

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 | Email: Rachael.Baiduc@colorado.EDU

EDUCATION

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

PROFESSIONAL EXPERIENCE

- 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

RESEARCH GRANTS AND AWARDS

Completed Research Support

- Baiduc, R.R. (co-Principal Investigator with Anderson, M). Sex Differences in Association between Hearing Loss and Cardiovascular Disease Risk Burden. *American Hearing Research Foundation*. Total Amount: \$45,000. Award Duration 2020-2021.
- Baiduc, R.R. (Principal Investigator). Hearing Loss and Cardiovascular Disease Risk Burden: Epidemiological and Physiological Data. *Hearing Health Foundation – Emerging Research Grant*. Total Amount: \$28,431. Award Duration 2018-2019.
- Baiduc, R.R. (Principal Investigator). Hearing Loss and Cardiovascular Disease Risk Burden. *University of Colorado Boulder – Innovative Seed Grant*. Total Amount: \$49,603. Award Duration 2017-2018.

Research Award

- Baiduc, R.R. Exploring Disparities in Auditory Dysfunction Related to Cardiovascular Disease Risk Factors. *National Institutes of Health - Health Disparities Research Loan Repayment Program Award*. Award Duration 2021-2023.

AWARDS AND HONORS

- 2021 Professional Poster Award (1 of 7 top professional posters), American Academy of Audiology
- 2021 Meritorious Poster Submission (one of 60 posters selected from 1253 submitted), American Speech-Language-Hearing Association
- 2021 New Investigator Award, American Auditory Society
- 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

SCIENTIFIC PUBLICATIONS

*Denotes student author (mentee).

† Denotes co-first authorship

Baiduc, R.R., Sun, J.*, Berry, C.*, Anderson, M., Vance, E.A. (*Under Review*). Relationship of cardiovascular disease risk and hearing loss in a clinical population.

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

Baiduc, R.R., Lemons, K.*, Archambault, E.*, Kaizer, A. Anderson, M. (*Under Review*). Idiopathic sudden sensorineural hearing loss and cardiovascular disease risk in a clinical population.

Baiduc, R.R., Sun, J.*, Spankovich, C., Vance, E.A. (2022). Tobacco, but Neither Cannabis Smoking Nor Co-Drug Use, Is Associated With Hearing Loss in the National Health and Nutrition Examination Survey, 2011 to 2012 and 2015 to 2016. *Ear & Hearing*, 43(5): 1582-1592. PMID: 35383601.

Jordan, J.[†], **Baiduc, R.R.**[†], Spankovich, C. (2022). Hearing screening age considerations for adults: National Health and Nutrition Examination Survey. *Journal of the American Academy of Audiology*, 33(02):058-065. PMID: 36049752.

Baiduc, R.R., Berry, C.*, Lemons, K.*, Vance, E.A. (2021). Electrocochleography and auditory brainstem responses in persons with non-optimal blood pressure. *Journal of the American Academy of Audiology*, 32(9): 576-587. PMID: 35176801.

McManus B., Harbarger C., Grillis A., Prewitt M.G., **Baiduc R.**, Block D., Paul O., Spankovich C. (2021). Otoscopy and tympanometry outcomes from the National Health and Nutrition Examination Survey (NHANES). *American Journal of Otolaryngology–Head and Neck Medicine and Surgery*, 14;43(2):103332. PMID: 34953248.

Baiduc, R.R., Ramsey, R.*, Sanders, A.*, Vance, E.A. (2020). Association between nonoptimal blood pressure and cochlear function. *Ear & Hearing*, 42(2): 393-404. PMID: 32826511.

Baiduc, R.R., Mullervy, S.*, Berry, C.*, Brumbach, S.*, Prabhu, S.*, Vance, E. (2020). An exploratory study of early auditory evoked potentials in cannabis smokers. *American Journal of Audiology*, 29(3):303-317. PMID:32510971.

Brumbach, S.*, Goodman, S., **Baiduc, R.R.** (2019). Behavioral Hearing Thresholds and Distortion Product Otoacoustic Emissions in Cannabis Smokers. *Journal of Speech, Language, and Hearing Research*, 62(9):3500-3515. PMID: 31525116.

Baiduc, R.R., Helzner, E. (2019). Epidemiology of diabetes and hearing loss. *Seminars in Hearing*, 40(4):281-291. PMID: 31602091.

- 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. PMID: 29946695.
- 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. PMID: NA.
- 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):300-314. PMID: 24437770.
- 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):147-156. PMID: 23507354.
- 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(1):26-35. PMID: 20086042.

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*, 42:269-284. 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*, 41:237-254.

PEER-REVIEWED CONFERENCE PRESENTATIONS

*Denotes student author (mentee)

- Lemons, K.*, **Baiduc, R.R.**, Anderson, M. (2021, November). Sudden sensorineural hearing loss in relation to cardiovascular disease risk factors. Poster presented at the American Speech-Language-Hearing Association conference (virtual).
 ^ Meritorious poster submission (one of 60 posters selected out of 1253 submitted); ASHA 2021
- Archambault, E.*, Lemons, K.*, Kaizer, A., Anderson, M., **Baiduc, R.R.** (2021, October). Cardiovascular disease risk factors and idiopathic sudden sensorineural hearing loss severity. Poster presented at the Colorado Academy of Audiology conference.
- Anderson, M., Sanders, A.*, Sun, J.W.*, Vance, E. **Baiduc, R.R.** (2021, April). Exploring associations between cardiovascular disease risk and hearing loss in a clinical population. Poster presented at American Academy of Audiology Conference (virtual).
 ^ Professional poster award; AAA 2021
- Baiduc, R.R.** Sun, J.W.*, Spankovich, C., Vance, E. (2021, March). Hearing loss and smoking: National Health and Nutrition Examination Survey. Podium presented at the American Auditory Society Conference (virtual).
- Lemons, K.*, Berry, C.*, Vance, E., **Baiduc, R.R.** (2021, March). Blood pressure level, auditory brainstem responses, and electrocochleography. Poster presented at the American Auditory Society Conference (virtual).

- Smith-Hooley, T.*, **Baiduc R.R.** (2020, April). The effects of plasma cholesterol levels on hearing outcomes. Presented at American Academy of Audiology Conference. Conference canceled due to COVID-19 pandemic; poster displayed virtually.
- Baiduc R.R.**, Sun, J.*, Anderson, M., Vance, E.A., Dowd, K. (2020, August). The link between hearing loss and diabetes: scientific overview and The Audiology Project outreach efforts. Presented at the Association of Diabetes Care and Education Specialists Conference, remote.
- 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; 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., Daviglus 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, Daviglus, 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 emission generators in humans. Association for Research in Otolaryngology, San Diego, California.
- Baiduc, R.R.**, Poling, G.L., Daviglus, 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, 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)
Clinical Translational Sciences Institute (CCTSI), University of Colorado

PROFESSIONAL DEVELOPMENT

American Speech-Language-Hearing Association Faculty Development Institute, 2021
ASSETT Summer Teaching Course Redesign Workshop, 2020
National Center for Faculty Development and Diversity Faculty Success Program, 2020
Principal Investigator 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 (2016-)
Arts & Sciences (Social Sciences) Divisional Council, member, University of Colorado Boulder (2022-)
Emergency Management Operations Group, faculty representative, University of Colorado Boulder (2018-)
Junior Faculty Steering Committee, member, University of Colorado Boulder (2018-)
The Audiology Project, CO state lead / advocate, national non-profit organization (2017-)
Undergraduate Committee, member, University of Colorado Boulder (2017-2020)

REVIEW WORK

Ad-Hoc Manuscript Review	<i>American Journal of Audiology; Applied Sciences; Ear and Hearing; International Journal of Audiology; Journal of Cannabis Research; Journal of Clinical Medicine; of Speech, Language, and Hearing Research; Journal of Aids Clinical Research and STDs; Psychological Reports</i>
Guest Editor	<i>Applied Sciences</i> special issue on Theoretical and Clinical Applications of Otoacoustic Emissions (2018-2019)
Grant Reviewer	Hearing Health Foundation (2020, 2021)
Grant Reviewer	University of Colorado CO-Pilot Grant Program (2020)
Grant Reviewer	United Kingdom Medical Research Council (2019)
Grant Reviewer	University of Colorado Boulder Innovative Seed Grant (2019)
Reviewer	ASHFoundation Graduate Student Scholarships (2020)
Reviewer	Hispanic Community Health Study/Study of Latinos; Jackson Heart Study [manuscript proposal review]
Dissertation Reviewer	University of Pretoria, South Africa (2021)

TEACHING

Graduate Courses

2022	Evidence-Based Practice & Research Methods, University of Colorado Boulder
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 – 2020	Hearing Loss Epidemiology, University of Colorado Boulder

STUDENT MENTORSHIP

Student	Role	AuD Capstone or Undergraduate Thesis	Year Completed	Awards
Emily Archambault	Laboratory Advisor	NA	Ongoing	
Katherine Lemons	Advisor	<p>AuD Capstone: Characterizing Cardiovascular Risk Profiles in Patients with Sudden Sensorineural Hearing Loss</p> <p>Undergraduate Honors Thesis: Hypertension's Link to Hearing loss- a look at Auditory Brainstem Responses & Electrocochleography</p>	<p>Ongoing</p> <p>2020</p>	<p>ASHA Audiology/Hearing Science Research Travel Award (ARTA), 2021</p> <p>Caption Call Scholarship 2021</p> <p>Undergraduate Research Opportunities Program (UROP) Grant Recipient</p> <p>Van Ek Award</p>
Melissa Williams	Advisor	Evaluation of Student Attitudes, Beliefs, and Behaviors in SLHS 3014	2021	
Amy Sanders	Advisor	Association Between Non-Optimal Blood Pressure and Cochlear Function	2020	
Trista Smith Hooley	Advisor	The Effects of Plasma Cholesterol Levels on Hearing Outcomes	2020	
Jennifer Masters	Advisor	Auditory Profiles of Individuals with Low vs. High Cardiovascular Disease Risk Burden	2019	
Eric Kinney	Advisor	Cardiovascular Risk Factor and Inflammatory Bio-marker C-Reactive Protein's Association with Hearing Loss and Cochleopathy: A Foundational Exploration	2019	
Samantha Brumbach	Advisor	Cannabis Use is Associated with Reduced Otoacoustic Emission Amplitudes in Young Adults	2018	University Fellowship Award

The following students have collaborated on projects and contributed to data analysis in my laboratory. Except for Mr. Prabhu, all students listed below work under the supervision of Dr. Vance and collaborate with me on statistical analysis.

Student	Department	Role	Year Completed	Awards
Shashidhar Prabhu, M.S.	Former Student/Electrical Engineer/Consultant	Collaborator	Ongoing	

Caitlin Berry	PhD Student (Applied Mathematics)	Oversight/collaborator	Ongoing	
Joshua Sun	B.S. (Applied Mathematics and Computer Science)	Oversight/collaborator	Ongoing	Maurice Davies Award (Colorado Wyoming Chapter of the American Statistical Association)
Vincent Peng	B.S. (Physics)	Oversight/collaborator	Completed	
Michael Ramsey	M.S. (Applied Mathematics)	Oversight/collaborator	Completed	