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## **I. Personal History and Professional Experience**

### A. Educational Background

2004 B.A., Psychology, Northern Illinois University  
2011 M.A., Speech Pathology and Audiology, University of Iowa  
2014 Ph.D./Au.D. (dual degree), Speech and Hearing Science & Audiology, University of Iowa

### B. Academic Positions since Final Degree

2014-2016 Postdoctoral Research Associate, VA Loma Linda Healthcare System  
2015-2016 Assistant Research Professor, Department of Otolaryngology and Head/Neck Surgery, Loma Linda University Health  
2016-present Assistant Professor, Department of Speech and Hearing Science, University of Illinois at Urbana-Champaign

### C. Other Professional Employment

2013 Audiologist, University of Iowa Hospitals and Clinics

### D. Honors, Recognitions, and Outstanding Achievements

2012 William F. Austin Scholarship, Starkey Hearing Technologies  
2015 Selected attendee, Pathways, American Speech-Language-Hearing Association  
2016 Selected attendee, Lessons for Success, American Speech-Language-Hearing Association  
2016-2018, 2020-2022 Loan Repayment Award, National Institute on Deafness and Other Communication Disorders  
2017 Selected attendee, ACES Research Academy, University of Illinois at Urbana-Champaign  
2021 Scholars Travel Fund, UIUC Office of the Vice Chancellor for Research & Innovation  
2021 Professional Poster Award, AAA (American Academy of Audiology) 2021 Virtual conference

### E. Invited Lectures and Invited Conference Presentations since Last Promotion

None

### F. Offices Held in Professional Societies

None

### G. Editorships of Journals or Other Learned Publications

None

### H. Grants Received

#### a. Research Grants

2010-2011 **Mertes, I. B.** (PI) *Clinical utility of early and late TEOAE components*, Student Research Grant in Audiology, American Speech-Language-Hearing Foundation, \$2,000.  
2013-2014 **Mertes, I. B.** (PI) *Repeatability of medial olivocochlear efferent effects in humans*, Research Grant, University of Iowa Executive Council of Graduate and Professional Students, \$750.

- 2015-2016 **Mertes, I. B.** (PI) *Role of the auditory efferent system in auditory perceptual learning*, F32 DC015149, National Institute on Deafness and Other Communication Disorders, \$55,106.
- 2016-2018 **Mertes, I. B.** (PI) *Auditory efferent effects and speech perception in noise*, Career Development Award-1, U.S. Department of Veterans Affairs Office of Rehabilitation R&D Service, \$214,908 (awarded but declined due to accepting tenure-track position at UIUC).
- 2017-2019 **Mertes, I. B.** (PI) *Effect of static versus dynamic noises on auditory efferent activity and speech perception in noise*, Arnold O. Beckman Award (project given special distinction), UIUC Campus Research Board, \$20,723.
- 2017-2019 **Mertes, I. B.** (PI) *Role of olivocochlear efferents for listening in dynamic noise*, 2017 New Investigators Research Grant, American Speech-Language-Hearing Foundation, \$10,000.
- 2021-2022 **Mertes, I. B.** (PI) *Auditory Reflexes in Listeners with Normal Hearing and with Hearing Loss*, UIUC Campus Research Board, \$29,938.

#### b. Training Grants

- 2007-2009 Abbas, P. J. (PI), *Predoctoral research training in speech and hearing*, T32 DC00736, National Institute on Deafness and Other Communication Disorders

#### I. Review Panels

None

#### **II. Publications and Creative Works**

- # Denotes any publication derived from the candidate's thesis.
- \* Denotes publication that has undergone stringent editorial review by peers.
- + Denotes publication that was invited and carries special prestige and recognition.
- ^ Denotes publication with student author(s).

#### A. Doctoral Thesis Title

Repeatability of medial olivocochlear efferent effects on transient-evoked otoacoustic emissions in normal hearing adults

#### B. Books Authored or Co-Authored (in print or accepted)

None

#### C. Books Edited or Co-Edited (in print or accepted)

None

#### D. Chapters in Books (in print or accepted)

None

#### E. Monographs (in print or accepted)

None

#### F. Articles in Journals (in print or accepted)

1. \*Goodman, S. S., Bentler, R. A., Dittberner, A., & **Mertes, I. B.** (2013). The effect of low-level laser therapy on hearing. *ISRN Otolaryngology*, 2013, 916370. doi: 10.1155/2013/916370
2. \*Goodman S. S., **Mertes, I. B.**, Lewis, J. D., & Weissbeck, D. K. (2013). Medial olivocochlear-induced transient-evoked otoacoustic emission amplitude shifts in individual subjects. *Journal of the Association for Research in Otolaryngology*, 14(6), 829–842. doi: 10.1007/s10162-013-0409-9
3. \***Mertes, I. B.**, & Goodman, S. S. (2013). Short-latency transient-evoked otoacoustic emissions as predictors of hearing

- status and thresholds. *The Journal of the Acoustical Society of America*, 134(3), 2127–2135. doi: 10.1121/1.4817831
4. \***Mertes, I. B.**, & Goodman, S. S. (2016). Within- and across-subject variability of repeated measurements of medial olivocochlear-induced changes in transient-evoked otoacoustic emissions. *Ear and Hearing*, 37(2), e72–e84. doi: 10.1097/AUD.0000000000000244
  5. \***Mertes, I. B.**, & Leek, M. R. (2016). Concurrent measures of contralateral suppression of transient-evoked otoacoustic emissions and of auditory steady state responses. *The Journal of the Acoustical Society of America*, 140(3), 2027–2038. doi: 10.1121/1.4962666
  6. \***Mertes, I. B.**, Wilbanks, E. C., & Leek, M. R. (2018). Olivocochlear efferent activity is associated with the slope of the psychometric function of speech recognition in noise. *Ear and Hearing*, 39(3), 583–593. doi: 10.1097/AUD.0000000000000514
  7. \***Mertes, I. B.** (2018). Human medial efferent activity elicited by dynamic versus static contralateral noises. *Hearing Research*, 365, 100–109. doi: 10.1016/j.heares.2018.05.007
  8. \***Mertes, I. B.**, Johnson, K. M., & Dinger, Z. A. (2019). Olivocochlear efferent contributions to speech-in-noise recognition across signal-to-noise ratios. *The Journal of the Acoustical Society of America*, 145(3), 1529–1540. doi: 10.1121/1.5094766
  9. \***Mertes, I. B.** (2020). Establishing critical differences in ear-canal stimulus amplitude for detecting middle ear muscle reflex activation during olivocochlear efferent measurements. *International Journal of Audiology*, 59(2), 140–147. doi: 10.1080/14992027.2019.1673491
  10. \***Mertes, I. B.** (2020). Medial olivocochlear reflex effects on synchronized spontaneous otoacoustic emissions. *The Journal of the Acoustical Society of America*, 147(3), EL235–EL240. doi: 10.1121/10.0000886
  11. \***Mertes, I. B.**, & Johnson, K. M. (2020). Lack of association between contralateral inhibition of otoacoustic emissions and vowel formant discrimination in noise. *Hearing, Balance and Communication*, 18(4), 250–255. doi: 10.1080/21695717.2020.1807257
  12. \***Mertes, I. B.** (2021). Reliability and critical differences for an implementation of the coordinate response measure in speech-shaped noise. *JASA Express Letters*, 1(1), 015202. doi: 10.1121/10.0003050

G. Creative Works (Exhibitions, Commissions, Competitions, Performances, Designs, Art or Architecture Executed)

None

H. Patents

None

I. Bulletins, Reports, or Conference Proceedings (in print or accepted)

1. \*Goodman, S. S., **Mertes, I. B.**, & Scheperle, R. S. (2011). Delays and growth rates of multiple TEOAE components. *AIP Conference Proceedings*, 1403, 279-285. doi: 10.1063/1.3658098

J. Abstracts (in print or accepted)

None

K. Book Reviews (in print or accepted)

None

L. Refereed Conference Papers and Presentations

1. **Mertes, I. B.**, & Goodman, S. S. (2009, March). *Delays and growth rates of early and late click-evoked otoacoustic emission components*. Poster presented at the American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ.
2. Goodman, S. S., **Mertes, I. B.**, Sheffield, S. W., Scheperle, R. A., & Koehlinger, K. M. (2010, March). *MOC suppression of extended high-frequency TEOAEs*. Poster presented at the American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ.
3. **Mertes, I. B.**, & Goodman, S. S. (2011, March). *Influence of multiple TEOAE components on measurement of growth and*

- delay. Poster presented at the American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ.
4. **Mertes, I. B.**, & Goodman, S. S. (2012, March). *Behavior of multiple TEOAE components in normal-hearing and hearing-impaired ears*. Poster presented at the American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ.
  5. Weissbeck, D. K., **Mertes, I. B.**, Lewis, J. D., Goodman, S. S., & Marler, J. (2012, March). *A bootstrapping approach to detect TEOAE suppression in individual subjects*. Poster presented at the American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ.
  6. **Mertes, I. B.**, & Goodman, S. S. (2014, February). *Repeatability and stability of medial olivocochlear reflex effects on short- and long-latency transient-evoked otoacoustic emissions*. Poster presented at the Association for Research in Otolaryngology MidWinter Meeting, San Diego, CA.
  7. Stanziola, R. W., **Mertes, I. B.**, Goodman, S. S., & Lewis, J. D. (2014, March). *Relationship between the medial olivocochlear reflex, attention, and hearing in noise*. Poster presented at the American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ.
  8. **Mertes, I. B.** (2014, September). *Repeatability of medial olivocochlear efferent effects on transient-evoked otoacoustic emissions in normal-hearing adults*. Podium presentation at SoCal Hearing Conference, University of California San Diego, La Jolla, CA.
  9. **Mertes, I. B.** (2015, August). *Assessing olivocochlear efferent effects using auditory steady-state responses*. Podium presentation at SoCal Hearing Conference, University of California Irvine, Irvine, CA.
  10. **Mertes, I. B.**, Wilbanks, E. C., & Leek, M. R. (2015, February). *Pitch dominance within harmonic complexes in hearing-impaired listeners*. Poster presented at the Association for Research in Otolaryngology MidWinter Meeting, Baltimore, MD.
  11. **Mertes, I. B.**, & Leek, M. R. (2016, February). *Comparison of ASSRs and TEOAEs for measuring MOC function in humans*. Poster presented at the Association for Research in Otolaryngology MidWinter Meeting, San Diego, CA.
  12. **Mertes, I.**, Stagner, B., Wilbanks, E., & Leek, M. (2016, March). *Contralateral suppression of TEOAEs and ASSRs measured concurrently*. Poster presented at the American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ.
  13. **Mertes, I.**, Wilbanks, E., & Leek, M. (2017, March). *Are auditory training outcomes related to olivocochlear efferent function?* Poster presented at the American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ.
  14. **Mertes, I. B.**, Johnson, K. M., & Dinger, Z. A. (2018, February). *Human olivocochlear efferent activity elicited by dynamic versus static noise*. Poster presented at the Association for Research in Otolaryngology MidWinter Meeting, San Diego, CA.
  15. **Johnson, K.**, Dinger, Z., & **Mertes, I.** (2018, March). *Assessing olivocochlear efferent contributions to speech understanding in noise*. Poster presented at the American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ.
  16. **Dinger, Z.**, & **Mertes, I.** (2019, March). *Wideband tympanometry: Contralateral acoustic reflexes and normative data*. Poster presented at the American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ.
  17. **Johnson, K.**, & **Mertes, I.** (2019, March). *Examining involvement of olivocochlear efferents for frequency discrimination*. Poster presented at the American Auditory Society Scientific and Technology Meeting, Scottsdale, AZ.
  18. **Potocki, M. E.**, & **Mertes, I. B.** (2021, April). *Olivocochlear effects on otoacoustic emissions versus auditory steady-state responses*. Poster presented at AAA (American Academy of Audiology) 2021 Virtual, online conference.

#### M. Other

1. **Mertes, I. B.** (2017, April). *Assessing olivocochlear efferent activity using cochlear, neural, and perceptual measures*. Invited speaker at Seminars in Hearing Research at Purdue, Department of Speech, Language, & Hearing Sciences, Purdue University, West Lafayette, IN.

### III. Resident Instruction

#### A. Summary of Instruction

##### 1. Courses Taught

SHS 450 Introduction to Audiology and Hearing Disorders (Fa 18, 19, 20, 21)  
 SHS 551 Electrophysiological Indices of Audition (Sp 18, 19, 21)

SHS 554 Advanced Audiological Assessment (Fa 16, Sp 19, 20, 21)  
SHS 557 Advanced Clinical Practicum in Audiological Assessment and Rehabilitation (Sp 17)  
SHS 588 Advanced Seminar in Neural Bases of Communication Disorders [Peripheral Auditory Assessment] (Sp 17)  
SHS 592 Proseminar in Speech and Hearing Science (Fa 17, Sp 18)  
SHS 593 Special Problems [Otoacoustic Emissions] (Fa 17)  
SHS 593 Capstone Project (Fa 17–present)

## 2. Supervision of Graduate Student Research

Chair, Au.D. Capstone – 7 students  
Committee Member, Ph.D. Dissertation – 2 students  
Committee Member, Au.D. Capstone – 13 students

## 3. Supervision of Undergraduate Research

Fall 2018 4 James Scholar honors contracts, SHS 450 Introduction to Audiology and Hearing Disorders  
Fall 2019 5 James Scholar honors contracts, SHS 450 Introduction to Audiology and Hearing Disorders  
Fall 2019 Research supervisor for 3 undergraduate students, SHS 291 Research Lab Experience in SHS  
Spring 2020 Research supervisor for 5 undergraduate students, SHS 291 Research Lab Experience in SHS  
Fall 2020 Research supervisor for 2 undergraduate students, SHS 291 Research Lab Experience in SHS;  
2 James Scholar honors contracts, SHS 390 Individual Study;  
2 James Scholar honors contracts, SHS 450 Introduction to Audiology and Hearing Disorders

## 4. Other Contributions to Instruction Programs

### a. Contributions to Speech and Hearing Science (SHS)

1. Presenter, SHS 592 Proseminar in Speech and Hearing Science, *Contralateral suppression of cochlear and neural responses in humans*, Fall 2016
2. Contributed to revision of Doctor of Audiology (Au.D.) course sequence, Spring 2017
3. Presenter, SHS 592 Proseminar in Speech and Hearing Science, *Auditory efferent contributions to speech recognition in noise*, Spring 2019
4. Revised “Process for Completing the Doctoral Research Project” document for Doctor of Audiology (Au.D.) program, Spring 2019
5. Panel member, SHS 191X Freshman Seminar, Spring 2019
6. Guest lecturer, SHS 170 Introduction to Human Communication Systems and Disorders, *Hearing Science*, Spring 2019, Fall 2019
7. Guest lecturer, SHS 541 Clinical Auditory Anatomy and Physiology, *The Efferent System*, Fall 2019, Fall 2020
8. Invited participant, Illinois Online Teaching Academy, Summer 2020
9. Invited participant, Illinois Summer Teaching Institute, Summer 2021

### B. Evaluation of Instruction

#### a. List of Teachers Ranked as Excellent by Their Students

SHS 450 Introduction to Audiology and Hearing Disorders, Fa 18, 19, 20  
SHS 551 Electrophysiologic Indices of Audition, Sp 18, 21  
SHS 554 Advanced Audiological Assessment, Fa 16, Sp 19, 21  
SHS 588 Advanced Seminar in Neural Bases of Communication Disorders, Sp 17  
SHS 593 Special Problems (Section: Otoacoustic Emissions), Fa 17

## **IV. Service (Public, Professional/Disciplinary, and University)**

### A. Summary of Service

#### 1. Public Engagement

2008-2013 Volunteer, Special Olympics Healthy Hearing (state, national, and international games)  
2018 Presenter, *A brief introduction to audiology*, Illini Academy Summer Camp

## 2. Service to Disciplinary and Professional Societies or Associations

### a. Ad-hoc Journal Reviewer

*Journal of the Association for Research in Otolaryngology  
Ear and Hearing*

*The Journal of the Acoustical Society of America*

*Journal of Speech, Language, and Hearing Research*

*Journal of the American Academy of Audiology*

*Journal of Hearing Science*

*International Journal of Audiology*

### b. Other Service to the Field

2017 Reviewer, *Graduate Student Scholarship*, American Speech-Language-Hearing Foundation

2017 Program committee member, 2018 Scientific and Technology Conference of the American Auditory Society

### c. Membership in Professional Organizations

2009-present American Auditory Society

2012-present Licensure in audiology, State of Iowa

2014-present American Speech-Language-Hearing Association (Certificate of Clinical Competence in Audiology)

2020-present Acoustical Society of America

## 3. University/Campus Service

### a. Campus

2017 Ad hoc reviewer, Research Support Award, Campus Research Board

2017 Invited participant, The Next 150 campus strategic planning meeting

### b. College of Applied Health Sciences

2021- Member, Elections and Credentials Committee

### c. Department of Speech and Hearing Science

2016- Faculty mentor for undergraduate students

2016-2017, Member, Awards Committee

2018-2021

2016-2017 Member, Search Committee for Open-Rank Faculty Positions in Speech Science and in Hearing Science

2017-2018 Member, Search Committee for Clinical Assistant Professors of Audiology and Speech-Language Pathology

2017-2018, Member, Program Policy Committee

2020-2021

2017-2018 Member, Faculty Advisory Committee

2018 Ad hoc member, Graduate Admissions Committee

2018 Panel member, National Student Speech-Language-Hearing Association graduate school information night

2018-2020 Member, Education Policy Committee

2018-2020 Chapter adviser, National Student Speech-Language-Hearing Association