

## CURRICULUM VITAE

### Jane A. Mondul, Au.D., Ph.D., CCC-A

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#### EMPLOYMENT

2025-present Assistant Professor, Department of Speech, Language, & Hearing Sciences  
Purdue University, West Lafayette, IN

#### EDUCATION AND TRAINING

2022-2024	Postdoctoral Fellowship	Johns Hopkins University Baltimore, MD	Auditory Neuroscience
2017-2022	Doctor of Philosophy (Ph.D.)	Vanderbilt University Nashville, TN	Neuroscience
2013-2017	Doctor of Audiology (Au.D.)	Vanderbilt University Nashville, TN	Clinical Audiology, Pediatric Specialty Track
2009-2013	Bachelor of Arts	St. Olaf College Northfield, MN	Psychology, Neuroscience

#### PUBLICATIONS

##### Peer-Reviewed Original Science Research

1. Valero, M.D., **Burton, J. A.**, Hauser, S. N., Hackett, T. A., Ramachandran, R., & Liberman, M. C. (2017). Noise-induced cochlear synaptopathy in rhesus monkeys (*Macaca mulatta*). *Hearing Research*, 353, 213-223.
2. Hauser, S. N., **Burton, J. A.**, Mercer, E. T., & Ramachandran, R. (2018). Effects of noise overexposure on tone detection in noise in nonhuman primates. *Hearing Research*, 357, 33-45.
3. **Burton, J. A.**, Dylla, M. E., & Ramachandran, R. (2018). Frequency selectivity in macaque monkeys measured using a notched-noise method. *Hearing Research*, 357, 73-80.
4. McRackan, T. R., Fabie, J. E., **Burton, J. A.**, Munawar, S., Holcomb, M. A., Dubno, J. R. (2018). Earphone and aided word recognition differences in cochlear implant candidates. *Otology & Neurotology*, 39(7), e543-e549.
5. Rajsic, J., **Burton, J. A.**, & Woodman, G. F. (2019). The contralateral delay activity tracks the storage of visually presented letters and words. *Psychophysiology*, 56, e13282.
6. Holcomb, M. A., **Burton, J. A.**, Dornhoffer, J. R., Camposeo, E. L., Meyer, T. A., & McRackan, T. R. (2019). When to replace legacy cochlear implants for technological upgrades: Indications and outcomes. *Laryngoscope*, 129, 748-753.
7. **Burton, J. A.**, Mackey, C. A., MacDonald, K., Valero, M. D., Hackett, T. A., & Ramachandran, R. (2020). Changes in audiometric threshold and frequency selectivity correlate with cochlear histopathology in macaque monkeys with permanent noise-induced hearing loss. *Hearing Research*, 398, 108082.
8. Peacock, J., Mackey, C. A., Benson, M. A., **Burton, J. A.**, Greene, N. T., Ramachandran, R., & Tollin, D. J. (2021). The binaural interaction component in rhesus macaques (*Macaca mulatta*). *eNeuro*, 8(6), 1-5.
9. **Burton, J. A.**, Tarabillo, A. L., Finnie, K. R., Shuster, K. A., Mackey, C. A., Hackett, T. A., Ramachandran, R. R. (2022). Chronic otitis externa secondary to tympanic membrane electrode placement in rhesus macaques (*Macaca mulatta*). *Comparative Medicine*, 72(2), 104-112.
10. McLeod, A., **Burton, J. A.**, Mackey, C. A., & Ramachandran, R. (2022). An assessment of ambient noise and other environmental variables in a nonhuman primate housing facility. *Lab Animal*, 51, 219-226.
11. Stahl, A. N., **Mondul, J. A.**, Alek, K. A., Hackett, T. A., & Ramachandran, R. (2022). Audiologic characterization using clinical physiological measures: Normative data from macaque monkeys. *Hearing Research*, 424, 108568.
12. **Mondul, J. A.**, Burke, K., Morley, B., & Lauer, A. M. (2024). Alpha9alpha10 knockout mice show altered physiological and behavioral responses to signals in masking noise. *J Acoust Soc Am*, 155(5), 3183-3194.

## Manuscripts Under Review

1. **Mondul, J. A.**, Hauser, S. N., & Racca, J. M. (under review). Perspectives on neuroscience and auditory evoked potentials in audiology education.
2. **Mondul, J. A.**, Mackey, C. A., Conner, A. N., Alek, K. A., Pitchford, D., Rausis, O., Liberman, L., Liberman, M. C., Ramachandran, R., Hackett, T. A. (under review). Cochlear histopathological characterization of a macaque model of noise-induced synaptopathy: Effects of post-exposure survival time.

## Review Articles

1. **Burton, J. A.**, Valero, M. D., Hackett, T. A., & Ramachandran, R. (2019). The use of nonhuman primates in studies of noise injury and treatment. *J Acoust Soc Am*, 146(5), 3770-3789.

## Case Studies

1. **Burton, J.** & Holcomb, M. (2019). Case 27: Unilateral auditory neuropathy spectrum disorder/cochlear nerve aplasia. In J. R. Madell, C. Flexer, J. Wolfe, & E. C. Schafer (Eds.), *Pediatric Audiology Casebook, 2<sup>nd</sup> Ed.* New York, NY: Thieme.
2. **Burton, J.** & Holcomb, M. (2019). Case 55: Cochlear implantation for enlarged vestibular aqueduct. In J. R. Madell, C. Flexer, J. Wolfe, & E. C. Schafer (Eds.), *Pediatric Audiology Casebook, 2<sup>nd</sup> Ed.* New York, NY: Thieme.

## EXTRAMURAL FUNDING

July 2023-December 2024	NIH NIDCD T32 DC 000023 Role: Postdoctoral Trainee PIs: K. Cullen, G. Fridman, Johns Hopkins University
June 2021-June 2022	NIH NIDCD F32 DC 019817 “Physiological and Perceptual Assessment of Hearing in Noise in Nonhuman Primates Following Noise-Induced Cochlear Synaptopathy” Role: PI, Vanderbilt University
August 2017-July 2019	NIH NIMH T32 MH 064913 Role: Graduate Student Trainee PI: D. Winder, Vanderbilt University
May 2014-June 2014	NIH NIDCD T35 DC 008763 Role: Audiology Student Trainee PI: L. Hood, Vanderbilt University

## OTHER RESEARCH ACTIVITIES

### Invited Talks

April 2023	<b>Mondul, J. A.</b> Dynamics of noise-induced dopamine upregulation in lateral olivocochlear neurons. Rubenstein Symposium on Hearing & Balance, Johns Hopkins School of Medicine, Baltimore, MD.
November 2022	<b>Mondul, J. A.</b> Effects of noise exposure on cochlear anatomy, auditory physiology, and hearing-in-noise in nonhuman primates. Audiology Grand Rounds, Johns Hopkins University.
March 2021	<b>Burton, J. A.</b> Linking auditory physiology and perceptual performance to cochlear histopathology in two nonhuman primate models of noise-induced hearing loss. Johns Hopkins University, virtual.
May 2020	<b>Burton, J. A.</b> & Fosnight, A. M. Translational hearing research updates: Cochlear synaptopathy and inner ear therapeutics. Pediatric Audiology Grand Rounds, Vanderbilt University Medical Center, Nashville, TN.
March 2020	<b>Burton, J. A.</b> Linking perceptual performance with cochlear histopathology in two nonhuman primate models of noise-induced hearing loss. Purdue University Hearing Seminar, West Lafayette, IN.
October 2019	<b>Burton, J. A.</b> Neuroscience and audiology. Miami University of Ohio National Student Speech Language Hearing Association Chapter.

- June 2019 **Burton, J. A.** The neuroscience of hearing loss, hearing aids, and cochlear implants. Vanderbilt Summer Academy course on Neuroscience and Music.
- March 2019 **Burton, J. A.** Hot Topics, Cold Drinks: Unconventional Audiology Panel. American Academy of Audiology Meeting, Columbus, OH.

### Oral Presentations

- February 2024 **Mondul, J. A.**, Graham, C. J. C., Wood, M. B., Lauer, A. M., & Glowatzki, E. Dynamics of Noise-Induced Dopamine Upregulation in Lateral Olivocochlear Neurons. Podium presentation at the 47<sup>th</sup> Midwinter Meeting of the Association for Research in Otolaryngology, Anaheim, CA.
- February 2022 **Burton, J. A.**, Alek, C. A., Liberman, L. D., Liberman, M. C., Hackett, T. A., & Ramachandran, R. Effect of noise exposure designed to cause synaptopathy on putative efferent function in nonhuman primates. Podium presentation at the 45<sup>th</sup> Midwinter Meeting of the Association for Research in Otolaryngology, Virtual Conference.
- April 2020 Racca, J. M. & **Burton, J. A.** Perspectives on auditory evoked potentials and neuroscience in audiology education. Learning module to be presented at the American Academy of Audiology AAA 2020 Conference, New Orleans, LA. *Conference cancelled.*
- October 2019 **Burton, J. A.** & Naguib, S. Vision & hearing: From molecules to sensory loss. Lecture presentation for the Osher Lifelong Learning Series, Nashville, TN.
- July 2019 **Burton, J. A.**, Temghare, N., Tarabillo, A., Valero, M. D., Liberman, M. C., Hackett, T. A., & Ramachandran, R. Hearing in background noise in macaque monkeys following noise exposure. Lecture presentation at the Midwest Auditory Research Conference, Springfield, IL.
- November 2018 **Burton, J. A.** and Ramachandran, R. Neuronal frequency selectivity in the inferior colliculus and cochlear nucleus of the awake behaving macaque monkey. Lecture presentation at the 176<sup>th</sup> Meeting of the Acoustical Society of America, Victoria, British Columbia, Canada.
- April 2018 **Burton, J. A.** Of mice and monkeys: Translating animal research to the clinic. Learning module presented at the American Academy of Audiology AAA 2018 Conference, Nashville, TN.
- March 2018 **Burton, J. A.** & Butera, I. M. Sensory system synergy: Putting information together and what happens when inputs decline. Lecture presentation for the Osher Lifelong Learning Series, Nashville, TN.
- February 2016 **Burton, J.** Toward a nonhuman primate model of noise induced hearing loss. Poster blitz presentation at the 39<sup>th</sup> Midwinter Meeting of the Association for Research in Otolaryngology, San Diego, CA.
- February 2015 **Burton, J.** Auditory perceptual filters in macaque monkeys. Poster blitz presentation at the 38<sup>th</sup> Midwinter Meeting of the Association for Research in Otolaryngology, Baltimore, MD.

### Poster Presentations

- April 2024 **Mondul, J. A.**, Hauser, S. N., & Racca, J. M. Perspectives on auditory evoked potentials and neuroscience in audiology education. American Academy of Audiology AAA 2024 Conference, Atlanta, GA.
- February 2024 Stahl, A., Kulkarni, S., Batchu, A., **Mondul, J.**, Alek, K., Hackett, T. A., & Ramachandran, R. Assessing physiological indicators of subtle auditory trauma: ABRs and DPOAEs in rhesus macaques at 2 and 8 months after noise-induced temporary threshold shifts with perceptual changes. 47<sup>th</sup> Midwinter Meeting of the Association for Research in Otolaryngology, Anaheim, CA.
- March 2023 **Mondul, J. A.**, Graham, C. J. C., Lauer, A. M., & Glowatzki, E. Dynamics of noise-induced dopamine upregulation in lateral olivocochlear neurons. 50<sup>th</sup> Annual Scientific and Technology Conference of the American Auditory Society, Scottsdale, AZ.
- February 2023 **Mondul, J. A.**, Burke, K., Morley, B., & Lauer, A. M. alpha9alpha10 Knockout Mice Show Altered Physiological and Behavioral Responses to Signals in Background Noise. 46<sup>th</sup> Midwinter Meeting of the Association for Research in Otolaryngology, Orlando, FL.
- February 2023 Jirik, K. J., Stahl, A. N., **Mondul, J. A.**, Alek, C. A., Liberman, L. D., Liberman, M. C., Hackett, T. A., & Ramachandran, R. Characterizing clinical auditory physiological measures in old-aged macaque monkeys. 46<sup>th</sup> Midwinter Meeting of the Association for Research in Otolaryngology, Orlando, FL.

- February 2023 Stahl, A. N., Alek, C. A., **Mondul, J. A.**, Hackett, T. A., & Ramachandran, R. Changes in clinical auditory physiology in macaque monkeys at 2 and 8 months following noise-induced temporary threshold shifts. 46th Midwinter Meeting of the Association for Research in Otolaryngology, Orlando, FL.
- February 2022 Stahl, A. N.\*, **Burton, J. A.\***, Temghare, N., Hackett, T. A., & Ramachandran, R. Auditory brainstem responses to masked clicks and chirps in macaque monkeys: Exploring potential biomarkers for auditory nerve loss. 45th Midwinter Meeting of the Association for Research in Otolaryngology, Virtual Conference.
- February 2021 **Burton, J. A.**, Mackey, C. A., Liberman, L. D., Liberman, M. C., Valero, M. D., Hackett, T. A., & Ramachandran, R. Tone detection in quiet and steady-state noise in a nonhuman primate model of cochlear synaptopathy. 44th Midwinter Meeting of the Association for Research in Otolaryngology, Virtual Conference.
- February 2021 Stahl, A. N., **Burton, J. A.**, Temghare, N., Hackett, T. A., & Ramachandran, R. Traditional and novel metrics from standard physiological measures: normative data from macaque monkeys. 44th Midwinter Meeting of the Association for Research in Otolaryngology, Virtual Conference.
- March 2020 Stahl, A. Archer, R., **Burton, J.**, Hackett, T., & Ramachandran, R. Physiological changes in macaque monkeys following noise-induced cochlear synaptopathy. American Auditory Society's 47th Annual Scientific & Technology Conference, Scottsdale, AZ.
- July 2019 **Burton, J. A.** & Ramachandran, R. Neuronal frequency selectivity in the inferior colliculus and cochlear nucleus of the awake behaving macaque monkey. Midwest Auditory Research Conference, Springfield, IL.
- July 2019 Stahl, A., Snyder, R., Valero, M. D., **Burton, J. A.**, Liberman, M. C., Hackett, T. A., & Ramachandran, R. Cochlear histopathology and clinical electrophysiology in noise-exposed macaque monkeys. Midwest Auditory Research Conference, Springfield, IL.
- May 2019 **Burton, J. A.**, Valero, M. D., Liberman, M. C., Hackett, T. A., & Ramachandran, R. Hearing in background noise in macaque monkeys following noise exposure. International Hearing Loss Conference, Niagara-on-the-Lake, Ontario, Canada.
- May 2019 Valero, M. D., Stahl, A., Snyder, R., Burton, J. A., Liberman, M. C., Ramachandran, R., & Hackett, T. A. Cochlear histopathology and clinical electrophysiology in noise-exposed macaque monkeys. International Hearing Loss Conference, Niagara-on-the-Lake, Ontario, Canada.
- July 2018 **Burton, J. A.**, McCrate, J., Hauser, S., Mackey, C., Feller, J., & Ramachandran, R. Temporal and spectral resolution in a nonhuman primate model of noise-induced hearing loss. Auditory System Gordon Research Conference, Smithfield, RI.
- May 2018 **Burton, J. A.**, Rajsic, J., & Woodman, G. F. ABC, easy as CDA: The contralateral delay activity robustly tracks the storage of letters in visual working memory. Vision Sciences Society 2018 Annual Meeting, St. Pete Beach, FL.
- February 2018 **Burton, J. A.** & Ramachandran, R. Perceptual auditory filters in noise-exposed macaque monkeys with permanent hearing loss. 41st Midwinter Meeting of the Association for Research in Otolaryngology, San Diego, CA.
- February 2017 Valero, M. D., **Burton, J.**, Hauser, S., Recanzone, G., Hackett, T., Ramachandran, R., & Liberman, M.C. Cochlear synaptopathy in the noise-exposed and aging rhesus macaque (*Macaca mulatta*). 40th Midwinter Meeting of the Association for Research in Otolaryngology, Baltimore, MD.
- February 2017 Hauser, S., **Burton, J.**, Mercer, E., & Ramachandran, R. Behavioral consequences of cochlear histopathology following noise overexposure in nonhuman primates. 40th Midwinter Meeting of the Association for Research in Otolaryngology, Baltimore, MD.
- February 2016 **Burton, J.**, Hauser, S., Watson, J., Valero, M., Hackett, T., & Ramachandran, R. Toward a nonhuman primate model of noise induced hearing loss. 39th Midwinter Meeting of the Association for Research in Otolaryngology, San Diego, CA.
- March 2015 **Burton, J.**, Mondul, C., Dylla, M., & Ramachandran, R. Auditory perceptual filters in macaque monkeys. 42nd Annual Scientific & Technology Conference of the American Auditory Society, Scottsdale, AZ.
- February 2015 **Burton, J.**, Mondul, C., Dylla, M., & Ramachandran, R. Auditory perceptual filters in macaque monkeys. 38th Midwinter Meeting of the Association for Research in Otolaryngology, Baltimore, MD.

- May 2013 **Burton, J.**, Phillips, S. K., & Stork, C. Perceptual identification of environmental sounds under cochlear implant simulation. 85th Meeting of the Midwestern Psychological Association, Chicago, IL.
- October 2012 **Burton, J.**, Phillips, S. K., & Stork, C. The effects of gender and body-esteem on advertisement reactions. 6th annual MidBrains Undergraduate Neuroscience Conference, Northfield, MN.
- May 2012 Loebach, J.L., **Burton, J.**, Phillips, S.K., Sennott, B., & Stork, C. Lip-reading ability is influenced by visual attention. 84th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.

\*denotes co-first authorship

## EDUCATIONAL ACTIVITIES

### Teaching

- 2023 & 2024 ‘Seminar Series in Hearing & Balance for Summer Trainees’, Director and Lecturer  
Center for Hearing & Balance, Johns Hopkins University School of Medicine
- 2020-2021 Certificate in College Teaching  
Center for Teaching, Vanderbilt University
- 2017-2019 ‘AUD 5233: Neuroscience’, Teaching Assistant  
Department of Hearing & Speech Sciences, Vanderbilt University School of Medicine

### Mentoring

#### *Undergraduate Mentees*

- 2023 Luke Long, senior in public health, Johns Hopkins University. Project topic: image analysis of lateral olivocochlear neurons in cochlea and brainstem tissue after noise exposure.
- 2020-2022 Alexander McLeod, Vanderbilt University, currently medical student at University of Pennsylvania. Project topic: environmental sound levels in a macaque housing facility; co-authored article #10.
- 2018-2022 Charita Veerapeneni, Vanderbilt University, currently medical student at Emory University. Project topic: perceptual auditory filters in macaque monkeys with permanent threshold shifts.
- 2014-2016 Tricia Tyson, MD, Vanderbilt University, currently internal medicine resident at University of Pittsburgh Medical Center. Project topic: neuronal and perceptual frequency selectivity in the inferior colliculus and cochlear nucleus of macaque monkeys.

#### *Pre-doctoral Mentees*

- 2020-2022 Karina Jirik, currently audiology graduate student at Vanderbilt University. Project topic: auditory physiology in aging macaque monkeys.
- 2018-2021 Amy Stahl, Au.D., currently neuroscience graduate student at Vanderbilt University. Project topic: auditory physiology in normal hearing macaque monkeys; co-authored article #11.
- 2018-2020 Rachel Archer, Au.D, currently audiologist in Des Moines, Iowa. Project topic: comparing macaque auditory brainstem responses using mastoid and tympanic membrane electrodes.

## CLINICAL ACTIVITIES

- 2016-2017 Audiology Extern, Medical University of South Carolina

## PROFESSIONAL SERVICE AND ORGANIZATIONAL ACTIVITIES

### Journal Peer Review Activities

- 2024-present Journal of the Association for Research in Otolaryngology
- 2020-present Hearing Research
- 2018-present Journal of the Acoustical Society of America

### Other Peer Review Activities

- 2022-present Research, Clinical, & Teaching Posters Subcommittee, American Academy of Audiology
- 2019-present Research Podiums & Student Research Forum Subcommittee, American Academy of Audiology

### Professional Societies

- 2017-present Certified Membership (CCC-A), American Speech-Language-Hearing Association

2017-present Fellow, American Academy of Audiology  
2015-present Member, American Auditory Society  
2014-present Member, Association for Research in Otolaryngology

**Institutional Leadership**

2020-2021 President, Neuroscience Student Organization, Vanderbilt University  
2019-2020 Retreat Coordinator, Vanderbilt Brain Institute, Vanderbilt University  
2015-2016 Vice President, Student Academy of Audiology, Vanderbilt University  
2014-2015 Fundraising Chair, Student Academy of Audiology, Vanderbilt University

**RECOGNITION**

**Awards and Honors**

2019 New Century Scholars Doctoral Scholarship, American Speech-Language-Hearing Foundation  
2019 Best Talk Award Winner, Neuroscience Retreat, Vanderbilt Brain Institute  
2017 Poster Award Winner, Neuroscience Retreat, Vanderbilt Brain Institute  
2017-2022 University Graduate Fellowship, Vanderbilt University  
2016 Audiology Capstone Award Winner, Vanderbilt University  
2016 Poster Blitz First Place Winner, Association for Research in Otolaryngology  
2013-2017 Vanderbilt Tuition Scholarship, Vanderbilt University  
2013-2016 Department of Education Training Grant, Vanderbilt University