

CURRICULUM VITAE

Daniel Combs, MD
Assistant Professor, Tenure Eligible
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CHRONOLOGY OF EDUCATION

- 08/2003-05/2007 BS in Molecular and Cellular Biology with Honors, *Magna Cum Laude*
BS in Health Sciences in Physiology, *Magna Cum Laude*
University of Arizona, Tucson, Arizona
- 08/2007-05/2011 Doctor of Medicine, Research Distinction Track
University of Arizona, Tucson, Arizona
- 07/2011-06/2014 Pediatric Residency
University of Arizona, Tucson, Arizona
- 08/2012-05/2013 Fellow, Leadership Education in Neurodevelopmental Disabilities (AZLEND), University of Arizona, Tucson, AZ
- 07/2014-06/2015 Sleep Medicine Fellowship
University of Arizona, Tucson, Arizona

CHRONOLOGY OF EMPLOYMENT

- 07/2015 – 11/2020 Assistant Professor of Pediatrics, Clinical Scholar Track
University of Arizona, Tucson, Arizona
- 07/2015- Director, Pediatric Sleep Medicine Program, Banner University Medical Center-Tucson
- 10/2015 - Assistant Professor of Medicine (J)
University of Arizona, Tucson, Arizona
- 01/2016 -11/2020 Banner University Medical Group – Tucson
Assistant Professor, University of Arizona,
Tucson, AZ
- 07/2019- Associate Program Director, Sleep Medicine Fellowship (Pediatrics)
- 11/2020- Assistant Professor of Pediatrics, Tenure Eligible

University of Arizona, Tucson, AZ

10/2021- Assistant Director of Scholarly Projects, Community-based Research
University of Arizona College of Medicine

Board Certification and Licenses

03/2014 - Arizona medical license, #48789

10/2014 - American Board of Pediatrics, Certified in General Pediatrics,
109506

10/2015 - American Board of Pediatrics, Board Certified in Sleep Medicine,
#258

HONORS AND AWARDS

8/2006-5/2008 Solon E. Summerfield Scholar

8/2009 Kenneth Gerber Memorial Scholarship

8/2010 A C Simon Memorial Scholarship

5/2011 Excellence in Research Award- University of Arizona College of
Medicine

4/2015 American Academy of Sleep Medicine Young Investigator Research
Forum Travel Award

6/2015 Sleep Research Society Implementation Science Young Investigator
Travel Award

10/2015 Anne Elizabeth Suratt Young Investigator Award

7/2016-6/2022 NIH/NHLBI Pediatric Research Loan Repayment Program Awardee
(renewed 2018, 2020)

2/2022- Fellow, American Academy of Sleep Medicine

SERVICE/OUTREACH

National/International Outreach

7/2011-6/2015 Member, American Academy of Pediatrics

7/2014 -	Member, American Academy of Sleep Medicine
7/2014 -	Member, Sleep Research Network
10/2014-10/2015	Member, Sleep Research Society
4/2015-4/2015	Participant, American Academy of Sleep Medicine Young Investigator Forum
8/2015-6/2016	Program faculty mentor, Arizona's Science, Engineering and Mathematics Scholars (ASEMS)
12/2015	Annual conference abstract reviewer: Sleep and Development category, 2016 Associated Professional Sleep Societies
12/2016	Annual conference abstract reviewer: Sleep Disordered Breathing category, 2017 Associated Professional Sleep Societies
12/2017 -	Member, American Heart Association
01/2017 -12/2020	Member, American Sleep Medicine Foundation Career Development Award Grant Review Committee
12/2017	Annual conference abstract reviewer: Pediatrics category, 2018 Associated Professional Sleep Societies
4/2018	Ad Hoc Reviewer, University of Arizona International Research & Academic Program Development Grant Review
8/2018	Member, American Academy of Sleep Medicine Foundation Strategic Research Award Grant Review Committee
11/2018	Social media facilitator, American Heart Association Scientific Sessions 2018: Abnormal Growth in Congenital Heart Disease: Not too little, Not too much
12/2018	Annual conference abstract reviewer: Pediatrics category, 2019 Associated Professional Sleep Societies
12/2019	Annual conference abstract reviewer: Pediatrics category, 2020 Associated Professional Sleep Societies
7/2020	Member, NIH grant review committee (ZRG1 BBBP-C (55) R)

12/2020	Annual conference abstract reviewer: Sleep-Related Breathing Disorders category, 2021 Associated Professional Sleep Societies
1/2021-	Member, American Academy of Sleep Medicine Foundation Investigator-Initiated Research Grant Review Committee
11/2021	Mail Reviewer, NIH Infectious, Reproductive, Asthma and Pulmonary Conditions (IRAP) Study Section
12/2021	Annual conference abstract reviewer, 2022 Associated Professional Sleep Societies
3/2022	Member, NIH grant review committee ZRG1 VH-A (90) S, RFA-OD-20-005: Transformative Research Award for the INCLUDE Project (R01)
4/2022-	Review Editor/Editorial Board Member, <i>Frontiers in Sleep</i>
8/2022	Ad Hoc member, American Academy of Sleep Medicine Foundation Career Development Award Grant Review Committee

Ad Hoc Reviewer:

SLEEP
 Journal of Clinical Sleep Medicine
 Sleep Medicine
 Journal of Sleep Research
 Nature and Science of Sleep
 European Respiratory Journal
 Annals of the American Thoracic Society
 Paediatric Respiratory Reviews
 Respiratory Medicine
 International Journal of Chronic Obstructive Pulmonary Disease
 Journal of Intellectual and Developmental Disabilities
 Research in Developmental Disabilities
 PEDIATRICS
 Journal of Applied Physiology
 Health and Quality of Life Outcomes
 BMJ Open
 Childhood Obesity
 Journal of Clinical Medicine
 Cancer
 Scientific Reports
 Future Cardiology
 International Journal of Environmental Research and Public Health
 BMC Pediatrics

Departmental Committees

7/2011-6/2014	Member, Pediatric Continuous Program Improvement Committee, University of Arizona Medical Center
07/2015-	Member, Sleep Medicine Fellowship Core Competencies Committee
07/2015-	Member, Sleep Medicine Fellowship Program Evaluation Committee
9/2016-3/2017	Member, 5-Year Administrative Review Committee for Dr. Faye Ghishan (University of Arizona Department of Pediatrics Chair review)

College Committees

7/2016-7/2021	Member, University of Arizona College of Medicine Continuing Medical Education Committee
7/2020-	Member, University of Arizona College of Medicine Graduate Medical Education Committee
7/2021-7/2022	Vice-Chair, University of Arizona College of Medicine Continuing Medical Education Committee

University Committees

2/2022-	Member, Institutional Review Board
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PUBLICATIONS/CREATIVE ACTIVITY

Chapters in scholarly books and monographs

1. **Combs D**, Cranmer LD; Melanoma and Skin Cancer; In: *Neuropsychological Impact of Cancer and Oncology*; Springer Publishing Company; New York; 2012

Refereed Journal Articles

1. **Combs D**, Shetty S, Parthasarathy S; Advances in PAP treatment modalities for hypoventilation syndromes; *Sleep Medicine Clinics*; Sept 2014; 9(3):315-325; PMID 25346650
2. **Combs D**, Rice SA and Kopp LM; Incidence of delirium in children with cancer; *Pediatric Blood & Cancer*; Nov 2014; 61(11):2094-5; PMID 24938869

3. Buterbaugh J, Wynstra C, Provencio N, **Combs D**, Gilbert M, Parthasarathy S; Cerebrovascular Reactivity in Young Subjects with Sleep Apnea; *Sleep*; Feb 2015; 1;38(2):241-50; PMID 25409111
4. Parthasarathy S, Shetty S, **Combs D**; Mend the Mind and Mind the “MCC”; *Sleep*; Jul 1, 2015; 38(7):1001-3; PMID: 26085292
5. **Combs D**, Goodwin JL, Quan SF, Morgan WJ, Parthasarathy S; Longitudinal Differences in Sleep Duration in Hispanic and Caucasian Children; *Sleep Medicine*; Jun 29, 2015; 18:61-66; PMID: 26299467
6. **Combs D**, Goodwin JL, Quan SF, Morgan WJ, Parthasarathy S; Modified Stop-Bang Tool For Stratifying Obstructive Sleep Apnea Risk in Adolescent Children; *PLoS One*; Nov 18, 2015; 10(11):e0142242; PMID 26581088
7. **Combs D**, Shetty S, Parthasarathy S; Big-data or Slim-data: Predictive Analytics Will Rule the World; *Journal of Clinical Sleep Medicine*; 2016; 12(2):159-160; PMID 26943716
8. Yamauchi M, **Combs D**, Parthasarathy S; Adaptive Servo-Ventilation for Central Sleep Apnea in Heart Failure; *New England Journal of Medicine*; Feb 17, 2016; 374: 687-691; PMID 26886532
9. **Combs D**, Goodwin JL, Quan SF, Morgan WJ, Shetty S, Parthasarathy S; Insomnia, Health-Related Quality of Life and Health Outcomes in Children: A Seven Year Longitudinal Cohort; *Scientific Reports*; Jun 13, 2016; 6:27921; PMID 27295263
10. Grandner MA, Alfonso-Miller P, Fernandez-Mendoza J, Shetty S, Shenoy S, **Combs D**; Sleep: Important Considerations for the Prevention of Cardiovascular Disease; *Current Opinion in Cardiology*; Sep 2016; 31(5):551-6; PMID 27467177 [Review]
11. Parthasarathy S, Buysse D, Carskadon M, Jean-Louis G, Owens J, Bramoweth A, **Combs D**, Hart C, Hasler B, Honaker S, Hertenstein E, Kuna S, Kushida C, Levenson J, Murray C, Pack A, Pillai V, Pruiksma K, Seixas A, Strollo P, Thosar S, Twery M, Williams N, Stoney K; Implementation of Sleep and Circadian Science: Recommendations from the Sleep Research Society and National Institutes of Health Workshop; *Sleep*; Oct 10, 2016; 39(12):2061-2075; PMID 27748248
12. Shetty S, Fernandes A, Patel S, **Combs D**, Grandner MA, Parthasarathy S; Unanticipated Nocturnal Oxygen Requirement during Positive Pressure Therapy for Sleep Apnea and Medical Comorbidities; *Journal of Clinical Sleep Medicine*; Jan 15, 2017; 13(1):73-79; PMID 27655454
13. **Combs D**, Parthasarathy S; Machines Learning to Detect Obstructive Sleep Apnea in Children: Are We There Yet?; *American Journal of Respiratory and Critical Care Medicine*; ePub; Aug 29, 2017; PMID 28849948

14. Chin CN, **Combs D**; Glycemic improvement with improved control of sleep-disordered breathing in Prader-Willi syndrome; *Sleep and Vigilance*; Oct 12, 2017; 1:85-88
15. Quan SF, **Combs D**, Parthasarathy S; Impact of Sleep Duration and Weekend Oversleep on Body Weight and Blood Pressure in Adolescents; *Southwest Journal of Pulmonary Critical Care*; 2018; 16(1):31-41; PMID 29375933
16. Bailey O, Parthasarathy S, **Combs D**; Too Little, but Still Great?; *Journal of Clinical Sleep Medicine*; Jun 15, 2018; 14(6):907–908; PMID 29852920
17. Parthasarathy S, **Combs D**, Patel SN, Poongkunran C, Quan SF; Provider Types and Outcomes in Obstructive Sleep Apnea Case Finding and Treatment; *Annals of Internal Medicine*; Aug 7, 2018; 169(3):201-202; PMID 30083707
18. **Combs D**, Skrepnek G, Seckeler M, Barber B, Morgan WJ, Parthasarathy S; Sleep-disordered breathing is associated with increased mortality among hospitalized infants with congenital heart disease; *Journal of Clinical Sleep Medicine*; Aug 30, 2018; PMID: 30176962
19. **Combs D**, Goodwin JL, Quan SF, Morgan WJ, Hsu CH, Edgin JO, Parthasarathy S; Mother knows best? Comparing child and parent report of sleep parameters with polysomnography; *Journal of Clinical Sleep Medicine*; Jan 15, 2019; 15(1):111-117; PMID: 30621839
20. Knitter J, Bailey OF, Poongkunran C, Martinez AF, Martinez L, Kobayashi U, **Combs D**, Lane R, Zareba W, Parthasarathy S; Comparison of Physiological Performance of Four Adaptive Servo Ventilation Devices In Patients With Complex Sleep Apnea; *American Journal of Respiratory and Critical Care Medicine*; Apr 1, 2019; 199(7):925-928; PMID 30605350
21. Bailey O, **Combs D**, Sans-Fuentes M, Havens C, Poongkunran C, Patel S, Berryhill S, Provencio N, Quan SF, Parthasarathy S; Delayed sleep time in African Americans and depression in a community-based population; *Journal of Clinical Sleep Medicine*; Jun 15, 2019; 15(6):857-864; PMID: 31138383
22. Tubbs AS, **Combs D**, Grandner MA, Parthasarathy S; Obstructive Sleep Apnea in Jacobsen Syndrome; *Sleep and Vigilance*; April 2019; <https://doi.org/10.1007/s41782-019-00060-w>
23. Tubbs AS, Grandner MA, **Combs D**; Refractory insomnia in an adolescent with total blindness; *Yale Journal of Biology and Medicine*; Jun 27, 2019; 92(2):201-204; PMID: 31249480

24. Berryhill, S Morton CJ, Dean A, Berryhill A, Provencio-Dean N, Patel, SI, Estep, L, **Combs D**, Gerald LB, Krishnan JA, Parthasarathy S. Effect of Wearables on Sleep in Healthy Individuals: A Randomized Cross-Over Trial and Validation Study. *Journal of Clinical Sleep Medicine*. May 15 2020; 16(5):775-783; PMID 32043961
25. Pandey A, Mereddy S, **Combs D**, Shetty S, Patel S, Mashaqi S, Seixas A, Littlewood K, Jean-Louis G. Parthasarathy S. Socioeconomic Inequities in Adherence to Positive Airway Pressure Therapy in Population Level Analysis. *Journal of Clinical Medicine*. February 6, 2020; 9(2):442; PMID 32041146
26. **Combs D**, Edgin JO, Klewer S, Barber BJ, Morgan WJ, Hsu CH, Abraham I, Parthasarathy S. Obstructive sleep apnea and neurocognitive impairment in children with congenital heart disease. *CHEST*. 2020 Sep;158(3):1208-1217; PMID 32222588
27. **Combs D**, Parthasarathy S. Nocturnal oxygen for high altitude travel in patients with COPD. *JAMA Network Open*. Jun 22 2020; 3(6):e208022; PMID 32568396
28. Patel S, **Combs D**, Parthasarathy S. Sleep Apnea 20/20: A 20-year Cohort that continues to inform the next 20 years. *Journal of Clinical Sleep Medicine*. Dec 17, 2020; 16(S1):27-28; PMID 33054968
29. Mashaqi S, Mansour H, Alameddin H, **Combs D**, Patel S, Estep L, Parthasarathy S. The Cross-Talk Between Obstructive Sleep Apnea and Cardiovascular Remodeling; Matrix Metalloproteinase-9 as a Messenger – A Literature Review. *Journal of Clinical Sleep Medicine*. Mar 1, 2021;17(3):567-591; PMID 33108267
30. **Combs D**, Hsu CH, Bailey O, Patel S, Mashaqi S, Estep L, Provencio-Dean, N, Lopez S, Parthasarathy S. Differences in sleep timing and related effects between African Americans and non-Hispanic Whites. *Journal of Clinical Sleep Medicine*. May 1, 2021; 17(5):897-908. PMID 33382030
31. Mashaqi S, Patel SI, **Combs D**, Estep L, Helmick S, Machamer J, Parthasarathy S. The Hypoglossal Nerve Stimulation as a Novel Therapy for Treating Obstructive Sleep Apnea – A literature Review. *Int J Environ Res Public Health*. 2021 Feb 9;18(4):1642; PMID 33572156
32. Knobbe K, Partha M, Seckeler MD, Klewer S, Hsu CH, Edgin J, Morgan WJ, Provencio-Dean N, Lopez S, Parthasarathy S, **Combs D**. Sleep problems are associated with neurodevelopmental problems and decreased health-related quality of life in children with Fontan circulation. *J Am Heart Assoc*. 2021 October 20; 10:e021749; PMID 34668394
33. Patel SI, Zareba W, LaFleur B, Coudere JP, Xia X, Woosely R, Patel IY, **Combs D**, Mashaqi S, Quan SF, Parthasarathy S. Markers of ventricular repolarization and overall mortality in sleep disordered breathing. *Sleep Med*. 2022 April 22; Apr 22;95:9-15.PMID: 35533628.

34. Mashaqi, S, Kallamadi R, Matta A, Quan SF, Patel SI, **Combs D**, Estep L, Lee-Iannotti J, Smith C, Parthasarathy S, Gozal D. Obstructive Sleep Apnea as a Risk Factor for COVID-19 Severity - The Gut Microbiome as a Common Player Mediating Systemic Inflammation via Gut Barrier Dysfunction. *Cells*. 2022 May 6;11(9):1569. PMID: 35563874

Electronic Publications

1. **Combs D**, Parthasarathy S; Pediatric Populations at High Risk for Sleep Apnea; Sleep Education.org. <http://sleepeducation.org/docs/default-document-library/nhsap-peds-high-risk-for-sleep-apnea.pdf>

CONFERENCES/SCHOLARLY PRESENTATIONS

Colloquia

Use of the receptor tyrosine kinase inhibitor MP470 in synovial sarcoma. Summer Institute on Medical Ignorance final oral report. Tucson, AZ. July 2007.

Neurocognitive Function in Melanoma Patients Treated with Interferon alpha-2b. Summer Institute on Medical Ignorance final oral report. Tucson, AZ. July 2008.

MP470, a Novel Agent for the Treatment of Synovial Sarcoma. Research Distinction Track Final Presentation. Tucson, AZ. April 2009.

Symposia/Conferences

Invited

Sleep Research Society Implementation Science Workshop, Seattle, WA. June 2015.

Update on Management of Sleep Disordered Breathing in Children. Pediatrics in the Desert. Tucson, AZ November 2015.

Sleep-disordered breathing in congenital heart disease. Invited lecture at the National University of Taiwan. Taipei, Taiwan, June 2017.

Update on Obstructive Sleep Apnea Treatment Options for Children. ENT in the Desert. Tucson, AZ February 2018.

Effects of Marijuana on Sleep. Invited lecture at Scientific Aspects of Medical Marijuana Conference, Phoenix, AZ March 2018.

Sleep Apnea in Children with Down Syndrome. Invited lecture at NIH INCLUDE Project workshop on Clinical Trials in Down syndrome for Co-occurring Conditions across the Lifespan, Bethesda MD May 2020.

Medications for Obstructive Sleep Apnea in Children with Down Syndrome. Invited lecture at NIH INCLUDE Project workshop on Clinical Trials in Down syndrome for Co-occurring Conditions across the Lifespan, Bethesda MD May 2020.

Invited participant, working group on respiratory and airway conditions for NIH INCLUDE Project workshop on Down Syndrome Research: The Intersection of Basic Science and Clinical Cohort Development, Bethesda MD November 2020.

Medications for Obstructive Sleep Apnea in Children with Down Syndrome. Invited Lecture at the New England Down Syndrome Symposium, Massachusetts Institute of Technology, Cambridge MA November 2020.

Sleep Dysfunction after TBI. Tucson Medical Center Concussion Symposium, Tucson AZ, September 2021

Sleep in children with congenital heart disease. Children's Hospital of Pennsylvania Sleep Shorts. Philadelphia, PA. October 2022

Sleep difficulties in children with congenital heart disease. 11th Annual Scientific Sessions of the Cardiac Neurodevelopmental Outcome Collaborative. Montreal, Canada October 2022.

Submitted

Clarifying the role of the fusion protein SYT-SSX in synovial sarcoma. Poster presentation for 17th annual Undergraduate Biology Research conference. Tucson, AZ. January 2006.

The synovial sarcoma associated fusion protein SYT-SSX1 antagonizes the retinoblastoma protein inhibiting oncogene E7. Poster presentation for 18th annual Undergraduate Biology Research conference. Tucson, AZ. January 2007.

Testing a Therapeutic Pharmaceutical for Synovial Sarcoma. Poster presentation for 19th annual Undergraduate Biology Research conference. Tucson, AZ. January 2008.

The Novel Multi-Targeted Receptor Tyrosine Kinase Inhibitor MP470 Inhibits Synovial Sarcoma Proliferation In Vitro. Western Student Medical Research Forum. Carmel, CA. February 2008.

Activity of the multi-targeted, receptor tyrosine kinase inhibitor MP470 against synovial sarcoma cells. Poster presentation for the 99th annual meeting of the American Association for Cancer Research. San Diego, CA. April 2008

Effects of high dose interferon on memory in melanoma patients. Poster presentation for 6th annual International Melanoma Conference. Boston, MA. November 2009.

Screening tools for interferon-related cognitive decline in melanoma patients. Poster Presentation for 2010 American Society of Clinical Oncology Annual Meeting. Chicago, IL. June 2010.

Use of Rapid PDSA Cycles to Improve Pediatric Resident Handoffs. Poster presentation at Society of Hospital Medicine Annual Meeting. San Diego, CA. April 2012.

Incidence of delirium in children with cancer. Poster presentation at American Society for Pediatric Hematology Oncology 27th annual meeting. Chicago, IL. May 2014.

Prevalence of Sleep-Disordered Breathing in Children with Congenital Heart Disease. Poster presentation at 2015 International meeting of the American Thoracic Society. Denver, CO. May 2015

Development of a Modified STOP-Bang Tool for Adolescent Children. Poster presentation at Associated Professional Sleep Societies 2015 annual meeting. Seattle, WA. June 2015.

Sleep-Disordered Breathing is Associated with Impaired IQ in Children with Congenital Heart Disease. 14th International Symposium on Sleep and Breathing. Porto de Galinhas, Pernambuco, Brazil, October 2015.

Sleep-disordered breathing is associated with increased mortality among hospitalized infants with congenital heart disease. 2016 meeting of the Associated Professional Sleep Societies. Denver, CO. June 2016.

Impact of insomnia in children in a longitudinal seven year cohort. 2016 meeting of the Associated Professional Sleep Societies. Denver, CO. June 2016.

Sleep-disordered breathing is associated with neurocognitive impairment in children with congenital heart disease. SLEEP 2018 annual meeting, Baltimore, MD June 2018.

Trouble sleeping predicts future decreased quality of life in young children with Fontan circulation. 2022 meeting of the Associated Professional Sleep Societies. Charlotte, NC. June 2022.

Medications for obstructive sleep apnea in children with Down syndrome. 4th Trisomy 21 Research Society International Conference. Long Beach, CA June 2022.

Peer-Reviewed Abstracts

Combs D, Cranmer LD, Trevor K. The novel multi-targeted receptor tyrosine kinase inhibitor MP470 inhibits synovial sarcoma proliferation in vitro. *Journal of Investigative Medicine*, Vol. 56 (1), 224-225, 2008.

Trevor K, **Combs D**, Mahadevan D, Bearss D, Cranmer L. Activity of the multi-targeted, receptor tyrosine kinase inhibitor MP470 against synovial sarcoma cells [abstract]. In: *Proceedings of the 99th Annual Meeting of the American Association for Cancer Research*; April 2008 ; San Diego, CA. Philadelphia (PA): AACR; 2008. [Abstract.] nr 4891.

Combs D, Baker A, Fu J, Herring A, Jeter J, Cranmer L. Feasibility study of neurocognitive assessment of melanoma patients treated with adjuvant interferon. *Journal of Clinical Oncology* 27, 2009 (suppl; abstr e20567).

Combs D, Baker A, Herring A, Trevor K, Jeter J, Cranmer L. Effects of high dose interferon on memory in melanoma patients. *Pigment Cell and Melanoma Research* 22(6):866, December 2009.

Combs D, Baker A, Jordan S, Morgan S, Pestana L, Herring A, Jeter J, Hersch E, Cranmer LD. Screening tools for interferon-related cognitive decline in melanoma patients. *Journal of Clinical Oncology* 28:7s, May 2010 (suppl; abstr 8539).

Kleifgen B, **Combs D**, Walker G, Franke H, Cramton R. Use of rapid PDSA cycles to improve pediatric resident handoffs. *Journal of Hospital Medicine* 7(S2), March 2012.

Combs D, Edgin J, Barber B, Morgan WJ, Parthasarathy S. Sleep-Disordered Breathing is Associated with Impaired IQ in Children with Congenital Heart Disease. 14th International Symposium on Sleep and Breathing. Porto de Galinhas, Pernambuco, Brazil, October 2015.

Oren E, **Combs D**, Fisher J, Goodwin JL, Billheimer D, Gerald JK, Clemens C, Brown M, Gerald LB. Impact of supervised asthma medication use on sleep outcomes of elementary school children. 2016 International Meeting of the American Thoracic Society. San Francisco, CA. May 2016.

Daulat R, DeArmond R, **Combs D**, Shetty S, Parthasarathy S. Circadian Rhythms in Survivors of Critical Illness is Related to Acuity of Illness. 2016 International Meeting of the American Thoracic Society. San Francisco, CA. May 2016.

Combs D, Skrepnek G, Seckeler M, Barber B, Parthasarathy S. Sleep-disordered breathing is associated with increased mortality among hospitalized infants with congenital heart disease. 2016 meeting of the Associated Professional Sleep Societies. Denver, CO. June 2016.

Merreddy S, Pandey A, **Combs D**, Shetty S, Jean-Luis G, Parthasarathy S. Altitudinal Central Apneas and Adherence to Positive Airway Pressure Therapy. 2017 International Meeting of the American Thoracic Society. Washington, D.C. May 2017.

Pandey A, Merreddy S, **Combs D**, Shetty S, Jean-Luis G, Parthasarathy S. Health Disparities in Adherence to Positive Airway Pressure Therapy in Population Level Analysis. 2017 International Meeting of the American Thoracic Society. Washington, D.C. May 2017.

Combs D, Goodwin JL, Quan SF, Morgan WJ, Edgin JO, Parthasarathy S. Mother knows best? Comparing child and parent report of sleep parameters with polysomnography. 2017 meeting of the Associated Professional Sleep Societies. Boston, MA June 2017.

Combs D, Edgin JO, Barber B, Morgan WJ, Hsu CH, Abraham I, Parthasarathy S. Sleep-disordered breathing is associated with memory impairment in children with congenital heart disease. 15th International Symposium on Sleep and Breathing. Madison, WI, July 2017.

Wagner A, Mathews C, Chen M, Lenker C, **Combs D**, Phan H, Lord L, Konop G, Caffey F, Sonney J, Maddox MH, Troxler RB. Developing Web-based Education Modules on Pediatric Sleep Disorders for Primary Care Providers: An Interdisciplinary Approach. 9th Pediatric Sleep Medicine Conference. Amelia Island, FL. November 2017.

Troxler RB, Chen ML, **Combs D**, Lenker CV, Matthews C, Wagner A. Pediatric Sleep Health is Public Health: An Interdisciplinary Approach to Development of Web-Based Education Modules for Primary Care Providers. 2018 Association of Maternal & Child Health Programs Annual Conference, Arlington, VA. February 2018.

Combs D, Abraham I, Hsu CH, Morgan W, Bailey O, Parthasarathy S. Parent treatment preferences for mild obstructive sleep apnea in children. 2018 International Meeting of the American Thoracic Society. San Diego, CA, May 2018.

Bailey O, Sans-Fuentes M, Havens C, **Combs D**, Poongkunran C, Patel S, Berryhill S, Provencio N, Quan SF, Parthasarathy S. Delayed sleep time in African Americans and depression in a community-based population. 2018 meeting of the Associated Professional Sleep Societies. Baltimore, MD June 2018.

Combs D, Edgin JO, Barber B, Morgan WJ, Hsu CH, Abraham I, Parthasarathy S. Sleep-disordered breathing is associated with neurocognitive impairment in children with congenital heart disease. 2018 meeting of the Associated Professional Sleep Societies. Baltimore, MD June 2018.

Knitter J, Patel S, Bailey O, Poongkunran C, Flores-Martinez A, Martinez L, Kobayashi U, **Combs D**, Parthasarathy S. Comparison of Performance of Four Adaptive Servo

Ventilation Devices in Patients with Complex Sleep Apnea. 2018 meeting of the Associated Professional Sleep Societies. Baltimore, MD June 2018.

Combs D, Edgin JO, Barber B, Klewer S, Morgan WJ, Hsu CH, Abraham I, Parthasarathy S. Obstructive Sleep Apnea is a Novel Risk Factor for Neurocognitive Impairment in Children with Congenital Heart Disease. 2018 American Heart Association Scientific Sessions. Chicago, IL November 2018.

Berryhill S, Patel SI, Provencio N, **Combs D**, Havens CM, Parthasarathy S. Cloud-Based Evaluation Of Wearable-Derived Sleep Data In Insomnia Trials. 2019 meeting of the Associated Professional Sleep Societies. San Antonio, TX June 2019.

Provencio N, Morton CJ, Wendel C, Berryhill S, Partha MT, Kulkarni H, **Combs D**, Patel SI, Desai, B, Quan SF, Parthasarathy S. EMR and Clinic Based Approaches for Recruiting Peer Support for Sleep Apnea. 2019 meeting of the Associated Professional Sleep Societies. San Antonio, TX June 2019.

Patel SI, Wendel C, Berryhill S, Provencio N, DeArmond R, Quan SF, **Combs D**, Skrepnek GH, Parthasarathy S. Health Benefits to Peers Participating in a Mentoring program for Treatment Adherence in Patients with Sleep Apnea. 2019 meeting of the Associated Professional Sleep Societies. San Antonio, TX June 2019.

Combs D, Abraham I, Hsu CH, Morgan WJ, Patel S, Parthasarathy S. Comparison of parent and child treatment preferences for obstructive sleep apnea. 2019 meeting of the Associated Professional Sleep Societies. San Antonio, TX June 2019.

De Armond R, Morton C, Patel SI, **Combs D**, Parthasarathy S. Sex as a Biological Variable on the Inflammatory Effects of Intermittent Hypoxia. 2019 meeting of the Associated Professional Sleep Societies. San Antonio, TX June 2019.

Patel SI, Vasquez M, Guerra S, **Combs D**, Parthasarathy S. Treatment of Sleep Disordered Breathing With Positive Airway Pressure Therapy Reduces The Number of Hospitalizations In A Large Cohort Of Patients With Heart Failure. 2019 American Heart Association Scientific Sessions. Philadelphia, PA November 2019.

Huang F, Patel SI, **Combs D**, Parthasarathy S. Mortality and hospitalization in patients with heart failure and sleep apnea: A retrospective study of positive airway pressure therapy in medicare beneficiaries. 2020 meeting of the Associated Professional Sleep Societies. Virtual meeting due to COVID-19 August 2020.

Combs D, Patel SI, Mashaqi S, Provencio-Dean N, Lopez S, Parthasarathy S. Objective differences in sleep timing between African Americans and Non-Hispanic Whites. 2020 meeting of the Associated Professional Sleep Societies. Virtual meeting due to COVID-19 August 2020.

Patel SI, Zareb W, Couderc JP, Xia X, LaFleur B, Torabzadeh E, Woosely R, Patel I, **Combs D**, Mashaqi S, Parthasarathy S. Repolarization Variability Predicts Cardiovascular Death In Obstructive Sleep Apnea. 2020 meeting of the Associated Professional Sleep Societies. Virtual meeting due to COVID-19 August 2020.

Parthasarathy S, Kukafka DS, Antonescu C, Patel SI, **Combs D**, Quan SF, Lee-Iannotti JK. Test Characteristics of a machine learned Electronic Medical Record Extractable tool for OSA Case Identification in a Community-based Population. 2020 meeting of the Associated Professional Sleep Societies. Virtual meeting due to COVID-19 August 2020.

Berryhill, S Morton CJ, Dean A, Berryhill A, Provencio-Dean N, Patel, SI, Estep, L, **Combs D**, Gerald LB, Krishnan JA, Parthasarathy S. Effect of Wearables on Sleep in Healthy Individuals: A Randomized Cross-Over Trial and Validation Study. 2020 meeting of the Associated Professional Sleep Societies. Virtual meeting due to COVID-19 August 2020.

Patel S, **Combs D**, Provencio-Dean N, Mashaqi S, Bhattacharjee R, Quan SF, Morton CJ, Wendel C, Parthasarathy S. Peer-intervention Can Reduce Health Disparities In Patients With Obstructive Sleep Apnea. 2020 meeting of the Associated Professional Sleep Societies. Virtual meeting due to COVID-19 August 2020.

Jain SV, Kondapalli K, Moskowitz A, **Combs D**, Parthasarathy S. Sleep Education Improves Screening for Sleep Disorders among Physicians and Residents in Primary Care and Neurology Specialties. 2020 meeting of the Associated Professional Sleep Societies. Virtual meeting due to COVID-19 August 2020.

Combs D, Fernandez V, Barber B, Morgan WJ, Hsu C, Andrews JG, Parthasarathy S, Klewer S, Seckeler M. Obstructive Sleep Apnea Is Associated with Cardiac Dysfunction In Children With Congenital Heart Disease. 2020 American Heart Association Scientific Sessions. Virtual meeting due to COVID-19 November 2020.

Patel SI, Zareba W, LaFleur B, Couderc JP, Xia X, Woosley RL, **Combs D**, Patel I, Mashaqi S, Parthasarathy S. The Relationship between Sleep Disordered Breathing, Markers of Ventricular Repolarization and Cardiovascular Mortality. 2021 meeting of the Associated Professional Sleep Societies. Virtual meeting due to COVID-19 June 2021.

Patel SI, Zareba W, LaFleur B, Couderc JP, Xia X, Woosley RL, **Combs D**, Patel I, Mashaqi S, Parthasarathy S. The association of QTc and QT Variability with Severity of Sleep Disordered Breathing. 2021 meeting of the Associated Professional Sleep Societies. Virtual meeting due to COVID-19 June 2021.

Robertson K, Seckeler M, Klewer S, Hsu CH, Edgin J, Provencio-Dean N, Lopez S, Parthasarathy S, **Combs D**. Sleep problems are associated with behavioral problems and decreased quality of life in children with Fontan circulation. 2021 meeting of the Associated Professional Sleep Societies. Virtual meeting due to COVID-19 June 2021.

Combs D, Partha M, Hsu CH, Edgin J, Seckeler M, Klewer S, Parthasarathy S, Cooper DS. Trouble sleeping predicts future decreased quality of life in young children with Fontan circulation. 2022 meeting of the Associated Professional Sleep Societies. Charlotte, NC. June 2022.

AWARDED GRANTS AND CONTRACTS

IHS-1306-02505

2/27/2014 -1/13/2018

\$2,117,118

“Peer-Driven Intervention as an Alternate Model of Care Delivery and Coordination for Sleep Apnea”

The primary purpose of this grant proposal is to integrate peer-driven intervention with an interactive voice response system that will improve patient-centered outcomes in patients with sleep apnea.

PI: Parthasarathy

Role: Co-investigator

**American Academy of Sleep Medicine Foundation
Jr Faculty Award**

6/1/2016-5/31/2019

\$74,389

“Neurocognitive Impairment in Children with Congenital Heart Disease and Sleep-Disordered Breathing”

This grant examined the role of sleep apnea as a treatable cause of neurocognitive impairment in children with congenital heart disease.

Role: PI

**University of Arizona
Faculty Seed Grant**

10/1/2016-9/30/2017

\$9,930

“Neurocognition and endothelial function in children with congenital heart disease and sleep-disordered breathing”

This grant examined the role of sleep apnea in endothelial and neurocognitive dysfunction in children with congenital heart disease.

Role: PI

**American Academy of Sleep Medicine Foundation
Focused Projects Award**

1/1/2017-12/31/2017

\$19,999

“Improving screening for sleep disorders in children with epilepsy among pediatric providers”

This grant evaluated the use of a brief training intervention to improve recognition of sleep disorders in children with epilepsy by pediatricians.

PI: Jain

Role: Co-investigator

University of Arizona Health Sciences 2/1/2019-1/31/2021
Career Development Award \$80,400

“Obstructive sleep apnea, neurocognition and quality of life in children with congenital heart disease”

This grant provided 75% protected time for career development and research on the effects of OSA on cognition and quality of life in children with CHD. Salary support was ended upon receipt of my American Heart Association award.

Role: PI

American Heart Association 4/1/19-03/31/22
Career Development Award \$231,000
(19CDA34740005)

“Examining the role of obstructive sleep apnea in cognitive and quality of life impairment in children with CHD”

This grant evaluates the impact of obstructive sleep apnea on cognition, quality of life and endothelial function in children with congenital heart disease.

Role: PI

R61/R33HL151254 9/15/2019-08/31/2025
NIH-NHLBI \$1,435,143

“Medications for Obstructive Sleep Apnea to Improve Cognition in Children with Down Syndrome (MOSAIC DS)”

This grant evaluates a novel therapy (atomoxetine and oxybutynin, “ato-oxy”) for the treatment of obstructive sleep apnea in children with Down syndrome as well as evaluating if ato-oxy treatment for OSA improves cognitive and quality of life outcomes in children with Down syndrome.

Role: PI

LuMind IDSC Foundation 6/1/2020-5/30/2021
\$15,000

“Neurocognitive and Language Evaluation in the ato-oxy treatment for OSA in children with Down Syndrome”

This grant is to obtain preliminary data on the short-term neurocognitive and language development effects of atomoxetine and oxybutynin in children with Down syndrome and obstructive sleep apnea.

Role: PI

R21HD109777 9/8/2022-8/31/2024
NIH-NICHD \$422,125

“DEtermining Capacity and Informing Down syndrome Assent Strategies (DECIDAS)”

This grant evaluates capacity for decision-making related to research participation in individuals with Down syndrome, as well as parent/legally authorized representative preferences for assent for research participation in people with Down syndrome.

Role: PI