

CURRICULUM VITAE

Rachael R. Baiduc, PhD, MPH

University of Colorado Boulder, Department of Speech, Language, and Hearing Sciences
2501 Kittredge Loop Drive 409 UCB

Tel: (303) 492-6417 • Rachael.Baiduc@colorado.EDU

EDUCATION AND TRAINING

- PhD Communication Sciences and Disorders** (Concentration: sensory neurobiology), 2014
Northwestern University, Evanston, IL
Advisor: Dr. Sumitrajit Dhar
- MPH Master of Public Health**, 2013
Northwestern University, Chicago, IL
- B.S. Speech Pathology and Audiology** (Minor: linguistics); *magna cum laude*, 2008
Miami University, Oxford, OH

ACADEMIC AND PROFESSIONAL POSITIONS

- 2016-Present Assistant Professor (tenure-track), University of Colorado Boulder, Department of Speech, Language, and Hearing Sciences, Boulder, CO
- 2014-2016 Research and Evaluation Associate, Searle Center for Advancing Learning and Teaching, Northwestern University, Evanston, IL
- 2014 Associate Evaluator, Searle Center for Advancing Learning and Teaching, Northwestern University, Evanston, IL
- 2014 Postdoctoral Research Assistant, Auditory Research Laboratory, Northwestern University, Evanston, IL
- 2011-2012 Public Health Intern, Consortium to Lower Obesity in Chicago Children (CLOCC), Chicago, IL
- 2009-2013 Graduate Research Assistant, Auditory Research Laboratory, Northwestern University, Evanston, IL

GRANTS

Ongoing Research Support

Role: PI American Hearing Research Foundation Jan 2020 - Present
Sex Differences in Association between Hearing Loss and Cardiovascular Disease Risk Burden award amount: \$45,000

Completed Research Support

Role: PI Hearing Health Foundation (Emerging Research Grant) Jul 2018 – Dec 2019
Hearing Loss and Cardiovascular Disease Risk Burden: Epidemiological and Physiological Data

Role: PI Innovative Seed Grant (CU Boulder) Jul 2017 – Dec 2018
Hearing Loss and Cardiovascular Disease Risk Burden

Role: Program Evaluator (PI: Beitel) Howard Hughes Medical Institute Sep 2014 – Dec 2014
Northwestern University Ventures in Biology Education

Pending Research Support

Role: PI NIH Loan Repayment Program
Cardiovascular Disease Risk Factors and Auditory Function: Epidemiological and Laboratory Data

AWARDS AND HONORS

- 2020 National Center for Faculty Development and Diversity Faculty Success Grant, University of Colorado Boulder
- 2019 American Speech-Language-Hearing Foundation Lessons for Success Travel Grant
- 2013 John D. and Lucille H. Clarke Dissertation Fellowship, Northwestern University
- 2012 American Speech-Language-Hearing Foundation New Century Scholars Doctoral Program
- 2012 Howard Hughes Medical Institute Mentoring Fellow, Northwestern University
- 2012 Student Conference Award, National Hearing Conservation Association
- 2012 Graduate Student Conference Grant, The Graduate School, Northwestern University
- 2008- Phi Beta Kappa (Honorary Society)
- 2008 Mary Thew Fowler Scholarship, Miami University
- 2007 Mary Thew Fowler Scholarship, Miami University
- 2007 Summer Scholars Scholarship and Research Stipend, Miami University
- 2007 Outstanding Student Award, Ohio Speech Hearing & Language Association
- 2007 Southwest Ohio Speech-Language-Hearing Association
- 2007 Deans Scholar Research Stipend, Miami University
- 2006 Mary Thew Fowler Scholarship, Miami University
- 2006 Deans Scholar Research Stipend, Miami University
- 2006 Undergraduate Research Award, Miami University
-

PEER-REVIEWED PUBLICATIONS

*Denotes student author (mentee).

Baiduc, R.R., Mullervy, S.*, Berry, C.*, Brumbach, S.*, Prabhu, S.*, Vance, E. (*Accepted*). Early auditory evoked potentials in cannabis smokers.

Baiduc R.R., Bogle B., Gonzalez F., Dinces E, Lee D.J., Daviglius M., Dhar S., Cai J. (*Under Revision*). Hearing loss and cardiovascular risk profiles: data from the Hispanic Community Health Study/Study of Latinos.

Baiduc, R.R., Ramsey, M.*, Sanders, A.*, Vance, E. (*Under Review*). Blood Pressure Level, Hearing Sensitivity, and Distortion Product Otoacoustic Emission Amplitudes.

Brumbach, S.*, Goodman, S. **Baiduc, R.R.** (2019). Characterization of peripheral auditory function in cannabis smokers. *Journal of Speech, Language, and Hearing Research*, 62(9):3500-3515.

Baiduc, R.R., Helzner, E. (2019). Epidemiology of diabetes and hearing loss. *Seminars in Hearing*, 40(4):281-291.

Baiduc, R.R., Dhar, S. (2018). Exploring optimal stimulus frequency ratio for measurement of the quadratic f_2 - f_1 distortion product otoacoustic emission in humans. *Journal of Speech, Language, and Hearing Research*, 61(7):1794-1806.

Baiduc, R.R., Lee, J., Dhar, S. (2014). Toward a test battery for differential categorization of age-related hearing loss. *Journal of Indian Speech Language and Hearing Association*, 28(2):25-40.

Baiduc, R.R., Lee, J., Dhar, S. (2014). Spontaneous otoacoustic emissions, threshold microstructure, and psychophysical tuning over a wide frequency range in humans. *Journal of the Acoustical Society of America*, 135(1):300-14.

Baiduc, R.R., Poling, G.L., Hong, O., Dhar, S. (2013). Clinical measures of auditory function: The cochlea and beyond. *Disease-a-Month*, 59(4):147-56.

Hutchinson, K.M., Alessio, H., **Baiduc, R.R.** (2010). Association between cardiovascular health and hearing function: pure-tone and distortion product otoacoustic emission measures. *American Journal of Audiology*, 19:26-35.

STEM PEDAGOGY PUBLICATIONS

McCartney, M., Childers, C., **Baiduc, R.R.**, Barnicle, K. (2018). Annotated primary literature: A professional development opportunity in science communication for graduate students and postdocs. *Journal of Microbiology & Biology Education*, 19(1), 1-11.

Brace, J., **Baiduc, R.R.**, Lo, S., Drane, D., Flores, L., Beitel, G. (2018). Design, implementation, and evaluation of a multi-disciplinary professional development program for research mentors. *Mentoring and Tutoring: Partnerships in Learning*, 26(4): 377-399.

Baiduc, R.R., Flores, L.C., Beitel, G. (2017). A Research Preparatory Program for First Year College Students: Student selection and preparation leads to higher science self-efficacy and persistence in STEM. *Innovative Higher Education*, 42(3):269-284. doi:10.1007/s10755-016-9377-4

Baiduc, R.R., Linsenmeier, R.A., Ruggeri, N. (2016). Mentored Discussions of Teaching: An introductory teaching development program for future STEM faculty, *Innovative Higher Education*, 41:237.

PEER-REVIEWED PRESENTATIONS

*Denotes student author (mentee).

Masters J.* & **Baiduc R.R.** (2019, October). Auditory profiles of individuals with low vs. high cardiovascular disease risk burden. Disease Risk Burden. Presented at the Colorado Academy of Audiology Conference, Breckenridge, Colorado.

Baiduc, R.R., Cates, M. (2019, June). The Audiology Project: Diabetes-related hearing and balance issues. Presented at the American Association for Diabetes Educators | Colorado Department of Public Health and Environment Spring Meeting, Denver, Colorado.

Sanders, A.*, Lemons, K.*, **Baiduc, R.R.** (2019, February). Blood pressure level, hearing sensitivity, and distortion product otoacoustic emissions. Presented at the American Auditory Society Conference, Scottsdale, Arizona.

Baiduc, R.R., Dowd, K. (2019, March). The Audiology Project statewide advocacy: promoting awareness of diabetes, hearing loss, and risk of falls. Presented at the American Academy of Audiology Conference, Columbus, Ohio.

Baiduc, R.R., Sanders, A.*, Dowd, K. (2019, March). The Audiology Project: diabetes, hearing loss, and risk of falls. Presented at the American Academy of Audiology Conference, Columbus, Ohio.

^ one of the highest rated professional posters at AAA 2019

Brumbach, S.*, Mullervy, S.*, Prabhu., S.* **Baiduc, R.R.** (2018, October). Distortion product otoacoustic emissions and auditory brainstem responses in cannabis smokers. Presented at the Colorado Academy of Audiology Conference, Breckenridge, Colorado.

Brumbach, S.*, Mullervy, S.*, Prabhu., S.*, **Baiduc, R.R.** (2018, November). Auditory behavioral and physiological findings in young cannabis users. Presented at the CORE Cannabis Research Perspective Conference, Boulder, Colorado.

- Baiduc, R. R.** (2018, October). The Audiology Project: Promoting awareness and treatment of the diabetic ear. Presented at the Colorado Academy of Audiology Conference, Breckenridge, Colorado.
- Brumbach, S*. & **Baiduc, R.R.** (2018, June). Cannabis use is associated with reduced otoacoustic emission amplitudes in young adults. Presented at the Hearing Across the Lifespan Conference, Lake Como, Italy.
- Baiduc R.R.**, Bogle B., Gonzalez F., Dinces E, Lee D.J., Daviglius M., Dhar S., Cai J. (2018, March). Cardiovascular disease risk factor burden is associated with hearing loss in young men: The Hispanic Community Health Study/Study of Latinos. Presented at the American Heart Association | Epidemiology Lifestyle Conference, New Orleans, Louisiana.
- Ruggeri, N., **Baiduc, R.R.**, & Woods, L. (2016, November). Analyzing teaching statements in the context of a graduate teaching development program. Presented at the Professional & Organizational Development Network in Higher Education Conference, Louisville, Kentucky.
- Ruggeri, N., **Baiduc, R.R.**, & Woods, L. (2016, November). Analyzing teaching statements in the context of a graduate teaching development program. Presented at the Professional & Organizational Development Network in Higher Education Conference, Louisville, Kentucky.
- Baiduc, R.R., & Ruggeri, N. (2015, November). Disciplinary conceptions of teaching in a graduate teaching development program. Professional & Organizational Development Network in Higher Education Conference, San Francisco, California.
- Baiduc, R.R.**, Linsenmeier, R., Ruggeri, N. (2015, October). CIRTL at Northwestern: Preparing Future Faculty for Innovative Teaching in STEM. Association of American Universities Conference, St. Louis, Missouri.
- Baiduc, R.R.**, Linsenmeier, R., Ruggeri, N. (2015, April). Mentored Discussions of Teaching. Center for the Integration of Research, Teaching, and Learning (CIRTL) Network Forum, College Station, Texas.
- Lo, S.M, Drane, D.L., **Baiduc, R.R.**, Swarat, S.L., Light, G.J. (2015, April). Sustainable Changes in Instructional Practices from Faculty Development: Relationships with Changes in Conceptions and Approaches to Teaching. American Educational Research Association, Chicago, Illinois.
- Lo, S.M, Drane, D.L., **Baiduc, R.R.**, Swarat, S.L., Light, G.J. (2014, October). Relationship among changes in faculty conceptions, approaches, and practices of teaching from professional development: a case study. The International Society for the Scholarship of Teaching & Learning, Quebec City, Canada.
- Baiduc, R.R.**, Dhar, S. (2013, February). Exploring stimulus conditions for measurement of the quadratic f_2 - f_1 distortion product otoacoustic emission. Association for Research in Otolaryngology, Baltimore, Maryland.
- Baiduc, R.R.**, Poling, G, Daviglius, M.L., Garside, D.B., Vu, T.T., Dhar, S. (2012, October). Association of cardiovascular risk status and hearing loss in older adults after thirty-nine years of follow-up: Chicago Healthy Aging Study (CHAS) preliminary findings. American Public Health Association, San Francisco, California.
- Baiduc, R.R.**, Lee, J., Dhar, S. (2012, February). The Influence of Spontaneous Otoacoustic Emissions on Threshold Microstructure and Psychophysical Tuning. Association for Research in Otolaryngology, San Diego, California.
- Baiduc, R.R.**, Charaziak, K., Siegel, J. (2012, February). Spatial Distribution of Stimulus-Frequency Otoacoustic Emissions Generators in Humans. Association for Research in Otolaryngology, San Diego, California.

Baiduc, R.R., Poling, G.L., Daviglius, M.L., Dhar, S. (2012, February). Chicago Healthy Aging Study (CHAS): Evaluation of Cardiovascular Disease Risk and Hearing in Older Adults. National Hearing Conservation Association, New Orleans, Louisiana.

Abdala, C., Dhar, S., Williams, T., **Baiduc, R.R.** (2009, March). DPOAE Component Analysis in Newborns and Adults. American Auditory Society, Scottsdale, Arizona.

Hutchinson, K., Alessio, H., **Baiduc, R.R.**, Maldonado, C.J., Cartaya, S., Swafford, J. (2008, March). Influence of Cardiovascular Health on Hearing Acuity: Otoacoustic Emissions and Suppression, Ohio Speech, Hearing and Language Association, Columbus, Ohio.

Hutchinson, K., Alessio, H., **Baiduc, R.R.**, Maldonado, C.J., Cartaya, S., Swafford, J. (2007, November). Influence of Cardiovascular Health on Hearing Acuity: Otoacoustic Emissions and Suppression, American Speech-Language-Hearing Association, Boston, Massachusetts.

Baiduc, R.R., Bulanda, R.E. (2010, April). Long Distance Relationships. Miami University Undergraduate Research Forum, Oxford, Ohio.

OTHER PRESENTATIONS

Baiduc, R.R. (2019, March). Diabetes and hearing loss: evidence from the literature and ongoing research efforts. CU Anschutz Endocrinology Group, Colorado.

Baiduc, R.R. Cates, M. (2019, June). Diabetes Related Hearing and Balance Issues Speakers. Diabetes Prevention Program Advisory Group meeting, Denver, Colorado.

Baiduc, R.R. Cates, M. (2019, June). Diabetes Related Hearing and Balance Issues Speakers: Increasing Diabetes Self-Management Education and Support Participation – Utilizing Complementary Services for Innovative Solutions, Denver, Colorado.

Baiduc, R.R. Cates, M. (2019, June). The Audiology Project: The Link Between Diabetes, Hearing Loss, and Increased Risk of Falls. Rocky Mountain Group, National Diabetes Prevention Program Advisory Group, Colorado.

PROFESSIONAL AFFILIATIONS

American Auditory Society (AAS)

American Heart Association (AHA)

American Public Health Association (APHA)

Clinical Translational Sciences Institute (CCTSI), University of Colorado

Center for Research and Education Addressing Cannabinoids and Health (CU REACH), University of Colorado

PROFESSIONAL DEVELOPMENT

National Center for Faculty Development and Diversity Faculty Success Program, 2020

PI Academy Certificate (University of Colorado Boulder), 2020

ASSETT Faculty Fellow (University of Colorado Boulder), 2018-2019 Project “Evaluating Changes in Student Attitudes and Beliefs in Hearing Health: Results from SLHS 3014, Hearing Loss Epidemiology”

ASHFoundation Lessons for Success, 2019

Faculty Teaching Excellence Program (University of Colorado Boulder), 2016-Present

Teaching Certificate, more than 10 sessions attended

Graduate Teaching Certificate (Northwestern University), 2014

SERVICE

Audiology Faculty Committee, member, University of Colorado Boulder
Emergency Management Operations Group, faculty representative, University of Colorado Boulder
Junior Faculty Steering Committee, member, University of Colorado Boulder
Undergraduate Committee, member, University of Colorado Boulder
The Audiology Project, CO state lead / advocate, national non-profit organization

REVIEW WORK

Ad Hoc Reviewer *Ear and Hearing; Journal of Speech, Language, and Hearing Research; Journal of Aids Clinical Research and STDs; Psychological Reports*
Guest Editor *Applied Sciences* special issue on Theoretical and Clinical Applications of Otoacoustic Emissions (2018-2019)
Grant Reviewer United Kingdom Medical Research Council (2019)
Grant Reviewer Hearing Health Foundation (Current)

TEACHING EXPERIENCE

Graduate Courses

2016 – Current Adult Audiological Assessment, University of Colorado Boulder
2015 – 2016 Writing and Peer Review for Publication, Northwestern University, Clinical and Translational Sciences Institute, Feinberg School of Medicine
2015 Students Reading Real Science: Bringing Primary Literature into the Undergraduate Classroom (Online, co-instructor), Northwestern University

Undergraduate Courses

2016 – Current Audiological Evaluation, University of Colorado Boulder
2018 – Current Hearing Loss Epidemiology, University of Colorado Boulder

STUDENT MENTORSHIP

Role: Advisor Student: Katherine Lemons 2020
Undergraduate Honors Thesis: Hypertension's Link to Hearing loss- a look at Auditory Brainstem Responses & Electrocochleography
Received Undergraduate Research Opportunities Program (UROP) grant

Role: Advisor Student: Trista Smith 2020
AuD Capstone: The Effects of Plasma Cholesterol Levels on Hearing Outcomes

Role: Advisor Student: Jennifer Masters 2019
AuD Capstone: Auditory Profiles of Individuals with Low vs. High Cardiovascular Disease Risk Burden

Role: Advisor Student: Eric Kinney 2019
AuD Capstone: Cardiovascular Risk Factor and Inflammatory Bio-marker C-Reactive Protein's Association with Hearing Loss and Cochleopathy: A Foundational Exploration

Role: Advisor Student: Samantha Brumbach 2018
AuD Capstone: Cannabis Use is Associated with Reduced Otoacoustic Emission Amplitudes in Young Adults
Received University Fellowship Award

The following students have collaborated on projects and contributed to data analysis in my laboratory.

Role: Oversight Student: Michael Ramsey M.S. (Applied Mathematics) Ongoing

Role: Oversight	Student: Caitlin Berry	PhD (Applied Mathematics)	<i>Ongoing</i>
Role: Oversight	Student: Vincent Peng	B.S. (Physics)	<i>Ongoing</i>
Role: Collaborator	Student: Shashidhar Prabhu, M.S.	Electrical Engineer/Consultant	<i>Ongoing</i>