

Reyna L. Gordon, Ph.D.

Office address: 1215 S. 21st Ave South, MCE 10267

Nashville, TN 37232

615-322-5550

reyna.gordon@vanderbilt.edu

reyna.gordon@vumc.org

Twitter: @CrunchyNeuroSci

Last updated: April 15, 2020

Education

Postdoctoral fellowship, Department of Otolaryngology, Vanderbilt University (Nashville, TN)	2014-2015
Postdoctoral fellowship, Vanderbilt Kennedy Center, Vanderbilt University (Nashville, TN)	2010-2013
Ph.D, Complex Systems and Brain Sciences, Florida Atlantic University (Boca Raton, FL)	2005-2010
M.S., Neuroscience, Université de Provence- Aix-Marseille I (Marseille, France)	2003-2004
B. of Music, Vocal Arts, (summa cum laude), Univ. of Southern California (Los Angeles, CA)	1997-2001

Current Position

Assistant Professor (tenure-track), Department of Otolaryngology-Head & Neck Surgery Director, Vanderbilt Music Cognition Lab Vanderbilt University Medical Center	2016-present
--	--------------

Affiliated Academic Appointments

Assistant Professor (tenure-track), Department of Otolaryngology-Head & Neck Surgery (primary appointment) Director, Vanderbilt Music Cognition Lab Vanderbilt University Medical Center Nashville, TN	2016-present
Fellow, Curb Center for Art, Enterprise, & Public Policy	2018-present
Training (full) Faculty, Vanderbilt Brain Institute	2017-present
Investigator, Vanderbilt Genetics Institute	2017-present
Assistant Professor, Department of Psychology, Vanderbilt University (secondary appt.)	2016-present
Faculty appointment, the Graduate School, Vanderbilt University	2016-present
Member, Vanderbilt Kennedy Center	2015-present
Associate Director, Program for Music, Mind & Society at Vanderbilt	2016-2019
Affiliate Faculty, Vanderbilt Brain Institute	2016-2017
Research Assistant Professor, Department of Otolaryngology	2015-2016
Director, departmental program for Music, Mind & Society	2015-2016

Professional Memberships and Activities

Professional Organizations

Member, Behavior Genetics Association	2019-present
Member, PsychEmerge Consortium	2019-present
Member, American Speech-Language-Hearing Association	2018-present
Member, GenLang Consortium	2017-present
Member, ENIGMA Consortium EEG working group	2017-present
Acoustical Society of America	2013-2015
Association for Women in Science	2011-2012
State of Tennessee Council of Certified Professional Midwifery (Consumer Member)	2010-2015
Society for the Neurobiology of Language	2010-2015
Society for Music Perception and Cognition	2009-present

American Association of University Women	2008-2012
Entrainment Network	2006-2017

Professional Development Activities

International Workshop on Statistical Genetics, Advanced course. Boulder, CO	2019
AAMC Early Career Women in Academic Medicine Workshop, San Diego, CA	2019
Women in Leadership Certificate, Cornell University	2018
Elliot Newman Society, Vanderbilt University School of Medicine	2018-2020
Brain Imaging Genetics Workshop – Cognomics, Nijmegen, Netherlands	2018
International Workshop on Statistical Genetics, Boulder, Colorado	2018
Junior Faculty Leadership Development Program, Vanderbilt University School of Medicine	2017-2018
Participation in ASHA Lessons-For-Success Workshop	2014

Editorial Board Appointments

Ad-hoc reviewer for Journals:

PLoS ONE; Cortex; Psychology of Music; Developmental Neuropsychology; Psychological Research; Archives of Medical Research; Psychomusicology: Music, Mind, & Brain; Music Perception; Journal of Neurolinguistics; Speech, Language and Hearing; Frontiers in Auditory Cognitive Neuroscience; Research in Intellectual Disabilities; Child Development; Musicae Scientiae; Journal of Experimental Psychology: General; Child Development Perspectives; Annals of the New York Academy of Sciences; Learning & Instruction; Attention, Perception, & Psychophysics; Music & Science; Journal of Speech, Language, & Hearing Research; Developmental Science; Developmental Psychology; Pediatrics

Review Editor, Frontiers in Auditory Cognitive Neuroscience	2016-present
---	--------------

Service to the field: Committee Work, Administrative Duties, and other Service

Intramural Activities

Reviewer, Vanderbilt University Summer Research Program undergraduate awards	2020
Reviewer, internal grants, Vanderbilt Kennedy Center	2018
Faculty Advisor, <i>Scientific Salon: A Soirée of Science and Song</i> . Annual event.	2017-2018
Symposium Chair, Vanderbilt Music, Mind & Society Annual Symposium	2016
Judge, Vanderbilt Bill Wilkerson Center Joint Poster Session	2016
Program Committee, Pace, Pitch & Rhythm: Essentials to Music Treatment Research Workshop	2016
Facilitator, Music Research Design Clinic and Science of Music Research Forums	2015-2017
Steering Committee, Program for Music, Mind & Society at Vanderbilt	2015-2017
Implementation Team, Program for Music, Mind & Society at Vanderbilt.	2015-2017
Planning committee, Vanderbilt Kickoff to Society for Music Perception & Cognition	2015
Program Committee, Vanderbilt Music & Mind: Melding Music and Mind in Music City	2013-2014
Co-organizer, Music and Brain Seminar and Discussion Series, Vanderbilt University	2013-2014

Extramural Board/Committee Positions

Advisory Board, Boys Town National Research Hospital T32 grant	2020-2025
Co-Chair, First Inaugural Musicality Genomics Consortium meeting	2020
Co-organizer, KNAW Academy Colloquium & Master Class Deciphering the Biology of Human Musicality Through State-Of-The-Art Genomics	2019
ASHA Research Roundtables at ASHA convention	2019
At-Large (elected) Board Member, Society for Music Perception and Cognition	2016-2018
American Foundation for Science of Music, Founding Member; Board of Directors	2016-2018
Scientific Advisory Board, International Conference for Music Perception & Cognition	2016
Co-Chair, Society of Music Perception and Cognition (SMPC) Conference	2015
Conference Coordinator, Fourth Entrainment Network Meeting	2006

Ad hoc reviewer for Funding Agencies and Tenure Review for external institutions

Ad-hoc reviewer, Canadian Foundation for Innovation	2019
Ad-hoc reviewer, United States-Israel Binational Foundation	2018
Ad-hoc reviewer, National Science Foundation	2016-2017
Tenure reviewer, peer institution	2016

Educational Activities

Coursework/Workshops

Careers in Science series (career development talks and discussions for Music Cognition Lab trainees). Monthly sessions covered the following topics: Time management and goal setting, how to pace writing projects, the process of collecting pilot data, NIH grant submission and grant review process, authorship, impact of government policy on research, Responsible Conduct of Research, workplace workstyles, overcoming obstacles, statistical analyses, public outreach and scientific communication, diversity and bias in STEM, and efficient research workflow. 2016- present

Science of Music Seminar (undergraduate course NSC 3851 and graduate course NURO 8350). Neuroscience Program, Vanderbilt University. Secured 14 expert guest speakers (one per week for a semester), developed curriculum for student learning. 2016

EEG Analysis Methods Workshop. Developed and taught Vanderbilt Kennedy Center workshop to graduate and postdoctoral trainees, including creating 41-page manual “EEG Analysis Tutorial: A step-by-step guide to Time-Frequency Analyses” and over 40 accompanying MATLAB scripts. Led group and individual meetings to teach analysis skills and interpretation of findings. 2010-2011

Invited Lectures

External

Weaving together music and science: New frontiers for our understanding of human rhythm and language skills. Gordon. R & Ladanyi, E. Guest lecture via Zoom, Honors Empathy class, Virginia Tech. April 15, 2020.

Delving into individual differences in rhythm and language ability: new behavioral, cognitive, and genetic evidence. Guest lecture, Psychology Department, Tulane University, New Orleans, LA, March 7, 2020.

Cross-disciplinary investigation of individual differences in rhythm and language abilities, from cognitive neuroscience to genome-wide approaches. Guest lecture, Department of Psychology, University of Milan – Bicocca, Milan, Italy, February 3, 2020.

Connecting Musicality with other traits. Lecture at KNAW Master Class on Musicality and Genomics, Amsterdam, June 19, 2019.

Individual differences in language and rhythm skills: a journey from behavior to brain to genetics. Invited lecture, Western Washington University, Bellingham, WA, November 5, 2018.

The biology of musical rhythm and what it means for language development. Invited lecture at Genetics & Neurobiology of Language course, Cold Springs Harbor Laboratory, July 30-August 5, 2018.

Music and meaning. “Tema della semana” Guest talk at Netflix, Los Gatos, California, November 17, 2017.

Musical rhythm and spoken grammar in children: mechanisms and music-based intervention. Gordon, R. & Myers, B. Invited talk, International Auditory Journal Club (hosted by Newcastle University), September 19, 2017.

Investigating a shared neurobiological basis for rhythm and grammar traits: groundwork and new horizons. Invited lecture to take place at Max Planck Institute for Psycholinguistics, Nijmegen, Netherlands. July 6, 2017.

Exploring strengths and weaknesses of language and music cognition in developmental disabilities, Public lecture at University of Memphis, Memphis, TN, November 20, 2013.

EEG oscillatory approach to studying emotional, timbral, and rhythmic features of music perception in Williams syndrome. Invited talk at Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, July 11, 2012.

Internal

Panelist at *How to manage a lab as New Investigator.* Newman Society Seminar Series. Vanderbilt University School of Medicine, February 27, 2020.

Building blocks of Rhythm Genetics. Guest lecture in Behavior Genetics graduate course, Vanderbilt University School of Medicine, January 17, 2020.

Harnessing big data at Vanderbilt for genomic and phenomic discovery: lessons from language and music. Invited seminar, ENT Resident Research Week, Department of Otolaryngology, Vanderbilt University Medical Center, July 9, 2019.

Rhythm & Language: the first steps on a genetics odyssey. Invited seminar, Vanderbilt Genetics Institute, April 24, 2019.

Rhythm Genetics. Guest lecture in Behavior Genetics graduate course, School of Medicine, Vanderbilt University, April 17, 2019.

New ways to think about rhythm and language. Guest lecture in Music and Spiritual Development Course, Divinity School, Vanderbilt University, January 29, 2019.

Rhythm and Grammar. Neuroscience Faculty Talk, Vanderbilt Brain Institute, January 25, 2019.

Why rhythm and timing are important for clinical outcomes in pediatric cochlear implant users. Chern A. & Gordon, R.L. Neurotology Fellowship lecture, Department of Otolaryngology, Vanderbilt University Medical Center, May 10, 2018.

Musical rhythm and grammar skills: a multi-method framework. Applied Music Cognition Course guest lecture, Department of Special Education, Vanderbilt University, February 16, 2018.

Untangling shared neural and cognitive resources for music and speech: What can plasticity and genomics approaches tell us about language development? Cognition and Cognitive Neuroscience Brown Bag series, Department of Psychology, Vanderbilt University, Feb. 7, 2018.

Music and the Mind. Joint public lecture with world-renowned singer and arts ambassador Renée Fleming, and collaborator Dr. Miriam Lense, Vanderbilt University, November 29, 2017.

How much fun can we have with grammar? Hint: Add Rhythm. New faculty talk at Vanderbilt Brain Institute

Annual Retreat, Cheekwood Botanical Gardens, Nashville, TN, September 26, 2017.

Exploring rhythm as a foundational component of language development: from brain and behavioral mechanisms to music intervention approaches. Joint lecture sponsored by The Science of Music Seminar Series and the Cognition and Cognitive Neuroscience Brown Bag series, Vanderbilt University, November 16, 2016.

From Rhythm and Language to Music, Mind & Society: New Developments in Music-Related Research at Vanderbilt. Otolaryngology Grand Rounds, Vanderbilt University Medical Center, May 27, 2016.

What do we know about music in children with language impairment? Clinical Brownbag, Department of Psychology, Vanderbilt University, January 19, 2016.

Auditory Processing in Developmental Disabilities: strengths and weakness of music cognition. Neurotology Fellowship lecture, Department of Otolaryngology, Vanderbilt University Medical Center, October 29, 2015.

Who's got rhythm? The surprising link between rhythm and grammar in typical and atypical language development. Clinical Brownbag, Department of Psychology, Vanderbilt University, August 2014.

An EEG and behavioral approach to investigating the relationship between musical rhythm and language skills in children, Developmental Lunch Bunch, Vanderbilt University, November 2012.

Studying the Neural bases of language, music and song. Guest Lecture in Engineering course at Vanderbilt University, November 2011.

Independent Studies/Directed Research for course credit

Neuroscience 3863, <i>Undergraduate Research</i> , Maya Martin-Gonzalez	Spring 2020
Neuroscience 3862, <i>Undergraduate Research</i> , Maya Martin-Gonzalez	Spring 2019
Psychology Honors Thesis, PSY-4998, Leyao Yu	Spring 2019
Psychology Honors Thesis, Leyao Yu	Fall 2018
Neuroscience 3861, <i>Undergraduate Research</i> , Maya Martin-Gonzalez	Fall 2018
Neuroscience 3862, <i>Undergraduate Research</i> , Kristin Gummersheimer	Spring 2018
Neuroscience 3862, <i>Undergraduate Research</i> , Courtney Walters	Fall 2017
Neuroscience 3862, <i>Undergraduate Research</i> , Cara Petrucci	Fall 2017
Neuroscience 3862, <i>Undergraduate Research</i> , Jason Antwi	Fall 2017
Neuroscience 3861, <i>Undergraduate Research</i> , Jason Antwi	Summer 2017
Neuroscience 3861, <i>Undergraduate Research</i> , Kristin Gummersheimer	Spring 2017
Neuroscience 3861, <i>Undergraduate Research</i> , Courtney Walters	Spring 2017
Neuroscience 3861, <i>Undergraduate Research</i> , Cara Petrucci	Spring 2017
Neuroscience 3862, <i>Undergraduate Research</i> , Kacie Dunham	Fall 2016
Audiology 5389, <i>Independent Study in Audiology</i> , Max Gilbane	Summer 2016
Hearing and Speech Sciences 8389, <i>Independent Readings in Audiology</i> , Kristen D'Onofrio	Summer 2016
Neuroscience 3861, <i>Undergraduate Research</i> , Kacie Dunham	Summer 2016
Biomedical Engineering 4959, <i>Senior Engineering Design Project Part II "Clinical Analysis of Speech Rhythms Using MATLAB"</i> . Cathleen Trepasz, Madeline Girard, Ben Christ, Zeynep Sayar	Spring 2016
Biomedical Engineering 4959, <i>Senior Engineering Design Project Part I.</i> Cathleen Trepasz, Madeline Girard, Ben Christ, Zeynep Sayar	Fall 2015
Biomedical Engineering 3860, <i>Undergraduate Research</i> , Alison Williams	Fall 2015

Consulting for external student projects (not including thesis committees)

Jessica Lawson, PhD student in Teaching and Learning, Vanderbilt University	2015- 2018
---	------------

Hannah Han, Student at Virginia Commonwealth Governor's School, Senior research project 2015

Research Supervision

Name	Level at time of Supervision	Type of Supervision	Date	Current Position
Post-doctoral Supervision				
Dan Gustavson, PhD	Staff Scientist and Research Instructor	Research Supervisor/ Mentor	2019-present	Research Instructor, Vanderbilt University Medical Center
Eniko Ladanyi, PhD	Post-doctoral Research Fellow	Research Supervisor/ Mentor	2019-present	Post-doctoral Research Fellow, Vanderbilt University Medical Center
Miriam Lense, PhD	Post-doctoral Research Fellow	Mentor, Collaborator	2016	Assistant Professor, Vanderbilt University Medical Center
Graduate Supervision as primary research mentor for in-depth research experiences (> 6 months)				
Valentina Persici, PhD	PhD Student (Visiting)	Research Supervisor/ Mentor	2018-2019	PhD student in Psychology, Linguistics and Cognitive Neuroscience, University of Milan-Bicocca
Olivia Boorum, M.S., CCC-SLP	SLP clinical fellow	Research Supervisor/ Mentor	2018-2019	Speech-Language Pathologist, Vanderbilt University Medical Center
Youjia Wang	Post-Bac Trainee	Research Supervisor/ Mentor	2019-present	Research Analyst, Vanderbilt University Medical Center
Alyssa Scartozzi	Post-Bac Trainee	Research Supervisor/ Mentor	2019-present	Research Analyst, Vanderbilt University Medical Center
Anna Kasdan	PhD student	Research Supervisor/ Mentor	2018-present	PhD student in Neuroscience, Vanderbilt University
Rachana Nitin, MS	PhD student, graduate RA	Research Supervisor/ Mentor	2018-present	PhD student in Neuroscience, Vanderbilt University
Chloe Vaughan, AuD	AuD student, graduate RA	Research Supervisor/ Mentor	2016-2018	Research Audiologist, The Ohio State University
Brett Myers, CCC-SLP, PhD	PhD candidate, graduate RA	Research Supervisor/ Mentor	2016-2019	Clinical Faculty, Voice Disorders Center, Department of Communication Sciences & Disorders, University of Utah
Katherine Margulis, CCC-SLP	Master's Student, Graduate RA	Research Supervisor/ Mentor	2016-2018	Speech-Language Pathologist, Kennedy Krieger Research Center
Alexander Chern, MD	MD Student, Vanderbilt Medical Scholar Research Fellow	Research Supervisor/ Mentor	2016-present	Medical Resident in Otolaryngology, Columbia-Cornell
Allison Aaron, SLP	Research Analyst	Research Supervisor/ Mentor	2016-2017	Speech-Language Pathologist – Clinical Fellow, Stony Brook Medicine

Natalie Wiens, CCC-SLP	Master's Student, Graduate RA	Research Supervisor/M.S. thesis mentor	2016-2017	Speech-Language Pathologist, Aegis Therapies
------------------------	-------------------------------	--	-----------	--

Research mentorship of graduate-level students (rotations and short-term experiences)				
Delphanie Wu	AuD student, graduate RA	Research Supervisor	2017-2018	Doctoral student in Audiology, Vanderbilt University School of Medicine
Caroline Cencer	IGP Rotation Student	Research Supervisor	2017	PhD student, Vanderbilt University School of Medicine
Anne Taylor	IGP Rotation Student	Research Supervisor	2017	PhD student, Vanderbilt University School of Medicine
Sara Beck, PhD	PhD candidate, graduate RA	Collaborator, PhD Committee Member	2016-2018	Assistant Professor, Randolph College
Aysu Erdemir, PhD	PhD candidate, graduate RA	Mentor, Collaborator	2016	Clinical-Translational Research Coordinator, Vanderbilt University Medical Center
Peter Bamikole, MD	MD Student, graduate RA	Research Supervisor	2016	Medical Resident in Anesthesiology, Oregon Health & Science University
Rita Pfeiffer, M.S., CCC-SLP	Master's Student, Graduate RA	Research Supervisor	2015-2017	Speech-Language Pathologist, Williamson County Schools, TN
Kylie Korsnack, PhD	PhD student	Collaborator	2015-2016	Visiting Assistant Professor of English, Berea College
Gloria Han	PhD student in Psychology, Graduate RA	Research Supervisor	2015-2016	PhD Student in Psychology, Vanderbilt University
Carolyn Shivers, PhD	PhD student in Psychology, Graduate RA	Mentor, Collaborator	2012-2013	Assistant Professor, Virginia Polytechnic Institute and State University
Miriam Lense, PhD	PhD student in Psychology	Mentor, Collaborator	2011-2014	Assistant Professor, Vanderbilt University Medical Center

Undergraduate Supervision				
Sabrina Halavi	Summer Research Intern	Research Supervisor	2019	Undergraduate, Kentyon College
Elise Titiner	Summer Research Intern	Research Supervisor	2019	Undergraduate, University of Michigan
Maya Martin-Gonzalez	Research Assistant (Neuroscience)	Research Supervisor	2018-present	Current Vanderbilt Undergraduate Student
Leyao Yu	Research Assistant (Psychology)	Research Supervisor	2018-present	Research Assistant, Flinker Lab, New York University School of Medicine
Mari McCarville	Summer Research Intern	Research Supervisor	2018	Undergraduate, University of Denver
Leah Boyd	Summer Research Intern	Research Supervisor	2018	Undergraduate, Mississippi State University
Rebecca Embalabala	Summer Research Intern	Research Supervisor	2018	Research Assistant, Sarko Lab, Southern Illinois University
Kenesha Ryce	Summer Research Intern	Research Supervisor	2017	Suzuki Violin Instructor
Jason Antwi	Research Assistant (Neuroscience)	Research Supervisor	2016-2017	Independent musician and recording artist
Courtney Walters	Research Assistant (Neuroscience)	Research Supervisor	2016-2019	Research Assistant, Veterans Administration, Atlanta

Cara Petrucci	Research Assistant (Neuroscience)	Research Supervisor	2017-2018	Medical Assistant
Genevieve Kupsky	Research Assistant (Medicine, Health & Society)	Research Supervisor	2016-2017	Medical Student, George Washington University
Kristin Gummersheimer	Research Assistant (Neuroscience)	Research Supervisor	2016-2018	K-12 Teacher, St. Cecilia Academy
Kacie Dunham	Research Assistant	Research Supervisor	2016-2017	PhD Student, Vanderbilt University
Michaela Novakovic	Research Assistant (Music Performance; Cellular & Molecular Biology)	Research Supervisor	2016	PhD Student in Neuroscience at Northwestern University
Alison Williams	Research Assistant (Biomedical Engineering)	Research Supervisor	2015-2016	Engineer, Cook Medical, Bloomington, IN
Scott Blain	Research Analyst, Research Assistant (Cognitive Sciences)	Research Supervisor	2015-2016	PhD student in Personality Psychology at University of Minnesota: Twin Cities

High School Supervision				
Alaina Baird	Harpeth Hall High School STEM Research Course	Research Supervisor	2016-2017	Undergraduate at Baylor University
Rachel Waters Joyner	School for Science and Math at Vanderbilt	Research Supervisor	2011-2012	PhD Student, Department of Psychology, University of Florida

Thesis/Dissertation Supervision **Chair or Co-Chair**

Degree	Student/Program
PhD	Brett Myers, Ph.D. in Interdisciplinary Studies, defended April 2019.
B.A.	Leyao Yu, Undergraduate Honors Thesis in Psychology, defended April 2019
Master's	Natalie Wiens, M.S. in Speech Language Pathology, defended May 2017 (Co-Chair with Stephen Camarata)

Committee Member (Vanderbilt degree programs)

Degree	Student/Program
PhD	Kristen D'Onofrio, PhD in Hearing & Speech Sciences, in progress
PhD	Rachana Nitin, PhD in Neuroscience, in progress
PhD	Resh Gupta, PhD in Neuroscience, in progress
PhD	Cristina Robinson, PhD in Biological Sciences, defended August 2019
PhD	Allison Whitten, PhD in Hearing & Speech Sciences, defended December 2018
AuD	Max Gilbrane, Au.D. in Audiology, defended April 2018
PhD	Sara Beck, PhD in Psychological Sciences (Developmental), defended March 2018
Master's	Rita Pfeiffer, M.S in Speech Language Pathology, defended August 2017

Committee Member or Thesis Examiner (External programs)

Valentina Persici, PhD in Psicologia, linguistica e neuroscienze cognitive, University of Milan-Bicocca, November 2019

Kierla McCormack, PhD in Psychology, Concordia University, August 2019

Courtney Rooker, undergraduate honors thesis in Communications Disorders, Butler University, April 2019

Brittany McCormack, PhD in Education. Griffith University, Australia, September 2017

Extramural Grant proposals mentored

Dan Gustavson, NIH NIMH K01 proposal (under review). *Unpacking Genetic and Environmental Risk Factors on the Emergence of Depression and Anxiety Symptoms in Adolescence: A Novel Role of Music Engagement.*

Jessica Ross, NIH BRAIN Fellows F32 program (Not funded). *Functional Connectivity of Prediction for Musical Rhythm Perception: A Transcranial Magnetic Brain Stimulation and Electroencephalography Mixed Methods Study of Neural Dynamics.*

Miriam Lense, NIH NIDCD Early Career R21 (Awarded). *Social Rhythmic Entrainment and Language Development in Autism Spectrum Disorder.* \$474,000.

Katherine Margulis, ASH Foundation Student Research Grant in Early Childhood Language Development, 2017-2018. (not funded) *Tracking natural language and rhythm during a musical intervention study for children with language impairment.*

Adam Horin, NSF Graduate Fellowship program, Honorable Mention, 2017-2020. *Development of Multiple Rhythm Skills: Behavioral, Neural, and Genetic Correlates.*

Alexander Chern, Vanderbilt Medical Scholars, 2016-2017. *Influence of rhythm on grammatical performance in children with cochlear implants, developmental language disorders, and typical development.* Awarded: \$30,000.

Honors and Awards

Ranked 5 th in nation in individual NIH Otolaryngology funding, Blue Ridge rankings	2019
NIH Director's New Innovator Award	2018
Honorable Mention, Poster at Vanderbilt Kennedy Center Science Day	2013
Dr. Daniel B. and Aurel B. Newell Doctoral Fellowship, Florida Atlantic University	2008-2009
American Association of University Women Dissertation Fellowship (\$20,000)	2007-2008
National Institute of Mental Health Pre-doctoral Trainee Fellowship- T32 position	2006-2007
Best Poster Award, Conference on Interdisciplinary Musicology	2004
USC Renaissance Scholar –Excellence in Multidisciplinary studies	2001

Grants and Contract Awards

Current Research Support

Extramural Awards

NSF 1926794 NSF-Integrative Strategies for Understanding Neural and Cognitive Systems
Biology and Function of Prosody: Integrative approach to individual differences
Magne (Co-PI)/Gordon (Co-PI) – 8% effort 2019-2023 Total funds: \$1,000,000
(VUMC award is \$606,605)

R01DC016977 NIH NIDCD (R01)
Neurobiological markers of rhythm: risk and resilience for language acquisition \$3,453,554
Gordon (PI) 40% effort 2019-2024

DP2HD098859 NIH Director's New Innovator Award (DP2)
Biomarkers of Rhythmic Communication: Integrating Foundational and Translational Approaches \$2,370,000
Gordon (PI) 25% effort 2018-2023

Completed Research Support

Extramural

K18DC017383 NIH NIDCD K18: Research Career Enhancement Award for Established Investigators
Mapping the genetic and neural architecture of human rhythm and communication traits \$236,576
Gordon (PI) 56% effort 2018-2020

KNAW Academy Colloquia Proposal - Royal Netherlands Academy of Arts & Sciences
Deciphering the biology of human musicality through state-of-the-art genomics €16,500
Honing (PI), Gordon (Co-I) 2019

R03DC014802 NIH NIDCD (Early Career R03)
Rhythm in Atypical Language Development: Mechanisms and Individual Differences \$478,489
Gordon (PI) 2015-2019

Intramural

Vanderbilt Kennedy Center Hobbs Discovery Award
Uncovering the genetic etiology of developmental language disorder \$29,896
Gordon (PI) 2018-2019

Vanderbilt Trans-Institutional Programs (TIPs) \$50,000
Making Music City a Magnet for Music Research
Gordon (PI) 2017-2018

Vanderbilt Institute for Clinical and Translational Research - VR18434 \$9,836
Exploring genetic contributions to language and rhythm skills
Gordon (PI) 2016-2017

Community Engagement Research Grant \$10,000
SERENADE Project: Parent Child Music Classes to Promote Social and Rhythmic Engagement in Autism Spectrum Disorder
Gordon (PI), Lense (Co-PI) 2016-2017

Vanderbilt Trans-Institutional Programs (TIPs) <i>The Science of Music Research: Creating a Program for Music, Mind & Society</i> Eavey (PI), Gordon (Co-I) 2015-2017	\$200,000
Vanderbilt Kennedy Center Hobbs Discovery Award, Vanderbilt University <i>Investigating the Relationship between Syntax and Rhythm in SLI</i> Yoder (PI), Gordon (Co-I) 2012-2015	\$29,636

Publications

Trainee contributions are underlined.

Updated publication list will be available at <http://orcid.org/0000-0003-1643-6979>

1. Ladányi E, Persici V, Fiveash A, Tillmann B, **Gordon RL**. Is atypical rhythm a risk factor for developmental speech and language disorders? WIREs Cogn Sci. 2020;e1528. (1-32) <https://doi.org/10.1002/wcs.1528> [Journal impact factor 3.18]
2. **Gordon, R.L.**, & Lense, M.D. (2020) Interprofessional education of the next generation of musician-scientists through music cognition research training: An innovative platform for health professions and biomedical research. *Music & Medicine*. 12:1 (37-41).
3. Myers, B., Lense, MD., **Gordon, RL**. (2019) Pushing the envelope: Developments in neural entrainment to speech and the biological underpinnings of prosody perception. *Brain Sciences*, 9:3 (70). <https://doi.org/10.3390/brainsci9030070>
4. Chern, A., Tillmann, B., Vaughan, C., **Gordon, R.L.** (2018). New evidence of a rhythmic priming effect that enhances grammaticality judgments in children. *Journal of Experimental Child Psychology*. 173 (371-379) <https://doi.org/10.1016/j.jecp.2018.04.007> [Journal impact factor 2.60]
5. Wiens, N., & **Gordon, R.L.**, (2018). The case for treatment fidelity in active music interventions: Why and How. *Annals of the New York Academy of Sciences*. <https://doi.org/10.1111/nyas.13639> [Journal impact factor: 4.04]
6. Magne, C., Jordan, D., **Gordon, R.L.**, (2016). Speech Rhythm Sensitivity and Musical Aptitude: ERPs and Individual Differences. *Brain & Language*. 153 (13-19). <https://doi.org/10.1016/j.bandl.2016.01.001> [Journal impact factor: 3.21]
7. **Gordon, R.L.**, Fehd, H.M., McCandliss, B.M. (2015). Does music training enhance literacy skills? A meta-analysis. *Frontiers in Psychology*. 6:1777. <https://doi.org/10.3389/fpsyg.2015.01777> [Journal impact factor: 2.60]
8. **Gordon, R.L.**, Jacobs, M.S., Schuele, C.M., McAuley, J.D. (2015) Perspectives on the rhythm-grammar link and its implications for typical and atypical language development. *Annals of the New York Academy of Sciences*. 1337, pp. 16-25. <https://doi.org/10.1111/nyas.12683> [Journal impact factor: 4.30]
9. **Gordon, R.L.**, Shivers, C.M., Wieland, E.A., Kotz, S.A., Yoder, P.J., McAuley, J.D. (2015). Musical rhythm discrimination explains individual differences in grammar skills in children. *Developmental Science*. 18(4), pp. 635-644. Epub 2014 Sep 7. <https://doi.org/10.1111/desc.12230> [Journal impact factor: 4.28]
10. Peters, S.U., **Gordon, R.L.**, Key, A.P. (2015). Induced gamma oscillations differentiate familiar and novel voices in children with *MECP2* Duplication and Rett Syndromes. *Journal of Child Neurology*. 30(2), pp. 145-152. Epub 2014 Apr 27. <https://doi.org/10.1177/0883073814530503> [Journal impact factor: 1.67]

11. Lense, M.D., **Gordon, R.L.**, Key, A. P., Dykens, E.M. (2014). Neural Correlates of Cross-Modal Affective Priming by Music in Williams Syndrome. *Social, Cognitive and Affective Neuroscience* 9(4), pp.529-37. Epub 2013 Feb 5. <https://doi.org/10.1093/scan/nst017> [Journal impact factor: 5.89]
12. **Gordon, R.L.**, Magne, C.L., Large, E.W. (2011). EEG Correlates of Song Prosody: A new look at the relationship between linguistic and musical rhythm. *Frontiers in Psychology: Auditory Cognitive Neuroscience* 2(352), pp. 1-13. <https://doi.org/10.3389/fpsyg.2011.00352> [Journal impact factor: 2.84]
13. **Gordon, R.L.**, Schön, D., Magne, C., Astésano, C., Besson, M. (2010). Words and melody are intertwined in perception of sung words: EEG and behavioral evidence. *PLoS ONE* 5(3): e9889, pp. 1-12. <https://doi.org/10.1371/journal.pone.0009889> [Journal impact factor: 3.53]
14. Schön, D., **Gordon, R.L.**, Campagne, A., Magne, C., Astésano, C., Anton, J.L., Besson, M. (2010). Similar cerebral networks in language, music and song perception. *NeuroImage* 51, pp. 450-461. <https://doi.org/10.1016/j.neuroimage.2010.02.023> [Journal impact factor: 6.96]
15. Schön, D., **Gordon, R. L.**, & Besson, M. (2005). Musical and Linguistic Processing in Song Perception. *Annals of the New York Academy of Sciences* (1060), pp. 71-81. <https://doi.org/10.1196/annals.1360.006> [Journal impact factor: 4.3]
16. Magne, C., Aramaki, M., Astésano, C., **Gordon, R. L.**, Ystad, S., Farner, S., Kronland-Martinet, R., Besson, M. (2005). Comparison of Rhythmic Processing in Language and Music: An Interdisciplinary Approach. *The Journal of Music and Meaning, JMM3*, pp. 1-8.

Manuscripts under review or in revision

1. Niarchou, Sathirapongsasuti, Jacoby, Bell, McArthur, Straub, 23andMe Research Team, McAuley, Capra, Ullén, Creanza, Mosing, Hinds, Davis, & **Gordon** (in revision). Unravelling the genetic architecture of musical rhythm. *bioRxiv* 836197; doi: <https://doi.org/10.1101/836197>
2. Walters, Nitin, Margulis, Boorum, Gustavson, Below, Davis, Cox, Camarata, & **Gordon** (in revision, *Journal of Speech, Language & Hearing Research*). APT-DLD: A New Phenotyping Algorithm for Identifying Cases of Developmental Language Disorder in Large-Scale Electronic Health Record Systems.
3. Smit, Andreassen, Boomsma, Burwell, Chorlian, de Geus, Elvåshagen, **Gordon**, Harper, Hegerl, Hensch, Iacono, Jawinski, Jönsson, Luykx, Magne, Malone, Sarah E Medland, Meijs, Meyers, Morbeget, Sander Sisodiya, Porjesz, Thompson, Jawinski, van Beijsterveldt, van Dellen, Via, & Wright (under review, *Human Brain Mapping*). Linking electrophysiological brain activity to neurological and psychiatric liability genes: Large-scale collaborative studies by the ENIGMA-EEG group. Preprint available at <https://doi.org/10.31234/osf.io/gyjb4>
4. Kasdan, **Gordon**, Lense (submitted, *Biological Psychiatry: Cognitive Neuroscience & Neuroimaging*). Neurophysiological correlates of dynamic beat tracking in individuals with Williams Syndrome.

Manuscripts in preparation

1. Ladanyi, Novakovic, Scartozzi, Bamikole, Vaughan, Fromboluti, Schuele, McAuley, & **Gordon**. (in preparation). Associations between internal time-keeping and expressive grammatical skills in children with DLD and with typical development.
2. Persici, Blain, Iversen, Yoder, Kotz, McAuley, & **Gordon** (in preparation). Individual differences in neural entrainment predict complex syntax ability in six-year-old children. Target journal: *European Journal of Neuroscience*.

3. Gustavson, Friedman, Stallings, Reynolds, Coon, Hewitt, & **Gordon** (in preparation). Distinct Genetic and Environmental Influences on Musical Instrument, Singing, and Dance Engagement in Early Adolescence.
Target journal: Psychological Science.
4. Yu, Persici, Boorum, Nitin, Aaron, Kasdan, Wiens, Vaughan, Margulis, Schuele, Camarata, McAuley, & **Gordon** (in preparation). Rhythm processing in children with developmental language disorder and typically developing peers.
Target journal: PLoS ONE
5. Wesseldijk, **Gordon**, Mosing, Madison, & Ullén (in preparation). Music, rhythm, & language: a twin study of genetic and environmental associations.
Target journal: Psychology of Aesthetics, Creativity, the Arts
6. Zhao, Boorum, Kuhl, & **Gordon** (in preparation). Infants' speech perception predicts language skills at 6 years of age.
Target journal: Developmental Cognitive Neuroscience.
7. Scartozzi, Jordan, Skaggs, Clayton, **Gordon**, (in preparation). Song and Synchrony for Social Good.
Target journal: Music & Science.
8. **Gordon**, Robinson, Bruno, Embalabala, Creanza. (in preparation). The role of genome variation in the development of rhythm traits.
Target journal: Philosophical Transactions of the Royal Society B.

Peer-reviewed book chapters and conference proceedings

1. **Gordon, R.L.** & Magne, C. (2017). *Music and the brain: Music and cognitive abilities*. Invited chapter. In (Eds R. Ashley & R. Timmers) Routledge Companion to Music Cognition, pp. 49-62.
2. Foss, K. & **Gordon, R.L.** (2013) '*We just have this one breastfeeding brochure*': *Exploring breastfeeding resources and agenda-setting in pediatricians' offices, WIC, LLL and the community hospital*. Proceedings of the Breastfeeding and Feminism Symposium (Chapel Hill, NC). pp. 1-6.
3. Lense, M.D., **Gordon, R.L.**, Key, A.P., and Dykens, E.M. (2012). *Neural correlates of musical timbre perception in Williams syndrome*. Proceedings of the 12th International Conference on Musical Perception and Cognition, (Thessaloniki, Greece). pp. 576-582.
4. Magne, C., **Gordon, R.L.**, Midha, S. (2010). *Influence of Metrical Expectancy on Reading Words: An ERP Study*. Proceedings of the Fifth International Conference on Speech Prosody. Chicago, May 11-14, 2010, pp. 1-4.
5. **Gordon, R. L.**, Racette, A., & Schön, D. (2006). *Sensory-motor networks in singing and speaking: A comparative approach*. In E. Altenmüller (Ed.), *Music, Motor Control and the Brain*. New York: Oxford University Press. pp. 223-238.

Pre-registered research protocols

1. Ladanyi, E., Gustavson, D. E., & Gordon, R. L. (2019, October 29). Do musical parents have children with better grammar? Open Science Framework, osf.io/baenj

Conference presentations

Invited conference talks

Gordon, R.L. Rhythm states and rhythm traits: a multi-methodological framework. Invited podium presentation, Synchrony and Rhythmic Interaction: from Neurons to Ecology Workshop, Lorentz Center, Leiden, Netherlands, July 29-Aug.2, 2019.

Gordon, R.L. Towards the genomic basis of rhythm: Building blocks of a research program. Invited podium presentation at KNAW Colloquium on Musicality and Genomics, Amsterdam, June 20-21, 2019.

Gordon R.L. Paving the way to the genomics of musical rhythm traits. Invited podium presentation, Auditory Cognitive Neuroscience Society, Gainesville, FL, January 3-5, 2019.

Yu, L., Myers, B.M., Gordon, R.L., Neural convergence of rhythm and language: from trait to state. Invited podium presentation for Music, Speech, and the Brain session, 176th Meeting of the Acoustical Society of America and 2018 Acoustics Week, Victoria, Canada, November 6, 2018.

Gordon., R.L., Rhythm and grammar in human communication traits. Invited podium presentation, 2018 Vanderbilt Translational Forum. October 26, 2018.

Gordon, R.L. In search of biomarkers of rhythm and language: The potential contributions of genomic approaches to auditory cognitive neuroscience. Invited podium presentation, Auditory Cognitive Neuroscience Society, Tampa, FL, January 4-6, 2018.

Gordon, R.L., Blain, S.D., McAuley, J.D. Why we should take rhythm and working memory into account when investigating grammar skills in children. Invited podium presentation/Symposium, 14th International Congress for the Study of Child Language, Lyon, France, July 17-21, 2017.

Gordon, R.L., The Contribution of rhythm to grammar skills in children: Lessons from typical development and language impairment. Invited Symposium, Neurosciences and Music VI, Boston, MA, June 15-18, 2017.

Gordon, R.L. If you don't have rhythm, you might not have grammar: From a neurobiological basis of language impairment to music intervention. Invited podium presentation, Auditory Cognitive Neuroscience Society, Gainesville, FL, January 6-7, 2017.

Gordon, R.L. Exploring the Relationship Between Music, Language, and Literacy. Invited podium presentation for Symposium, Literacy Research Association, Nashville, TN, November 30, 2016.

Gordon, R.L., Pfeiffer, R.E., Williams, A.J., Jones, K.B., Hirsch, A.B., Morrill, T.H., McAuley, J.D. Musical rhythms, speech rhythms, and brain rhythms: new applications for child language development. Podium presentation at International Conference for Music Perception & Cognition 14, San Francisco, CA., July 5-9, 2016. **Symposium Co-Chair.**

Gordon, R.L. Strengths and Weakness of Music Cognition in Developmental Disabilities. Invited podium presentation at Southern Society for Philosophy and Psychology Conference, April 3-5, 2015, New Orleans, LA.

Gordon, R.L. Rhythm perception relates to syntactic production in children: implications for typical and atypical language development. Musical rhythm and language development: Basic research and translation to rhythm-based interventions. Podium presentation at Neurosciences and Music V, Dijon, France, May 29-June 1, 2014. **Symposium Co-Chair.**

Other conference talks – peer reviewed

Gordon, R., Nitin, R., Persici, V., Yu, L., Boorum, O., Gustavson, D., Camarata S., McAuley, J.D. Musical rhythm perception relates to typical and atypical language development: a multi-method approach. Oral and poster presentations at European Cognitive Neuropsychology Workshop, January 26-31, 2020, Bressanone, Italy.

Nitin, R., Walters, C., Margulis, K., Boorum, O., Below, J., Davis, L., Camarata, S., Cox, N., & Gordon, R. Cohort Discovery & Phenotyping Developmental Language Disorder Using Electronic Health Record Data. Podium presentation at American Speech, Language & Hearing Association Convention, Orlando, FL, November 21-21, 2019.

Gordon, R.L., Niarchou, M., Sathirapongsasuti, J. F., Jacoby, N., 23andMe Research Team, McAuley, J.D., Bell, E., Mosing, M., Straub, P., Creanza, N., Ullén, F., Cox, N.J., Hinds, D. & Davis, L.K. Can you clap to the beat? Findings from the first large-scale genome-wide association study on rhythm. Podium presentation at Behavioral Genetics Association conference, Stockholm, June 26-30, 2019.

Margulis, K., Aaron, A., Vaughan, C., Blain, S., Chern, A., McAuley, D., & Gordon, R.L. Auditory working memory and musical rhythm as a predictor of grammar outcomes. Podium presentation at Society for Music Perception and Cognition 2017, San Diego, CA, July 30-August 4, 2017.

Aaron, A., Wiens, N., Margulis, K., Bingham, E., Hirsch, A., Gordon, R.L. M.I.L.E.Stone: Music Impacting Language Expertise? A musical training program for children with language impairment. Podium presentation at Society for Music Perception and Cognition 2017, San Diego, CA, July 30-August 4, 2017.

Myers, B., Gordon, R.L. Neural Entrainment to Rhythmic Speech through Speech Envelope Analysis. Podium presentation at Society for Music Perception and Cognition 2017, San Diego, CA, July 30-August 4, 2017.

Gordon, R.L., Wiens, N.W., Vaughan, C., Myers, B., McAuley, J.D. Individual differences in rhythm relate to grammar skills in children: Mechanisms and rhythm-based training. Podium presentation at the 16th Rhythm Production and Perception Workshop, Birmingham, UK, July 3-5, 2017.

Gordon, R.L., & Wiens, N. What does Rhythm Have to Do With Language Impairment? Podium presentation, School Speech-Language Pathology Conference at Vanderbilt, August 1, 2016.

Pfeiffer, R.E., Williams, A.J., Shivers, C., Gordon, R.L. Using a Rhythmic Speech Production Paradigm to Elucidate the Rhythm-Grammar Link: A Pilot Study. Podium presentation at International Conference for Music Perception & Cognition 14, San Francisco, CA., July 5-9, 2016.

Gordon, R.L., Hirsch, A.B., Bingham, E. Can Music Training Help Children with Language Impairment? A Framework for Longitudinal Investigation. Podium presentation at Pace, Pitch, & Rhythm-The Essentials of Conducting Music Treatment Research, April 16, 2016.

Gordon, R.L., Jacobs, M.S., Kotz, S.A., Schuele, C.M., Key, A.P.F., Yoder, P.J., & McAuley, J.D. Relating individual differences in musical rhythm skills to grammar development: a behavioral and EEG approach. Podium presentation at the Society for Music Perception and Cognition Biennial Meeting, Nashville, TN, August 1-5, 2015.

Nave, K., McAuley, J.D., **Gordon, R.L.**, Musical rhythm discrimination and language development in children ages 4 to 7 years. Podium presentation at the Society for Music Perception and Cognition Biennial Meeting, Nashville, TN, August 1-5 2015.

Gordon, R.L., Lense, M.D., Magne, C.L., Key, A.P.F., Dykens, E.M. The influence of musical rhythm on the perception of word stress in Williams Syndrome. Podium presentation at the Perspectives on Rhythm and Timing Workshop, Glasgow, Scotland, July 19-21, 2012.

Gordon, R.L. & Large, E.W. The Influence of temporal alignment of lyrics and melody on semantic integration in song: EEG and behavioral evidence. Podium Presentation at Society for Music Perception and Cognition, Montreal, Canada, Jul. 30-Aug. 3, 2007.

Gordon, R.L. & Large, E.W. EEG correlates of text-setting and semantic integration in song prosody. Podium Presentation at Language and Music as Cognitive Systems Conference. Cambridge, U.K., May 11-13, 2007.

Gordon, R.L., Neurocognition of Sung Language: Interrelated roles of Melody, Semantics, and Meter. Podium presentation at Fourth Entrainment Network Meeting, Boca Raton, FL, May 5-8, 2006.

Magne, C., **Gordon, R.L.**, & Besson, M. The Influence of rhythmic, melodic, and semantic violations in language and music on the electrical activity of the brain. Podium presentation at the Rhythm Perception and Production Workshop, Ile de Tatihou, France, June 21-25, 2003.

Selected Poster Presentations

Niarchou, M., Sathirapongsasuti, J. F., Jacoby, N., 23andme Research Team, McAuley, J.D., Bell, E., Mosing, M., Straub, P., Creanza, N., Ullén, F., Cox, N.J., Hinds, D., Davis, L.K. & **Gordon, R.L.** Can you clap to the beat? Findings from the first large-scale genome-wide association study of a musical rhythm trait in 606,825 individuals. Poster presentation at NIH High-Risk, High-Reward Symposium, Bethesda, MD, June 5-7, 2019.

Walters, C.E., Margulis, K., Below, J., Cox, N.J., Camarata, S.M. **Gordon, R.L.** A new phenotyping algorithm for identifying cases of developmental language disorder in large-scale electronic health record systems. Poster presented at American Society of Human Genetics 2018 meeting, San Diego, CA, October 16-20, 2018.

Vaughan, C., Soman, U., Blain, S., Hirsch, A., **Gordon, R.L.** Prosody Matching: The relationship between rhythm, grammar, and prosody discrimination. Poster presented at Society for Music Perception and Cognition 2017, San Diego, CA, July 30-August 4, 2017.

Chern, A., Vaughan, C., Tillmann, B., **Gordon, R.L.** Examining rhythm and language in children with cochlear implants, developmental language disorders, and typical development. Poster presented at Society for Music Perception and Cognition 2017, San Diego, CA, July 30-August 4, 2017.

Vaughan, C., Soman, U., Blain, S., Hirsch, A., **Gordon, R.L.** Individual Differences in Prosody-Matching Skills and Connection to Musical Rhythm Abilities. Poster presented at Neurosciences and Music VI, Boston, MA, June 15-18, 2017.

Pfeiffer, R., **Gordon, R.L.**, Wallace, M., Lense, M. Feasibility of Semi-Automated Movement Synchrony Measures during Adult-Child Interactions in Preschoolers with and without Autism. Poster presented at Neurosciences and Music VI, Boston, MA, June 15-18, 2017.

Myers, B., Dunham, K., Korsnack, K., **Gordon, R.L.** Neural encoding of speech in children with specific language impairment. Poster presented at Neurosciences and Music VI, Boston, MA, June 15-18, 2017.

Margulis, K., Wiens, N., Aaron, A., Bingham, E., Hirsch, A., **Gordon, R.L.** M.I.L.E.Stone: A musical training program designed to enhance grammar skills in children with language impairment. Poster presented at Neurosciences and Music VI, Boston, MA, June 15-18, 2017.

Chern, A., Vaughan, C., Tillmann, B., **Gordon, R.L.** Testing the Influence of Rhythmic Listening on Grammar Performance in Children with Cochlear Implants. Poster presented at Neurosciences and Music VI, Boston, MA, June 15-18, 2017.

Baird, A., Myers, B., **Gordon, R.L.** Brain and Behavioral Study of Rhythm Perception in Children. Poster presented at Neurosciences and Music VI, Boston, MA, June 15-18, 2017.

Aaron, A., Margulis, K., Vaughan, C., Blain, S., Chern, A., McAuley, J.D., **Gordon, R.L.** The role of auditory working memory in rhythm and language performance. Poster presented at Neurosciences and Music VI, Boston, MA, June 15-18, 2017.

Chern, A., Tillmann, B., **Gordon, R.L.** Rhythm and Language in Cochlear Implant Users. Poster presented at the International Symposium on Music and Cochlear Implants, Snekersten, Denmark, October 13-14, 2016.

Gordon, R.L., Pfeiffer, R.E., Williams, A.J., Jacobs, M.S., Schuele, C.M., & McAuley, J.D. Examining the contributions of musical rhythm and speech rhythm to typical and disordered language acquisition. Poster presentation at BRAMS: The Next Ten Years, Montreal, Canada, October 21-23, 2015.

Pfeiffer, R., Williams, A., Shivers, C., Gordon, R.L. Examining Rhythmically Constrained Speech Production in Typically Developing Six-Year-Old Children and its Potential Intersections with Musical and Language Abilities. Poster presentation at the Society for Music Perception and Cognition Biennial Meeting, Nashville, TN, August 1-5, 2015.

Gordon, R.L., Shivers, C.M., Wieland, E., Kotz, S.A., Yoder, P.J., & McAuley, J.D. Individual differences in discrimination of musical rhythms relate to expressive language skills in children. Poster presented at Society for Neurobiology of Language Annual Meeting, San Diego, CA, Nov 6-9, 2013.

Gu, C., Yoncheva, Y., Gordon, R.L., Shu, H. McCandliss, B. Language experience influences the neural synchronization for auditory speech processing: A cross-language MMN study using time-frequency analysis. Poster presented at Cognitive Neuroscience Society 2013 Meeting, San Francisco, CA, April 13-16, 2013.

Gordon, R.L., Shivers, C.M., Waters, R.E., Key, A.P.F., Yoder, P.J. Have they got rhythm? An EEG and behavioral approach to musical rhythm and language skills in children. Poster presented at Vanderbilt Kennedy Center Science Day, January 15, 2013. **Honorable Mention.**

Magne, C., Jordan, D., Gordon, R.L. Music Aptitude Influences Speech Meter Sensitivity. Poster presented at the Perspectives on Rhythm and Timing Workshop, Glasgow, Scotland, July 19-21, 2012.

Gordon, R.L., Lense, M.D., Magne, C.L., Key, A.P.F., Dykens, E.M. The influence of musical rhythm on the perception of prosody in Williams Syndrome. Poster presentation at the 24th Annual Association for Psychological Science Convention, Chicago, IL, May 24-27, 2012.

Lense, M.D., Gordon, R.L., Key, A.P.F., Dykens, E.M. Neural correlates of timbre perception in Williams Syndrome. Poster presentation at the 24th Annual Association for Psychological Science Convention, Chicago, IL, May 24-27, 2012.

Gordon, R.L., Hundley, R.J., Wilson, A.K., Key, A.P.F., Peters, S.U. Alterations of MECP2 Expression and brain indices of autism-related social engagement. Poster presentation at the 45th Annual Gatlinburg Conference, Annapolis, MD, March 7-9, 2012.

Magne, C., Jordan, D., Gordon, R.L. Influence of Music Aptitude on Metrical Expectancy during Speech Perception. Poster presented at the Third Annual Neurobiology of Language Conference, Annapolis, MD, November 10-11, 2011.

Lense, M.D., Gordon, R.L., Key, A.P.F., Dykens, E. Neural Correlates of the Affective Priming Effects of Music on Facial Expressions in Williams Syndrome. Poster presented at the Neurosciences and Music IV, Edinburgh, U.K., June 9-11, 2011.

Gordon, R.L., & Large, E.W. High Frequency EEG correlates of rhythmic attending in song perception. Poster presented at the Neurobiology of Language Conference, San Diego, CA, Nov. 11-12, 2010.

Gordon, R.L., Magne, C., Schrader, S., Large, E.W. EEG study of temporal alignment of words and melody in song perception. Poster presented at The Neurosciences and Music III: Disorders and plasticity conference. Montreal, Canada, June 25-28, 2008.

Gordon, R.L., Schön, D., Magne, C., Astésano, C., Ystad, S., Kronland-Martinet, R. & Besson, M. An fMRI study of the neural basis of song perception. Poster presented at the Conference on Interdisciplinary Musicology, Graz, Austria, April 15-18, 2004. **Best Poster Award.**

Conference Keynote Presentations

Musical rhythm and what it means for children's grammar skills: a multi-methodological approach. Keynote Lecture for the Nebraska Psychological Society Conference, York College, York, Nebraska, November 4, 2017.

What a child's rhythm profile can tell us about their language development. Keynote Lecture, NeuroMusic Conference, McMaster University, Hamilton, Ontario, Canada, November 19, 2016.

Singing for Neurons: Breakthroughs in the study of language and music in the brain. Keynote Lecture, Middle Tennessee Psychological Association 2012 spring meeting, Murfreesboro, TN, April 21, 2012.

Media Contributions

"Rhythm and Clues"

Vanderbilt Magazine, Fall 2018, page 16.

"Gordon receives \$2.3 million NIH Director's New Innovator Award"

VUMC Reporter, October 2, 2018

<http://news.vumc.org/2018/10/02/gordon-receives-2-3-million-nih-directors-new-innovator-award/>

"Biology and the Beat"

Vanderbilt Medicine magazine, Summer 2018

<https://www.mc.vanderbilt.edu/vanderbiltmedicine/biology-and-the-beat/>

"Music, Mind & Society Program Growing Fast"

VUMC Reporter, May 17, 2018

<https://news.vanderbilt.edu/2018/05/17/music-mind-and-society-program-growing-fast/>

"Positive Parenting: Good Rhythm, Better Grammar?"

WFMZ, *Positive Parenting* series, March 15, 2018

<http://www.wfmz.com/features/positive-parenting/positive-parenting-good-rhythm-better-grammar/716806095>

"Learn"

***The Human Body: Secrets of your Life Revealed*, BBC, October 9, 2017**

<https://www.pbs.org/program/amazing-human-body/> episode: "Learn," segment starts at 14:40

(aired in U.S. on PBS in September 2018)

"Sing-Song Speech"

89.3 KPCC, *The Loh-Down on Science*, Sept. 26, 2017

<https://www.scpr.org/programs/loh-down-on-science/2017/09/26/16554/>

"Using Music and rhythm to help kids with grammar and language"

NPR's *All Things Considered*, June 1, 2017

<http://www.npr.org/sections/health-shots/2017/06/01/530723046/using-music-and-rhythm-to-help-kids-with-grammar-and-language>

"A Musical Awakening"

VUBreakThru, May 24, 2017

<https://my.vanderbilt.edu/universityfundingprograms/2017/05/a-musical-awakening/>

"Vanderbilt Program for Music, Mind & Society to host free event May 3"

MyVU, April 20, 2017.

<https://news.vanderbilt.edu/2017/04/20/vanderbilt-program-for-music-mind-society-to-host-free-event-may-3/>

“The Rhythm of Research in the Music Cognition Lab

VUBreakThru, March 16, 2017.

<https://my.vanderbilt.edu/universityfundingprograms/2017/03/the-rhythm-of-research-in-the-music-cognition-lab/>

“Can music training improve language outcomes in children? Program for Music, Mind and Society provides violin lessons for children with language impairments”

VUBreakThru, February 16, 2017.

<https://my.vanderbilt.edu/universityfundingprograms/2017/02/can-music-training-improve-language-outcomes-in-children-program-for-music-mind-and-society-provides-violin-lessons-for-children-with-language-impairments/>

“The Program for Music, Mind, and Society makes Music City more musical through the SeREnADe project”

VUBreakThru, February 2, 2017.

<https://my.vanderbilt.edu/universityfundingprograms/2017/02/the-program-for-music-mind-and-society-makes-music-city-more-musical-through-the-serenade-project/>

“Program for Music, Mind and Society brings together researchers to examine how and why music affects us”

VUBreakThru, January 6, 2017.

<https://my.vanderbilt.edu/universityfundingprograms/2017/01/program-for-music-mind-and-society-brings-together-researchers-to-examine-how-and-why-music-affects-us/>

“Teaching Grammar Through Rhythm”

informED Open Colleges website, November 24, 2016.

<http://www.opencolleges.edu.au/informed/features/teaching-grammar-rhythm/>

“Symposium explores using music to ease social skills, PTSD”

Vanderbilt University Medical Center Reporter, September 15, 2016.

<https://news.vanderbilt.edu/2016/09/15/symposium-explores-using-music-to-improve-social-skills-ease-ptsd/>

“Singing the Way to a Shorter length of Stay”

Hospitals & Health Networks Website, August 29, 2016.

http://www.hhnmag.com/articles/7584-singing-the-way-to-a-shorter-length-of-stay-at-vanderbilt?utm_source=twitter&utm_medium=social&utm_campaign

“VU Music, Mind & Society Program may feed Nashville innovation”

Venture Nashville Website, August 15, 2016.

<http://venturenashville.com/reporters-notebook-br-vu-music-mind-society-program-may-feed-nashville-innovation-cms-1409>

“Can music make you a better athlete?”

PBS NewsHour Online. August 8, 2016.

<http://www.pbs.org/newshour/runtdown/can-music-make-you-a-better-athlete/>

“Class of 2016: Michaela Novakovic mixes music and science”

MyVU, May 5, 2016

<https://news.vanderbilt.edu/2016/05/05/class-of-2016-michaela-novakovic/>

“Does musical training help reading skills?”

Music Psychology (Blog by Dr. Victoria Williamson), March 16, 2016.

<http://musicpsychology.co.uk/does-musical-training-help-reading-skills/>

"Brain's Song"

Nashville Scene (Cover Story), November 12, 2015.

<http://www.nashvillescene.com/nashville/vanderbilt-researchers-seek-a-new-kind-of-harmony-as-music-unlocks-the-secrets-of-the-mind/Content?oid=6094821>

"Science of music comes alive at 2015 SMPC Conference"

Vanderbilt Kennedy Center Notables, September 3, 2015.

<http://vkc.mc.vanderbilt.edu/notables/2015/09/science-of-music-comes-alive-at-2015-society-of-music-perception-and-cognition-conference/>

"New program set to explore effects of music on the mind"

Research News @ Vanderbilt, September 3, 2015.

<http://news.vanderbilt.edu/2015/09/new-program-set-to-explore-effects-of-music-on-the-mind/>

"Vanderbilt scientists search for elusive benefits of music on the brain"

Nashville Public Radio, January 26, 2015.

<http://nashvillepublicradio.org/post/vanderbilt-scientists-search-elusive-benefits-music-brain>

"Vanderbilt Music & Mind: 2015 Society for Music Perception and Cognition Kickoff"

The Tennessean: Events, August 1, 2015.

http://events.tennessean.com/event/detail/441923511/Vanderbilt_Music_Mind_2015_Society_for_Music_Percption_and_Cognition_Kickoff

"Vanderbilt to host conference of leading music cognition researchers"

Research News @ Vanderbilt, July 30, 2015.

<http://news.vanderbilt.edu/2015/07/vanderbilt-to-host-conference-of-leading-music-cognition-researchers/>

"The most popular research news stories of 2014"

Research News @ Vanderbilt, December 26, 2014.

<http://news.vanderbilt.edu/2014/12/the-most-popular-research-news-stories-of-2014/>

"Children's rhythmic aptitude linked to grammar skills"

San Francisco Chronicle, December 3, 2014.

<http://www.sfchronicle.com/health/article/Children-s-rhythmic-aptitude-linked-to-grammar-5926095.php?t=c0177e648faf83a867&cmpid=twitter-desktop>

"Les liens entre le rythme musical et la grammaire"

Ecole Branchée, November 20, 2014.

<http://www.infobourg.com/2014/11/20/les-liens-entre-le-rythme-musical-et-la-grammaire/>

"Music education can improve grammar skills"

Pakistan Tribune, November 9, 2014.

<http://tribune.com.pk/story/788218/music-education-can-improve-grammar-skills/>

"Links between grammar, rhythm explored by researchers"

Science Daily, November 5, 2014.

<http://www.sciencedaily.com/releases/2014/11/141105101238.htm>

"Researchers explore links between grammar, rhythm"

Research News @ Vanderbilt, October 30, 2014.

<http://news.vanderbilt.edu/2014/10/researchers-explore-links-between-grammar-rhythm/>

"Learning by singing"

Scientific television show E=M6, French TV channel 6 (M6), September 19, 2004.

Professional Community Activities

(See also *Extramural service activities section*)

Talks and Panels: Public Outreach

A winding path from music performance to the science of music. Invited talk, Vanderbilt Science Academy, Program for Talented Youth, July 14, 2019.

Gordon & Boorum. *Language development, rhythm, and the brain.* Lecture, teacher professional development workshop, Montessori Academy, February 16, 2019, Brentwood, TN.

Can Nashville hear the beat? A pathway to rhythm and language in Music City. Keynote speaker, Discovery Society Dinner, Adventure Science Center, November 8, 2018, Nashville, TN.

Adventures in rhythm and language development: from neurobiology to intervention. Mainly Mozart Festival: Music and the Mind, Invited Featured Lecture. June 10, 2017, La Jolla, CA.

Lense, Gordon & Dykens. *Musical Engagement in Language Impairment, Autism, and Williams Syndrome.* American Association of Intellectual and Developmental Disabilities Webinar series. April 4, 2017, Broadcast on AAIDD website.

Why rhythm matters for Language Development. Lightning talk at Science of Song: Music, Mind & Society Annual Symposium. Blair School of Music at Vanderbilt University, September 12, 2016,

Rhythm and Language Development in Children. Lightning talk at Vanderbilt Music & Mind Kickoff to SMPC 2015 conference, Blair School of Music at Vanderbilt University, August 1, 2015.

Singing Neurons: How your brain processes music, speech and song. Workshop presenter at Expanding your Horizons, a science enrichment conference for high-school girls, Middle Tennessee State University, Murfreesboro, TN, Oct. 31, 2009.

My Fellowship Year: AAUW Educational Foundation Dissertation Fellowship, American Association of University Women, Murfreesboro, TN branch, October 9, 2008.

Round table discussion on multi-linguism, RTTR in Trento, Italy, 2002.