 - 1998 Co-supervisor, Resident Research Award, Wellesley Central Hospital, "Predictors of mortality in patients with connective tissue disorders in the ICU" (M. Varkul)
- Co-supervisor, Pulmonary Fellow (K. Fraser) for extended clinical training in respiratory sleep medicine
- 1998 - 1999 Supervisor, Pulmonary Fellow's (D. Dancey) research project on sleep quality and daytime sleepiness in adults with cystic fibrosis
- 1998 - 2000 Supervisor, Pulmonary Research Fellow (M. Niroumand) on the impact of obstructive sleep apnea on cardiac function (funded by the Canadian Lung Association)
- 1999 - 2000 Supervisor, Pulmonary Research Fellow (D. Dancey) for extended clinical training in Sleep Medicine (funded by Cameron Gray Fellowship)
- 1999 - 2001 Supervisor, Pulmonary Research Fellow (M. Alfifi) for extended clinical training in Sleep Medicine
- 2000 - 2003 Co-supervisor, Renal Research Fellow (A. Charest) for thesis (Relationship Between Sleep Apnea Syndrome and the Risks of Death in Chronic End Stage Renal Disease Patients Treated by Renal Replacement Therapy) in Masters in Epidemiology
- Co-supervisor, Pulmonary Fellow (Vasanti Shende) for extended clinical training in Sleep Medicine
- 2000 - 2001 Co-supervisor, Pulmonary Fellow (Althea Aquart-Stewart) for 1 month (October 2000) elective in Sleep Medicine
- Co-supervisor, Pulmonary Fellow (C. Lo) for extended clinical training in Sleep Medicine
- 2002 - 2004 Co-supervisor, PhD student (Safraaz Mahamed), Department of Physiology, University of Toronto: "Respiratory Chemoreflex Adaptations"
- 2004 - 2005 Chris Li, MD: "Learning and Memory in Patients with REM dependant Obstructive Sleep Apnea"
- Mentor for Zbigniew Topor, Parker B Frances Fellowship application
- 2006-2007 Co-supervisor, Sleep Fellow (Andrea Loewen MD) clinical training for Sleep Medicine Fellowship, University of Calgary



2008-2009	Co-supervisor, Sleep Fellow (Sachin Pendharkar MD) clinical training for Sleep Medicine Fellowship, University of Calgary
2010-2011	Co-supervisor, Sleep Fellow (Christine Chang MD) clinical training for Sleep Medicine Fellowship, University of Calgary
2012-2015	Co-supervisor, Sleep Fellow (Marcus Povitz MD) clinical training for Sleep Medicine Fellowship, University of Calgary
2017-2019	Co-supervisor, Sleep and Neuromuscular Fellow (Michael Braganza MD) clinical training for Sleep and Neuromuscular Medicine Fellowship, University of Calgary

### **Research Supervisor: Undergraduate Students**

Bachelor of Health Sciences, Honours Thesis (Supervisor)

Wesley Chan, “Prevalence of sleep apnea in patients with Transient Ischemic Attack (TIA) and minor stroke” University of Calgary, 2009

David Nicholl, “The prevalence of sleep apnea in patients with chronic kidney disease and end-stage renal disease” University of Calgary, 2010

Jonathan Lee, “The prevalence of restless legs syndrome in patients with chronic kidney disease” University of Calgary, 2012

Emma Lynch, “Treatment of Obstructive Sleep Apnea in Patients with Chronic Kidney Disease- Pilot Study to assess the Feasibility of using CPAP” University of Calgary, 2015

Ryan Sarkar, “Treatment of Obstructive Sleep Apnea in Patients with Chronic Kidney Disease” University of Calgary, 2015

### **Research Supervisor: Graduate Students**

Masters (Supervisor and Co-supervisor)

Andre Charest, MD “Relationship between sleep apnea syndrome and the risk of death in chronic end-stage renal disease patients treated by renal replacement therapy” Clinical Epidemiology, University of Toronto, 2005

Jaime Beecroft, BSc “Pathogenesis of Sleep Apnea in End-Stage Renal Disease” Dept of Physiology, University of Toronto, 2006

Shiel Patel, BSc

“White Matter Disease in Minor Stroke and TIA Patients with Obstructive Sleep Apnea”, Dept of Neurosciences, University of Calgary, 2009-2011

David Nicholl, BSc

“Obstructive Sleep Apnea treatment with Continuous Positive Airway Pressure Therapy improves Renin Angiotensin System Activity”, Dept of Medical Sciences, University of Calgary, 2010-2012

Mati Pun, BSc

“Effect of Selective and Non-selective Cyclooxygenase Enzyme Inhibition on Arterial Blood Pressure and Cerebral Blood Flow with Exposure to Intermittent Hypoxia in Humans”, Dept of Physiology and Biophysics, University of Calgary, 2012-2013

Ann Zalucky, BSc

“Sustained Hypoxia and the Renin Angiotensin System”, Department of Medical Sciences, University of Calgary, 2012-2014

Alexander Rimke, BSc

“Treatment of obstructive sleep apnea in patients with chronic kidney disease”, University of Calgary, 2017-2019

Andrew Prsa

“Impact of intermittent nocturnal hypoxia on human sleep architecture, cardiovascular and cerebrovascular function”, University of Calgary, 2019-2021

### **Masters (Supervisory Committee member)**

Marcus Povitz, MD

“Prevalence of sleep disordered breathing in obese hypoxemic individuals, and association of adherence to positive airway pressure treatment with long term oxygen utilization in a single centre in Alberta, Canada”, Department of Community Health Sciences, University of Calgary, 2013-2015

### **PhD (Co-supervisor)**

Safraaz Mahammed

“Respiratory Chemoreflex Adaptations” Dept of Physiology, University of Toronto, 2004

Glen Foster

“Effects of Intermittent Hypoxia on Cardiovascular and Cerebrovascular Function: Implications for Obstructive Sleep Apnea”, Dept of Physiology and Biophysics, University of Calgary, 2005-2009

Andrew Beaudin

“Ventilatory Stability in Obstructive Sleep Apnea: Role of Cerebral Blood Flow”, Dept of Physiology and Biophysics, University of Calgary, 2009-2016

**Post-Doctoral trainees (Co-supervisor)**

Julien Brugniaux PhD

“Role of Erythropoietin in Cerebrovascular Regulation and Ventilatory Control in Obstructive Sleep Apnea”. Dept of Physiology and Biophysics, University of Calgary, 2006-2008

Vincent Pialoux PhD

“Role of Oxidative Stress in the Pathogenesis of Obstructive Sleep Apnea”. Dept of Physiology and Biophysics, University of Calgary, 2007-2009

Andrea Loewen MD

“Role of Arousals in the Pathogenesis of Obstructive Sleep Apnea”. Department of Medicine, University of Calgary, 2007-2009

Craig Steinback PhD

“Regulation of Peripheral and Cerebral Blood Flow in Obstructive Sleep Apnea”, 2010-2012

Xavier Waltz PhD

“Effects of Intermittent Hypoxia on the Regulation of Cerebral Blood Flow in Healthy Humans and patients with Obstructive Sleep Apnea: Role of Oxidative Stress”, 2013-2015

Andrew Beaudin PhD

“Cognitive function in a sleep clinic cohort of patients with obstructive sleep apnea”, 2017-2022

**Examiner: For Post Graduate Students at the University of Calgary**

**Masters**

- Shiel Patel, 2011
- David Nichol, 2012
- Ann Zalucky, 2014
- Marcus Povitz, 2015
  
- Alex Rimke, 2019

**PhD**

- Glen Foster, 2009
- Andrew Beaudin, 2016

**External Examiner**

External examiner for PhD thesis submitted by Kerri Louise Melehan, entitled “Obstructive sleep apnea and sexual function in men”, University of Sydney, Australia, 2014

External examiner for PhD thesis submitted by Carissa Ann Hanes, entitled “The provision of obstructive sleep apnea services in community pharmacies and development of professional practice guidelines”, University of Sydney, Australia, 2015

External examiner for PhD thesis submitted by Luke Rowsell, entitled “The Effect of Acute Oral Morphine on Obstructive Sleep Apnea”, Sydney Medical School, University of Sydney, NSW, Australia, 2016

External examiner for PhD thesis submitted by Yasmina Serinel, entitled "Novel methods of treating and assessing hypertension in obstructive sleep apnea", University of Sydney, New South Wales, Australia, 2019

## **PROFESSIONAL ACTIVITIES AND AFFILIATIONS**

### **Reviewer for Medical Journals**

American Journal of Kidney Diseases  
American Journal of Respiratory and Critical Care Medicine  
American Journal of Cardiology  
Canadian Respiratory Journal  
Chest  
Clinical Journal of the American Society of Nephrology  
European Respiratory Journal  
Journal of the American Medical Association  
Journal of Rheumatology  
Journal of Sleep Research  
Kidney International  
Nephrology Dialysis Transplantation  
PLOS ONE  
Sleep  
Sleep and Biological Rhythms  
Sleep Medicine  
Sleep Medicine Reviews  
Thorax

### **Reviewer for Granting Agencies**

British Columbia Lung Association  
Canadian Institutes of Health Research  
Kidney Foundation of Canada  
Ontario Thoracic Society  
Physicians Services Incorporated Foundation

University of Calgary Clinical Research Fund

### **Membership of Editorial Boards**

Sleep 2003-present

### **Membership in Professional Societies**

Alberta Medical and Scientific Society  
American Academy of Sleep Medicine  
American College of Chest Physicians  
Canadian Medical Association  
Canadian Medical Protective Association  
Canadian Sleep Society  
Clinical Teachers Association, University of Toronto  
Canadian Thoracic Society  
Ontario College of Physicians and Surgeons  
Ontario Medical Association  
Ontario Thoracic Society  
Royal College of Physicians and Surgeons of Canada  
Royal College of Physicians of Ireland

### **Reviewer for Medical and Scientific Organizations**

Inspector of Independent Health Facilities (Sleep Laboratories) for College of Physicians and Surgeons of Ontario, 2001-2004

External Reviewer for evaluation of candidate's application for promotion to full Professor, University of British Columbia, 2006

Inspector of Sleep Medicine Facilities (Sleep Laboratories) for College of Physicians and Surgeons of Alberta, 2008

Member, Sleep Review Panel, College of Physicians and Surgeons of Ontario, 2012-2015

Member, Advisory Committee, Sleep Medicine Diagnostics, College of Physicians and Surgeons of Alberta, 2017-present

## **COMMITTEES**

### **Membership in University Committees**

Council of the Faculty of Medicine, University of Toronto, 1989 - 1994

Respirology Undergraduate Curriculum Committee, University of Toronto, 1990 - 1994

Executive Committee, Centre for Sleep and Chronobiology, University of Toronto, 1992 - 2000

Executive Committee, Centre for Sleep Medicine and Circadian Biology, University of Toronto, 2000 - 2004

Protective Lung Ventilation Strategy (PLVS) Safety Committee, University of Toronto, 1995

Program and Education Committee, Division of Respiriology, University of Toronto, 1995 - 2000

Executive Committee, Division of Respiriology, University of Toronto, 2000 - 2004

Ambulatory Clinic Committee to establish an ambulatory clinic at the University of Toronto, 2003

Assessment and Evaluation Committee, Alternative Relationship Plan, University of Calgary, 2005-2006

Pulmonary Executive committee, Division of Respiratory Medicine, University of Calgary, 2012-present

Search and Selection committee for Division Head in Respiratory Medicine, University of Calgary, Dec 2013-April 2014

Search and Selection committee for Division Head in Respiratory Medicine, University of Calgary, September 2016-December 2016

Search and Selection committee for recruitment of an academic respirologist, University of Calgary, Jan 2017-February 2017

### **Membership in Hospital Committees**

Committee for Post-graduate Education in Critical Care, University of Manitoba, Winnipeg, 1987 - 1988

ICU Management Committee, The Wellesley Central Hospital, Toronto, 1988 - 1997

Respiratory Care Committee, The Wellesley Hospital, Toronto, 1989 - 1991

Pharmacy and Therapeutics Committee, The Wellesley Hospital, Toronto, 1989 - 1990

Committee on Post-graduate training in Core Internal Medicine, The Wellesley Hospital, Toronto, 1989 - 1996

Respiratory Management Committee, The Wellesley Central Hospital, Toronto, 1996 - 1997

Respiratory and Medical Services Executive Committee, St. Michael's Hospital, Toronto, 1999 - 2000

Respiratory Care Committee, St. Michael's Hospital, Toronto, 1999 - 2000

Division Heads Committee, St. Michael's Hospital, Toronto, 1999 - 2004

Patient Care model for Critical Care (Sub-committee of ICU Steering Committee), St Michael's Hospital, Toronto, 2000 - 2001

Sleep Physician committee, FMC Sleep Centre, Calgary, 2004 - present

Sleep Centre Management committee, FMC Sleep Centre, Calgary, 2005 – present

### **Membership in Other Committees**

Respiratory Standing Committee, Assistive Devices Program (ADP), Ontario Ministry of Health, 1994 - 1997

Chair, Task Force on establishing criteria for ADP approval of Sleep Laboratories in Ontario, 1994 - 1995

Sleep Studies Parameter Development Task Force, College of Physicians and Surgeons of Ontario, 1994 - 1996

Planning Committee for Ontario Thoracic Society Annual Meeting, 1995 - 1998

Chair, Planning Committee, Better Breathing 1997, (Ontario Thoracic Society), 1996 - 1997

Sleep Medicine Focus Group, The Mitchener Institute for Applied Health Sciences, 1995 - 1996

Ontario Thoracic Society Block Term Grant Committee, 1996 - 2001

Ontario Respiratory Societies Association, CPAP Compliance Committee, 1996 - 1997

Ontario Thoracic Society Education Committee, 1996 - 1997

Colloid Therapy International Advisory Panel, Orlando, Florida, Jan 1998

Sleep Medicine Guidelines Development Task Force, College of Physicians and Surgeons of Ontario, 1999 - 2000

Sleep sub-committee for Respiratory Section of the Ontario Medical association, March 2001

Canadian Thoracic Society Sleep Disordered Breathing Committee, 2004 - 2008

Sleep Apnea 8<sup>th</sup> World Congress, International Scientific Committee, July 2005

Alberta Medical Association, TOP Program, Insomnia Guidelines Committee, September 2005 - 2008

Member, Medical and Scientific Committee, Alberta Medical and Scientific Society, 2006 - present

Canadian Thoracic Society Sleep Disordered Breathing Assembly, 2012 - present

Chair, Scientific Organizing Committee, Canadian Sleep Society Annual Meeting, 2016 – 2017

Member, Clinical Advisory Committee, Respiratory Benefits Program, 2015 – present

## **RESEARCH AWARDS**

### **Operating Grants: Peer reviewed**

**Hanly P** (PI). “Effect of acetazolamide and temazepam on sleep and daytime function in patients with congestive heart failure”. Dean’s Fund, University of Toronto, July 1989 - June 1990. \$10,000

**Hanly P** (PI), Sasson Z. “Effect of nocturnal oxygen therapy on cardiovascular and neuropsychologic function in patients with congestive heart failure”. Physicians Services Incorporated Foundation, July 1990 - June 1993. \$80,000

**Hanly P** (PI), Tullis E. “Doppler-echocardiography, nocturnal hypoxemia, sleep and daytime function in adults with cystic fibrosis”. Canadian Cystic Fibrosis Foundation, May 1993 - April 1994. \$30,300

**Hanly P** (PI), Tullis E. “Doppler-echocardiography, nocturnal hypoxemia, sleep and daytime function in adults with cystic fibrosis”. Ontario Thoracic Society Block Term Grant, June 1993 - April 1994. \$6,000

Stewart T, **Hanly P** (PI). “Sleep in critically ill patients requiring mechanical ventilation”. Ontario Thoracic Society Block Term Grant, March 1997. \$9,450

**Hanly P** (PI). “Sleep in critically ill patients requiring mechanical ventilation”. Ontario Thoracic Society Block Term Grant, October 1997. \$5,364

**Hanly P** (PI). “Time synchronization system for audio-visual monitoring in the ICU”. Ontario Thoracic Society Block Term Grant, January 1999. \$6,420

Cooper A, **Hanly P** (PI). “Sleep disruption in mechanically ventilated patients: identification of reversible sleep disrupting factors”. Canadian Intensive Care Foundation, 1999. \$20,000

**Hanly P** (PI), Cooper A. “Sleep disruption in critically ill, mechanically ventilated patients”. St. Michael’s Hospital Health Science Research Program, 1999. \$49,296



Duffin J, **Hanly P** (Co-investigator). “Respiratory Chemoreflex Adaptations to Hypoxia”. Ontario Thoracic Society, 2001. \$35,000

**Hanly P** (PI). “Role of Patient-Ventilator Dyssynchrony in the Pathogenesis of Sleep Disruption in Critically Ill Patients”. Ontario Thoracic Society Block Term Grant, October 2001. \$3,250

**Hanly P.** (Principal Investigator, St. Michael’s Hospital Site). “Multicentre Randomized Trial of Continuous Positive Airway Pressure for the Treatment of Heart Failure Patients with Central Sleep Apnea (CANPAP)”. Canadian Institutes of Health Research University-Industry Program (grant UI-14909). \$5 million (\$45,000 at St Michael’s Hospital site)

**Hanly P** (PI). “Monitoring Sleep in the ICU: Comparison of Actigraphy and Polysomnography”. Ontario Thoracic Society Block Term Grant, January 2003. \$6,752.59

**Hanly P** (PI), Younes M. “The Role of Mechanical Ventilation in the Pathogenesis of Sleep Disruption in Critically Ill Patients”. Physicians Services Incorporated, July 2003. \$120,000

**Hanly P** (PI), Younes M. “The Role of Mechanical Ventilation in the Pathogenesis of Sleep Disruption in Critically Ill Patients”. Ontario Thoracic Society, July 2003. \$21,000.00

Duffin J, **Hanly P** (Co-investigator), Moe G. “Sources of Dyspnea in Heart Failure”. Heart and Stroke Foundation, March 2004-March 2006. \$67,540

Younes M, **Hanly P** (Co-investigator), Horner R. “Control of Breathing in Health and Disease (pathogenesis of obstructive sleep apnea)”. CIHR, Sept 2004-Sept 2009. \$535,597

M. Poulin, **Hanly P** (Co-investigator). “Regulation of Cerebral Blood Flow in Obstructive Sleep Apnea: Role of Nitric Oxide”. Heart and Stroke Foundation, July 2006-June 2009. \$196,635

Poulin M, **Hanly P** (Co-investigator), Anderson T. “Regulation of Cerebral Blood Flow in Obstructive Sleep Apnea”. CIHR, July 2009 - June 2012. \$238,323

Poulin M, **Hanly P** (Co-investigator), Anderson T. “Regulation of Cerebral Blood Flow in Obstructive Sleep Apnea”. Heart and Stroke Foundation, July 2009 - June 2012. \$135,000

Bradley D (PI), **Hanly P** (Co-investigator). Multicentre trial on “Adaptive Servo Ventilation for Therapy of Sleep Apnea in Heart Failure”. Canadian Institutes of Health Research University-Industry Program, January 2009 - December 2014. \$7,449,398

Loewen A, **Hanly P** (PI). “Prevalence of Sleep Apnea in Patients with Chronic Kidney Failure and End Stage Kidney Disease”. Department of Medicine Research Development Fund, University of Calgary, May 2009 - April 2010. \$9,744

Pendharkar S, **Hanly P** (Co-investigator), Penz E, Flemons W, Santana M. “Evaluation of a “Fast Track” Respiratory Therapy Clinic for Patients with Suspected Severe Sleep-Disordered Breathing”. The Lung Association-Alberta and NWT, October 2014-September 2015. \$30,000

Poulin M, **Hanly P** (Co-investigator), Anderson T. “Role of Intermittent hypoxia in the Pathogenesis of Obstructive Sleep Apnea”. Heart and Stroke Foundation, June 2013 - July 2016. \$362,955

Poulin M, **Hanly P** (Co-investigator), Anderson T. “Regulation of Cerebral Blood Flow in Obstructive Sleep Apnea”. Canadian Institutes of Health Research, March 2013 - April 2018. \$774,740

Poulin M, **Hanly P** (Co-investigator), et al. “Effects of aerobic exercise on cognition and brain health in older adults at increased risk of Alzheimer disease and dementia: probing the underlying biological mechanisms using translational physiology”. Canadian Institutes of Health Research, September 2015 - September 2020. \$890,550

Carrier J, **Hanly P** (Co-investigator), et al. Canadian Sleep and Circadian Network (CSCN), Community Development Program, Canadian Institutes of Health Research, October 2015 - October 2020. \$4,000,000

**Hanly P** (Principle Investigator), S Ahmed, D Nicholl, A Zalucky. “The search for a biomarker of kidney injury due to nocturnal hypoxemia”. Research Development Fund, Department of Medicine, University of Calgary, December 2015 - December 2016. \$15,000

Pendharkar S, **Hanly P** (Co-investigator), et al. Development and evaluation of a community based model of care for sleep-disordered breathing. Cumming School of Medicine Enhanced Bridge Funding Program, July 2016-June 2017. \$50,301

Leung A, Kline G, Rabi D, Pendharkar S, **Hanly P** (Co-investigator). “Prognostic risk stratification with an Aldosterone-to-Renin Ratio in adults with obstructive sleep apnea” University of Calgary Clinical Research Fund. September 2017-September 2019. \$20,000

Pendharkar S, Lenton J, Byblow C, Atkar R, Parthiv A, Khara R, Naqvi S, Hergott C, **Hanly P** (Co-investigator): “ Patient experience with management of sleep-disordered breathing at FMC Sleep Centre” Department of Medicine, Clinical Analytics Award, March 2018- April 2019. \$30,000

Poulin M, **Hanly P** (Co-investigator), Anderson T. “Regulation of Cerebral Blood Flow in Obstructive Sleep Apnea”. Canadian Institutes of Health Research, April 2019 - March 2024 \$868,275

Carrier J, Lim A, Chertkow H, **Hanly P** (Collaborator). Canadian Consortium of Neurodegeneration in Aging (CCNA)....SLEEP TEAM: Canadian Institutes of Health Research, April 2019 - March 2024. \$1,232,700

Pendharkar S, **Hanly P**, et al. “Evaluation of an early management strategy for obstructive sleep apnea: a randomized trial”. Canadian Lung Association/Thoracic Network of Alberta and Northwest Territories, September 2020-August 2021, \$30,000

Pendharkar S, **Hanly P**, et al. “Adoption and enhancement of a primary care management pathway for obstructive sleep apnea: an independent evaluation project”. Canadian Institutes of Health Research, April 2021 - March 2024. \$423,046

Pack A, **Hanly P**, et al. “Genetics, Epigenetics and Metabolomics of OSA sub-types. National Heart, Lung and Blood Institute, Transomics for Precision Medicine (TOPMed), October 2020.

### **Operating Grants: Non-peer-reviewed**

**Hanly P**, Sasson Z. “ST segment depression during sleep in patients with obstructive sleep apnea”. Medigas Inc./Professional Respiratory. July 1991 - June 1992. \$9,000

**Hanly P**. “Cerebral Perfusion in patients with Obstructive Sleep Apnea”. Medigas Inc. July 1995 - Dec 1995. \$4000

**Hanly P**. “Pulmonary hypertension and cardiac function in patients with obstructive sleep apnea”. Vital Aire/ResMed Corp. July 1997 - June 1998. \$10,000

**Hanly P**. “Impact of patient education on compliance with nasal CPAP therapy in patients with obstructive sleep apnea”. Healthdyne Technologies. July 1997 - June 1998. \$40,000

**Hanly P**. “Left ventricular mass in patients with obstructive sleep apnea”. Respir Care. December 1997 - November 1998. \$12,000

**Hanly P**. “Sleep disruption in the ICU”. Respir Care. January 1999 - December 1999. \$28,000

**Hanly P**. “Sleep Apnea in patients with chronic renal failure”. Respir Care. January - June 2000. \$8,000

**Hanly P**. “Double-blind, placebo controlled study of the efficacy and safety of three doses of SR 46349B in patients with obstructive sleep apnea hypopnea syndrome”. Sanofi-Synthelabo. January 2000 - March 2001. \$100,000

**Hanly P**. “Evaluation of Oracle CPAP Mask”. Fisher-Paykel. January - Dec 2001. \$20,000

**Hanly P**. “Comparison of OxyMask and Venturi masks in the delivery of supplemental oxygen”. Southmedic. Sept 2003 - Aug 2004. \$16,250

**Hanly P**, M. Poulin. “Mechanisms for Stroke in Patients with Sleep Apnea: Understanding Cerebrovascular Regulation in Healthy Subjects and Patients with Sleep Apnea”. Tyco Intl. October 2004 - October 2009. Sleep monitoring and analysis system (approx. value \$40,000)

**Hanly P**, Coutts S, Klein G, Poulin M. “Sleep apnea in patients with TIA and minor stroke”. Hotchkiss Brain Institute. July 2007 - June 2008. \$10,000

**Hanly P**, S Ahmed, T Chowdhury. “Treatment of obstructive sleep apnea in patients with chronic kidney disease”. Philips Respironics. November 2015- December 2017. \$160,000

Povitz M, **Hanly**. Initial Study to Investigate the Safety and Feasibility of Transcutaneous Stimulation of the Hypoglossal Nerve for the Treatment of Primary Snoring using the ZENS transcutaneous nerve stimulator. Zennea Technologies, June 2019-May 2020, \$119,637

### **Trainee Grants: Peer-reviewed**

Niroumand M, **Hanly P** (Supervisor). “Impact of Obstructive Sleep Apnea on Cardiac Function”. Canadian Lung Association, 1998 - 2000. \$45,000

Dancy D, **Hanly P** (Supervisor). Cameron Gray Fellowship. Ontario Thoracic Society, 1999 - 2000. \$30,000

Foster G, **Hanly P** (Co-supervisor), Poulin M. “Regulation of Cerebral Blood Flow in Obstructive Sleep Apnea”. Alberta Heritage Foundation for Medical Research, July 2006 - June 2009. \$6,300/yr (incentive award) + \$1,500 (research allowance)

Foster G, **Hanly P** (Co-supervisor), Poulin M. TORCH (Tomorrow’s Research Cardiovascular Health Professionals - Strategic Training Program in Cardiovascular Research), Sept. 2006 - August 2007. \$2,100 (incentive award)

Foster G, **Hanly P** (Co-supervisor), Poulin M. “Regulation of Cerebral Blood Flow in Obstructive Sleep Apnea”. Heart and Stroke Foundation, July 2006 - June 2009. \$21,000/yr (annual salary) + \$1,500 travel allowance

Brugniaux J, **Hanly P**, (Co-supervisor), Poulin M. “Role of Erythropoietin in Cerebrovascular Regulation and Ventilatory Control in Obstructive Sleep Apnea”. Hotchkiss Brain Institute, University of Calgary, October 2006 - September 2008. \$35,000 (annual salary) + \$3,000 (research allowance)

Pialoux V, **Hanly P**, (Co-supervisor), Poulin M. “Role of Oxidative Stress in the Pathogenesis of Obstructive Sleep Apnea”. Alberta Heritage Foundation for Medical Research, January 2007 - December 2009. \$35,000 (annual salary) + \$3,500 (research allowance)

Loewen A, Younes M, **Hanly P** (Co-supervisor). “Role of Arousals in the Pathogenesis of Obstructive Sleep Apnea”. Alberta Heritage Foundation for Medical Research, April 2007 - March 2010. \$45,000 (annual salary) + \$3,500 (research allowance)

Brugniaux J, **Hanly P** (Co-supervisor), Poulin M. “Role of Erythropoietin in Cerebrovascular Regulation and Ventilatory Control in Obstructive Sleep Apnea”. Focus on stroke Personnel award, Heart and Stroke Foundation, July 2008 - June 2010. \$40,000 (annual salary) + \$5,000 (research allowance)

Beaudin A, **Hanly P** (Co-supervisor), Poulin M. “Regulation of Cerebral Blood Flow in Obstructive Sleep Apnea”. Alberta Innovates Health Solutions. \$21,000/yr (annual salary) + \$1,500 (travel allowance)

Beaudin A, **Hanly P** (Co-supervisor), Poulin M. “Regulation of Cerebral Blood Flow in Obstructive Sleep Apnea”. Focus on Stroke Doctoral Research Award, July 2010 - June 2013. \$21,000/yr (annual salary) + \$1,000 (research allowance)

Steinback C, **Hanly P** (Co-supervisor), Poulin M. “Regulation of Peripheral and Cerebral Blood Flow in Obstructive Sleep Apnea”. Alberta Innovates Health Solutions. \$35,000/yr (annual salary) + \$3,000 (allowance)

Nicholl D, **Hanly P** (Co-supervisor), Ahmed S. “The Effect of Treatment of Obstructive Sleep Apnea on the Vascular and Renal Hemodynamic Responses to Angiotensin II Infusion”. American Society of Nephrology Student Scholar Grant, June - September 2012. \$7,000

Zalucky A, Ahmed S, **Hanly P** (Co-supervisor). “The Effect of Obstructive Sleep Apnea and Nocturnal Hypoxia on Kidney Function”. The Lung Association, Alberta and North West Territories, July 2013 - June 2014. \$10,000

Poulin M and **Hanly P** (Co-investigator). Eyes High Postdoctoral award. University of Calgary, Jan 2013 - Dec 2014. \$100,000

Waltz X, **Hanly P** (Co-investigator), Poulin M. “Effects of Intermittent Hypoxia on the Regulation of Cerebral Blood Flow in Healthy Humans and patients with Obstructive Sleep Apnea: Role of Oxidative Stress”. Hotchkiss Brain Institute, December 2013- November 2015. \$50,000

Beaudin A, **Hanly P** (Co-supervisor), Poulin M. “Ventilatory stability in obstructive sleep apnea”. William H Davies Medical Research Scholarship, October 2013-June 2014. \$5,000

Waltz X, **Hanly P** (Co-investigator), Poulin M. “Effect of CPAP on blood rheological properties and cerebral blood flow reactivity in OSA: Role of oxidative stress”. Alberta Innovates Health Solutions, November 2014 - October 2017. \$150,000

Waltz X, **Hanly P** (Co-investigator), Poulin M. “Effect of CPAP on blood rheological properties and cerebral blood flow reactivity in OSA: Role of oxidative stress”. Canadian Institutes of Health Research, April 2015-October 2016. \$67,500

Braganza M, Pendharkar S, Fraser K, **Hanly P** (Co-investigator): “Predictors of hypoventilation: A retrospective analysis of factors that predict hypoventilation and need for non-invasive positive pressure ventilation”. Canadian Sleep and Circadian Network. October 2017 – July 2019. \$50,000

Beaudin A, Smith E, **Hanly P** (Principle investigator): “Cognitive function in a sleep clinic cohort of patients with obstructive sleep apnea”. Canadian Institutes of Health Research, April 2019-March 2022. \$135,000

Rimke A, Ahmed S, Pendharkar S, Chowhdury T, **Hanly P** (Principle investigator): “Treatment of obstructive sleep apnea in patient with chronic kidney disease”. University of Calgary Scholarship, May 2019-September 2019, \$11,000

### **Trainee Grants: Non-peer-reviewed**

Sleep Medicine Fellowship, University of Calgary. Respironics Inc. July 2007 - June 2009. \$140,000

### **Visiting Scientist Award: Peer-reviewed**

Gail Eskes PhD, **Hanly P**, (Co-supervisor), Poulin M. “Maximizing stroke outcome: Effects of sleep apnea on cognition and functional recovery in patients with transient ischemic attack (TIA) or minor stroke”. Heart and Stroke foundation, July 2008 - June 2009. \$14,500

Alberta Heritage Foundation for Medical Research, Sept 2008 - June 2009. \$5,300

### **Conference funding (Co-applicant)**

Planning meeting for Canadian Sleep and Circadian Network, January 2013, CIHR \$25,000

### **Summer students**

Summer Student Research Scholarship. Ontario Thoracic Society, Block Term Grant 1994. \$2,500

Summer Student Research Scholarship. Ontario Thoracic Society, Block Term Grant 1995. \$2,300

Summer Student Research Scholarship. Ontario Thoracic Society, Block Term Grant 1996. \$2,500

Summer Student Research Scholarship. Ontario Thoracic Society, Block Term Grant 1997. \$3,500

Summer Student Research Scholarship. Ontario Thoracic Society, Block Term Grant 1998. \$3,500

Summer Student Research Scholarship. Ontario Thoracic Society, Block Term Grant 1999.  
\$3,000

Summer Student Research Scholarship. Ontario Thoracic Society, Block Term Grant 2000.  
\$2,500

Summer Student Research Scholarship. Health Sciences Research Centre, SMH 2000.  
\$2000

Summer Student Research Scholarship. Ontario Thoracic Society, Block Term Grant 2001.  
\$2,100

Summer Student Research Scholarship. Ontario Thoracic Society, Block Term Grant 2002.  
\$2700

Summer Student Research Scholarship. Ontario Thoracic Society, Block Term Grant 2003.  
\$2500

Summer Student Scholarship Program. Faculty of Medicine, University of Toronto 2003.  
\$3,000

Summer Student Scholarship Program. Faculty of Medicine, University of Toronto, 2004.  
\$3,000

Summer Student Program. Alberta Heritage Foundation for Medical Research, 2008.  
\$6,500

Summer Student Scholarship Program. Bachelor of Health Sciences, University of Calgary,  
2008. \$6,500

Summer Student Program. Alberta Heritage Foundation for Medical Research, 2009.  
\$6,500

Summer Student Scholarship Program. Bachelor of Health Sciences, University of Calgary,  
2010. \$6,500

Summer Student Scholarship Program. FMC Sleep Physician Fund, University of Calgary, 2011.  
\$6,500

Summer Student Scholarship Program. FMC Sleep Centre Development Fund, University of  
Calgary, 2012. \$6,500

Summer Student Scholarship Program. FMC Sleep Centre Development Fund, University of  
Calgary, 2013. \$6,500

Summer Student Scholarship Program. Respiratory Health Network, Alberta Health Services,  
2015. \$5,600

Summer Student Scholarship Program. Bachelor of Health Sciences, and Faculty of Medicine Sleep Research Program, University of Calgary, 2015. \$5,600

## **PUBLICATIONS**

### **Peer-Reviewed papers**

1. Blake S, Drury I, **Hanly P**, O'Neill and O'Malley E. Rheumatoid Constrictive Pericarditis. *Ir Med J* 75:362-363, 1982 (Co-PI, 30% personal contribution)
2. Drury I, **Hanly P**, Blake et al. The diagnosis and treatment of constrictive pericarditis. *Ir Med J* 76:171-173, 1983 (Co-PI, 40%)
3. **Hanly P**, Walker JF, Hanson S and McNulty JG. Asymptomatic congenital microaneurysms in potential living related sibling donors. *Ir J Med Sci* 152:199-200, 1983 (PI, 80%)
4. Blake S, Bonar S, O'Neill H, **Hanly P**, Drury I, Flanagan M, Garrett J. Aetiology of chronic constrictive pericarditis. *Bri Heart J* 50:273-276, 1983 (Collab. 20%)
5. **Hanly P**, Garrett P, Spencer S, and O'Dwyer W.F. HLA-A, -B and -DR antigens in IgA nephropathy. *Tissue Antigens* 23:270-273, 1984 (PI, 80%)
6. **Hanly P**, Walker JF et al. Related potential donors in renal transplantation: A high risk group for occult renal disease? *Br J Clin Pract* 19-21, January 1986 (PI, 90%)
7. **Hanly P** and Light RB. Lung mechanics, gas exchange, pulmonary perfusion and hemodynamics in a canine model of acute pseudomonas pneumonia. *Lung* 165:305-322, 1987 (PI, 90%)
8. **Hanly P** and Light RB. Effect of positive end-expiratory pressure (PEEP) on gas exchange, pulmonary perfusion and hemodynamics in a canine model of diffuse pseudomonas pneumonia. *J Crit Care* 2:187-193, 1987 (PI, 90%)
9. **Hanly P**, Sienko A, and Light RB. Role of prostacyclin and thromboxane in the circulatory changes of acute bacteremic pseudomonas pneumonia in dogs. *Am Rev Respir Dis* 137:700-706, 1987 (PI, 80%)
10. **Hanly P**, Sienko A, and Light RB. Effect of cyclooxygenase blockade on gas exchange and hemodynamics in pseudomonas pneumonia. *J Appl Physiol* 63:1829-1836, 1987 (PI, 80%)



11. **Hanly P**, Roberts D, Dobson K, and Light RB. Effect of indomethacin on arterial oxygenation in critically ill patients with severe bacterial pneumonia. *Lancet* 1:351-354, 1987 (PI, 80%)
12. George C, Nickerson PW, **Hanly P**, Miller TW, and Kryger MH. Sleep apnoea patients have more automobile accidents. *Lancet* 2:447, 1987 (Collab. 20%)
13. **Hanly P** and Light RB. Plasma volume expansion and PEEP in a canine model of acute pseudomonas pneumonia. *Lung* 167:285-99, 1989 (PI, 90%)
14. George C, Miller T, **Hanly P**, and Kryger M. The effect of L-Tryptophan on daytime sleep latency in normals (correlation with blood levels). *Sleep* 12:345-353, 1989 (Collab. 20%)
15. **Hanly P**, George C, Miller T, and Kryger M. Heart rate response to breath-hold, Valsalva and Mueller maneuvers in obstructive sleep apnea. *CHEST* 95:735-39, 1989 (PI, 80%)
16. **Hanly P**, Miller T, Steljes D, and Kryger MH. Respiration and abnormal sleep in patients with congestive heart failure. *CHEST* 96:480-488, 1989 (PI, 80%)
17. **Hanly P**, Miller T, Steljes D, and Kryger MH. Effect of oxygen on sleep and respiration in patients with severe congestive heart failure. *Ann Intern Med* 111:777-782, 1989 (PI, 80%)
18. Miller T, **Hanly P**, Hunt B, Kryger M. The entrainment of low frequency breathing periodicity. *CHEST* 98:1143-8, 1990 (Co-PI, 40%)
19. **Hanly P**. Mechanisms and management of central sleep apnea. *Lung* 170:1-17, 1992 (PI, 100%)
20. **Hanly P**, Sasson Z, Zuberi N, Alderson M. Ventricular function in snorers and patients with obstructive sleep apnea. *CHEST* 102:100-105, 1992 (PI, 80%)
21. Millar TW, **Hanly P**, Kryger M. Quantification of periodic breathing. *Sleep* 15:364-370, 1992 (Co-PI, 40%)
22. **Hanly P**, Zuberi N. Periodic leg movements during sleep before and after heart transplant. *Sleep* 15:489-492, 1992 (PI, 90%)
23. Walz-LeBlanc B, Urowitz MB, Gladman D, **Hanly P**. The “shrinking lungs syndrome” in systemic lupus erythematosus-improvement with corticosteroid therapy. *J Rheumatol* 19:1970-1972, 1992 (Collab. 30%)
24. **Hanly P**, Sasson Z, Zuberi N, Lunn K. ST segment depression during sleep in obstructive sleep apnea. *Am J Cardiol* 71:1341-1345, 1993 (PI, 80%)
25. **Hanly P**, Zuberi N, Gray R. Pathogenesis of Cheyne-Stokes respiration in patients with congestive heart failure: Relationship to arterial PCO<sub>2</sub>. *CHEST* 104:1079-84, 1993 (PI, 90%)

26. Stal JM, **Hanly P**, Darling G. Gastrobronchial fistula: an unusual complication of esophagectomy. *Ann Thorac Surg* 58:886-7, 1994 (Co-PI, 30%)
27. **Hanly P**, Zuberi N. Daytime sleepiness in patients with congestive heart failure and Cheyne-Stokes respiration. *CHEST* 107: 952-958, 1995 (PI, 90%)
28. Tremblay L, Hyland R, Schouten D, **Hanly P**. Survival of acute myelogenous leukemia (AML) patients requiring intubation/ventilatory support. *Clin Invest Med* 18:19-24, 1995 (Co-PI, 30%)
29. **Hanly P**, Ford D. Sleep apnea and aortic dissection. *Can Respir J* 2: 69-73, 1995 (PI, 90%)
30. Hoffstein V, Mateika S, **Hanly P**. Snoring and arousals: a retrospective analysis. *Sleep* 18:866-872, 1995 (Co-PI, 40%)
31. **Hanly P**, Zuberi-Khokhar N. Increased mortality associated with Cheyne-Stokes respiration in patients with congestive heart failure. *Am J Respir Crit Care Med* 153:272-6, 1996 (PI, 90%)
32. **Hanly P**, Zuberi-Khokhar N. Periodic leg movements in patients with congestive heart failure. *CHEST* 109(6):1497-1502, 1996 (PI, 90%)
33. **Hanly P**. Augmented chemosensitivity to hypercapnia: another link in our understanding of the pathogenesis of Cheyne-Stokes respiration. *Eur Respir J* 11(1):1-3, 1998 (PI, 100%)
34. Fraser K, Tullis E, Sasson Z, Hyland R, Thornely K, **Hanly P**. Pulmonary hypertension and cardiac function in adults with cystic fibrosis: role of hypoxemia. *CHEST* 115(5):1325-8, 1999 (PI, 70%)
35. Cooper A, Ferguson N, **Hanly P**, Meade M, Granton J, Slutsky A, Stewart T. Long term follow-up of survivors of acute lung injury (ALI): effect of a pressure and volume limited strategy (PLVS). *Crit Care Med* 27(12), 1999 (collab 20%)
36. Cooper A, Stewart T, Thornley K, Slutsky A, **Hanly P**. Sleep in critically ill patients requiring mechanical ventilation. *CHEST* 117:809-818, 2000 (PI, 70%)
37. O'Connor C, Thornley K, Sumal P, **Hanly P**. Gender differences in polysomnographic features of obstructive sleep apnea. *Am J Respir Crit Care Med* 161:1465-1472, 2000 (PI, 70%)
38. Kuperstein R, **Hanly P**, Niroumand M, Sasson Z. The importance of age and obesity on the relation between diabetes and left ventricular mass. *Journal of American College of Cardiology* 37(7):1957-62, 2001 (Collab 40%)
39. Dancey DR, **Hanly P**, Soong C, Lee B and Hoffstein V. Impact of menopause on the prevalence and severity of sleep apnea. *CHEST* 120(1):151-5, 2001 (Collab 30%)

40. **Hanly P** and Pierratos A. Improvement of sleep apnea in chronic renal failure treated by nocturnal hemodialysis. *N Engl J Med* 344(2): 102-7, 2001 (PI 90%)
41. Niroumand M, Sasson Z, Thornley K, **Hanly P**. Impact of obstructive sleep apnea on left ventricular mass. *Am J Respir Crit Care Med* 163(7): 1632-6, 2001 (PI, 80%)
42. Dancey D, Tullis E, Heslegrave R, Thornley K, **Hanly P**. Sleep quality and daytime function in adults with cystic fibrosis and severe lung disease. *Eur Respir J* 19(3): 504-10, 2002 (PI, 80%)
43. **Hanly P**, Gabor J, Chan C, Pierratos A. Daytime Sleepiness in Patients with Chronic Renal Failure: Impact of Nocturnal Hemodialysis. *Am J Kidney Dis* 41(2): 403-10, 2003 (PI 90%)
44. Gabor J, Cooper A, Crombach S, Lee B, Kadikar N, Bettger H, **Hanly P**. Contribution of the Intensive Care Unit Environment to Sleep Disruption in Mechanically-Ventilated Patients and Healthy Subjects. *Am J Respir Crit Care Med* 167(5): 708-715, 2003 (PI 80%)
45. Dancey D, **Hanly P**, Soong C, Lee B, Shepard J, Hoffstein V. Gender Differences in Sleep Apnea: The Role of Neck Circumference. *CHEST* 123(5): 1544-50, 2003 (Co-PI 40%)
46. Miletin M, **Hanly P**. Measurement Properties of the Epworth Sleepiness Scale. *Sleep Medicine* 4:195-9, 2003 (PI 70%)
47. Beecroft J, Zanon S, Lukic D, **Hanly P**. Oral CPAP for Sleep Apnea: Effectiveness, Patient Preference and Adherence. *CHEST* 124:2200-8, 2003 (PI 80%)
48. Chan C, **Hanly P**, Gabor J, Picton P, Pierratos P, Floras J. Impact of nocturnal hemodialysis on the variability of heart rate and oxygen saturation during sleep. *Kidney International* 65:661-5, 2004 (Co-PI 50%)
49. Mahammad S, **Hanly P**, Gabor J, Beecroft J, Duffin J. Overnight changes of chemoreflex control in obstructive sleep apnea patients. *Respiration Physiology and Neurobiology* 146: 279-290, 2005 (Co-PI 50%)
50. Gabor J, Newman D, Dorian P, **Hanly P**. Improvement of Cheyne-Stokes respiration following Cardiac Resynchronization Therapy. *European Respiratory Journal* 26: 95-100, 2005 (PI 80%)
51. Bradley D, Logan A, Kimoff J, Series F, Morrison D, Ferguson K, Belenke I, Pfeifer M, Fleetham J, **Hanly P**, Smilovitch M, Tomlinson G, Floras J. Continuous Positive Airway Pressure for Central Sleep Apnea and Heart Failure. *N Engl J Med* 353:2025-2033, 2005 (Collaborator 10%)
52. Beecroft J, **Hanly P**. Comparison of the OxyMask and Venturi mask in the delivery of supplemental oxygen: a pilot study in oxygen dependant patients. *Can Respir J* 13(5):247-52, 2006 (PI 80%)

53. Beecroft J, Duffin J, Pierratos A, Chan C, **Hanly P**. Enhanced Chemo-responsiveness in Patients with Sleep Apnea and End Stage Renal Disease. *Eur Respir J* 28(1):151-8, 2006 (PI 80%)
54. Fleetham J, Ayas N, Bradley D, Ferguson K, Fitzpatrick M, George C, **Hanly P**, Hill F, Kimoff J, Kryger M, Morrison D, Series F, Tsai W. CTS Sleep Disordered Breathing Committee. Canadian Thoracic Society guidelines: diagnosis and treatment of sleep disordered breathing in adults. *Can Respir J* 13(7):387-92, 2006 (Collaborator 10%)
55. Foster G, Poulin M, **Hanly P**. Intermittent hypoxia and vascular function: implications for obstructive sleep apnoea. *Exp Physiol* 92(1):51-65, 2007 (PI 70%)
56. Foster G, **Hanly P**, Ostrowski M, Poulin M. Effect of CPAP on Cerebral Vasculature Response to Hypoxia in Obstructive Sleep Apnea Patients. *Am J Respir Crit Care Med* 175(7): 720-5, 2007 (C0-PI 50%)
57. Beecroft JM, Zaltzman J, Prasad R, Meliton G, **Hanly P**. Impact of kidney transplantation on sleep apnea in patients with end stage renal disease. *Nephrol Dial Transplant* 22(10): 3028-3033, 2007 (PI 80%)
58. Artz M, Floras J, Logan A, Kimoff J, Series F, Morrison D, Ferguson K, Belenke I, Pfeifer M, Fleetham J, **Hanly P**, Smilovitch M, Ryan C, Tomlinson G, Bradley T. Suppression of Central Sleep Apnea by Continuous Positive Airway Pressure and Transplant-free Survival in Heart Failure. *Circulation* 115(25):3173-80, 2007 (Collaborator 10%)
59. Brugniaux J, Hodges A, **Hanly P**, Poulin M. Cerebrovascular responses to altitude. *Respiratory Physiology and Neurobiology* 30 158:212-23, 2007 (Co-PI 50%)
60. Beecroft JM, Hoffstein V, Pierratos A, Chan CT, McFarlane PA, **Hanly P**. Pharyngeal narrowing in end-stage renal disease: Implications for obstructive sleep apnea. *Eur Respir J* 30(5):965-71, 2007 (PI 80%)
61. Beecroft JM, Hoffstein V, Pierratos A, Chan CT, McFarlane P, **Hanly P**. Nocturnal hemodialysis increases pharyngeal size in patients with sleep apnea and end-stage renal disease. *Nephrol Dial Transplant* 23(2):673-9, 2008 (PI 80%)
62. Younes M, Ostrowski M, Atkar R, Laprairie J, Siemens A, **Hanly P**. Mechanisms of Breathing Instability in Patients with Obstructive Sleep Apnea. *J Appl Physiol* 103(6):1929-41, 2007 (Co-PI 50%)
63. Beecroft JM, Zaltzman J, Prasad R, Meliton G, **Hanly P**. Improvement of periodic limb movements following kidney transplantation. *Nephron Clin Pract* 109(3):c133-9, 2008 (PI 80%)
64. Beecroft JM, Ward M, Younes M, Crombach S, Smith O, Lukic D, Lawrence J, **Hanly P**. Sleep monitoring in the intensive care unit: comparison of nurse assessment, actigraphy and polysomnography. *Intensive Care Med* 34(11): 2076-83, 2008 (PI 80%)

65. Lee C, Gabor J, Tansey C, Matte A, Herridge M, **Hanly P**. Chronic sleep disorders in survivors of the acute respiratory distress syndrome. *Intensive Care Medicine* 35(2):314-20, 2008 (PI 80%)
66. Beecroft JM, Duffin J, Pierratos A, Chan CT, McFarlane P, **Hanly P**. Decreased chemosensitivity and improvement of sleep apnea by nocturnal hemodialysis. *Sleep Medicine* 10(1): 47-54, 2009 (PI 80%)
67. Foster G, **Hanly P**, Ostrowski M, Poulin M. Ventilatory and cerebrovascular responses to hypercapnia in patients with obstructive sleep apnea: Effect of CPAP therapy. *Respir Physiol Neurobiol* 165(1): 73-81, 2009 (Co-PI 50%)
68. Beecroft JM, Pierratos A, **Hanly P**. Clinical presentation of obstructive sleep apnea in patients with end-stage renal disease. *Journal Clin Sleep Med* 5:115-121, 2009 (PI 80%)
69. Loewen A, Siemens A, **Hanly P**. Sleep disruption in patients with sleep apnea and end-stage renal disease. *Journal Clin Sleep Med* 5(4): 324-329, 2009 (PI 80%)
70. **Hanly P**. Sleep disorders and home dialysis. *Adv Chronic Kidney Dis* 16(3):179-188, 2009 (PI 100%)
71. Foster G, Brugniaux J, Pialoux V, Duggan C, **Hanly P**, Ahmed S, Poulin M. Cardiovascular and Cerebrovascular Responses to Acute Hypoxia Following Exposure to Intermittent Hypoxia in Healthy Humans. *J Physiol* 587: 3287-99, 2009 (Co-PI 50%)
72. Loewen A, Ostrowski M, Laprarie J, Atkar R, Gnitecki J, **Hanly P**, Younes M. Determinants of ventilatory instability in obstructive sleep apnea; inherent or acquired? *Sleep* 32:1355-1365, 2009 (Co-PI 50%)
73. Pialoux V, Foster G, Brugniaux J, Duggan C, **Hanly P**, Ahmed S, Poulin M. Effects of exposure to intermittent hypoxia on oxidative stress, anti-oxidant status and acute hypoxic ventilatory response in humans. *Am J Respir Crit Care Med* 180(10):1002-9, 2009 (CO-PI 50%)
74. Ronksley PE, Hemmelgarn BR, Heitman SJ, **Hanly P**, Faris PD, Quan H, Tsai WH. Obstructive sleep apnea is associated with diabetes in sleepy subjects. *Thorax* 64(10): 834-839, 2009 (Collaborator, 20%)
75. **Hanly P**. Impact of sleeping angle on the upper airway and pathogenesis of Cheyne-Stokes respiration. *Sleep* 32:1412-3, 2009 (PI, 100%)
76. Ryan CM, Floras JM, Logan AG, Kimoff RJ, Series F, Morrison D, Ferguson KA, Belenkie I, Pfeifer M, Fleetham J, **Hanly P**, Smilovitch M, Artz M, Bradley TD, for the CANPAP Investigators. Shift in Sleep Apnea Type in Heart Failure. *Eur Respir J* 35(3):592-7, 2010 (Collaborator 10%)

77. Foster GE, **Hanly P**, Ahmed SB, Beaudin AE, Pialoux V, Poulin MJ. Intermittent hypoxia increases arterial blood pressure in humans through a Renin-Angiotensin System-dependent mechanism. *Hypertension* 56(3):369-77, 2010 (Co-PI 50%)
78. Maimon N, **Hanly P**. Does snoring intensity correlate with the severity of obstructive sleep apnea? *J Clin Sleep Med* 6(5):475-8, 2010 (PI 70%)
79. Chan W, Coutts SB, **Hanly P**. Sleep apnea in patients with transient ischemic attack and minor stroke: opportunity for risk reduction of recurrent stroke? *Stroke* 41(12):2973-5, 2010 (PI 80%)
80. Brugniaux J, Pialoux V, Foster G, Duggan C, Eliasziw M, **Hanly P**, Ahmed S, Poulin M. Effects of intermittent hypoxia on Epo, soluble Epo receptor and ventilation in humans. *Eur Respir J* 37(4):880-7, 2011 (Co-PI 50%)
81. Pierratos A, **Hanly P**. Sleep disorders over the full range of chronic kidney disease. *Blood Purif* 31(1-3):146-50, 2011 (Co-PI 50%)
82. Ahmed SB, Ronskley PE, Hemmelgarn BR, Tsai WW, Manns BJ, Tonelli M, Klarenbach SW, Chin R, Clement FM, **Hanly P**. Nocturnal hypoxia and loss of kidney function. *PLoS ONE* 2 One 9(4):e19029, 2011 (Co-PI 50%)
83. Loewen A, Ostrowski M, Laprairie J, Maturino F, **Hanly P**, Younes M. Response of genioglossus muscle to increasing chemical drive in sleeping obstructive sleep apnea patients. *Sleep* 34(8):1061-73, 2011 (Co-PI 50%)
84. Pialoux V, Foster G, Ahmed S, Beaudin A, **Hanly P**, Poulin M. Losartan abolishes oxidative stress induced by intermittent hypoxia in humans. *J Physiol* 589(pt 22):5529-37, 2011 (Co-PI)
85. Younes M, Loewen A, Ostrowski M, Laprairie J, Maturino F, **Hanly P**. Genioglossus activity available via non-arousal mechanisms vs. that required for opening the airway in obstructive apnea patients. *J Appl Physiol* 112(2):249-58, 2012 (Co-PI, 50%)
86. Nicholl D, Ahmed S, Loewen A, Hemmelgarn B, Sola D, Beecroft J, Turin T, **Hanly P**. Declining kidney function increases the prevalence of sleep apnea and nocturnal hypoxia. *CHEST* 141(6):1422-30, 2012 (PI, 80%)
87. Nicholl D, Ahmed S, Loewen A, Hemmelgarn B, Sola D, Beecroft J, Turin T, **Hanly P**. Clinical presentation of obstructive sleep apnea in patients with chronic kidney disease. *Journal Clin Sleep Med* 8(4):381-7, 2012 (PI, 80%)
88. Nicholl D, Ahmed S, Loewen A, Hemmelgarn B, Sola D, Beecroft J, Turin T, **Hanly P**. Diagnostic value of screening instruments for identifying obstructive sleep apnea in patients with kidney failure. *Journal Clin Sleep Med* 15(9):31-8, 2013 (PI, 80%)

89. Azarbarzin A, Ostrwowski M, Moussavi Z, **Hanly P**, Younes M. Contribution of arousal from sleep to post-event tachycardia in patients with obstructive sleep apnea. *Sleep* 36(6):881-9, 2013 (Co-PI, 50%)
90. Champod AS, Eskes G, Foster G, **Hanly P**, Pialoux V, Beaudin A, Poulin M. Effects of acute intermittent hypoxia on working memory in young healthy adults. *Am J Respir Crit Care Med* 187(10):1148-50, 2013 (Collaborator, 20%)
91. Lee, J, Nicholl D, Ahmed S, Loewen A, Hemmelgarn B, Sola D, Beecroft J, Tourin T, **Hanly P**. Prevalence of restless legs syndrome in patient with chronic kidney disease. *Journal Clin Sleep Med* 15;9(5):455-9, 2013 (PI 80%)
92. Azarbarzin A, Ostrowski O, **Hanly P**, Younes M. Relationship between arousal intensity and heart rate response to arousal. *Sleep* 37(4):645-653, 2014 (Co-PI, 50%)
93. Ayas N, Skomro R, Blackman A, Curren K, Fitzpatrick M, Fleetham J, George C, **Hanly P**, Li C, Morrison D, Series F. Obstructive sleep apnea and driving: A Canadian Thoracic Society and Canadian Sleep Society position paper. *Can Respir J* 21(2):114-123, 2014 (Collaborator, 20%)
94. Younes M, Loewen A, Ostrowski M, **Hanly P**. Short-term potentiation in the control of pharyngeal muscles in obstructive apnea patients. *Sleep* 37(11):1833-49, 2014 (Co-PI, 50%)
95. **Hanly P**, Ahmed S. Obstructive sleep apnea and the kidney: Is sleep apnea a risk factor for chronic kidney disease? *Chest* 146(4):1114-22, 2014 (PI, 80%)
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Rawling JM, Sajobi T, Poulin MJ. The Brain in Motion II Study: study protocol for a randomized controlled trial of an aerobic exercise intervention for older adults at increased risk of dementia. *Trials*. 2021 Jun 14;22(1):394. doi: 10.1186/s13063-021-05336-z.

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**144.**

## Publications: Books Chapters

1. Kryger M. and **Hanly P.** Cheyne-Stokes respiration in cardiac failure. In: Sleep and Respiration, Wiley-Liss Inc., 1990, 215-226 (50%)
2. **Hanly P.** and Shapiro C. Excessive daytime sleepiness. In: Sleep Solutions, Vol. 4 C. Shapiro (ed). Kommunikom Publications, Quebec, 1992 (90%)
3. **Hanly P.** Transcutaneous monitoring of carbon dioxide tension. In: Principles and Practice of Intensive Care Monitoring, M. Tobin (ed), McGraw-Hill, 1998, 401-414 (100%)
4. Hoffstein V, **Hanly P.** Hypertension and sleep apnea. In: Harrison's Principles of Internal Medicine (Harrison's Online), E. Braunwald (ed), McGraw-Hill, 1999 (50%)
5. **Hanly P.** Obstructive sleep apnea and myocardial ischemia in humans. In: Sleep Disorders and Cardiovascular and Cerebrovascular Disease (Lung Biology and Health) D. Bradley and J. Floras (eds), Marcel Dekker Inc, NY, May 2000 (100%)
6. Hoffstein V, **Hanly P.** Hypertension and Sleep Apnea. In: Harrison's Advances in Cardiology. E. Braunwald (ed), McGraw-Hill, 2002, 65-70 (50%)
7. **Hanly P.** Sleep in the Ventilated Patient. In: Principles and Practice of Mechanical Ventilation, 2<sup>nd</sup> edition. M. Tobin (ed), McGraw-Hill, 2006, 1173-1184 (100%)
8. **Hanly P.** Sleep Disorders and End Stage Renal Disease. In: Sleep Med Clin, 1<sup>st</sup> edition. Nancy Collop (ed), Elsevier Saunders, 2007, 2: 59-66 (100%)
9. Foster G, **Hanly P.**, Ostrowski M, Poulin M. Ventilatory and blood pressure responses to isocapnic hypoxia in OSA patients. In: Integration in Respiratory Control-from Genes to Systems (Advances in Experimental Medicine and Biology Series). Eds: M.J. Poulin and R.J.A. Wilson, Springer Publishers, New York, 2008, 452-456 (50%)
10. Loewen A, Poulin M, **Hanly P.** Sleep Apnea in the Elderly. In: Principles and Practice of Geriatric Sleep Medicine, 1<sup>st</sup> edition. Pandi-Perumal SR, Monti JM, Monjan AA (eds), Cambridge University Press, England, 2009, 248-259 (PI 80%)
11. **Hanly P.**, Pierratos A, Novak M, Mucsi I. Sleep disorders in end-stage renal disease. In: UpToDate, November 2012 (90%)
12. **Hanly P.** Renal Disorders and Sleep. In: The Encyclopedia of Sleep, 1<sup>st</sup> edition. Kushida C.A. (ed). Waltham, MA: Academic Press, 2013, 4: 457-468 (100%)
13. **Hanly P.** Sleep in the Ventilator-Supported Patient. In: Principles and Practice of Mechanical Ventilation, 3<sup>rd</sup> edition. M. Tobin (ed), McGraw-Hill, 2013, 1293-1305 (100%)
14. **Hanly P.** Renal failure and sleep. In: Sleep Medicine 1st edition. Darren Mansfield, Matthew Naughton, Shantha Rajaratnam, Nick Antic (eds). IP Communications Pty Ltd. Norwalk, CT 06854 USA, 2015 (100%)

15. Corrigan J, **Hanly PJ**. Sleep disorders in chronic kidney disease. In: Atlas of Sleep Medicine 3rd edition. Alon Avidan, Meir Kryger (eds). Elsevier, 2020 (in press) (80%)

**Publications: Non-peer-reviewed papers**

1. Garrett P and **Hanly P**. Medical haematuria and IgA nephropathy. Mod Med Ir 23-24, April 1985 (50%)
2. Flood D and **Hanly P**. Snoring: mere nuisance or serious disease? Can J Diagn 9:87-104, 1992 (80%)
3. **Hanly P**, Powles P. Hypnotics should never be used in patients with sleep apnea. J Psychosomat Res 37: 1-7, 1992 (50%)
4. **Hanly P**. Obstructive sleep apnea. Update (Ontario Respiratory Care Society) 9:1-7, 1993 (100%)
5. **Hanly P**. What are the most effective and safest treatments of snoring? Can J Diagnosis 11:20-21, 1994 (100%)
6. **Hanly P**. Better Breathing '97 Update. Ontario Thoracic Reviews 8:7, 1996 (100%)
7. **Hanly P**. Medico-legal aspects of driving with a sleep disorder (editorial). Ontario Thoracic Reviews 10(3):3, 1998 (100%)
8. **Hanly P**. What's new with nasal CPAP? Breathing Easier 8(2):6-7, 1998 (100%)
9. **Hanly P**. Obstructive sleep apnea: what you need to know. Can. Resp J 6(5):398-99, 1999 (100%)
10. Gabor J, Cooper A and **Hanly P**. Sleep disruption in the intensive care unit. Curr Opin Crit Care 7:21-27, 2001 (M Ranieri, ed) (70%)
11. Cooper A, Gabor J and **Hanly P**. Sleep in the Critically Ill Patient. Seminars in Respiratory and Critical Care Medicine 22:153-163, 2001 (C Sessler, ed) (70%)
12. Gabor J, **Hanly P**. Sleep Disruption in the ICU. Advance for sleep.com. Merion Publishing 2001 (70%)
13. **Hanly P**, Chan C, Pierratos A. The impact of Nocturnal Hemodialysis on sleep apnea in ESRD patients. Nephrology News and Issues 17:19-21, 2003 (90%)
14. **Hanly P**. Sleep Apnea and Daytime Sleepiness in End-Stage Renal Disease. Semin Dial 17(2):109-14, 2004 (100%)

15. **Hanly P.** Sleep Disorders and End-Stage renal Disease. *Curr Opin Pul Med* 14(6):543-50, 2008 (100%)

#### **Publications: Letter to the Editor**

1. **Hanly P**, Sasson Z. Role of upper airway occlusion as a predisposing factor for systemic hypertension. *CHEST* 104:1312, 1993 (50%)
2. Cooper A, **Hanly P.** Sleep and recovery from critical illness and injury: A review of theory, current practice and future directions. *Crit Care Med* 36(10):2962-3, 2008 (50%)
3. Cowie R, **Hanly P.** Treatments for sleep apnea. *The Canadian Journal of CME*, July/August 2013, 18

#### **Publications: Manuscripts submitted for publication**

#### **Publications: Manuscripts in preparation**

#### **PUBLICATIONS: Abstracts**

1. **Hanly P** and Light RB. Lung mechanics in experimental pseudomonas pneumonia. *Am Rev Respir Dis*, 131:A341, 1985 (Presented at the American Thoracic Society Annual Meeting, 1985, Anaheim, California)
2. **Hanly P** and Light RB. Effect of positive end-expiratory pressure (PEEP) on gas exchange, regional pulmonary blood flow and central hemodynamics in acute experimental pseudomonas pneumonia. *Am Rev Respir Dis* 131:A153, 1985 (Presented at the American Thoracic Society Annual Meeting, 1985, Anaheim, California)
3. **Hanly P** and Light RB. Effect of experimental pseudomonas pneumonia on gas exchange, regional pulmonary blood flow and hemodynamics. *Am Rev Respir Dis* 131:A341, 1985 (Presented at the American Thoracic Society Annual Meeting, 1985, Anaheim, California)
4. Garrett P, Spencer S, Mulcahy D, **Hanly P**, Hanson JS et al. Link between HLA-B40 and dialysis encephalopathy. XXII Congress European Dialysis and Transplantation Association, 1985
5. **Hanly P** and Light RB. Effect of positive end-expiratory pressure (PEEP) on experimental pseudomonas pneumonia. *Clin Invest Med* 8:A68, 1985 (Presented at the Canadian Critical Care Society Annual Meeting, 1985, Vancouver, British Columbia)

6. **Hanly P** and Light RB. Effect of plasma volume expansion in experimental pseudomonas pneumonia. *Clin Invest Med* 8:A69, 1985
7. **Hanly P**, Sienko A, and Light RB. Role of endogenous prostaglandins in the hemodynamic changes during acute experimental pseudomonas pneumonia with bacteremia. *Am Rev Respir Dis* 133:A77, 1986 (Presented at American Thoracic Society Annual Meeting, 1986, Kansas)
8. **Hanly P**, Sienko A, and Light RB. Effect of indomethacin on central hemodynamics, gas exchange, pulmonary blood flow distribution and prostaglandin synthesis in experimental pseudomonas pneumonia. *Am Rev Respir Dis* 133:A282, 1986 (Presented at American Thoracic Society Annual Meeting, 1986, Kansas)
9. **Hanly P** and Light RB. Positive end-expiratory pressure (PEEP) and plasma volume expansion increase the extent of disease in acute pseudomonas pneumonia. *Am Rev Respir Dis* 133:A280, 1986 (Presented at American Thoracic Society Annual Meeting, May 1986, Kansas)
10. **Hanly P**, Roberts D, Dobson K, and Light RB. Effect of indomethacin on gas exchange in patients with extensive bacterial pneumonia. *Clin Invest Med* 9:A23, 1986 (Presented at annual meeting of the Royal College of Physicians and Surgeons of Canada, 1986, Toronto)
11. **Hanly P**, Sienko A, and Light RB. Role of prostacyclin in the pathophysiology of bacteremic pseudomonas pneumonia in dogs. *Clin Invest Med* 9:A151, 1986 (Presented at annual meeting of the Royal College of Physicians and Surgeons of Canada, 1986, Toronto)
12. **Hanly P**, George C, Miller T, and Kryger M. Heart rate response to breathhold, Valsalva and Mueller maneuvers in obstructive sleep apnea (OSA). *Clin Invest Med* 10:B120, 1987 (Presented at annual meeting of the Royal College of Physicians and Surgeons of Canada, September 1987, Winnipeg)
13. **Hanly P**, Sullivan G, Miller T, and Kryger M. Respiration and sleep in patients with congestive heart failure. *Am Rev Respir Dis* 137:56, 1988 (Presented at annual meeting of American Thoracic Society, May 1988, Las Vegas)
14. George CF, Miller T, **Hanly P**, and Kryger MH. The effect of L-Tryptophan on daytime sleep latency in normals (correlation with blood levels). *Sleep Research* 17:40, 1988
15. **Hanly P**, Miller T, Steljes D, Baert R, Fraise M, Kryger MH. Effect of oxygen on sleep and respiration in patients with severe congestive heart failure. *CHEST* 96:177S, August 1989 (Presented at annual meeting of American College of Chest Physicians, Boston, MA, 1989)
16. **Hanly P**, Gerrard J, Mustard R, Light RB. Plasma prostaglandins levels in humans with severe bacterial pneumonia. *Clin Invest Med* 13:B31, 1990



17. **Hanly P**, Zuberi N, Alderson M, Sasson Z. Effect of obstructive sleep apnea (OSA) on ventricular function. *Clin Invest Med* 14:A112, 1991 (Presented at annual meeting of Royal College of Physicians and Surgeons of Canada, Quebec city, 1991)
18. Walz-LeBlanc B, Urowitz MB, Gladman D, **Hanly P**. The “Shrinking lungs syndrome” in systemic lupus erythematosus - improvement with corticosteroid therapy. *Clin Invest Med* 14:A118, 1991 (Presented at annual meeting of Royal College of Physicians and Surgeons of Canada, Quebec city, 1991)
19. **Hanly P**, Zuberi N, Alderson M, Lunn K, Sasson Z. ST segment depression during sleep in patients with obstructive sleep apnea. *Am Rev Respir Dis* 145:A444, 1992 (Presented at annual meeting of American Thoracic Society, Miami, Florida, USA, 1992)
20. **Hanly P**, Zuberi N, Alderson M. Transcutaneous PCO<sub>2</sub> during sleep in patients with congestive heart failure and Cheyne-Stokes respiration. *Am Rev Respir Dis* 145:A447, 1992 (Presented at annual meeting of American Thoracic Society, Miami, Florida, USA, 1992)
21. **Hanly P**, Zuberi N, Alderson M, Sasson Z. Ventricular function in snorers and patients with obstructive sleep apnea. *Am Rev Respir Dis* 145:A444, 1992 (Presented at annual meeting of American Thoracic Society, Miami, Florida, USA, 1992)
22. **Hanly P**, Zuberi. Daytime sleepiness in patients with congestive heart failure and Cheyne-Stokes respiration. *Am Rev Respir Med* 147:A688, 1993 (Presented at annual meeting of American Thoracic Society, San Francisco, USA, 1993)
23. **Hanly P**, Zuberi N, Stuss D. Periodic leg movements in patients with congestive heart failure. *Am Rev Respir Dis* 147:A688, 1993 (Presented at annual meeting of American Thoracic Society, San Francisco, USA, 1993)
24. Tremblay L, Schouten D, Hyland R, **Hanly P**. Survival of acute myelogenous leukemia patients requiring intubation/ventilatory support. *CHEST* 104:99S, 1993 (Presented at annual meeting of American College of Physician, Orlando, Florida, 1993)
25. **Hanly P**, Zuberi N, Carvalho C. Increased mortality associated with Cheyne-Stokes respiration in patients with congestive heart failure. *Am Rev Respir & Crit Care Med* 149(4):A560, 1994 (Presented at annual meeting of American Thoracic Society, Boston, USA, 1994)
26. **Hanly P**. Sleep apnea and heart failure. *Can J Respir Ther* 31; S21, 1995 (Presented at annual meeting of Canadian Society of Respiratory Therapists, Toronto, Canada, 1995)
27. Aaron S, Coppolino M, **Hanly P**, Hyland R, Levene R, Darling G, Stewart T. Nitric oxide is effective in patients with hypoxemic respiratory failure of diverse etiology. *Clin & Invest Med* 18S:B28, 1995 (Presented at annual meeting of Royal College of Physicians and Surgeons of Montreal, Canada 1995)

28. Aaron S, Silkoff P, **Hanly P**, Levene R, Darling G, Hyland R, Stewart T. Alveolar nitric oxide (NO): a marker of inflammation? *CHEST* 108:173S, 1995 (Presented at annual meeting of American College of Chest Physicians, New York, 1995)
29. Aaron S, Silkoff P, **Hanly P**, Levene R, Darling G, Hyland R, Stewart T. Inhaled nitric oxide is effective in patients with hypoxemic respiratory failure of diverse etiology. *CHEST* 108:118S, 1995 (Presented at annual meeting of American College of Chest Physicians, New York 1995)
30. **Hanly P**, Sasson Z, Hyland RH, Zuberi-Khokhar N, Squires A, Tullis DE. Doppler-echocardiography in adult cystic fibrosis patients with severe lung disease. *Am J Respir & Crit Care Med* 153(4):A72, 1996 (Presented at annual meeting of American Thoracic Society, New Orleans 1996)
31. **Hanly P**, Zuberi-Khokhar N. Periodic limb movements during sleep in patients with congestive heart failure. *Excerpta Medica Abstract Journal on Cardiovascular Disease and Cardiovascular Surgery* 18(78):21, 1996
32. Heslegrave R, Tullis D, **Hanly P**. Impact of cystic fibrosis on sleep and daytime cognitive performance in adult cystic fibrosis patients. (Presented at annual meeting, Associated Professional Sleep Societies, San Francisco, 1997)
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126. Povitz M, Kendzerska T, **Hanly P**, Jenkyn KB, Allen B, George C, Shariff S. Wait times from diagnosis to treatment of obstructive sleep apnea in Ontario: A population-based cohort study. (Presented at the annual meeting of the American Thoracic Society, Washington, USA, May, 2017)
127. Povitz M, Kendzerska T, **Hanly P**, Jenkyn KB, Allen B, George C, Shariff S. Profile of Continuous Positive Airway Pressure treated Patients in Ontario, Canada, 2006-2013: A Population-Based Cohort Study. (Presented at the annual meeting of the American Thoracic Society, Washington, USA, May, 2017)
128. Ayas N, **Hanly P**, Skomro R, Warby S, Carrier J. Feasibility of a multi-site obstructive sleep apnea registry: the Canadian experience. (Presented at the World Sleep Congress, Prague, Czech Republic, October 2017)
129. Loffler KA, Heeley E, Freed R, Anderson CS, Woodman RJ, **Hanly PJ**, McEvoy RD. Effect of Obstructive Sleep Apnea Treatment on Renal Function in Patients with Cardiovascular Disease (Presented at the annual meeting of the Australasian Sleep Association, Auckland, New Zealand, October 2017)
130. Guadagni V, Clark C, Tyndall A, Raneri J, Parboosingh J, **Hanly P**, MD, Poulin P. Effects of six-month exercise intervention on sleep in healthy older adults from the Brain in Motion study. (Presented at the Canadian conference “Resilience in Aging: Exploring people, places and policy”. Campus Alberta Neuroscience Symposium, October 2017))
131. Nicholl DD, **Hanly PJ**, Zalucky A, Mann MC, MacRae JM, Poulin MJ, Handley GB, Sola DY, Ahmed SB. CPAP therapy improves central arterial stiffness and decreases arterial renin angiotensin system activity in humans with obstructive sleep apnea (Presented at the annual meeting of the American Society of Nephrology, New Orleans, October 2017)

132. Rimke AN, Ahmed SB, Turin TC, Pendharkar SR, Raneri JK, Lynch EJ, **Hanly PJ**. Evaluation of CPAP therapy on renal function in patients with obstructive sleep apnea and chronic kidney disease. Presented at Tine Haworth Cardiovascular Research Day, Libin Cardiovascular Institute, April 2018
133. Beaudin A, Ayas N, Skomro R, Raneri J, Fox N, Boewen M, Lynch E, Carrier J, Smith E, **Hanly P**. Cognitive function in a sleep clinic cohort of patients with obstructive sleep apnea: Preliminary data from the Canadian Sleep and Circadian Network. (Presented at the annual meeting of the American Thoracic Society, San Diego, CA, May 2018)
134. Thornton C, Santana M, Penz E, Flemons W, Tsai W, Fraser K **Hanly P**, Pendharkar S. The Relationship between Wait Times and Clinical Outcomes for Patients with Severe Sleep-Disordered Breathing. (Presented at the annual meeting of the American Thoracic Society, San Diego, CA, May 2018)
135. Guadagni V, Clark C, Tyndall A, Raneri J, Parboosingh J, **Hanly P**, MD, Poulin P. Effects of six-month aerobic exercise intervention on sleep in healthy older adults. (Presented at the Canadian conference “Promoting healthy brain aging and preventing dementia”, Banff, Alberta, June 2018)
136. Clark C, Guadagni V, Tyndall A, Raneri J, Parboosingh J, **Hanly P**, MD, Poulin P. The Brain in Motion II randomized controlled trial: An aerobic exercise intervention for older adults at increased risk of dementia. (Presented at the Canadian conference “Promoting healthy brain aging and preventing dementia”, Banff, Alberta, June 2018)
137. Gerdung C, Codesal C, Nettel-Aguirre A, **Hanly P**, Maclean J, Bendiak G. Split-night polysomnography for obstructive sleep apnea in children. (Presented at SLEEP, Baltimore, USA, June 2018)
138. Guadagni V, Clark C, Tyndall A, Raneri J, Parboosingh J, Hogan D, **Hanly P**, MD, Poulin P. Effects of aerobic exercise on sleep in healthy older adults at increased genetic risk for late-onset sporadic Alzheimer’s disease. (Presented at the annual meeting of the European Sleep Research Society, Basel, Switzerland, September 2018)
139. Bowen M, **Hanly P**, Ayas N, Fenton M, Raneri J, Fox N, Lynch E, Carrier J, Smith E, Beaudin A, Skomro R. Impacts of time of day and seasonal light variation on cognitive performance in patients with suspected Obstructive Sleep Apnea. (Presented at the annual meeting of the European Sleep Research Society, Basel, Switzerland, September 2018)
140. Nicholl DD, **PJ Hanly**, AA Zalucky, GB Handley, DY Sola, SB Ahmed. Sex differences in the renal hemodynamic response to angiotensin II post-CPAP therapy in women and men with obstructive sleep apnea. Presented at the annual meeting of the American society of Nephrology, San Diego, CA, October 25, 2018

141. Nicholl DD, **PJ Hanly**, AA Zalucky, GB Handley, DY Sola, SB Ahmed. Nocturnal hypoxemia severity influences the effect of CPAP on renal RAS and renal hemodynamics in humans with obstructive sleep apnea. Presented at the annual meeting of the Canadian Society of Nephrology, Montreal, May 2019
142. Byles H, Guadagni V, Younes M, **Hanly P**, Poulin M. Spindles characteristics are associated with executive function in healthy older adults from the Brain in Motion study. Presented at Sleep, San Antonio, Texas, June 2019
143. Rimke A, Ahmed S, Turin TC, Pendharkar S, Raneri J, Lynch E, **Hanly P**. Recruitment of patients with chronic kidney disease and obstructive sleep apnea for a clinical trial. Presented at World Sleep Society meeting, Vancouver, BC, September 2019
144. Beaudin A, Ayas N, Skomro R, Raneri J, Lynch E, **Hanly P**. Impact of hypoventilation on cognitive function in patients with severe obstructive sleep apnea. Presented at World Sleep Society meeting, Vancouver, BC, September 2019
145. Beaudin A, Ayas N, Skomro R, Raneri J, Nocon A, Fox N, Ahmed S, **Hanly P**. Prevalence of patients at risk for progression of chronic kidney disease in a sleep clinic cohort with obstructive sleep apnea. Presented at World Sleep Society meeting, Vancouver, BC, September 2019
146. Braganza M, **Hanly P**, Fraser K, Lee M, Tsai W, Pendharkar S. Predicting CPAP failure in patients with suspected sleep hypoventilation. Presented at World Sleep Society meeting, Vancouver, BC, September 2019
147. Braganza M, **Hanly P**, Fraser K, Lee M, Tsai W, Pendharkar S. Predicting hypoventilation in selected patients following home sleep apnea testing. Presented at World Sleep Society meeting, Vancouver, BC, September 2019
148. Braganza M, **Hanly P**, Fraser K, Lee M, Tsai W, Pendharkar S. Sex differences in patients with obstructive sleep apnea and suspected hypoventilation on home sleep apnea testing. Presented at World Sleep Society meeting, Vancouver, BC, September 2019
149. Guadagni V, Byles H, **Hanly P**, Younes M, Poulin M. Association of sleep spindle characteristics with executive functioning in healthy sedentary middle-aged and older adults. Presented at World Sleep Society meeting, Vancouver, BC, September 2019
150. Franczak A, Nocon A, Bil-Lula, Fenton M, **Hanly P**, Beaudin A, Sawicki G, Skomro R. Urinary MMP-2 activity in patients with obstructive sleep apnea. Presented at World Sleep Society meeting, Vancouver, BC, September 2019
151. Nicholl DD, **Hanly PJ**, Zalucky AA, MacRae JM, Handley GB, Sola DY, Ahmed SB. Sex differences in bioimpedance in humans with obstructive sleep apnea and normal kidney function before and after CPAP therapy. Presented at the American Society of Nephrology, Washington DC, November 2019

152. Nicholl DD, **Hanly PJ**, Zalucky AA, Handley GB, Sola DY, Ahmed SB. Sex does not influence the association between nocturnal hypoxemia, renal hemodynamics, renin-angiotensin system activity in humans with obstructive sleep apnea treated with CPAP. Submitted for presentation at the Canadian Society of Nephrology, Halifax NS, May 2020

## PRESENTATIONS

### Hospital Meetings

1. **Hanly P**. Prostaglandin metabolism in bacterial pneumonia. Wellesley Hospital Research Day, 1990
2. **Hanly P**, Zuberi N, Alderson M, Sasson Z. Ventricular function in snorers and patients with obstructive sleep apnea. Toronto Western Hospital Sleep Rounds, 1991
3. **Hanly P**, Sasson Z, Zuberi N, Lunn K. ST segment depression during sleep in obstructive sleep apnea. Wellesley Hospital Research Day, 1992
4. **Hanly P**, Sasson Z, Zuberi N. Cause and consequences of Cheyne-Stokes respiration in patients with congestive heart failure. Wellesley Hospital Research Day, 1995
5. **Hanly P**. The Role of mechanical ventilation in the pathogenesis of sleep disruption in critically ill patients. St Michael's Hospital, Critical Care Department, Research Rounds, February, 2003
6. Lee C, Gabor J, Tansey C, Matte A, Herridge M, **Hanly P**. Sleep disorders in survivors of acute respiratory distress syndrome. Higgins Day, St Michael's Hospital, Toronto, May 2007

### University Meetings

1. **Hanly P**, Zuberi N, Sasson Z. Cardiac function in patients with obstructive sleep apnea. Cardiovascular Science Rounds, University of Toronto, 1992
2. **Hanly P**, Zuberi N, Alderson M. Transcutaneous PCO<sub>2</sub> during sleep in patients with congestive heart failure and Cheyne-Stokes respiration. Centre for Sleep and Chronobiology, University of Toronto, 1992
3. **Hanly P**, Zuberi N, Sasson Z. Cardiac function in patients with obstructive sleep apnea. Respiratory Medicine Research Rounds, University of Toronto, 1992
4. **Hanly P**, Zuberi N. Periodic leg movements in patients with congestive heart failure. Centre for Sleep and Chronobiology, University of Toronto, 1993
5. **Hanly P**, Zuberi N. Sleep and daytime function in patients with congestive heart failure. Respiratory Medicine Research Rounds, University of Toronto, 1993

6. **Hanly P**, Zuberi N. Increased mortality associated with Cheyne-Stokes respiration in patients with congestive heart failure. Centre for Sleep and Chronobiology, University of Toronto, 1994
7. **Hanly P**. Impact of disordered breathing during sleep on the management of hypoxemia during wakefulness. Centre for Sleep and Chronobiology, University of Toronto, 1995
8. **Hanly P**. Sleep apnea and heart failure. Critical Care Medicine Research Seminars, University of Toronto, 1996
9. Cooper A, **Hanly P**. Sleep in mechanically ventilated, critically ill patients. Respiratory Medicine Research Rounds, University of Toronto, 1997
10. Cooper A, **Hanly P**. Sleep in the ICU: How bad is it? Centre for Sleep and Chronobiology, University of Toronto, 1997
11. **Hanly P**. Does sleep apnea cause myocardial ischemia? Centre for Sleep and Chronobiology, University of Toronto, 1998
12. O'Connor C, **Hanly P**. Gender differences in polysomnographic features of obstructive sleep apnea. Respiratory Medicine Research Rounds, University of Toronto, 1998
13. O'Connor C, **Hanly P**. Obstructive sleep apnea: What's the difference between men and women? Centre for Sleep and Chronobiology, University of Toronto, 1998
14. **Hanly P**, MacFarlane J. Insomnia and snoring. Centre for Sleep and Chronobiology, University of Toronto, 1998
15. **Hanly P**, Niroumand M. To sleep, perchance to kick. Centre for Sleep and Chronobiology, University of Toronto, 1999
16. **Hanly P**, Blackman A. REM OSA. Centre for Sleep and Chronobiology, University of Toronto, 1999
17. **Hanly P**. Sleep in the ICU. Centre for Sleep and Chronobiology, University of Toronto, 1999
18. Fraser K, Hoffstein V, **Hanly P**. Evaluation of measurement techniques for sleep-related breathing disorders. Centre for Sleep and Chronobiology, University of Toronto, 1999
19. **Hanly P**. Nocturnal wandering. Centre for Sleep and Chronobiology, University of Toronto, 2000
20. **Hanly P**. Impact of nocturnal hemodialysis on sleep apnea in patients with chronic renal failure. Respiratory Medicine Research Rounds, University of Toronto, 2000
21. **Hanly P**. Impact of obstructive sleep apnea on left ventricular mass and diastolic function. Respiratory Medicine Research Rounds, University of Toronto, 2001



22. Gabor J, Cooper A, Lee B, **Hanly P**. Impact of the ICU environment on sleep in healthy subjects. 1<sup>st</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2001
23. Gabor J, Cooper AB, Kadikar N, Bettger H, Beecroft J, Lee B, **Hanly P**. Analysis of sleep-disrupting factors in the ICU. 2<sup>nd</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2002, and 1<sup>st</sup> Annual Academic Day, Adult and Pediatric Critical Care Medicine Program, University of Toronto, June 2002
24. Gabor J, Beecroft J, Lukic D and **Hanly P**. Daytime symptoms in patients with REM - dependent obstructive sleep apnea. 2<sup>nd</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2002
25. **Hanly P**. Sleep disruption in the ICU. Presented at Centre for Sleep Medicine and Circadian Biology, University of Toronto, October 2002
26. **Hanly P**. Daytime sleepiness in patients with end-stage renal disease. Presented at Respiratory Medicine Research Rounds, University of Toronto, May 2003
27. Mahammad S, **Hanly P**, Gabor J, Beecroft J, Duffin J. Overnight changes in respiratory chemoreflexes of obstructive sleep apnea patients. 3<sup>rd</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2003
28. Beecroft J, Zanon S, Lukic D, **Hanly P**. Oral CPAP for sleep apnea: effectiveness, patient preference and compliance. 3<sup>rd</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2003
29. Gabor J, **Hanly P**, Khaykin Y, Lashevsky I, Barnard-Roberts V, Korley P, Dorian P, Newman D. Biventricular pacing improves Cheyne-Stokes respiration in patients with congestive heart failure. Presented at 17<sup>th</sup> annual Medical Student Research Day, University of Toronto, January 2003
30. Gabor J, Beecroft J, Crombach S, Lukic D, **Hanly P**. Daytime symptoms and patient demographics in REM-dependent obstructive sleep apnea. Presented at 18<sup>th</sup> annual Medical Student Research Day, University of Toronto, January 2004
31. Beecroft J, Duffin J, Crombach S, Gabor J, Mahamed S, Pierratos A, Chan C, Zaltzman J, Prasad R, McFarlane P, **Hanly P**. Chemo-responsiveness in patients with sleep apnea and end-stage renal disease. 4<sup>th</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2004
32. Beecroft J, Crombach S, Mahamed S, **Hanly P**. Comparison of the OxyMask and Venturi mask in the delivery of supplemental oxygen. 4<sup>th</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2004

33. Beecroft J, Hoffstein V, Crombach S, Gabor J, Pierratos A, Chan C, Zaltzman J, Prasad R, McFarlane P, **Hanly P**. Upper airway profile in patients with sleep apnea and end-stage renal disease. 4<sup>th</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2004
34. **Hanly P**. Daytime sleepiness in chronic renal failure. Presented at Sleep Medicine and Research Rounds, University of Toronto Centre for Sleep Medicine and Circadian Biology, May 2004
35. **Hanly P**. Pathogenesis of sleep apnea in renal failure. Presented at Sleep Medicine and Research Rounds, University of Toronto Centre for Sleep Medicine and Circadian Biology, May 2004
36. **Hanly P**. Sleep apnea in renal failure: past, present and future studies. Sleep and Respiration rounds, University of Calgary, January 2005
37. Beecroft J, Ward M, Younes M, Crombach S, Smith O, Lukic D, Lawrence J, **Hanly P**. Sleep monitoring in the intensive care unit: comparison of nurse assessment, actigraphy and polysomnography. 5<sup>th</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2005
38. Beecroft J, Duffin J, Mahamed S, **Hanly P**. Comparison of chemoresponsiveness in obstructive sleep apnea patients with and without chronic renal failure. 5<sup>th</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2005
39. Beecroft J, **Hanly P**. Sleep apnea and end-stage renal disease. Research in Progress Rounds, Division of Respiriology, University of Toronto, February 2006
40. Beecroft J, **Hanly P**. Chemoreflex responsiveness in sleep apnea and end-stage renal disease. Cardiovascular Platform, Department of Physiology, University of Toronto, Ontario, April 2006
41. Beecroft J, Duffin J, Pierratos A, Chan C, McFarlane P, **Hanly P**. Chemoreflex responsiveness is decreased in patients whose sleep apnea is improved by nocturnal hemodialysis. 6<sup>th</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2006
42. Beecroft J, Pierratos A, Chan C, McFarlane P, **Hanly P**. The impact of nocturnal hemodialysis on sleep apnea is dose-dependent. 6<sup>th</sup> Annual Research Day in Respiriology and Respiratory Physiology, University of Toronto, June 2006
43. Beecroft J, **Hanly P**. Sleep apnea and end-stage renal disease, Sleep and Respiration Rounds, Department of Medicine, University of Calgary, Alberta, November 2006
44. **Hanly P**. Daytime sleepiness in patients with renal failure. Sleep and Respiration Rounds, University of Calgary, January 2006

45. **Hanly P.** Mortality in Patients with end stage renal disease: role of obstructive sleep apnea. Sleep and Respiration Rounds, University of Calgary, January 2006
46. Lee C, Gabor J, Tansey C, Matte A, Herridge M, **Hanly P.** Sleep disorders in survivors of acute respiratory distress syndrome. 5<sup>th</sup> Annual Critical Care Medicine Research Day, University of Toronto, June 2007. *Received resident award*
47. **Hanly P.** Sleep apnea and stroke. Sleep and Respiration Rounds, University of Calgary, September 2008
48. Nicholl D, **Hanly P,** Handley G, Hemmelgarn B, Poulin M, Sola D, Ahmed S. Obstructive sleep apnea enhances blood pressure responsiveness to angiotensin II in humans. Leaders in Medicine Research Symposium, University of Calgary, November 2012

### National Meetings

1. **Hanly P,** Light RB. Effect of positive end-expiratory pressure (PEEP) on experimental pseudomonas pneumonia. Canadian Critical Care Society Annual Meeting, 1985, Vancouver, British Columbia
2. **Hanly P,** Roberts D, Dobson K, Light RB. Effect of indomethacin on gas exchange in patients with extensive bacterial pneumonia. Annual meeting of the Royal College of Physicians and Surgeons of Canada, 1986, Toronto
3. **Hanly P,** Sienko A, Light RB. Role of prostacyclin in the pathophysiology of bacteremic pseudomonas pneumonia in dogs. Annual meeting of the Royal College of Physicians and Surgeons of Canada, 1986, Toronto
4. **Hanly P,** George C, Miller T, Kryger M. Heart rate response to breathhold, Valsalva and Mueller maneuvers in obstructive sleep apnea (OSA). Annual meeting of the Royal College of Physicians and Surgeons of Canada, 1987, Winnipeg
5. **Hanly P,** Zuberi N, Alderson M, Sasson Z. Effect of obstructive sleep apnea (OSA) on ventricular function. Annual meeting of Royal College of Physicians and Surgeons of Canada, Quebec City, 1991
6. Walz-LeBlanc B, Urowitz MB, Gladman D, **Hanly P.** The “Shrinking lungs syndrome” in systemic lupus erythematosus - improvement with corticosteroid therapy. Annual meeting of Royal College of Physicians and Surgeons of Canada, Quebec City, 1991
7. Tremblay L, Schouten D, Hyland R, **Hanly P.** Survival of acute myelogenous leukemia patients requiring intubation/ventilatory support. Annual meeting of Royal College of Physicians and Surgeons of Canada, 1993
8. Aaron S, Coppolino M, **Hanly P,** Hyland R, Levene R, Darling G, Stewart T. Use of inhaled nitric oxide in patients with hypoxemic respiratory failure of diverse etiology. Annual meeting of Royal College of Physicians and Surgeons of Canada, 1995

9. **Hanly P.** Sleep apnea and heart failure. Annual meeting of Canadian Society of Respiratory Therapists, 1995
10. Cooper A, Thornley K, Young G, Stewart T, Slutsky A, **Hanly P.** Sleep in critically ill, mechanically ventilated patients: results of a pilot study. Annual meeting of Royal College of Physicians and Surgeons of Canada, 1998
11. Gabor J, **Hanly P,** Khaykin Y, Laskevsky I, Barnard V, Korley V, Dorian P, Newman D. The effect of biventricular pacing for heart failure on sleep: A possible further mechanism of benefit. Annual meeting of the Canadian Cardiology Society, Edmonton, October 2002
12. Chan C, **Hanly P,** Gabor J, Picton P, Pierratos A, Floras J. Nocturnal hemodialysis improves nocturnal hypoxemia, lowers heart during sleep and normalizes its parasympathetic and sympathetic modulation. Presented at the annual meeting of the Canadian Society of Nephrology, Newfoundland, May 2003
13. Foster GE, **Hanly P,** Ostrowski M, Poulin M. Sensitivity of the cerebral vasculature to hypoxia is reduced in obstructive sleep apnea. Presented at the Alberta Respiratory Diseases Symposium, Banff, Alberta, April 2006. *GE Foster awarded prize (3<sup>rd</sup> overall) for best scientific abstracts and presentations by trainees*
14. Foster GE, **Hanly P,** Ostrowski M, Poulin M. Sensitivity of the cerebral vasculature to hypoxia is reduced in obstructive sleep apnea. Presented at the Oxford Conference on Modeling and Control of Breathing, Lake Louise, Alberta, September 2006
15. Loewen A, Siemens A, **Hanly P.** Sleep quality in patients with end-stage renal disease: contribution of sleep apnea and periodic leg movements. Presented at the Alberta Respiratory Diseases Symposium, Banff, Alberta, April 2008
16. Pialoux V, Foster G, Brugniaux J, Duggan C, **Hanly P,** Poulin M. Effect of 4 days of intermittent hypoxia on oxidative stress in healthy men. Presented at the Alberta Respiratory Diseases Symposium, Banff, Alberta, April 2008
17. Chan W, Coutts S, **Hanly P.** Sleep apnea in patients with transient ischemic attack and minor stroke. Presented at the Canadian Stroke Congress, Quebec City, June 2010
18. Chan W, Coutts S, **Hanly P.** Sleep apnea in patients with transient ischemic attack and minor stroke. Presented at the Canadian Neurological Sciences Federation, Quebec City, June 2010
19. Nicholl D, **Hanly P,** Handley G, Hemmelgarn B, Poulin M, Sola D, Ahmed S. Obstructive sleep apnea treatment improves renin angiotensin system activity in humans. Canadian Society of Clinical Investigation - Clinical Investigator Trainee Association of Canada (CSCI-CITAC) Annual Meeting and Young Investigators' Forum, Ottawa, Canada, September 2012

20. Nicholl D, **Hanly P**, Handley G, Hemmelgarn B, Poulin M, Sola D, Ahmed S. Obstructive sleep apnea treatment with continuous positive airway pressure decreases intraglomerular pressure and alters renal sensitivity to angiotensin II. Submitted for presentation at the annual meeting of the Canadian Society of Nephrology, Montreal, Canada, April 2013
21. Zalucky A, Nicholl D, **Hanly P**, Handley G, Poulin M, Walji S, Sola D, Ahmed S. The effect of sustained and intermittent hypoxia on renal renin angiotensin system activity in patients with obstructive sleep apnea. Presented at the Canadian Respiratory Conference Annual Meeting, Calgary, Alberta, April 2014
22. Zalucky A, Nicholl D, **Hanly P**, Poulin M, Sola D, Ahmed S. The effect of nocturnal hypoxia on the systemic vascular response to angiotensin II infusion in patients with obstructive sleep apnea. Presented at the Canadian Respiratory Conference Annual Meeting, Calgary, Alberta, April 2014
23. Cummins L, Loewen A, Tye R, **Hanly P**, Fraser K. Non-invasive ventilation for the restricted thorax: effects of ventilator modality on quality of life. Presented at the Canadian Respiratory Conference Annual Meeting, Calgary, Alberta, April 2014

### **International Meetings**

1. **Hanly P** and Light RB. Lung Mechanics in Experimental Pseudomonas Pneumonia. American Thoracic Society Annual Meeting, Anaheim, California, 1985
2. **Hanly P** and Light RB. Effect of Positive End-Expiratory Pressure (PEEP) on Gas Exchange, Regional Pulmonary Blood Flow and Central Hemodynamics in Acute Experimental Pseudomonas Pneumonia. American Thoracic Society Annual Meeting, Anaheim, California, 1985
3. **Hanly P** and Light RB. Effect of Experimental Pseudomonas Pneumonia on Gas Exchange, Regional Pulmonary Blood Flow and Hemodynamics. American Thoracic Society Annual Meeting, Anaheim, California, 1985
4. **Hanly P**, Sienko A, Light RB. Role of Endogenous Prostaglandins in the Hemodynamic Changes during Acute Experimental Pseudomonas Pneumonia with Bacteremia. American Thoracic Society Annual Meeting, Kansas, 1986
5. **Hanly P**, Sienko A, Light RB. Effect of Indomethacin on Central Hemodynamics, Gas Exchange, Pulmonary Blood Flow Distribution and Prostaglandin Synthesis in Experimental Pseudomonas Pneumonia. American Thoracic Society Annual Meeting, Kansas, 1986
6. **Hanly P**, Light RB. Positive End-Expiratory Pressure (PEEP) and Plasma Volume Expansion Increase the Extent of Disease in Acute Pseudomonas Pneumonia. American Thoracic Society annual meeting, Kansas, 1986

7. **Hanly P**, Sullivan G, Miller T, Kryger M. Respiration and Sleep in Patients with Congestive Heart Failure. Annual meeting of American Thoracic Society, Las Vegas, 1988
8. **Hanly P**, Miller T, Steljes D, Baert R., Fraise M, Kryger MH. Effect of Oxygen on Sleep and Respiration in Patients with Severe Congestive Heart Failure. Annual meeting of American College of Chest Physicians, Boston, MA, 1989
9. **Hanly P**, Zuberi N, Alderson M, Lunn K, Sasson Z. ST Segment Depression during Sleep in Patients with Obstructive Sleep Apnea. Annual meeting of American Thoracic Society, Miami, Florida, USA, 1992
10. **Hanly P**, Zuberi N, Alderson M. Transcutaneous PCO<sub>2</sub> during Sleep in Patients with Congestive Heart Failure and Cheyne-Stokes respiration. Annual meeting of American Thoracic Society, Miami, Florida, USA, 1992
11. **Hanly P**, Zuberi N, Alderson M, Sasson Z. Ventricular Function in Snorers and Patients with Obstructive Sleep Apnea. Annual meeting of American Thoracic Society, Miami, Florida, USA, 1992
12. **Hanly P**, Zuberi. Daytime Sleepiness in Patients with Congestive Heart Failure and Cheyne-Stokes respiration. Annual meeting of American Thoracic Society, San Francisco, USA, 1993
13. **Hanly P**, Zuberi N, Stuss D. Periodic Leg Movements in Patients with Congestive Heart Failure. Annual meeting of American Thoracic Society, San Francisco, USA, 1993
14. Tremblay L, Schouten D, Hyland R, **Hanly P**. Survival of Acute Myelogenous Leukemia Patients Requiring Intubation/Ventilatory Support. Annual meeting of American College of Physician, Orlando, Florida, 1993
15. **Hanly P**, Zuberi N, Carvalho C. Increased Mortality Associated with Cheyne-Stokes respiration in Patients with Congestive Heart Failure. Annual meeting of American Thoracic Society, Boston, USA, May 1994
16. Aaron S, Silkoff P, **Hanly P**, Levene R, Darling G, Hyland R, Stewart T. Alveolar Nitric Oxide (NO): A Marker of Inflammation? Annual meeting of American College of Chest Physicians, 1995
17. Aaron S, Silkoff P, **Hanly P**, Levene R, Darling G, Hyland R, Stewart T. Inhaled Nitric Oxide is Effective in Patients with Hypoxemic Respiratory Failure Of Diverse Etiology. Annual meeting of American College of Chest Physicians, 1995
18. **Hanly P**, Sasson Z, Hyland R, Zuberi-Khokhar N, Squires A, Tullis D. Doppler-Echocardiography in Adult Cystic Fibrosis Patients with Severe Lung Disease. Annual meeting of American Thoracic Society, New Orleans, 1996

19. Heslegrave R, Tullis D, **Hanly P**. Impact of Cystic Fibrosis on Sleep and Daytime Cognitive Performance in Adult Cystic Fibrosis Patients. Annual meeting of Association of Professional Sleep Societies, San Francisco, 1997
20. Pierratos A, Thornley K, Ouwendyk M, Francoeur R, **Hanly P**. Nocturnal Hemodialysis Improves Sleep Quality in Patients with Chronic Renal Failure. (Presented at annual meeting, American Society of Nephrology, November 1997)
21. Kingsley S, Thornley K, Hoffstein V, **Hanly P**. The Effect of Body Position on Auditory Spectral Analysis of Non-Apneic Snoring. (Presented at annual meeting, American Thoracic Society, April 1998)
22. O'Connor C, Thornley K, Sumal P, **Hanly P**. Gender Differences in The Severity and Type of Obstructive Sleep Apnea. (Presented at annual meeting, American Thoracic Society, April 1998)
23. O'Connor C, Thornley K, Sumal P, **Hanly P**. Long Term Follow Up of Patients with REM-Dependent Obstructive Sleep Apnea. (Presented at annual meeting, American Thoracic Society, April 1998)
24. O'Connor C, Sasson Z, Thornley K, Sumal P, **Hanly P**. Right Ventricular Hypertrophy in Obstructive Sleep Apnea. (Presented at annual meeting, American Thoracic Society, April 1998)
25. **Hanly P**, Thornley K, Ouwendyk R, Francoeur R, Sumal P, Pierratos A. Effect of Nocturnal Hemodialysis on Sleep Apnea. (Presented at annual meeting, American Thoracic Society, April 1998)
26. Cooper A, Stewart T, Thornley K, Slutsky A, **Hanly P**. Sleep Patterns in Critically Ill, Mechanically Ventilated Patients. (Presented at annual meeting, American Thoracic Society, April 1998)
27. Ferguson N, Cooper A, **Hanly P**, Meade M, Granton J, Slutsky A, Stewart T. Long Term Follow-Up of Survivors of Acute Lung Injury (ALI): Effect of A Pressure and Volume Limited Ventilation Strategy (PLVS). (Presented at annual meeting, American Thoracic Society, April 1998)
28. Heslegrave R, Thornley K, Ouwendyk M, Francoeur R, Sumal P, Pierratos A, **Hanly P**. Impact of Nocturnal Hemodialysis on Sleep and Daytime Cognitive Functioning in Patients with Chronic Renal Failure. (Presented at annual meeting, Association of Professional Sleep Societies, New Orleans, 1998)
29. Dancey D, Thornley K, Tullis DE, Hyland RH, **Hanly P**. Sleep Quality and Daytime Sleepiness in Adults with Cystic Fibrosis. (Presented at XIX World Congress on Diseases of the Chest, Toronto, November 1998)

30. Varkul MD, **Hanly P**, Schouten BD, McIvor A, Finkelstein A. Accuracy of APACHE II Score in Predicting Mortality in Critically Ill Patients with Rheumatologic Disease. (Presented at Toronto Critical Care Symposium, Toronto, November 1998)
31. Kuperstein R, **Hanly P**, Niroumand M, O'Connor C, Thornley K, Perl J, Sasson Z. Importance of Obesity and Hypertension to the Relation Between Age and Left Ventricular Mass. (Presented at the American College of Cardiology, Anaheim, California, March 2000)
32. Niroumand M, Sasson Z, O'Connor C, Kuperstein R, Thornley K, Perl J, **Hanly P**. Left Ventricular Diastolic Function in Patients with Obstructive Sleep Apnea. (Presented at the annual meeting of the American Thoracic Society, Toronto, May 2000)
33. Dancey D, **Hanly P**, Soong C, Lee B, Shephard J, Hoffstein V. Gender Differences in Obstructive Sleep Apnea - Structure vs Function? (Presented at the annual meeting of the American Thoracic Society, Toronto, May 2000)
34. Dancey D, **Hanly P**, Soong C, Lee B, Hoffstein V. Impact of Menopause on the Prevalence and Severity of Sleep Apnea. (Presented at the annual meeting of the American Thoracic Society, Toronto, May 2000)
35. Niroumand M, Sasson Z, O'Connor C, Kuperstein R, Thornley K, Perl J, **Hanly P**. Impact of Obstructive Sleep Apnea on Left Ventricular Mass and Left Atrial Size. (Presented at the annual meeting of the American Thoracic Society, Toronto, May 2000)
36. Gabor JY, Cooper AB and **Hanly P**. Impact of the ICU Environment on Sleep in Healthy Subjects. (Presented at the annual meeting of the American Thoracic Society, San Francisco, May 2001)
37. Cooper AB, Gabor JY and **Hanly P**. Sleep in the ICU: Estimated Prevalence of Reliable Polysomnography. (Presented at the annual meeting of the Society of Critical Care Medicine, February 2001)
38. Po A, Mahamed S, **Hanly P**, Duffin J. Changes in Heart Rate Variability in OSA Patients Before and After Sleep. (Presented at the annual meeting of Experimental Biology, New Orleans, April 2002)
39. Gabor J, Beecroft J, Lukic D, **Hanly P**. Memory Loss in Patients with REM-Dependent Obstructive Sleep Apnea. (Presented at the annual meeting of the American Thoracic Society, Atlanta, May 2002)
40. Gabor JY, Cooper AB, Kadikar N, Bettger H, Beecroft J, Lee B, Hanly P. Analysis of Sleep-Disrupting Factors in the ICU. (Presented at the annual meeting of the American Thoracic Society, Atlanta, May 2002)
41. **Hanly P**, Gabor J, Pierratos A. Daytime Sleepiness in Patients with End-Stage Renal Disease: Impact of Nocturnal Hemodialysis. (Presented at the 8<sup>th</sup> International Symposium on Sleep and Breathing, Reykjavik, Iceland, June 2002)



42. **Hanly P**, Pierratos A. Improvement of Sleep Apnea with Nocturnal Hemodialysis. (Presented at 9<sup>th</sup> International Symposium on Hemodialysis, Seattle WA, March 2003)
43. Chan C, **Hanly P**, Gabor J, Picton P, Pierratos A, Floras JS. Nocturnal Hemodialysis Lowers Heart Rate during Sleep and Normalizes Its Parasympathetic and Sympathetic Modulation. *Hemodialysis International* 7: 89-90, 2003 (Presented at the 23<sup>rd</sup> Annual Dialysis Conference, Seattle, March 2003)
44. Mahammad S, **Hanly P**, Gabor J, Beecroft J, Duffin J. Overnight Increase in Respiratory Chemoreflexes of Obstructive Sleep Apnea Patients. (Presented at the annual meeting of the Association of Professional Sleep Societies, Chicago, June 2003)
45. Beecroft J, Zanon S, Lukic D, **Hanly P**. Oral CPAP for Sleep Apnea: Effectiveness, Patient Preference and Compliance. (Presented at the annual meeting of the Association of Professional Sleep Societies, Chicago, June 2003)
46. Chan C, **Hanly P**, Gabor J, Picton P, Pierratos A, Floras J. Nocturnal Hemodialysis Improves Nocturnal Hypoxemia, Lowers Heart during Sleep And Normalizes Its Parasympathetic and Sympathetic Modulation. (Presented at International Society of Nephrology, Berlin, Germany, June 2003)
47. Chan C, **Hanly P**, Gabor J, Picton P, Pierratos A, Floras J. Nocturnal Hemodialysis Improves Nocturnal Hypoxemia, Lowers Heart during Sleep and Normalizes Its Parasympathetic and Sympathetic Modulation. (Presented at 9<sup>th</sup> International Symposium on Hemodialysis, Seattle WA, March 2003)
48. Beecroft J, Duffin J, Crombach S, Gabor J, Mahamed S, Pierratos A, Chan C, Zaltzman J, Prasad R, McFarlane P, **Hanly P**. Chemo-Responsiveness in Patients with Sleep Apnea and End-Stage Renal Disease. (Presented at the annual meeting of the American Thoracic Society, Orlando, Florida, May 2004)
49. Beecroft J, Crombach S, Mahamed S, **Hanly P**. Comparison of the Oxymask and Venturi Mask in the Delivery of Supplemental Oxygen. (Presented at the annual meeting of the American Thoracic Society, Orlando, Florida, May 2004)
50. Beecroft J, Hoffstein V, Crombach S, Gabor J, Pierratos A, Chan C, Zaltzman J, Prasad R, McFarlane P, **Hanly P**. Upper Airway Profile in Patients with Sleep Apnea and End-Stage Renal Disease. (Presented at the annual meeting of the American Thoracic Society, Orlando, Florida, May 2004)
51. **Hanly P**, Beecroft J, Duffin J, Crombach S, Gabor J, Mahamed S, Chan C, Zaltzman J, Prasad R, McFarlane P, Pierratos A. Ventilatory Sensitivity to Carbon Dioxide is Increased in Patients with Sleep Apnea and End-Stage Renal Disease. (Presented at the annual meeting of the American Society of Nephrology, St Louis, Missouri, Oct 2004)

52. **Hanly P**, Beecroft J, Hoffstein V, Crombach S, Gabor J, Chan C, Zaltzman J, Prasad R, McFarlane P, Pierratos A. Pharyngeal Size and Collapsibility in Patients with Sleep Apnea and End-Stage Renal Disease. (Presented at the annual meeting of the American Society of Nephrology, St Louis, Missouri, Oct 2004)
53. Charest A, **Hanly P**, Parkes R, Naimark M, Logan A. Impact of Sleep Apnea on Mortality in Patients with End-Stage Renal Disease. (Presented at the annual meeting of the American Society of Nephrology, St Louis, Missouri, Oct 2004)
54. Beecroft J, Ward M, Younes M, Crombach S, Smith O, Lukic D, Lawrence J, **Hanly P**. Sleep Monitoring in the Intensive Care Unit: Comparison of Nurse Assessment, Actigraphy and Polysomnography. (Presented at the annual meeting of the American Thoracic Society, San Diego, California, May 2005)
55. Beecroft J, Duffin J, Mahamed S, **Hanly P**. Comparison of Chemoresponsiveness in Obstructive Sleep Apnea Patients with and without Chronic Renal Failure. (Presented at the annual meeting of the American Thoracic Society, San Diego, California, May 2005)
56. Arzt M, Ryan C, Logan A, Floras J, **Hanly P**, Bradley T, for the **CANPAP Investigators**. Transplant-free Survival of Heart Failure Patients According to Effect of CPAP on Central Sleep Apnea in the CANPAP Trial. (Presented at the annual meeting of the American Thoracic Society, San Diego, California, May 2006)
57. Beecroft J, Duffin J, Pierratos A, Chan C, McFarlane P, **Hanly P**. Chemoreflex Responsiveness is Decreased in Patients Whose Sleep Apnea is Improved by Nocturnal Hemodialysis. (Presented at the annual meeting of the American Thoracic Society, San Diego, California, May 2006)
58. Beecroft J, Pierratos A, Chan C, McFarlane P, **Hanly P**. The Impact of Nocturnal Hemodialysis on Sleep Apnea is Dose-dependant. (Presented at the annual meeting of the American Thoracic Society, San Diego, California, May 2006)
59. Beecroft J, Zaltzman J, Prasad R, Meliton G, **Hanly P**. Evaluation of Sleep Apnea in Patients with Chronic Renal Failure Treated with Kidney Transplantation. (Presented at the annual meeting of the American Thoracic Society, San Diego, California, May 2006)
60. Ryan C, Arzt M, Poppat N, Logan A, Floras J, **Hanly P**, Bradley T for the **CANPAP investigators**. Conversion from Central to Obstructive Sleep Apnea in Heart Failure Patients in the CANPAP trial. Conversion from Central to Obstructive Sleep Apnea in Heart Failure Patients in the CANPAP trial. (Presented at the annual meeting of the American Thoracic Society, San Diego, California, May 2006)
61. Foster GE, **Hanly P**, Ostrowski M, Poulin M. Regulation of Cerebral Blood Flow in Patients with Obstructive Sleep Apnea. (Presented at the annual meeting of the American Thoracic Society, San Diego, California, May 2006)

62. Foster GE, **Hanly P**, Ostrowski M, Poulin M. Ventilatory and Cerebral Blood Flow Responses to Isocapnic Hypoxia in Patients with Obstructive Sleep Apnea. (Presented at the X<sup>th</sup> Oxford Conference on Modeling and Control of Breathing, Lake Louise Alberta, September 2006) *GE Foster selected as a finalist in the Young Investigator Awards competition.*
63. **Hanly P**, Beecroft J, Prasad R, Meliton G, Zaltzman J. Evaluation of Sleep Apnea Pre and Post Kidney Transplantation. *J Am Soc Nephrol* 2006; 17:386A. (Presented at the annual meeting of the American Society of Nephrology, San Diego, California, October 2006)
64. **Hanly P**, Beecroft J, Chan C, McFarlane P, Pierratos A. How Much Nocturnal Hemodialysis is Required to Improve Sleep Apnea? *J Am Soc Nephrol* 2006; 17:58A. (Presented at the annual meeting of the American Society of Nephrology, San Diego, California, October 2006)
65. Beecroft J, Hoffstein V, Pierratos A, Chan C, McFarlane P, **Hanly P**. Upper Airway Narrowing in Patients with End-Stage Renal Disease: Implications for the Pathogenesis of Obstructive Sleep Apnea. (Presented at the annual meeting of the American Thoracic Society, San Francisco, California, May 2007)
66. Beecroft J, Hoffstein V, Pierratos A, Chan C, McFarlane P, **Hanly P**. Nocturnal Hemodialysis Increases Pharyngeal Size in Patients with Sleep Apnea and End-Stage Renal Disease. (Presented at the annual meeting of the American Thoracic Society, San Francisco, California, May 2007)
67. Ronksley P, **Hanly P**, Tsai W. Pathogenesis of Sustained Hypoxemia in Obese Patients with Severe Obstructive Sleep Apnea. (Presented at the annual meeting of the American Thoracic Society, San Francisco, California, May 2007)
68. Ronksley P, **Hanly P**, Tsai W. Accuracy and Stability of Transcutaneous PCO<sub>2</sub> Monitoring in Patients with Nocturnal Hypoventilation. (Presented at the annual meeting of the American Thoracic Society, San Francisco, California, May 2007)
69. Beecroft J, Pierratos A, **Hanly P**. Clinical Presentation of Obstructive Sleep Apnea in Patients with End-Stage Renal Disease. (Presented at the annual meeting of the American Thoracic Society, Toronto, Ontario, May 2008)
70. Loewen A, Siemens A, **Hanly P**. Sleep Quality in Patients with End-Stage Renal Disease: Contribution of Sleep Apnea and Periodic Leg Movements. (Presented at the annual meeting of the American Thoracic Society, Toronto, Ontario, May 2008)
71. Loewen A, Ostrowski M, Atkar R, Laprairie J, Gnitecki J, **Hanly P**, Younes M. Determinants of Ventilatory Instability in Obstructive Sleep Apnea: Inherent or Acquired? (Presented at the annual meeting of the American Thoracic Society, Toronto, Ontario, May 2008)

72. Foster G, Brugniaux J, Pialoux V, Duggan C, **Hanly P**, Ahmed S, Poulin M. Intermittent Hypoxia Increases Resting Blood Pressure and the Pressor Response to Acute Isocapnic Hypoxia in Healthy Humans. (Presented at the annual meeting of the American Thoracic Society, San Diego, California, May 2009)
73. Loewen A, Ostrowski M, Laprairie J, Maturino F, Roman M, **Hanly P**, Younes M. Genioglossus (GG) Responses to Increasing Chemical Drive in Obstructive Apnea (OSA) Patients During Sleep. (Presented at the annual meeting of the American Thoracic Society, San Diego, California, May 2009)
74. Poulin M, **Hanly P**, Foster G, Pialoux V, Brugniaux J. Physiological Responses to Intermittent Hypoxia in Healthy Humans: Implications for Obstructive Sleep Apnea and Periodic Breathing. (Presented at the 8<sup>th</sup> World Congress on High Altitude Medicine and Physiology, Arequipa, Peru, August, 2010)
75. Brugniaux J, Pialoux V, Foster G, Duggan C, Eliasziw M, **Hanly P**, Ahmed S, Poulin M. Effects of Intermittent Hypoxia on Epo, Soluble Epo Receptor and Ventilation in Healthy Humans. (Presented at the 8<sup>th</sup> World Congress on High Altitude Medicine and Physiology, Arequipa, Peru, August, 2010)
76. Chan W, Coutts SB, **Hanly P**. Sleep Apnea in Patients with Transient Ischemic Attack (TIA) and Minor Stroke. (Presented at the Canadian Neurological Sciences Federation, Quebec City, June 2010)
77. Chan W, Coutts SB, **Hanly P**. Sleep Apnea in Patients with Transient Ischemic Attack (TIA) and Minor Stroke. (Presented at the Canadian Stroke Congress, Quebec City, June 2010)
78. Nicholl D, Ahmed S, Hemmelgarn B, Sola D, Beecroft J, **Hanly P**. Prevalence of Sleep Apnea and Nocturnal Hypoxemia in Chronic Kidney Disease. World Congress of Nephrology 2011 (WCN 2011, Vancouver, Canada, April 2011)
79. Pun M, Ahmed S, Beaudin A, **Hanly P**, Poulin M. Effects of Intermittent Hypoxia on Arterial Blood Pressure and Cerebral Blood Flow in Healthy Humans: Role of Cyclooxygenases. (Presented at the International Hypoxia Symposia 2011, Lake Louise, Canada, February 2011)
80. Younes M, Loewen A, Ostrowski M, Laprairie J, Maturino F, **Hanly P**. How Much Genioglossus Activation is Required during Sleep to Open the Airway of Patients with Obstructive Sleep Apnea? (Presented at the annual meeting of the American Thoracic Society, Denver, May 2011)
81. Younes M, Loewen A, Ostrowski M, Laprairie J, Maturino F, **Hanly P**. Short Term Potentiation (STP) of Genioglossus Activity in Patients with Obstructive Sleep Apnea. (Presented at the annual meeting of the American Thoracic Society, Denver, May 2011)

82. Patel S, **Hanly P**, Smith E, Coutts S. White Matter Disease in Minor Stroke and TIA Patients with Obstructive Sleep Apnea. (Presented at the Canadian Stroke Congress, Ottawa, October 2011)
83. Nicholl D, Ahmed S, Loewen A, Hemmelgarn B, Sola D, Beecroft J, Turin T, **Hanly P**. Clinical Presentation of Sleep Apnea in Patients with Chronic Kidney Disease. (Presented at the annual meeting of the American Society of Nephrology, Philadelphia, November 2011)
84. Nicholl D, Ahmed S, Loewen A, Hemmelgarn B, Sola D, Beecroft J, Turin T, **Hanly P**. Validity of the Berlin Questionnaire and Adjusted Neck Circumference in Identifying Sleep Apnea in Patients with Chronic Kidney Disease. (Presented at the annual meeting of the American Society of Nephrology, Philadelphia, November 2011)
85. Nicholl D, **Hanly P**, Handley G, Hemmelgarn B, Poulin M, Sola D, Ahmed S. The Renal Hemodynamic Response to Angiotensin II Infusion in Patients with Obstructive Sleep Apnea. (Presented at the annual meeting of the American Thoracic Society, San Francisco, May 2012)
86. Nicholl D, **Hanly P**, Handley G, Hemmelgarn B, Poulin M, Sola D, Ahmed S. Obstructive Sleep Apnea and the Vascular Renin Angiotensin System in Humans. (Presented at the annual meeting of the American Thoracic Society, San Francisco, May 2012)
87. Nicholl D, **Hanly P**, MacRae JM, Handley G, Hemmelgarn B, Poulin M, Sola D, Ahmed S. Treatment of Obstructive Sleep Apnea Improves Arterial Stiffness and Alters Vascular Sensitivity to Angiotensin II in Humans. (Presented at the annual meeting of the American Society of Nephrology, San Diego, November 2012)
88. Nicholl D, **Hanly P**, Handley G, Hemmelgarn B, Poulin M, Sola D, Ahmed S. Obstructive Sleep Apnea Treatment Improves Renin Angiotensin Activity in Humans. (Presented at the annual meeting of the American Society of Nephrology, San Diego, November 2012)
89. Loewen A, Korngut L, Damji O, **Hanly P**. Utility of Polysomnography to Initiate Noninvasive Positive Pressure Ventilation in Patients with Amyotrophic Lateral Sclerosis. (Presented at the annual meeting of the American Academy of Sleep Medicine (SLEEP), Baltimore, Maryland, June 2013)
90. Tyndall A, Case S, Arsenault-Lapierre G, Davenport M, Wilson B, Eskes G, Longman R, **Hanly P**, Poulin M. Physical Fitness Improves Sleep Quality through Improvement in Sleep Efficiency. (Abstract selected for oral presentation as part of a “Nanosymposium on Human Cognition: Cognitive Aging” at the 43<sup>rd</sup> Annual Meeting of the Society of Neuroscience San Diego C.A. USA, 9-13 November 2013. Program No. XXX.X. 2013 Neuroscience Meeting Planner. San Diego, CA, USA: Society for Neuroscience, 2013. Online)

91. Tyndall A, Case S, Arsenault-Lapierre G, Davenport M, Wilson B, Eskes G, Longman R, **Hanly P**, Poulin M. Fitness Improves Sleep Quality through Improvement in Sleep Efficiency. (Abstract to be presented (oral presentation) at the 24<sup>th</sup> Annual Meeting of the North American Menopause Society, Dallas, TX USA, 9-12 October 2013. AV Tyndall's abstract accepted for an oral presentation and selected as one of the recipients of the 2013 New Investigator Travel Awards for the best scientific abstracts by trainees)
92. Yang C, Beaudin A, Pun M, Ahmed S, Steinbeck C, Bond L, De Souza A, Wynne-Edwards K, **Hanly P**, Poulin M. Effect of Cyclooxygenase Inhibition on Intermittent Hypoxia Induced Alterations in Blood Pressure in Healthy Humans. (Presented at the International Hypoxia Symposia 2013, Lake Louise, Canada, February 2013)
93. Beaudin A, Pun M, Yang C, Steinbeck C, Bond L, De Souza A, Wynne-Edwards K, Anderson T, Ahmed S, **Hanly P**, Poulin M. Ventilatory and Cerebral Blood Flow Responses to Isocapnic Hypoxia Following Six Hours of Intermittent Hypoxia Exposure: Impact Of Cyclooxygenase Inhibition. (Presented at the International Hypoxia Symposia, Lake Louise, Canada, February 2013)
94. Mandzia J, Smith E, Horton M, **Hanly P**, Barber P, Godzwon C, Donaldson E, Asdaghi N, Patel S, Aram H, Coutts S. Imaging and Baseline Predictors of Cognitive Performance in Minor Stroke and TIA Patients at 90 Days. (Presented at the European Stroke Conference, London, England, May 2013)
95. Dechant A, Bischak D, **Hanly P**, Tsai W, Stevenson AM, Pendharkar S. The Use of Alternative Care Providers in the Management of Obstructive Sleep Apnea: An Efficient and Effective Alternative. (Presented at CHEST 2013 annual meeting, Chicago, IL, USA, October 2013)
96. Zalucky A, Nicholl D, **Hanly P**, Handley G, Poulin M, Walji S, Sola D, Ahmed S. The Effect of Sustained and Intermittent Hypoxia on Renal Renin Angiotensin System Activity in Patients with Obstructive Sleep Apnea. (Presented at the Canadian Respiratory Conference Annual Meeting, Calgary, Alberta, April 2014)
97. Zalucky A, Nicholl D, **Hanly P**, Poulin M, Sola D, Ahmed S. The Effect of Nocturnal Hypoxia on the Systemic Vascular Response to Angiotensin II Infusion in Patients with Obstructive Sleep Apnea. (Presented at the Canadian Respiratory Conference Annual Meeting, Calgary, Alberta, April 2014)
98. Cummins L, Loewen A, Tye R, **Hanly P**, Fraser K. Non-Invasive Ventilation for the Restricted Thorax: Effects of Ventilator Modality on Quality of Life. (Presented at the Canadian Respiratory Conference Annual Meeting, Calgary, Alberta, April 2014)
99. Zalucky A, Nicholl D, **Hanly P**, Handley G, Poulin M, Walji S, Sola D, Ahmed S. The Effect of Sustained and Intermittent Hypoxia on Renal Renin Angiotensin System Activity in Patients with Obstructive Sleep Apnea. (Presented at the annual meeting of the American Thoracic Society, San Diego, CA, USA, May, 2014)

100. Zalucky A, Nicholl D, **Hanly P**, Poulin M, Sola D, Ahmed S. The Effect of Nocturnal Hypoxia on the Systemic Vascular Response to Angiotensin II Infusion in Patients with Obstructive Sleep Apnea. (Presented at the annual meeting of the American Thoracic Society, San Diego, CA, USA, May, 2014)
101. Raneri J, Ostrowski M, Younes M, **Hanly P**. Agreement Between Manual and Automatic Scoring of Polysomnograms in A Broad Spectrum of Sleep Disorders. (Presented at the annual meeting of the American Thoracic Society, San Diego, CA, USA, May, 2014)
102. Azarbarzin A, Ostrowski M, **Hanly P**, Younes M. Automatic Scoring of Arousal Intensity Based on Time and Frequency Characteristics of the Electroencephalogram. (Presented at the annual meeting of SLEEP, Minneapolis, MN, USA, June 2014)
103. Azarbarzin A, Ostrowski M, **Hanly P**, Scharf M, Aamir R, Ahmed M, Younes M. Relationship Between Periodic Limb Movement Intensity and Associated Changes in Heart Rate and the Electroencephalogram. (Presented at the annual meeting of SLEEP, Minneapolis, MN, USA, June 2014)
104. Younes M, Ostrowski M, Ranieri J, **Hanly P**. Variability of Electroencephalogram Spectral Pattern in Patients with Sleep Disorders. (Presented at the annual meeting of SLEEP, Minneapolis, MN, USA, June 2014)
105. Younes M, Ostrowski M, Soiferman M, Younes H, Younes M, Ranieri J, **Hanly P**. A Simplified Method for Distinguishing Sleep and Wakefulness. (Presented at the annual meeting of SLEEP, Minneapolis, MN, USA, June 2014)
106. Ostrowski M, Ranieri J, **Hanly P**, Younes M. Reasons for Inter-rater Variability in Sleep Scoring of Polysomnography Records. (Presented at the annual meeting of SLEEP, Minneapolis, MN, USA, June 2014)
107. Byblow C, Ward K, Pawlak B, **Hanly PJ**, Warren J, Pendharkar S. Access to Zzzz's: A Quality Improvement Journey. (Presented at Canadian Respiratory Conference, Ottawa, Ontario, April 2015).

#### **Invited CME Lectures**

1. **Medical Grand Rounds, Dalhousie University, Halifax**  
"Management of Hypoxemia in Acute Bacterial Pneumonia", March 1986
2. **Respirology Rounds, Wayne State University, Detroit, Michigan**  
"Prostaglandins and Pneumonia", October 1986
3. **European Congress on Diseases of the Chest (ACCP), Dublin, Ireland**  
"Hypoxia and Pneumonia", July 1988
4. **Clinical Day - Wellesley Hospital, Toronto, Ontario**  
"The Spectrum of Sleep Apnea", April 1989

5. **Respirology Rounds, Queen's University, Kingston, Ontario**  
"Sleep and Respiration in Patients with Congestive Heart Failure", September 1989
6. **Respiratory Technology Course, The Wellesley Hospital, Toronto, Ontario**  
"Obstructive Sleep Apnea", 1989
7. **American College of Chest Physicians, Toronto, Ontario**  
"Central Sleep Apnea: Mechanisms and Management" (Post-graduate course on respiratory and cardiovascular disorders during sleep), November 1990
8. **Toronto Rehabilitation Centre, Ontario**  
"Sleep Apnea Syndromes", March 1991
9. **Beaumont Hospital, Dublin, Ireland**  
"Sleep Apnea and Cardiac Function", October 1991
10. **Medical Grand Rounds, Markham-Stouville Hospital, Ontario**  
"Obstructive Sleep Apnea", December 1991
11. **Clinical Day - Wellesley Hospital, Toronto, Ontario**  
"Evaluation of Excessive Daytime Sleepiness", April 1992
12. **Canadian Sleep Society, Phoenix, Arizona**  
"Sedatives Should Never be Used in Patients with Sleep Apnea", May 1992
13. **CME for family physicians, Toronto, Ontario**  
"Diagnosis and Management of Obstructive Sleep Apnea", December 1992
14. **CME for family physicians, Toronto, Ontario**  
"Diagnosis of Obstructive Sleep Apnea", April 1993
15. **Association of Professional Sleep Societies, Los Angeles, California**  
"Sleep and Cardiac Disease" (Post-graduate course on "Sleep in Cardiopulmonary Disease"), June 1993
16. **Centre for Sleep and Chronobiology, University of Toronto, Ontario**  
"Sleep-related Breathing Disorders", October 1993
17. **Ontario Thoracic Society, Toronto, Ontario**  
"BiPAP for Sleep Apnea" (Debate), February 1994
18. **Ontario Thoracic Society CME for family physicians, Toronto, Ontario**  
"Sleep Apnea - Who to Send?", March 1994



19. **Centre for Sleep and Chronobiology, University of Toronto, Ontario**  
“Obstructive Sleep Apnea: CPAP therapy” (CME on Sleep Apnea, Faculty of Medicine, University of Toronto), October 1994
20. **Centre for Sleep and Chronobiology, University of Toronto, Ontario**  
“Obstructive Sleep Apnea: Hypertension, Stroke and Heart Attacks” (CME on Sleep Apnea, Faculty of Medicine, University of Toronto), October 1994
21. **Canadian Society of Respiratory Therapists, Toronto, Ontario**  
“Sleep Apnea and Heart Failure”, June 1995
22. **Oakville-Trafalgar Memorial Hospital, Oakville, Ontario**  
“Medical Complications of Obstructive Sleep Apnea”, November 1995
23. **St. Joseph’s Health Centre, Toronto, Respiratory Symposium, Ontario**  
“Obstructive Sleep Apnea”, November 1995
24. **Centre for Sleep and Chronobiology, University of Toronto , Ontario**  
“Medical Treatment of Snoring and Apnea” (CME: The Essential of Sleep Disorders Medicine), February 1996
25. **Department of Family and Community Medicine, Wellesley Hospital, Ontario**  
“Excessive Daytime Sleepiness”, April 1996
26. **Third Annual Ontario Respiratory Residents Symposium, Ontario**  
“Sleep Apnea”, April 1996
27. **American Thoracic Society Annual Meeting, Sunrise Seminar**  
“Sleep Apnea and Cheyne-Stokes respiration”, May 1996
28. **Etobicoke General Hospital Annual Clinical Day, Ontario**  
“Sleep Apnea”, June 1996
29. **American Thoracic Society Annual Meeting, Discussion Facilitator at the Thematic Porter Session**  
“Hemodynamic and Cardiac Impact of Sleep Disordered Breathing”, May 1996
30. **Clinical Day in Respiriology, Windsor, Ontario**  
“Sleep Apnea”, October 1996
31. **Centre for Sleep and Chronobiology, University of Toronto, Ontario**  
“Disordered Breathing and Insomnia” (CME: Insomnia: Assessment and Management), October 1996
32. **Ontario Thoracic Society Annual Meeting, Toronto, Ontario**  
“Sleep Disorders and Respiratory Disease”, February 1997

- 33. American Thoracic Society Symposium on Clinical and Pathophysiologic Interaction of Sleep Apnea and Heart Disease**  
“Obstructive Sleep Apnea and Cardiac Ischemia in Humans”, April 1997
- 34. Medical Grand Rounds, Woman’s College Hospital, Toronto, Ontario**  
“Sleep Apnea: An Update”, September 1997
- 35. Trillium Sleep Laboratory, Toronto, Ontario**  
“Sleep Apnea: Truths and Misconceptions”, November 1997
- 36. CIU Education Seminar, Toronto, Ontario**  
“Sleep Apnea”, January 1998
- 37. VitalAire Healthcare CPAP Users Clinic, Toronto, Ontario**  
“Nasal CPAP Therapy for Sleep Apnea”, June 1998
- 38. Association of Professional Sleep Societies, New Orleans Post-graduate course on Cardiovascular Disease and Sleep Disordered Respiration, Louisiana**  
“Sleep Apnea and Ischemic Heart Disease”, June 1998
- 39. American College of Chest Physicians, Toronto, Ontario**  
“Hypertension and Sleep Apnea: Response to Therapy”, November 1998
- 40. Grand Rounds, Department of Family Practice, St. Michael’s Hospital, Toronto, Ontario**  
“Sleep Apnea”, November 1999
- 41. Sleep Medicine Technology Certificate Program, Michener Institute, Toronto, Ontario**  
“Approach to the Sleepy Patient”, April 2000
- 42. American Thoracic Society Annual Meeting, Toronto, Ontario**  
“Environmental Causes of Sleep Disruption” Symposium on Biorhythms, Sleep and the Care of the Critically Ill, May 2000
- 43. Bayer Respiratory Medicine Update, Inn at Manitou, Ontario**  
“Controversies in Sleep Medicine”, June 2000
- 44. The Renal Education an Peer Support Group, Toronto, Ontario**  
“Sleep Disorders in Chronic Renal Failure”, June 2000
- 45. Nephrology Rounds, St Michael’s Hospital, Toronto, Ontario**  
“Sleep Apnea in Chronic Renal Failure: Future Studies”, October 2000
- 46. Centre for Sleep and Chronobiology, Toronto, Ontario**  
“Refractory Daytime Sleepiness”, October 2000

47. **Centre for Sleep and Chronobiology, Toronto, Ontario**  
“Slumber Dialysis: Impact on Sleep Apnea in Chronic Renal Failure”, November 2000
48. **Family Practice, St Michael’s Hospital, Toronto, Ontario**  
“Sleep Disorders”, December 2000
49. **Centre for Sleep and Chronobiology, Toronto, Ontario**  
“Sleep in the ICU”, February 2001
50. **Medical/Dental CME, Toronto, Ontario**  
“Multidisciplinary Approach to the Treatment of Snoring and Sleep Apnea”, March 2001
51. **Centre for Sleep and Chronobiology, Toronto, Ontario**  
“Non-24 hour Sleep - Wake Schedule Disorder”, March 2001
52. **Respirology Rounds, St Vincent’s Hospital, Dublin**  
“Sleep Apnea in Chronic Renal Failure”, February 2001
53. **Medical Grand Rounds, Hamilton, Bermuda**  
“Sleep Disorders in Chronic Renal Failure”, March 2001
54. **Michener Institute of Technology, Toronto, Ontario**  
“Approach to the Sleepy Patient”, May 2001
55. **Toronto Critical Care Medicine Symposium, Toronto, Ontario**  
“Sleep in the ICU”, October 2001
56. **Cardiology Rounds, Sudbury, Ontario**  
“Sleep and Heart Failure”, November, 2001
57. **Ontario Thoracic Society, Annual Meeting, Toronto, Ontario**  
“Sleep in the ICU”, February, 2002
58. **Faculty of Medicine, University of Toronto, Ontario**  
“Sleep in Institutionalized Patients”, March 2002
59. **Faculty of Medicine, University of Toronto, Ontario**  
“Sleep-related Breathing Disorders in the Elderly”, March 2002
60. **Cardiology Rounds, St Michael’s Hospital, Toronto, Ontario**  
“Sleep Apnea and the Heart”, September 2002
61. **North York Family Physicians After Hours Clinic, Toronto, Ontario**  
“Sleep Apnea: Presentation, Complications and Management”, October 2002
62. **American College of Chest Physicians, Annual Meeting, Orlando, Florida**  
“Sleep in Ventilated Patients” Symposium on Sleep and Sleep Disorders in Hospitalized Patients, October 2003

63. **Canadian Cardiovascular Congress, Toronto, Ontario**  
“Sleep in the ICU”, October 2003
64. **Toronto Critical Care Medicine Symposium, Toronto, Ontario**  
“Sleep in the ICU”, October 2003
65. **Sleep and Alertness Clinic, Toronto Western Hospital, Ontario**  
“Sleep Apnea and Chronic Renal Failure”, December 2003
66. **Critical Care Grand Rounds, St Michael’s Hospital, Toronto, Ontario**  
“Sleep in the ICU”, March 2004
67. **Respiratory Research Group, University of Calgary, Alberta**  
“Pathogenesis of Sleep Apnea in Chronic Renal Failure”, February 2004
68. **5<sup>th</sup> Annual Advances in Respiratory and Critical Care Medicine, University of British Columbia**  
“Sleep-disordered Breathing in the ICU”, April 2004
69. **5<sup>th</sup> Annual Advances in Respiratory and Critical Care Medicine, University of British Columbia**  
“Obstructive Sleep Apnea: Year in Review”, April 2004
70. **American Thoracic Society, Annual Meeting, Orlando, Florida**  
“What Factors Disturb Sleep in the ICU?”, Symposium on Sleep in the ICU, May 2004
71. **American Society of Nephrology, Annual Meeting, St Louis, Missouri**  
“Role of Daily Dialysis and Transplantation in OSA”, October 2004
72. **Clinical Academic Rounds, Division of Respiriology, University of Calgary, Alberta**  
“Sleep in the ICU”, November 2004
73. **Grand Rounds, Foothills Medical Centre, Calgary Health Region, Alberta**  
“Sleep Apnea and Chronic Renal Failure”, February 2005
74. **Sleep Education Day, 2<sup>nd</sup> Annual Meeting, Edmonton, Alberta**  
“Sleep Apnea and Renal Failure”, October, 2005
75. **Canadian Thoracic Society Sleep Disordered Breathing Guidelines, Montreal, Quebec**  
“Sleep Hypoventilation”, October 2005
76. **Nephrology Research Rounds, Foothills Medical Centre, Calgary, Alberta**  
“Sleep Apnea and Chronic Renal Failure”, March, 2005
77. **Psychiatry Rounds, Foothills Medical Centre, Calgary, Alberta**  
“Sleep Apnea: Pathophysiology, Complications and Management”, March 2006

78. **American Society of Nephrology, Annual Meeting, San Diego, California**  
“Hypoxia, Sleep Apnea and Sudden Death”, October 2006
79. **Update in Respiratory Medicine, Calgary, Alberta (Hosted by Abbott)**  
“Sleep Apnea”, November, 2006
80. **CME for Schering-Plough Canada, Calgary, Alberta**  
“Sleep and Allergic Rhinitis”, March 2007
81. **Sleep Education Day, 4<sup>th</sup> Annual Meeting, Calgary, Alberta**  
“Management of Sleep Apnea in the Hospitalized Patient”, October 2007
82. **Global Perspectives on Chronic Disease: Prevention and Management, Calgary, Alberta**  
“Sleep Apnea and Chronic Medical Disorders”, October 2007
83. **Clinical Academic Rounds, Division of Respiriology, University of Calgary, Alberta**  
“Sleep Apnea in Hospital: Study Now or Study Later”, November 2007
84. **CME for Parkland Respiratory, Red Deer, Alberta**  
“Obstructive Sleep Apnea: The Underlying Pathology in Many Diseases”, April 2008
85. **Stroke Rounds, Hotchkiss Brain Institute, University of Calgary, Alberta**  
“Stroke Prevalence, Pathogenesis and Prognosis; Is Sleep Apnea Implicated?”, April 2008
86. **Cardiometabolic Evaluation and Risk Assessment (C-era) e-conference, Calgary, Alberta**  
“Sleep Apnea and CPAP”, January 2009
87. **CME for Sandoz Canada, Calgary, Alberta**  
“Sleep Apnea: Diagnosis, Complications and Management”, May 2009
88. **Sleep Forum, Alberta Lung Association, Calgary, Alberta**  
“Sleep Apnea and Stroke: What is the Relationship?”, October, 2009
89. **Clinical Academic Rounds, Division of Respiriology, University of Calgary, Alberta**  
“Sleep Apnea and Stroke”, November, 2009
90. **Sleep and Respiration Rounds, University of Calgary, Alberta**  
“Sleep Apnea in TIA and Minor Stroke”, March 2010
91. **Stroke Rounds, University of Calgary, Alberta**  
“Role of Sleep Apnea in Patients with TIA and Minor Stroke”, March, 2010
92. **Canadian Sleep Society CME, Toronto, Ontario**  
“End-stage Renal Disease and Sleep”, October, 2010

93. **13<sup>th</sup> Annual Medical Update for Psychiatrists, University of Calgary, Banff, Alberta**  
“Sleep Apnea: Pathophysiology, Diagnosis and Treatment”, November, 2010
94. **CME, Alberta Sleep Forum, Banff, Alberta**  
“How do the 2008 AASM Guidelines on Auto-CPAP Therapy Impact Albertans?”, April 2011
95. **CME, Alberta Sleep Forum, Banff, Alberta**  
“Cardiovascular Consequences of Obstructive Sleep Apnea”, April 2011
96. **CME, Dream Sleep Respiratory Services, Calgary, Alberta**  
“Sleep Apnea: Clinical Presentation, Diagnosis and Management”, February 2012
97. **American Academy of Dental Sleep Medicine, Annual Meeting, Boston, Massachusetts**  
“Diagnostic Sleep Testing: Confounding Conditions”, June 2012
98. **MDSC 623.03 Respiratory & Ventilator Physiology I course, University of Calgary, Alberta**  
“Control of Breathing: Hyperventilation, Hypoventilation and Sleep Disordered Breathing”, December 2012
99. **Clinical Academic Rounds, Division of Respiriology, University of Calgary, Alberta**  
“Diagnostic Testing for OSA in Patients with Comorbid Disease”, February 2013
100. **Woolcock Institute of Medical Research, Sydney, Australia**  
“Sleep Apnea and Kidney Function”, October, 2013
101. **CME, Alberta Sleep Forum, Edmonton, Alberta**  
“Sleep Apnea and the Kidney”, October 2013
102. **Sleep and Respiration rounds, University of Calgary, Alberta**  
“Level 3 Sleep Testing: Strengths and Limitations”, December 2013
103. **CME, Dream Sleep Respiratory Services, Calgary, Alberta**  
“How to Diagnose and Treat Obstructive Sleep Apnea”, December, 2013
104. **Respiratory Seminar Series, University of British Columbia**  
“Is Sleep Apnea a Risk Factor for Chronic Kidney Disease?”, February, 2014
105. **Canadian Respiratory Conference, Annual Meeting, Calgary, Alberta**  
“Sleep Apnea and Kidney Disease?”, April, 2014
106. **Department of Respiratory & Sleep Medicine, Royal Prince Alfred Hospital, Sydney, Australia**  
“Relationship between Sleep Apnea and Kidney Disease”, October, 2014

- 107. Breath by Breath Foundation, North Shore Hospital, Sydney, Australia**  
“Basics of NIV, CPAP and BiPAP”, November, 2014
- 108. Adelaide Sleep Retreat, Keynote Speaker, Adelaide, Australia**  
“Is Sleep Apnea a Risk Factor for Chronic Kidney Disease?” November 2014
- 109. Department Respiratory Medicine, Monash Health Centre, Melbourne, Australia**  
“Sleep Apnea and Chronic Kidney Disease”, November, 2014
- 110. Neuroscience Research Australia (NeuRA), University of New South Wales, Sydney, Australia**  
“Sleep Apnea and Chronic Kidney Disease”, November, 2014
- 111. Sleep and Respiration Rounds, University of Calgary, Calgary, Alberta**  
“Some of the Things I did on Sabbatical”, June 2015
- 112. Research Rounds, Division of Nephrology, University of Calgary, Alberta**  
“Treatment of Obstructive Sleep Apnea in Chronic Kidney Disease”, October, 2015
- 113. Calgary Bariatric Clinic, Calgary, Alberta**  
“Sleep Apnea: Pathophysiology, Diagnosis and Treatment”, December 2015
- 114. CME, Canmore, Calgary, Alberta**  
“Sleep Apnea: Pathophysiology, Diagnosis and Treatment”, January, 2016
- 115. Canadian Rheumatology Association Annual Meeting, Lake Louise, Alberta**  
“Common Sleep Disorders: Recognition, Assessment and Management”, February, 2016
- 116. Sleep and Respiration Rounds, University of Calgary, Calgary, Alberta**  
“Benefits of CPAP Beyond Improved Sleep and Breathing”, March, 2016
- 117. Canadian Respiratory Conference Annual Meeting, Halifax, Nova Scotia**  
“Systemic Benefits of CPAP Therapy for Obstructive Sleep Apnea”, April, 2016
- 118. Sleep and Respiration Rounds, University of Calgary, Alberta**  
“Canadian Sleep and Circadian Network (CSCN): What does it mean for the Sleep Community?”, March 2017
- 119. Dental Program, Canadian Sleep Society conference, Calgary, Alberta**  
“Sleep Disordered Breathing: Pathophysiology and Diagnosis”, April 2017
- 120. Canadian Sleep Society conference, Calgary, Alberta**  
“Effect of Sleep Apnea on the Kidney: Evidence from Human Studies”, April 2017
- 121. Academic Rounds, Division of Respiratory Medicine, University of Calgary**  
“Is Sleep Apnea a Risk Factor for Chronic Kidney Disease?”, May 2017

122. **Aging and Sleep 2017 Conference, Lyons, France**  
 “Obesity Hypoventilation Syndrome (OHS) and OSA: An Underestimated Risk and Opportunity”, June 2017
123. **Sleep and Aging 2017 Conference, Lyons, France**  
 “Kidney Disease and Obstructive Sleep Apnea”, June 2017
124. **MOSAIC PCN, Calgary, Alberta**  
 “Does Treatment of OSA improve kidney function, August 2017
125. **World Sleep Congress, Prague, Czech Republic**  
 “Effect of Sleep Apnea on the Kidney”, October 2017
126. **RANA, Calgary, Alberta**  
 “Canadian Sleep and Circadian Network – OSA Cohort Study”, January 2018
127. **Pulmonary Research Group, University of Alberta, Edmonton, Alberta**  
 “Sleep Apnea and Kidney Disease”, January 2018
128. **Canadian Respiratory Conference, Vancouver, British Columbia**  
 “Treatment of Sleep Apnea in the setting of Heart Failure: Life after SERVE-HF”, April, 2018
129. **Department of Sleep Medicine, Landspítali University Hospital, Reykjavic, Iceland**  
 “Impact of Sleep Apnea on the Kidney, May, 2018
130. **Academic Rounds, Division of Respiratory Medicine, University of Calgary**  
 “Management of Sleep Apnea in Patients with Heart Failure”, June 2018
131. **Sleep and Respiration Rounds, University of Calgary, Alberta**  
 “Should sleep apnea be treated in patients with heart failure?”, September 2018
132. **Sleep and Respiration Rounds, University of Calgary, Alberta**  
 “Treatment of sleep apnea in patients with chronic kidney disease” February 2019
133. **Research rounds, Division of Nephrology, University of Calgary, Alberta**  
 “Treatment of sleep apnea in chronic kidney disease” May 2019
134. **World Sleep Society, Vancouver, British Columbia**  
 “Kidney Disease: Mechanisms and Intervention studies”, September 2019
135. **World Sleep Society, Vancouver, British Columbia**  
 “Sleep apnea and kidney disease: A bi-directional relationship”, September 2019
136. **Academic Rounds, Division of Respiratory Medicine, University of Calgary**  
 “Sleep apnea and the kidney: Role in chronic kidney disease and cardiovascular outcomes”, May 2020



- 137. Postgraduate course (Sleep disturbances across various medical disorders), annual meeting of American Thoracic Society, Philadelphia, USA**  
“Renal failure, dialysis and sleep apnea: who is to blame for a poor night’s sleep?”, May 2020