

CURRICULUM VITAE FOR CWRU SCHOOL OF MEDICINE

PERSONAL INFORMATION

Decker, Michael John PhD

Case Western Reserve University, School of Medicine
Department of Physiology and Biophysics
Robbins E423C; Mail code 4970
216-368-2467
mjd6@case.edu

EDUCATION & TRAINING

Education

California College of Health Sciences, Salt Lake City, UT
CRTT, Respiratory Care
08/1982-05/1984

Case Western Reserve University, Cleveland, OH
BSN, Nursing
08/1991-94/1994

Case Western Reserve University, Cleveland, OH
PhD, Anatomy
08/1995-05/1999

PhD Thesis

Wakefulness and Sleep: Intrinsic modulators of the Suprachiasmatic Nucleus
Kingman P. Strohl, Susan Redline, Musa Haxhiu, Joseph LaManna, Joseph Miller, David B. Rye

ACADEMIC APPOINTMENTS

Associate Professor / Department of Physiology & Biophysics; School of Medicine
Case Western Reserve University, Cleveland, OH
07/2018-present. Tenured 07/01/2022

Associate Professor (Secondary Appt) / Department of Neurosciences; School of Medicine
Case Western Reserve University, Cleveland, OH
07/2014-present

Associate Professor (Secondary Appt) / Department of Physiology & Biophysics; School of Medicine
Case Western Reserve University, Cleveland, OH
07/2014-06/2018

Associate Professor / Bolton School of Nursing
Case Western Reserve University, Cleveland, OH
07/2013-06/2018

Associate Professor / Byrdine F. Lewis Chair in Nursing

Michael John Decker, PhD

Georgia State University, Atlanta, GA
07/2010-05/2013
Assistant Professor / Department of Neurology; School of Medicine
Emory University, Atlanta, GA
08/2002-09/2008

Instructor / Department of Neurology; School of Medicine
Emory University, Atlanta, GA
01/2000-07/2002

Instructor / Department of Anatomy; School of Medicine
Case Western Reserve University, Cleveland, OH
09/1999-11/1999

PROFESSIONAL APPOINTMENTS

Senior Research Physiologist
Naval Medical Research Unit- Dayton
Department of Environmental Physiology
Dayton, OH
08/2018-present

Senior Service Fellow (Team Leader)
Centers for Disease Control and Prevention
Viral Exanthems & Herpesvirus Branch
Atlanta, GA
08/2008-01/2010

Visiting Scientist (30% annual effort)
Centers for Disease Control and Prevention
Viral Exanthems & Herpesvirus Branch
Atlanta, GA
11/2002-08/2008

University Hospitals, Cleveland, OH
Registered Nurse, Pulmonary Medicine
07/1994-07/1995

ADDITIONAL CAREER DEVELOPMENT

Leadership Development

Vistage International
CEO Coaching and Peer Advising (Leadership Training)
06/2006-06/2008

Personal Mentoring Program
Mentors: S. Truett Cathy; Robert H. Waterman, Jr.
08/2002-09/2005

Clinical Development

Atlanta School of Sleep Medicine & Technology
Polysomnography Training Course—Sleep Medicine Board preparation
07/2006-08/2006

CERTIFICATION & LICENSURE

Certification

American Board of Sleep Medicine
Diplomate #3543
2006-present

Clearance

“Secret” United States Navy- Department of Defense
2022-2032

Licensure

Ohio Medical Board
Respiratory Care Professional, RCP.2370
1990-2022

Ohio Nursing Board
Registered Nurse, RN.252216
1994-2023

Georgia Board of Nursing
Registered Nurse, RN182947
2006-2019

Georgia Composite Medical Board
Respiratory Care Professional, #6597
2006-2016

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Ohio Thoracic Society
Member
1990-1993

American Association of Respiratory Care
Member
1990-1996

Sleep Research Society
Member
2003-2017

Aerospace Medical Association
Member
2018-present

American Physiological Society
Member
2018-present

PROFESSIONAL SERVICES

Editorial Board Membership

Sleep Diagnosis and Therapy
2007-2010

Frontiers in Neurology: Sleep and Chronobiology, Associate Editor
2010-2015
Michael John Decker, PhD

Sleep and Breathing, Editorial Board
2013-present

Spokesman for the American Academy of Sleep Medicine
2012-2014

Frontiers in Physiology, Environmental, Aviation and Space Physiology, Associate Editor
2021-present

Manuscript Reviewer

Journal of the American Association of Respiratory Care
07/1987-07/1993

Neuroscience
08/2000-present

Brain Research
03/2000-05/2019

Sleep
11/2000-present

Sleep & Breathing
12/1996-present

Sleep Science
04/2015-present

Cerebral Cortex
02/2021-present

Study Sections/ Grant Review Committees

National Institute of Health
General Clinical Research Center site visit/ Ad-hoc reviewer
11/2004

National Science Foundation
Neuroscience Cluster/ Primary reviewer
06/2009-09/2009

National Institutes of Health
Heart Lung & Blood/ Scientific Review Group: ZHL1 CSR-N S1/ Primary Reviewer
05/2010

Canadian Institute of Health Research
Team Grants: Sleep and Circadian Rhythms
09/2010

Ministry of Science and Technological Development of the Republic of Serbia
Neuroscience/ Primary reviewer
10/2010

Centers for Disease Control and Prevention: Chairperson Epilepsy Coordinating and Collaborating Centers
Special Interest Project 10-037: Examining the impact of cognitive impairment on co-occurring chronic conditions
Special Interest Project 10-039: Epidemiologic follow-up study of newly diagnosed epilepsy

06/2012

National Institutes of Health
Developmental Brain Disorders/ Primary reviewer
10/2014 & 12/2015

National Institutes of Health
National Institute of Nursing Research/ Ad-hoc reviewer
10/2015 & 03/2017

Canadian Institute of Health Research
Team Grants: Sex influences on biologic outcome measures
12/2017

National Institutes of Health
National Institute of General Medical Sciences / Ad-hoc reviewer
06/2018-06/2019

Research Südtirol/Alto Adige
Autonomous Province of Bolzano (Italy) / Reviewer
07/2020

National Institutes of Health
Brain Disorders and Clinical Neuroscience Integrated Review Group BDCN-E(55) / Reviewer
10/2020

National Institutes of Health
Myalgic Encephalomyelitis/Chronic Fatigue Syndrome ZRG1 CFS-N 80 / Reviewer
11/2021

National Institutes of Health
Myalgic Encephalomyelitis/Chronic Fatigue Syndrome ZRG1 CFS-N 80 / Reviewer
11/2023

Advisory Groups

SiMed Medical – Seattle, WA
Consultant
06/1988-07/1990

Medcare/Flaga – Iceland
Consultant
04/2004-03/2005

Paraxel Intl – Newton, MA
Consultant
08/2005-03/2007

Invacare – Cleveland, OH
Consultant
10/2005-10/2007

COMMITTEE SERVICE

International

North Atlantic Treaty Organization (NATO)
Michael John Decker, PhD

Science & Technology Working Group: Physiologic Events Committee (HFM-312) Member
08/2019-present

Aerospace Medical Association
Science & Technology Committee Member
05/2022-Present

National

American Association of Respiratory Care
Cardio-Pulmonary Clinical Guidelines Task Force
1993-1996

Sleep Research Society
Research & Education Committee/ Member
2003-2005

Regional / Midwest

Ohio Thoracic Society
Membership Committee Member/ Conference Planning Committee Member
10/1991-09/1993

Ohio Physiological Society
Cleveland, OH 2021 Conference Planning Committee Member
12/2019-09/2021

Educational Committees

Emory University
Information Technology Group, Department of Neurology/ Committee Chair & Director
07/2003-06/2006

Georgia State University
Faculty Senate: Research Committee / Campus Planning & Development Committee
07/2011-06/2013

CWRU Service

CWRU Faculty Spotlight Presentation
A Hard Day's Night
Invited Guest of President Barbara Snyder, 2/11/2014

Representative Marcy Kaptur and United States Air Force (USAF) advisors
Biomarkers of Fatigue and Human Performance
Lakeland Community College /Subcommittee on Defense Preparation, 8/19/2014

CWRU Trustee Partnership Presentation
Sleep Disorders, Brain Dysfunction, and Life Above 50,000 feet
Invited Guest of President Barbara Snyder, 02/19/2016

Co-hosted a One-Day Meeting of CWRU leadership at Wright-Patterson Air Force Base. CWRU attendees included Provost (Bud Baeslack, PhD), CWRU Vice President for Research & Technology Management (Suzanne Rivera), and Director for the Institute of Origins (Glenn Starkman, PhD) that culminated in an Educational Agreement Program EPA-NAMRU-D-18-10323 between CWRU and WPAFB, 04/13/2017.

Co-hosted a showcase of CWRU research to USAF leadership and scientists from WPAFB. Laboratory tours with faculty research demonstrations occurred across the CWRU campus. Poster sessions and meetings between CWRU faculty and USAF scientists were held in Tinkham Veale 01/17 & 01/18/2017.

Co-hosted a one-day scientific exchange between multiple CWRU scientists with USAF and US Navy scientists, in Dayton at a facility adjacent to WPAFB, 09/28/2017.

Hosted a One-Day Meeting at CWRU between Naval Medical Research Unit-Dayton Leadership (CMDR Reese Lee, MD and Richard Arnold, PhD) with CWRU leadership Provost (Bud Baeslack, PhD), School of Medicine Dean (Pamela Davis, MD), Physiology & Biophysics Department Chair (Walter Boron, MD, PhD), 2/21/2018.

Inaugural Symposia of Aerospace Physiology
Named Director of the Center for Aerospace Physiology
Department of Physiology & Biophysics, 04/2019

Library of Congress CWRU Alumni event
Enhancing Pilot Performance and Resiliency to Extreme Environments
Washington, DC 06/2017, 06/18/2019

Presentation to Congressional subcommittee chaired by Congressman Pascrell and Congressman Bacon
Acquired Brain Injury and Postnatal Hypoxia
Washington, DC 06/19/2019

Center for Aerospace Physiology, Inaugural Director, 2019-2022

Center for Aerospace Physiology, Co-Director, 2022

Chair: Search Committee for Non-Tenure Track teaching position, 2022

Center for Aerospace Physiology, hosted USN colleagues to meet SOM, Stan Gerson.

Center for Aerospace Physiology, hosted USAF colleagues to attend Dr Damato's aerospace research seminar.

Guided CWRU Gov't relations, office of sponsored programs and other groups seeking to establish DoD funding, educations, etc.

Successfully Co-Developed (with Elizabeth Damato) and launched the new Aerospace Physiology Certificate program in in the School of Medicine 2023.

Successfully Co-Developed (with Elizabeth Damato) and launched the new MS in Aerospace Physiology, program in in the School of Medicine 2024.

HONORS & AWARDS

Bolton Scholarship
Case Western Reserve University
08/1991-08/1993

Undergraduate Research Stipend, Genetic epidemiology studies at high altitude (Tibet)
National Geographic
06/1991

Undergraduate Research Stipend, Genetic epidemiology studies at high altitude (Bolivia)
National Geographic
06/1993

Undergraduate Research Stipend, Genetic epidemiology studies at high altitude (Ethiopia)
National Geographic
06/1994

Excellence in Anatomy
Stearns Foundation Award
05/1999

Research Excellence Award
American Professional Sleep Societies
06/1999

Nominee: J. Bruce Jackson, MD Award for Excellence in Undergraduate Mentoring
Case Western Reserve University
05/2015

Mary Kay Lehman Award for Outstanding Instructor
Case Western Reserve University, Bolton School of Nursing
05/2016

Arnold D. Tuttle Award for the original research paper *Characterizing the Dose Response of Hyperoxia with Brain Perfusion*. The award highlights the most significant contribution toward the solution of a challenging problem in aerospace medicine and was published in *Aerospace Medicine and Human Performance*, the official journal of the Aerospace Medical Association, 05/2023.

TEACHING ACTIVITIES

Curriculum/ Course Development at CWRU

1. SAGES USSO288 - Spirits and Synapses - Case Western Reserve University, 2015-2018 Fall semester, 50 hours to create, Undergraduate students
2. PHOL 614 - Sleep Physiology, Case Western Reserve University, 01/2015-05/2015; 06/2019-08/2019; 06/2020-07/2020; 01/2021-present, 60 hours to create, Masters in Medical Physiology students.
3. PHOL 421, 422, 423 Developing structure, content and text used for Aerospace Course Action Forms and creation of these new courses. 06/2022-04/2023
4. Co-Developed PHOL 421 Aerospace Physiology I and created content & provided four 90-minute lectures\classes, 2023
5. Co- Developed PHOL 422 Aerospace Physiology II, 2024
6. Co- Developed PHOL 423 Aerospace Physiology III, 2024

Developed Aerospace Physiology Course Action Forms:

1. PHOL 426 Human Factors. 2023
2. PHOL 427 Aviation Mishaps. 2023

Invited Lectures

International

1. Neurochemical and Behavioral Correlates of Neonatal Intermittent Hypoxia” Laboratory Animal Science Meeting, Tokyo, Japan, Guest Speaker, 09/2003
2. Long Term Neurochemical and Behavioral Outcomes of Intermittent Hypoxic Insults During Early Brain Development. Institute de Sono, Sao Paolo, Brazil, Guest Speaker, 10/2005
3. Convention of Sleep and Disorders of Sleep, Bombay, India, Co-Chair, 02/2005
4. Electroencephalography in Safety Pharmacology, Tokyo, Japan, Guest Speaker, 09/2005

Michael John Decker, PhD

5. Neurochemical Outcomes of Sleep Apnea, Tokyo, Japan, Guest Speaker, 04/2005
6. Methods for Diagnosing Excessive Daytime Sleepiness, Sao Paulo, Brazil, Guest Speaker, 10/2005
7. Sexual Dysfunction in Sleep Apnea, Curitiba, Brazil, Guest Speaker, 07/2005
8. Sleep Apnea Associated Cognitive Decline, Curitiba, Brazil, Guest Speaker, 07/2005
9. Use of Computational Medicine to Advance Understanding of Psoriasis and Comorbidities that Promote Inflammation and CVD, International Workshop of Dermatology, CWRU, Guest Speaker, 06/2014
10. The Impact of Poor Sleep on Well-Being in People with Dermatological Conditions. The 23rd World Congress of Dermatology, Vancouver, Canada, Guest Speaker, 09/2015
11. Neuroimaging of the Sleep Disordered Patient: Findings & Implications. Chinese Sleep Meeting, Peking University, Guest Speaker, 11/2018
12. MRI Imaging of Persons After Exposure to Hypobaric Hypoxia. World Sleep Meeting, Vancouver CA, Invited Speaker, 09/2019
13. Mayes, R.S., Decker, M.J., Damato, E.G. (2019, September). The Impact of High Oxygen Levels on Cerebral Perfusion & Cognitive Performance. International Congress of Aviation and Space Medicine: Debrecen, Hungary.
14. Neurobiologic Sequelae of Nocturnal Hypoxemia. International Hospital, Peking, China, Invited Speaker, 11/2019
15. Metabolic Outcomes of Short Sleep. Peking University, China, Invited Speaker, 11/2019
16. Oxygen: More is Not Better. Chinese Sleep Meeting, Binzhou City, China, Invited Speaker, 11/2019
17. Brain Outcomes of Hyperoxia and Hypobaria. NATO Köln: Butzweilerhof Airfield, Invited Speaker, 02/2020.
18. Characterizing the Dose Response Curve of Hyperoxia-Induced Reductions in Brain Perfusion. Ramstein Aerospace Medicine Summit / NATO Science & Technology Organization Technical Course, Garmisch-Partenkirchen, Germany. Invited Speaker 03/2022
19. Oscillating Inspired Oxygen Results in Oscillating Arterial Oxygen Partial Pressures Ramstein Aerospace Medicine Summit / NATO Science & Technology Organization Technical Course, Garmisch-Partenkirchen, Germany. Invited Speaker 03/2022
20. Mechanisms contributing to increasing fatigue levels may extend beyond the usual suspects of diet and sleep. Aerospace Medical Association 92nd Annual Scientific Meeting: Reno, NV. Invited Speaker, 05/2022.
21. Study rationale and findings of potential mechanisms contributing to progressive onset of fatigue in aviators. Aerospace Medical Association 92nd Annual Scientific Meeting: Reno, NV. Invited Speaker, 05/2022.
22. Near infrared cortical spectroscopy measurements may predict vulnerability towards cognitive fatigue. International Conference of Aerospace Medicine, Paris, France. 09/2022.
23. Oscillating inspired oxygen results in oscillating arterial oxygen partial pressures. International Conference of Aerospace Medicine, Paris, France. 09/2022.
24. *"Serum Levels of Proinflammatory Cytokines and Fatigue in Aviators"*. Residents in Aerospace Medicine Conference. Garmisch-Partenkirchen, Germany, 03/2023.
25. Mayes, R.S., Damato, E.G., Decker, M.J. (2023, October) The Impact of USAF Flight Operations on Fatigue and Pro-Inflammatory Cytokines. International Congress of Aviation and Space Medicine: ICASM 2023, Abu Dhabi

26. "Electrochemiluminescent analyses of candidate serum proteins associated with systemic inflammatory processes" Eurac Research Institute. Bolzano, South Tyrol, Italy 10/2023
27. "*Serum proinflammatory cytokine levels proteins found within aviators with MRI-confirmed neck and back injury.*" Swiss Aeromedical Center, Dubendorf, Switzerland

National

1. Controversial Issues in Home Diagnostic Studies for Sleep Related Respiratory Disorders. The American Association of Respiratory Care, Respiratory Care Journal Conference, St. Petersburg Fla, Workshop, 05/1993
2. Intermittent Hypoxia Across the Lifespan: Neuropathologic Underpinnings of Executive Dysfunction" Association of Professional Sleep Societies. Seattle, WA. Symposia Chair, 06/2002
3. Neonatal Intermittent Hypoxia Impairs Dopamine Signaling and Executive Functioning. Stanford Research Institute, San Francisco, CA, Guest Speaker, 08/2004
4. Forgetful and Unable to Stay Focused? You may be Hypoxic While Asleep. National Meeting of the Association of Polysomnographic Technicians, Philadelphia, PA. Guest Speaker, 06/2004
5. Preventing Sudden Infant Deaths. First Candle, Atlanta, GA. Guest Speaker, 10/2005
6. The Role of Electroencephalography in Safety Pharmacology. American College of Safety Pharmacology, San Diego, USA. Guest Speaker, 09/2006
7. The Biological Basis of ADHD. Pediatric Sleep Medicine Conference, Amelia Island, FL, USA. Guest Speaker, 04/2006
8. The Utility of Electroencephalography in Safety Pharmacology. American College of Clinical Toxicology, NC, USA, Guest Speaker 11/2007
9. Apnea Induced Executive Dysfunction: Is dopamine the Culprit or Unwitting Scapegoat? University of Illinois, Chicago, Guest Speaker, 01/2007
10. Performing Clinical Research in a Sleep Disorders Center. American Academy of Sleep Medicine management series, Florida, Guest Speaker, 02/2008
11. Owning & Operating a Sleep Disorders Center. American Academy of Sleep Medicine Management series, Florida, Guest Speaker, 02/2008
12. Electroencephalography in Safety Pharmacology. Charles Rivers "MASS PHYSIO" Boston, MASS, Guest Speaker, 04/2008
13. Sleep Pathology Contributing to Hypersomnolence in Georgia. Future of Clinical Sleep Medicine, Boston, MA, Panel, 09/2008
14. Persistent Fatigue in Chronic Fatigue Syndrome: A manifestation of Cortical Hypoarousal? Lake Arrowhead NIH sponsored Sleep Workshop, UCLA, CA, Guest Speaker, 09/2008
15. Hypersomnolence and Sleep Related Complaints in Metropolitan, Urban, and Rural Georgia. Lake Arrowhead NIH sponsored Sleep Workshop, UCLA, CA, Guest Speaker, 09/2008
16. Prevalent Sleepiness: A Population-Based Study. NHLBI, NIH, Bethesda, MD. Guest Speaker, 04/2009
17. Translating Preclinical Research to the Public Health Agenda: Sleep Complaints as Biomarkers of CNS Dysfunction. Battelle Eastern Science & Technology Center, Aberdeen, MD, Guest Speaker 07/2009
18. Does Poor Sleep Make Us Fat? American Academy of Dental Sleep Medicine, Las Vegas, NV., Guest Speaker, Michael John Decker, PhD

06/2010

19. Obesity, OSA and the Airway: Implications for Oral Appliance Therapy and the Impact of Weight Loss. American Academy of Dental Sleep Medicine, Las Vegas, NV, Guest Speaker, 06/2010
20. Sleep Disorders in Chronic Fatigue Syndrome: Cause, Consequence, or Red Herring. Sleep epidemiology program. Harvard Brigham & Women's Hospital, Boston, MA, Guest Speaker, 06/2012
21. State-of-the-Art: Hypoglossal Nerve Stimulation in Obstructive Sleep Apnea. American Academy of Dental Sleep Medicine, Boston, MA, Guest Speaker, 06/2012
22. Biomarkers of Sleep: Post Traumatic Stress Disorder. Lake Arrowhead NIH-sponsored Sleep Workshop, UCLA, CA, Panel Chair, 09/2012
23. A Future Role for Pharyngeal Stimulation Therapy for Mild and More Severe OSA. American College of Chest Physicians, Guest Speaker, 10/2012, Atlanta, Georgia
24. REM Sleep Behavior Disorder as a Predictor of Neurodegenerative Disease & Establishing Sleep Disorder & Chronic Inflammation Phenotypes in CFS. UCLA-NIH Lake Arrowhead, CA Neuroscience and Sleep Workshop. Guest Speaker, 09/2013
25. Establishing Chronic Fatigue Syndrome Phenotypes with Unique Molecular and Electrophysiological Markers – Symposia Chair. Council for the Advancement of Nursing Science. Washington, DC. Guest Speaker, 09/2014
26. Use of Computational Medicine to Advance Understanding of Psoriasis and Comorbidities that Promote Inflammation and CVD. International Workshop hosted by Department of Dermatology, CWRU, 10/2014
27. The Basic Science of Sleep, Wakefulness and Upper Airway Tone. American Academy of Dental Sleep Medicine, Denver, CO, Guest Speaker, 06/2016
28. Neuroimaging in Self-Management. Preconference workshop, Midwest Nursing Research Society. Milwaukee, WI., Guest Speaker, 03/2016
29. Neuroimaging of the Sleep Disordered Patient: Findings and Implications. American Academy of Sleep Medicine. Boston, MA., Guest Speaker, 06/2017
30. The Effect of Hyperoxia Upon Neural Function. COPE - Fighter Pilot Summit. Guest Speaker, Wright-Patterson Air Force Base, OH, 11/2018
31. Drug Repurposing Informed by Mammalian Models of Hypoxia, Epilepsy and Neurodegeneration. MERCK, West-Point, PA, Guest Speaker, 05/2019
32. Sorties and Super Bowls: Insights into Mechanisms of Post Flight Fatigue. COPE - Fighter Pilot Summit. Wright-Patterson Air Force Base, OH, Guest Speaker, 12/2019
33. Decker, M.J. & Damato, E.G. (2021, April). *COPE 21A Research Update April 2021*. COPE Fighter Summit Biannual Meeting (Virtual).
34. Decker, M.J. & Damato, E.G. Post-Sortie Cognitive Fatigue. COPE Fighter Pilot Summit 21B, Denver, CO, Guest Speaker, 08/2021
35. Decker, M.J. & Damato, E.G. (2021, May). *Decker Lab Briefing: Establishing Biomarkers of Post-Sortie Cognitive Fatigue in T-6A Texan II Instructor Pilots*. Vance Air Force Base, Enid, OK.
36. Decker, M.J. & Damato, E.G. (2021, June & September). *Decker Lab Briefing: Establishing Biomarkers of Post-Sortie Cognitive Fatigue: Findings & Next Steps*. Randolph Air Force Base, San Antonio, TX.
37. Decker, M.J. & Damato, E.G. (2021, August). *Decker Lab Briefing: Establishing Biomarkers of Post-Sortie Cognitive Fatigue: Applicability to Tactical Aviators*. Nellis Air Force Base, Las Vegas, NV.

38. Decker, M.J. & Damato, E.G. (2021, August). *Establishing Biomarkers of Post-Sortie Cognitive Fatigue*. COPE Fighter Summit 21B, Denver, CO.
39. Damato, E.G., Flak, T.A., Borato, L., Decker, M.J. (2021, September). *Structure of Dopaminergic Brain Networks Following Postnatally-Occurring Hypoxic Insults*. Ohio Physiological Society 35th Annual Meeting, Cleveland, OH.
40. Vannix, I., Damato, E.G., Flak, T.A., Michenkova, M., Decker, M.J. (2021, September). *Characterizing the Dose Response Curve of Hyperoxia-Induced Reductions in Brain Perfusion*. Ohio Physiological Society 35th Annual Meeting, Cleveland, OH.

Regional

1. Pathophysiology & Interventions of Obstructive & Central Sleep Apnea. Georgia Dental Sleep Society, GA. USA, Guest Speaker, 04/2006
- 2.
3. Long Term Behavioral and Neurochemical Sequelae Outcomes Attributed to Perinatally Occurring Hypoxic Insults. Dekalb Medical Center, Atlanta GA, Guest Speaker, 02/2011
4. Neuroprotective Strategies to Mitigate Neurochemical Sequelae Attributed to Perinatally Occurring Hypoxic Insults. Dekalb Medical Center, Atlanta GA, Guest Speaker, 02/2012
5. Establishing Fatigue Phenotypes with Unique Molecular and Electrophysiological Markers. Health and Human Performance Research Summit. Dayton, Ohio, Guest Speaker, 05/2015

Local

1. Noninvasive Ventilation: Frances Payne Bolton Symposia on Critical Care Techniques. University Hospitals of Cleveland, Ohio, Guest Speaker, 09/1994.
2. Neurochemical and Executive Dysfunction Following Neonatal Intermittent Hypoxia. Case Western Reserve University, Cleveland, Ohio, Guest Speaker, 03/2004.
3. Applications of Chaos Theory in Heart Rate and Respiratory Algorithms, Cleveland Clinic, Ohio, Guest Speaker, 04/2006.
4. Chan JM, Decker MJ. A role for ApoA2 in cognition. Intersections Fall Symposium. Case Western Reserve University Support of Undergraduate Research and Creative Endeavors, SOURCE, Cleveland OH, 12/2016.
5. Ziganti AM, Abdollahifar A, Flak T, Galan R, Flask C, Damato EG, Decker MJ. Phenotypic variation in response to a hyperoxic environment. Intersections Spring Symposium. Case Western Reserve University Support of Undergraduate Research and Creative Endeavors, SOURCE, Cleveland OH, 04/2018.
6. *Oxygen: Why is it needed during high performance aviation, and whether 'more is better.'* Keynote Speaker. Case Western Reserve University Department of Defense Research Symposium: Cleveland, Ohio, 09/2022
7. *Increased serum levels of proinflammatory cytokines and fatigue emerge in aviators following repetitive exposure to aggressive flight maneuvers.* Wright State University: Dayton, Ohio, 10/2022

Grand Rounds

8. The Influence of Environmental Illumination and Sleep upon Circadian Rhythms. Neurology Grand Rounds University Hospitals of Cleveland, OH, Guest Speaker, 09/1999.
9. The Effects of Wakefulness and Sleep upon the Circadian Pacemaker Pediatric Neurology Grand Rounds University Hospitals of Cleveland, OH, Guest Speaker, 10/1999.
10. Translating Public Health Research into Improved Patient Outcomes: Improving Recognition & Intervention of Sleep Disorders. Grand Rounds, Good Samaritan Hospital, York, PA, Guest Speaker, 10/2009.
11. Cognitive Dysfunction and Sleep Apnea. Sleep Grand Rounds Cleveland Clinic, Cleveland, OH, Guest Speaker,

07/2014.

12. Hypoxia-induced Brain Dysfunction. Sleep Grand Rounds Cleveland Clinic, Cleveland, OH, Guest Speaker, 08/2014.
13. Translating Public Health Research into Improved Patient Outcomes: Improving Recognition & Intervention of Sleep Disorders. Nursing Grand Rounds MetroHealth Hospital, Cleveland, OH, Guest Speaker, 09/2014.
14. Hypoxia-induced Neuropathology at Sea Level and at 50,000 Feet. Neurology & Sleep Medicine Grand Rounds Emory University, Atlanta, GA, Guest Speaker, 01/2018.
15. White Matter Hyperintensities in Pilots of High-Performance Aircraft. Pulmonary and Critical Care Grand Rounds University Hospitals of Cleveland, OH, Guest Speaker, 05/2018.
16. Neuroimaging's Role in Diagnosing Sleep Related Disorders. Pulmonary and Critical Care Grand Rounds University Hospitals of Cleveland, OH, Guest Speaker, 10/2020.
17. Magnetic Resonance Imaging to Quantify Brain Perfusion During Hyperoxia. Interventional Cardiology Grand Rounds, The Christ Hospital, Cincinnati, OH, Guest Speaker, 09/2021.

Other Presentations

1. Schwartz HJ, Arnold JL, **Decker MJ**, Hoekje PL, Strohl KP. Posterior rhinometry as an objective, rapid screening test for nasal obstruction or disease. VIII International Symposium on Infection and Allergy of the Nose: International Rhinology Conference, Baltimore, MD, 06/1989.
2. Cahan C, Arafah B, **Decker MJ**, Arnold JL, Strohl KP. Adrenal steroids in sleep apnea before and after NCPAP treatment. *American Review of Respiratory Disease* 1991; 143(4):A382. American Thoracic Society, Anaheim, CA, 05/1991.
3. Munger MA, Stanek EJ, Strohl KP, Nair RN, Nara AR, **Decker MJ**, Flaharty KK. Circadian variation in oxygen saturation profiles in chronic mild moderate heart failure. American College of Clinical Pharmacology Annual Meeting, Toronto, Ontario, Canada, 08/1992. American Heart Association 65th Scientific Sessions, New Orleans, LA, 11/1992.
4. Blangero J, Williams-Blangero S, **Decker MJ**, Strohl KP, Brittenham G, Beall CM. Genetic analysis of hypoxic ventilatory response in a high-altitude Tibetan population. American Association of Physical Anthropologists, Research Triangle Park, Durham, NC, 04/1994.
5. Jones KA, Carter S, Shoemaker JT, Solomon IG, Lah J, Levey A, **Decker MJ**. Intermittent hypoxic insults occurring during a period of critical brain development reduce the expression of insoluble beta amyloid within the hippocampus. 9th International Conference on Alzheimer's Disease, Philadelphia, PA, 07/2004.
6. Baharav A, **Decker MJ**, Eyal S, Fuxman Y, Cahan C, Reeves WC. Validation of a novel sleep diagnostic system based on ECG and oxygen saturation. American Thoracic Society Meeting, San Diego, CA, 05/2009.
7. Helvig A, Keating G, **Decker M**. Maternal dietary supplementation with Omega 3 confers neuroprotection to the newborn against hypoxia-induced neurochemical morbidity. Lake Arrowhead Training Workshop in Basic Sleep Research, Los Angeles, CA, 09/2010.
8. Helvig A, **Decker MJ**. Protecting the newborn's brain with Omega 3 fatty acids. Georgia Public Health Association conference, Atlanta, GA, 05/2011.
9. Helvig A, Sawyer N, Escayg A, **Decker M**. Seizure and behavioral phenotyping of the Scn1a mouse model of genetic epilepsy with febrile seizures plus. Southern Nursing Research Society 27th Annual Conference. Little Rock, AR, 02/2013.

10. Lorain Community College—Presentation to Representative Marcy Kaptur & 711th Human Performance Wing leadership. Biomarkers of Fatigue & Cognition, 07/2014.
11. Givens SE, Damato EG, Litman P, **Decker MJ**. Electrochemiluminescence detection and multiplexing technology facilitates reconstitution and measurement of cytokines from dried blood samples. Council for the Advancement of Nursing Science: 2014 State of the Science Conference, Washington DC, 09/2014.
12. **Decker MJ**, Damato EG, Darrah RJ, Strohl KP. Establishing chronic fatigue syndrome phenotypes with unique molecular and electrophysiological markers. Council for the Advancement of Nursing Science: 2014 State of the Science Conference, Washington DC, 09/2014.
13. Damato EG, Sattar A, Darrah RJ, **Decker MJ**. Sleep & circadian mechanisms as mediators of reward system responsiveness to amphetamine. Council for the Advancement of Nursing Science: 2014 State of the Science Conference, Washington DC, 09/2014.
14. **Decker MJ**, Damato EG, Decker DD, Strohl KP. Towards defining hypothalamic and cortical mechanisms through which peroneal nerve simulation attenuates physiologic responses to pain. DARPA ElectRx Proposers' Day, Arlington, VA, 12/2014.
15. Helvig A, Sawyer N, Escayg A, **Decker M**. Examining complementary methods to mitigate hyperactive behavior. Southern Nursing Research Society 29th Annual Conference. Tampa, FL, 02/2015.
16. Damato EG, Carr S, Ponton C, Griswold M, Walter B, Strohl KP, **Decker MJ**. Mapping changes in cortical network activity using integrated high density electroencephalography and functional magnetic resonance imaging. Health and Human Performance Research Summit: Creating Game Changers, Dayton, OH, 04/2015.
17. Life at 70,000 feet and beyond. CWRU Science Slam Auxiliary Program. Republican National Convention, Cleveland, OH, Guest Speaker, 07/2016
18. Damato EG, Flak TA, Ziganti AM, Flak CA, **Decker MJ**. Atrophy within neural networks mediating cognitive function in persons without corresponding neurodegenerative disease. Midwest Nursing Research Society 42nd Annual Research Conference, Cleveland OH, 04/2018.
19. Vannix, I., Damato, E.G., Flak, T.A., Michenkova, M., **Decker, M.J.** Characterizing the Dose Response Curve of Hyperoxia-Induced Reductions in Brain Perfusion. Ohio Physiological Society 35th Annual Meeting, Cleveland, OH, 09/2021.
20. Damato, E.G., Flak, T.A., Borato, L., Decker, M.J. (2021, September). Structure of Dopaminergic Brain Networks Following Postnatally-Occurring Hypoxic Insults. Ohio Physiological Society 35th Annual Meeting, Cleveland, OH, 09/2021.

Trainees / Mentees

High School Summer Interns

1. Anaya N.M. Spencer, Cleveland School of Science & Medicine
06/2018-08/2018
Current: Student at Cuyahoga Community College
2. Elisa Katz, Shaker Heights High School
06/2019-08/2019
Current: Biology major at Temple University, Philadelphia, PA
3. Wiktor Golczak, Mayfield Heights High School
06/2020-08/2020
Current: Accepted to CWRU for Fall 2021; plans to major in Aerospace Engineering
4. Thomas Blossom, University School, Hunting Valley, OH
06/2021-08/2021

Current: High School Student (Junior year)

Undergraduate Trainees

1. Karra A. Jones, Emory University (B.S. Chemistry)
09/2003-05/2005
Current: MD, PhD Clinical Associate Professor of Pathology, University of Iowa Health Care
2. Sara Mithani, Case Western Reserve University (B.S.N. Nursing)
08/2014-05/2016
Current: PhD, Postdoctoral Researcher, National Institutes of Health
3. Jessica Chan, Case Western Reserve University (B.A. Biology)
05/2016-12/2016
Current: Doctor of Osteopathic Medicine Student, New York Institute of Technology
4. Treasure Byrge, Walsh University (B.A. Psychology)
06/2018-08/2018
Current: Public Health Associate, Centers for Disease Control & Prevention, Atlanta, GA

Masters Student Trainees

1. Amanda E. Hodges, Georgia State University (Masters in Public Health; served on thesis committee)
01/2010-05/2011
Current: unknown
2. Rebecca New Davenport, CWRU (M.S. Medical Physiology)
08/2018-05/2019
Naval Research Enterprise Intern-Navy Experimental Diving Unit, Panama City, FL, Summer 2019
Current: Enlisting in United States Air Force for Cardiopulmonary lab technician/Respiratory therapist position
3. Will Roeder, CWRU (M.S. Medical Physiology)
06/2019-06/2020
Current: Medical Student, University of Nebraska, Omaha, NE
4. Peter O'Connor, CWRU (M.S. Medical Physiology)
08/2019-05/2020
Current: Operational Paramedic (US Dept of State, Bureau of Diplomatic Security)
5. Lily Norton, CWRU (M.S. Medical Physiology)
08/2019-present
Current: Research Assistant 2, Decker Lab; Medical School Applicant
6. Ian Vannix, CWRU (M.S. Medical Physiology)
08/2020-present
Current: Research Assistant 2, Decker Lab; Medical School Applicant

Predoctoral Trainees

1. Thomas Guillot, Emory University (PhD Neuroscience; served on dissertation committee)
04/2003-05/2004
Current: Assistant Research Professor, Environmental Health Department, Emory University Morris K. Udall Center of Excellence for Parkinson's Disease Research
2. Ashley Helvig Coombe, Georgia State University (PhD Nursing; chaired dissertation committee)
08/2010-05/2012
Current: Clinical Assistant Professor, Nell Hodgson Woodruff School of Nursing, Emory University
3. Sara Taki, CWRU (PhD Physiology & Biophysics; serving on dissertation committee)

08/2020-present
Current: PhD student

Postdoctoral Trainees/Mentees

1. Michael Scullin, Post-doctoral scholar, Emory University Neurology/Sleep Medicine Program
06/2012-05/2013
Current: Associate Professor of Psychology and Neuroscience, Baylor University, Waco, TX
2. Yu-Yun Hsu, Fulbright Scholar, CWRU, Decker Neuroscience Nursing Lab
02/2016-08/2016
Current: Professor, Department of Nursing, College of Medicine at National Cheng Kung University, Taiwan
3. Jessica Beebe, D.O. Post-doctoral scholar, CWRU, Decker Lab/Center for Aerospace Physiology
10/2019-07/2020
Current: Wright Center National Family Medicine Residency, HealthSource Ohio/Mercy Hospital System
4. Seth Fillioe, Syracuse University (M.S. & PhD, Chemistry), Hofstra University (B.A. Chemistry)
10/2020-08/2022
Current: Adjunct Professor, Cuyahoga Community College
5. Ian Vannix, CWRU (M.S. Medical Physiology)
08/2020-09/2022
Current: Medical Student: Wright State University
6. Koyal Ansingkar (M.S. Medical Physiology)
08/2021-05/2023
Current: Recipient of USAF grant to pursue studies in Decker Lab; Medical Student: Texas A&M

Current Teaching Material Produced and Activities

1. Block 2 “*Circuits of the Central Nervous System*” / PHOL 481 - Med Phys I / 2018-2021
2. Block 5 “*Hyperoxia and Pulmonary outcome*” / PHOL 484 - Trans Phys II / 2018-2021
3. Block 5 “*Neural Outcomes of Postnatal Hypoxia*” / PHOL 484 - Trans Phys II / 2018-2021
4. Block 8 **Director** and lecturer of “*Disorders of Sleep*” / PHOL 484 - Trans Phys II / 2018-2021
5. Block 8 “*Naval Medical Research*” / PHOL 484 - Trans Phys II / 2018-2021
6. Block 8 “*Environmental Physiology*” / PHOL 482 - Med Phys II / 2018-2021
7. “Physiologic Basis of Wake and Sleep” PHOL 614 2018- current
8. Neural Reflex Pathways PHOL 482, 2023

Teaching Activities

1. Teaching Assistant, Histology, (CWRU), ANAT 412-413, 1996
 2. Module Leader – Neurobiology and Neuropathology of Disorders of Sleep, (Emory University), NBB401, 2003-2004
 3. Neurobiology of Sleep and Wake (Georgia State University) HHS8050, 2010
 4. Epidemiology for Health Professionals, (Georgia State University), PH8001, 2011- 2013
 5. Spirits & Synapses, SAGES (CWRU) USSO288, 2015-2018
- Michael John Decker, PhD

6. Cardiac Physiology, SAMI-(CWRU School of Medicine), Congestive Heart Failure, 2019
7. Renal Physiology, SAMI- (CWRU School of Medicine), Diabetic Ketoacidosis, 2020
8. Cardiac Physiology, SAMI-(CWRU School of Medicine), Congestive Heart Failure, 2021

RESEARCH / GRANT SUPPORT

Active Research Support

Department of Defense—711th Human Performance Wing
12/2024-11/2025

Fatigue Phenotype Mediates Intervention Efficacy (Decker & Damato, Co-PI).

TDC=\$811,790

\$507,609 to CWRU via MTEC (contract arrived in December 2024)

\$304,181 to NAMRU for my IPA (MIPR to NAMRU in Aug 2024)

Role: Co-PI (contact PI): 50% effort

Department of Defense—711th Human Performance Wing

02/2025-01/2026

Defining Interactions between Aviator Mask Safety Pressure and Oxygen Concentration with Arterial Oxygen Levels and Inflammation (Decker & Damato, Co-PI).

TDC=\$525,200

Role: Co-PI 50%, Damato contact PI

Department of Defense—Military Operational Medicine Research Program, Joint Program Commission-5

08/2023-07/2025

Mechanisms Evoking Post-Sortie Systemic Inflammation, Reduced Prefrontal Cortical Activity and Cognitive Fatigue. (Decker & Damato, Co-PI).

TDC=\$1,090,179

Role: Co-PI; 20%, Damato contact PI

Department of Defense—US Navy; Naval Medical Research Unit-Dayton

09/2022-06/2024

Cortical & Cognitive Effects of Normobaric and Hypobaric Rapid Oscillating Oxygen Conditions (ROHC) (Decker & Damato, Co-PI).

TDC=\$344,777

Role: Co-PI

Department of Defense—711th Human Performance Wing

10/2022-09/2023

Role of RPTP and RPTP in sensing dyscarbia-related acid-base disturbances in neurons and astrocytes (Decker, USN PI; Boron, CWRU PI)

TDC=\$248,444

Role: Co-I; 5% effort

Completed Research Grants

Department of Defense -711th Human Performance Wing

09/2021-03/2023

(Decker, PI; Damato, Co-PI)

Defining mechanisms mediating vulnerability towards cognitive fatigue: Post Sortie Systemic Inflammation, Sleep, Diet, and Exercise.

TDC=\$345,121 CWRU [plus \$223,078 administered through NAMRU-D IPA]

Role: Co-PI, Decker contact PI 25% effort

Department of Defense - Air Force Research Laboratories, FA8650-19-C-6103

09/2019-06/2023

Neurophysiological & Cognitive Effects of Rapid Oscillating Hyperoxic Conditions.

(Decker, PI, Damato, Co-PI)

TDC=\$999,776
Role: PI; Contact PI, 20% effort

The Air Force Research Laboratory/Defense Associated Graduate Student Innovators Ohio/Student-Faculty
Graduate Fellowship for Koyal Ansingkar
05/2021-09/2023
Establishing mechanisms through which systemic inflammatory processes negatively impact brain structure, function, and ultimately, Aircrew readiness
TDC=\$47,121
Role: Faculty Lead

Department of Defense—United States Navy - NAMRU
09/2021-08/2022
Co-Funding to support *Defining mechanisms mediating vulnerability towards cognitive fatigue: Post Sortie Systemic Inflammation, Sleep, Diet, and Exercise*.
(Decker, PI)
TDC=\$223,078
Role: DoD-defined Co-PI; 50% effort (administered through NAMRU-D IPA)

Department of Defense—711th Human Performance Wing
09/2021-08/2022
Defining mechanisms by which CO₂ and O₂ move through AQP4 at the blood-brain barrier. (Decker, USN PI; Boron, CWRU PI)
TDC=\$251,332
Role: Co-I; 5% effort (administered through NAMRU-D IPA)

National Institutes of Nursing Research, 1R21NR017235-01
01/2018-12/2021
Structure & Function of Dopaminergic Brain Networks following Postnatally-Occurring Hypoxic Insults.
(Decker, Contact PI; Damato, Co-PI).
TDC=\$275,000
Role: Contact-PI; 11.25% effort

Department of Defense—711th Human Performance Wing/FMU, F4F4FE0163G001
06/2020-11/2021
Establishing Biomarkers of Post-Sortie Cognitive Fatigue.
(Decker, PI; Damato, Co-PI).
TDC=\$374,804
Role: Co-I; 50% effort (administered through NAMRU-D IPA)

Department of Defense—US Navy Bureau of Medicine and Surgery, N3239819P0321
10/2019-03/2021
Characterizing the Duration of Hyperoxia-Induced Reductions in Brain Perfusion.
(Decker, PI; Damato, Co-PI).
TDC=\$240,655
Role: PI; salary support effort provided by co-funding from NAMRU IPA

Department of Defense—United States Navy - NAMRU
08/2019-08/2020
Co-Funding for *Characterizing the Duration of Hyperoxia-Induced Reductions in Brain Perfusion*.
(Decker, PI; Damato, Co-PI).
TDC=\$226,368
Role: PI; 50% effort (administered through NAMRU-D IPA)

Department of Defense—US Navy; Naval Medical Research Unit-Dayton
08/2018-08/2019
Defining Traits Conferring Enhanced Performance and Resilience in Austere Environments. (Decker, PI).
TDC=\$222,725
Role: Co-I; 50% effort

Department of Defense—Air Force Research Laboratories. FA8650-17-F-6822
06/2017-09/2018
Hyperoxia: An Unrecognized Mechanism for Inducing Hypoxia-Like Symptoms. (Decker, PI).
TDC=\$245,555
Role: Co-I; 10% effort

Clinical and Translational Science Collaborative of Cleveland, UL1TR000439
2015
Biologic Determinants of Exercise-Mediated Symptom Reduction in Chronic Fatigue.
TDC=\$9,888
Role: PI. 5% effort (in kind)

Department of Defense—Wright Patterson AFB, 711th Human Performance Wing
Subcontract C1770.0105
06/2015-09/2016
Respiratory Assessment of F-22 Aircrew Life Support (RAALS) Gear.
(Decker, PI).
TDC=\$14,440
Role: PI. 5% effort

National Institutes of Health, 5 P30 NR015326-03
03/2014-08/2019
SMART Center II Brain Behavior Connections in Self-Management Science
(Moore, PI)
10% effort
10% t
TDC=\$462,590
Core Director 10%

National Institutes of Health, 5T32HL007913-14
09/1999-06/2020
Sleep Medicine Neurobiology and Epidemiology
(Strohl, PI)
5% effort
0% Salary Support
Role: Trainer

Department of Defense – Defense University Research Instrumentation Program (DURIP) FA9550-18-1-0426
Viewing the Human Brain's Response to Cockpit Levels of Hyperoxia
Role: Principal Investigator
0% effort
0% salary support
TDC: \$282,187
07/2018-06/2019

National Institute of Biomedical Imaging and Bioengineering; 3U18EB021792-01S1
A Tool for Neurotherapeutic Therapy for Sleep Disordered Breathing (Strohl, PI)
Role: Co-Investigator
10% effort
10% Salary Support
TDC=\$577,727
07/2015-06/2017

Funding received at Emory

NIH- National Institute of Neurological Disorders and Stroke, 1R01NS046484
Sodium channel dysfunction and epilepsy (Andrew Escayg, PI)
12/2004-11/2009

NIH- National Institute of Neurological Disorders and Stroke, R01NS051834
Sodium channel regulation and disease, (Andrew Escayg, PI)
04/2005-03/2009

Organon, 176002
A six-week, double-blind, randomized, placebo-controlled, parallel group, efficacy and safety, sleep lab trial with
Org 50081 in patients with chronic primary insomnia (**Michael Decker**, PI)
06/2007-05/2008

NIH- National Heart, Lung, and Blood Institute, R01HL72722
Episodic Neonatal Hypoxia Impairs Sleep and Cognition (**Michael Decker**, PI)
07/2002-07/2006

Eli-Lilly, H9U-MC-MDBD
Oversight of Multi-Center acquisition of Polysomnographic Data (**Michael Decker**, PI)
10/2005-06/2006

NIH- National Institute of Neurological Disorders and Stroke, R01NS043374
Functional Circuitry of Midbrain Dopamine in Sleep and Wake (David B. Rye, PI)
04/2002-03/2006

Centers for Disease Control and Prevention (CDC)
Polysomnographic Correlates of Chronic Fatigue Syndrome (**Michael Decker**, PI)
11/2002-10/2005

Emory Center for Alternative Medicine Research Pilot project
Dietary supplementation with fatty acids protects the mesotelencephalic dopamine system against hypoxia-induced
impairment and degeneration. (**Michael Decker**, PI)
4/2004-4/2005

NIH – National Center for Complementary and Alternative Medicine, R01AT000611
Polysomnographic Assessment of Alternative Treatment for Sleep Disturbance in PD. (Donald Bliwise, PI)
04/2004-04/2005

Emory Collaborative Center for Parkinson's Disease
Genetic and developmental influences of environmental toxin induced neurodegeneration. (Donald Bliwise, PI)
11/2002-10/2004

NIH- National Institute of Neurological Disorders and Stroke, R01NS040221
Sleep/Dopamine Phenotypes in Genetically Distinct Mice (David B. Rye, PI)
10/1999 - 09/2004

BIBLIOGRAPHY

Peer Reviewed Articles (served as mentor for those denoted with *)

1. Strohl KP, **Decker MJ**, Olson LG, Flak T, Hoekje PL. The nasal response to exercise is similar in healthy and asthmatic subjects. *Thorax* 1988; 43:890-895.
2. **Decker MJ**, Hoekje PL, Strohl KP. Ambulatory monitoring of arterial oxygen saturation. *Chest* 1989; 95(4):717-722.
3. **Decker MJ**, Conrad KP, Strohl KP. Noninvasive oximetry in the rat. *Biomedical Instrumentation and Technology* 1989; 23:222-228.
4. **Decker MJ**, Dickensheets D, Arnold JL, Strohl KP, Cheung PW. A comparison of a new reflectance oximeter with the Hewlett-Packard ear oximeter. *Biomedical Instrumentation and Technology* 1990; 24:122-126

5. Cahan C, **Decker M**, Strohl KP. Humoral correlates of sleep apnea: Erythropoietin and hypoxemia. *Progress in Clinical & Biologic Research* 1990; 345:317-322.
6. Cahan C, **Decker MJ**, Arnold JL, Hoekje PL, Brown DP, Cheung PW, Strohl KP. Agreement between noninvasive oximetric values for oxygen saturation. *Chest* 1990; 97(4):814-819.
7. Cahan C, Hoekje PL, Goldwasser E, **Decker MJ**, Strohl KP. Assessing the characteristic between length of hypoxic exposure and serum erythropoietin levels. *The American Journal of Physiology* 1990; 258 (4 Pt 2): R1016-R1021.
8. Schwartz HJ, Arnold JL, **Decker MJ**, Hoekje PL, Strohl KP. Posterior rhinometry as a rapid screening test for nasal dysfunction. *American Journal of Rhinology & Allergy* 1990; 4(2):69-73.
9. **Decker MJ**, Redline S, Arnold JL, Masny J, Strohl KP. Normative values of oxygen saturation over time. *Journal of Ambulatory Monitoring* 1991; 4(4):297-304.
10. Strohl KP, Arnold JL, **Decker MJ**, Hoekje PL, Mcfadden ER. Nasal flow-resistive responses to challenge with cold dry air. *Journal of Applied Physiology* 1992; 72(4):1243-1246.
11. Cahan C, **Decker MJ**, Arnold JL, Washington LH, Veldhuis J, Goldwasser E, Strohl KP. Diurnal variations in serum erythropoietin levels in healthy subjects and sleep apnea patients. *Journal of Applied Physiology* 1992; 72(6):2112-2117.
12. **Decker MJ**, Arnold JL, Haney D, Masny J, Strohl KP. Extended monitoring of oxygen saturation in chronic lung disease. *Chest* 1992; 102(4): 1075-1079.
13. Strohl KP, Arnold JL, **Decker MJ**, Hoekje PL, Doershuk CF, Stern RC. The nasal response to exercise in patients with cystic fibrosis. *Rhinology* 1992; 30(4):241-248.
14. Cahan C, Gothe B, **Decker MJ**, Arnold JL, Leitner J, Strohl KP. Arterial oxygen saturation over time and sleep studies in quadriplegic patients. *Paraplegia* 1993; 31:172-179.
15. **Decker MJ**, Haaga J, Arnold J, Atzberger D, Strohl KP. Functional electrical stimulation and respiration during sleep. *Journal of Applied Physiology* 1993; 75(3): 1053-1061.
16. Strohl KP, Boehm KD, Denko CW, Novak RD, **Decker MJ**. Biochemical morbidity in sleep apnea. *Ear Nose & Throat Journal* 1993; 72(1):34-41.
17. Munger MA, Stanek EJ, Nara AR, Strohl KP, **Decker MJ**, Nair R.N. Arterial oxygen saturation in chronic congestive heart failure. *The American Journal of Cardiology* 1994; 73:180-185.
18. Stanek EJ, Nara AR, Strohl KP, Nair RN, **Decker MJ**, Munger MA. Effect of long-term angiotensin-converting enzyme inhibitor therapy on arterial oxygen saturation in patients with mild to moderate heart failure. *Pharmacotherapy*; 1994; 14(3):321-329.
19. **Decker MJ**, Smith BL, Strohl KP. Center-based vs patient-based diagnosis and therapy of sleep related respiratory disorders and the role of the respiratory care practitioner. *Respiratory Care* 1994; 39(4):390-396.
20. Cahan C, **Decker MJ**, Arnold JL, Goldwasser E, Strohl KP. Erythropoietin levels with treatment of obstructive sleep apnea. *Journal of Applied Physiology* 1995; 79(4):1278-1285.
21. Smith ML, Niedermaier NW, Hardy SM, **Decker MJ**, Strohl KP. Role of hypoxemia in sleep apnea-induced sympathoexcitation. *Journal of the Autonomic Nervous System* 1996; 56:184-190.
22. Beall CM, Gebremedhin A, Brittenham GM, **Decker MJ**, Shamebo M. Blood pressure variation among Ethiopians on the Simien Plateau. *Annals of Human Biology* 1997; 24(4):333-342.
23. Beall CM, Strohl KP, Blangero J, Williams-Blangero S, **Decker MJ**, Brittenham GM, Goldstein MC.

- Quantitative genetic analysis of arterial oxygen saturation in Tibetan Highlanders. *Human Biology* 1997; 69(5):597-604.
24. Beall CM, Strohl KP, Blangero J, Williams-Blangero S, Almasy LA, **Decker MJ**, Worthman CM, Goldstein MC, Vargas E, Villena M, Soria R, Alarcon AM, Gonzales C. Ventilation and hypoxic ventilatory response of Tibetan and Aymara high altitude natives. *American Journal of Physical Anthropology* 1997; 104(4):427-447.
 25. Netzer N, Schuschnick M, Matthys H, Miles L, Steinacker J, **Decker MJ**, Lehmann M. [Sleep and respiration at an altitude of 6,400 m (Aconcagua, Argentina)] *Pneumologie* 1997; 51 Suppl 3:729-735.
 26. Beall CM, Brittenham GM, Strohl KP, Blangero J, Williams-Blangero S, Goldstein MC, **Decker MJ**, Vargas E, Villena M, Soria R, Alarcon AM, Gonzales C. Hemoglobin concentration of high- altitude Tibetans and Bolivian Aymara. *American Journal of Physical Anthropology* 1998; 106:385-400.
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 29. Berkeley JL, **Decker MJ**, Levey AI. The role of muscarinic acetylcholine receptor-mediated activation of extracellular signal-regulated kinase 1/2 in pilocarpine-induced seizures. *Journal of Neurochemistry* 2002; 82(1):192-201.
 30. **Decker MJ**, Rye DB. Neonatal intermittent hypoxia impairs dopamine signaling and executive functioning. *Sleep and Breathing* 2002; 6(4):205-210.
 31. Beall CM, **Decker MJ**, Brittenham GM, Kushner I, Gebremedhin A, Strohl KP. An Ethiopian pattern of human adaptation to high-altitude hypoxia. *Proceedings of the National Academy of Sciences of the United States of America* 2002; 99(26):17215-17218.
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 33. **Decker MJ**, Jones KA, Solomon IG, Keating GL, Rye DB. Reduced extracellular dopamine and increased responsiveness to novelty: neurochemical and behavioral sequelae of intermittent hypoxia. *Sleep* 2005; 28(2):169-176.
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 37. Boneva RS, **Decker MJ**, Maloney EM, Lin JM, Jones JF, Helgason HG, Heim CM, Rye DB, Reeves WC. Higher heart rate and reduced heart rate variability persist during sleep in chronic fatigue syndrome: a population-based study. *Autonomic Neuroscience: Basic & Clinical* 2007; 137(1-2):94-101.
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and developmental impacts. *Institute for Laboratory Animal Research (ILAR) Journal* 2009; 50(3):248-261.

39. **Decker MJ**, Lin JM, Tabassum H, Reeves WC. Hypersomnolence and sleep-related complaints in metropolitan, urban, and rural Georgia. *American Journal of Epidemiology* 2009; 169(4):435-443.
40. **Decker MJ**, Tabassum H, Lin JM, Reeves WC. Electroencephalographic correlates of Chronic Fatigue Syndrome. *Behavioral and Brain Functions* 2009; 5:43.
41. Lin JM, **Decker MJ**, Brimmer DJ, Reeves, WC. Validity of self-reported body mass index and sleeping problems among adult population of Georgia. *The Open Obesity Journal* 2010; (2):145.
42. **Decker MJ**, Eyal S, Shinar Z, Fuxman Y, Cahan C, Reeves WC, Baharav A. Validation of ECG-derived sleep architecture and ventilation in sleep apnea and chronic fatigue syndrome. *Sleep and Breathing* 2010; 14(3):233-239.
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44. Lee SY, Lee KA, Aycock D, **Decker M**. Circadian activity rhythms for mothers with an infant in ICU. *Frontiers in Neurology* 2010; 1:155.
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53. **Decker MJ**, *Jones KA, Keating GL, Rye DB. Postnatal hypoxia evokes persistent changes within the male rat's dopaminergic system. *Sleep and Breathing* 2018; 22(2):547-554.
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