

## Curriculum Vitae

Updated May 2023

**NAME:**

**LINCOLN GRAY**

**ADDRESS:**

Department of Communication Sciences and Disorders  
James Madison University  
MSC 4304, 235 Martin Luther King Jr. Way  
Harrisonburg, VA 22807  
Email: [graylc@jmu.edu](mailto:graylc@jmu.edu)

**WEB SITES:**

<https://csd.jmu.edu/computationallab.html> (lab)  
<http://www.csd.jmu.edu/csdsquared/> (maps of diseases)  
<http://www.csd.jmu.edu/people/gray.html> (vitae)  
<http://nba.uth.tmc.edu/neuroscience/> (on-line textbook ; Sect II, Chapters 10-13)

**UNDERGRADUATE EDUCATION:** B.A. Magna Cum Laude, Carleton College, MN: Biology

**GRADUATE EDUCATION:** M.Ed. University of Houston (Curriculum and Instruction)  
Ph.D., Michigan State University (Neuroscience/Zoology)

**POSTGRADUATE TRAINING:** Visiting Assistant Fellow, Yale University  
Otolaryngology Department, University of Virginia

**CURRENT ACADEMIC POSITIONS:**

Professor, Department of Communication Sciences and Disorders, James Madison University, 2005-.

Adjunct Research Professor, Department of Otolaryngology, University of Virginia Medical School, 2006 - .

**Past Academic Positions:** Professor and Director of Research, Department of Otolaryngology - Head and Neck Surgery; Adjunct Professor of Computational Biomedicine, School of Health Information Sciences; Joint Appointment, Department of Neurobiology and Anatomy; Faculty, Graduate School of Biomedical Sciences (GSBS); all at the University of Texas Health Science Center at Houston, 1982-2005. Adjunct Faculty, Department of Curriculum, Baylor College of Medicine 2000-2005.

**HONORS AND AWARDS:**

Invited Graduate Commencement Speaker, James Madison University, Dec 2019.

“Dukes Inspire”; selected as an employee who makes a “positive impact on the lives of students with disabilities on our campus”, 2017

Senior Fulbright/Nehru Research Funding, 1 month, 2016-2017.

College of Health and Behavioral Studies, Distinguished Teacher Award (prize and commencement address) 2015

College of Integrated Science and Technology, Madison Scholar Award (prize and special lecture), 2011.

Collaborative Spirit Award, 2010, JMU-Rockingham Memorial Hospital Collaborative, for ‘Gender differences in Heart Failure – Retrospective Research’

Madison Research Fellow, James Madison University, 2009-2010. Member of inaugural cohort.

Gray. L. Vulnerable listeners are abnormally distracted by unpredictable backgrounds and details. 2 hour Keynote Presentation. 39th MidSouth Conference on Communication Disorders, Memphis, TN, 2009.

Madison Teaching Fellow, James Madison University 2007-2008.

Invited “Distinguished Visiting Researcher”, University of Auckland, NZ, 2006.

Invited “Distinguished Visiting Faculty”, 30<sup>th</sup> Annual Fitz-Hugh Symposium, Otolaryngology, University of Virginia Health System, June 2006.

Elected "Best First-Year Teacher" by medical-school class of over 200 students

Senior Fulbright Fellow 1997-1998: Research on patterns of cancer in Asia and Africa.

Nominated for "Most Memorable Lecture" by medical-school class

Invited “Head and Neck Trust Lecture”, Royal College of Surgeons, Auckland, New Zealand, 1999

One of 3 Ph.D. faculty selected for salary support under the inaugural Educational Scholars Fellowship Program

2002-5 (approved for 2005-08). One of two University of Texas faculty selected for 1<sup>st</sup> Master-Teacher Fellowship, in collaboration with Baylor College of Medicine, 2000-2001.  
NIH used grant progress report for congressional justifications, 1995.  
Invited speaker on "Productive Collaborations" to the Advisory Council of the National Institute of Nursing Research (NIH), 1994  
Consulting Editor, Developmental Psychobiology, 1987-1995.  
Reviewer for the International Journal of Pediatric Otorhinolaryngology, Journal of the Acoustical Society of America, Pediatrics, International Journal of Developmental Psychobiology, Journal of Comparative Psychology, Ear and Hearing, Annals of Otology, Medical Education.  
Dean's Teaching Excellence Award, 1989, 2001, 2004. Problem-Based Learning Facilitator Award, 2005.  
Departmental Teaching Excellence Awards, 1983-91. School Award for Outstanding Faculty, 1990  
Elected by students as "Best Teacher in Developmental Anatomy", 1986, 1988-1990, 1992-4, 2002. Elected by Classes of 1992, 1993 to address incoming medical students on importance of basic sciences  
First student to complete dual Ph.D. in Neuroscience and Zoology, Michigan State University  
Elected to Sigma Xi and Phi Kappa Phi honor societies.  
Michigan State University Graduate School Fellowships.  
Sloan Foundation Postdoctoral Fellowship.  
B.A. Magna Cum Laude, Carleton College.

#### **SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES:**

Invited and paid reviewer of text-book proposals and drafts, 2010, 2011, 2013.  
Autism Speaks Grant Review Study Section, 2008 Spring and Fall, 2009.  
Member NIH Special Emphasis Study Section, ZDC1 SRB-R (33), January 2005.  
Site visitor, National Institute of Environmental Health Sciences, NIH, 2002.  
Site visitor, Hearing and Auditory Research study section, NIH, 1996.  
Ad-hoc reviewer for 1) Sensory Physiology and Perception, and 2) Psychobiology Programs of National Science Foundation.  
Advisor, Committee on Hearing, Bioacoustics & Biomechanics of the National Research Council, 1984-2000.  
Acoustical Society of America, Psychological and Physiological Technical Committee, Member at Large 1993-1996.  
Local Organizing Committee, Technical Program Committee, Plenary Session Organizer, and Session Chair for Acoustical Society of America Meeting in Houston, 1991.  
Administrative Committee, Acoustical Society of America, 1987-1989.

#### **SERVICE TO THE UNIVERSITY:**

Prestigious Scholarships Liaison, facilitate CSD students wishing to apply for Fulbright etc. 2018-  
Mentor, JMU Judicial Council, Mentor students in legal trouble, 2010-  
Honors Liaison, facilitate CSD undergrad. honors theses. 2009-present.  
CSD AuD and Undergraduate Councils, JMU 2005 – present.  
University Conflict of Interest Committee. 2019 –present.  
Committee to recommend College Teaching and Research awards. 2017- present.  
Institutional Animal Care and Use Committee, 2020.  
Mentor foreign students in for JMU's Leaders in International Friendship Exchange program 2012- 2016.  
JMU Research Advisory Committee, 2008-2018.  
Member JMU/Rockingham Memorial Hospital Collaboration Team, 2008 – 2012.  
Member Autism Collaboration, JMU 2008 – 2012.  
Faculty Adviser, JMU Student Campus Ministry group, 2014-2016.  
Invited motivational speaker to incoming faculty (2012, 2013).  
Search Committee, CSD Department Chair, 2011-12.  
CSD SLP Council, JMU 2005-2016.

Promotions and Appointment Committee, Dept. CSD. 2011-2013.  
College of Integrated Science and Technology International Committee, 2011-13 .  
First-year reading, discussion of provocative articles with incoming freshmen, 2009 – 2013.  
Invited, paid participant in Madison Institute on Academic Rigor, June 2011.  
Facilitator, Scientific Scholarly Writers Group, JMU Center for Faculty Development, 2010.  
Frequent laboratory tours for K-12, college students, elderly, University guests, 1984-2011.  
Health and Human Services Visioning Committee (to think broadly about future STEM education), 2009  
Search Committees, Alvin Baird Professor, 2008; Alvin Baird Centennial Professor of Psychology, 2009.  
Planning team for Biology Building, JMU, 2009.  
Presentation of interactive research for prospective and minority students at recruitment fairs, 2005 - present  
Conversations with Professors, Freshman Orientation 2008 - 2009.

### **SERVICE TO THE COMMUNITY:**

Virginia Master Naturalist (2018-present); Leader of certification class for new members (2023- ); Co-Treasurer (2021-3)  
'Five Senses' tour leader and 'Forest Stewards' work-team member at JMU Arboretum (2019 -).  
Licensed Pesticide Technician (2019 - ). Volunteer in Shenandoah National Park treating Ash and Hemlock trees.  
Letters to a Pre-Scientist (pen-pal program to at-risk teen), 2013-present.  
Volunteer National Park Interpreter, tell visitors about their Peregrine Falcon restoration project (2020)  
Sierra Club (new Shenandoah Valley Chapter) Election Committee Chair, 2007- 2016.  
Board of Trustees, Harrisonburg Unitarian-Universalist Association, 2007- 2010.  
Professional Advisory Board, Houston Center for Hearing and Speech, 1995- 2005.  
President Emerson Unitarian Church, 2000; Vice-President, 1999; Board of Trustees 1997-2002.  
Ask a Scientist or Engineer Hotline, NSF sponsored email forum for high-school students, 1998-2005.  
Advisory Board, Prairie View A&M University (a historically black college), Collaboration to Integrate Research and Education grant from the National Science Foundation, 1997-9.  
UT "House Medics", community service team member, 1993-9.  
Judge, Houston Science & Engineers fair, 1993, 95, 99. Elementary School Science Fair 1993.  
President, Houston Chapter of Acoustical Society of America, 1987-89; Vice President, 1985-86; member at large, 1995.  
Communities in Schools Houston, Inc., Involvement program for academically promising disadvantaged high school students, Summer 1991, 2005.  
President, Westridge Civic Association, 1989 - 1994.  
South Main Center Association, Beautification Subcommittee, 1991-5.

### **SUPERVISION OF DISSERTATIONS AND THESES:**

Supervised 30 Doctoral Dissertations: Cassidy Shugrue (2022-26), Jamilah Odeh (2022-25), Becky Hales, Kate Hobbs (2021-24); Michelle Besser (2020-2023); Elizabeth Surface, Megan Crouse (2017-2021); Anna Louthan & Logan Faust (2015-19), Kathleen Burns (AuD 2014-18; won Best Poster award at Graduate School Scholarship Showcase 4/17); Sofia Ganey & Melissa Teller (AuD 2013-17), Robyn Browne & Michelle Gerringer (AuD 2011-2016), Cara Sanderson & Megan Klingenburg (AuD 2012-15), Andrea Liuzzo (AuD 2011-14), Anne Hogan (PhD 2011- 13), Bethany McGee & Bryna Rickenbach (AuD 2009-13), Kristin Shearer (AuD. 2009-12); Jessica Sitcovski (PhD 2009-10); Jessica Miller, Lauren McIntosh & Brooke Stogner (AuD 2007-10), Erica Cole & Laura Davies (AuD 2007-9), Lisa Mages (AuD 2005-08). Kara Norcross (AuD 2007). Debra Wilmington (PhD 1987-92).  
Seven additional students completed graduate dissertation work in my laboratory with my help (though I was not the official supervisor), including Taylor Arbogast (Aud 2019-22); Kristie Meehan (AuD 2010-13; won AAA Jerger student research award); Kate Belzner (AuD/PhD 2005-10); Joshua Breier (University of

Houston, Ph.D., 1991-3); Janet Banks (Doctor of Nursing), Diane Ballweg (U.T. School of Nursing, MSN, 1991), Rebecca Stroud (U.T. School of Nursing, MSN, 1991-2)

Served on 61 Doctoral Thesis Advisory Committees: Diana Trinidad, Joanna Goedeke (2023-4); Elizabeth Pahigianis (2023-5); Becca Civil (2022-24); Haley Szabo, Erin Hernon, Lara Leggio, Sara Wright (AuD 2021-23); Andrew Thorne, Bonnie Purtill, Susanne Nelson, Kerri Lawlor, Taylor Arbogast (AuD 2020-22); Valerie Beacham (AuD 2018-21), Julia Dawson (AuD 2016-20); Nicole Jones (AuD 2016-18), Allie Matz (AuD 2015-18); Alexa Short, Ali Bove, Molly Shearer (AuD 2014-17), Alison McGrath, Sarah McClements (AuD 2013-16), Nicholas Barone (PhD 2012-5), Caitlin Cotter, Larisa Heckler & Katie Sabri (AuD 2013-15), Daniel Shearer (AuD, 2011-14), Marsha Longerbeam (PhD, 2011-13), Lauren Shastanay & Verleyne Andrews (AuD 2011-13), Meredith Robotti & Sara Blankenship (AuD 2010-12), Brenda Fogus (PhD 2009-12), Julie Wheeler & Sheena Jessee (AuD 2010-11), Jessica Sitcovski (PhD 2008-9), Philip Bond, Melisa McNichol & Sara Spork (2008-10), Candace Thorpe & Sara Billari (2007-9), Kate Belzner (2005-10), Kara Wright, Lori Hanline & Kimberly Croteaux (2006-8); At UTx Ph.D.: Chris Hymel (1989-94; 2002-7), Ev McClendon, (1993-6; 2000-9); Matthew Murphy (2003-4); Keith Kline (2002-5); Ashley Cain (2002-3); Shelly Babin (2002-5); Richard Machado (2001-4); Eric Plautz (1993-5); Youping Xio (1993-5); Keith Garcia (1993-4); Jeff Stekete (1987-9); Elsewhere: Richard Brink (Mechanical Engineering, University of Houston, 1991-2); Bret Mensch (M.D./Ph.D., Baylor College of Medicine, 1989-91); Karen Johnson (Audiology, Baylor College of Medicine, 1988-94); Ahmed Nassef (Mechanical Engineering, University of Houston, 1985-7).

Served on several interdepartmental master's degree committees: Ben Stone, Laura Reinert, Psych (2023); Supervised 18 Undergraduate Senior Honors Theses: Brid Collum (2024), Danielle Bates, Bailey Kramaric (2022), Madison Ferguson (2021), Elisa Morgan (2020), Ashley Hillyard, Nicolette Chuss (2019), Amanda Cascio (2018), Elizabeth Surface (2017), Camila Czulada (2016); Kathryn Brooks, Dakota Sharp (2015), Valerie Acquesta (2014, won best thesis in CSD), Nicole Spielsinger, Sophia Ganev, Abby Lantzy (2013); Emily Combs (2011); Elizabeth Gerhart (2009, won best thesis in Dietetics), Julie Gaven (2009, won best thesis in CSD). Member of undergraduate honors thesis committees: Katherine Kress (2021), Rachael Pittard, Jenna Novick, Lauren Maher, Megan Taliaferro (2015), Allison McGrath (2012); Elizabeth Bihn (2009), Steven Kulsar (2008); Kimberly Ward, Brea Aker (2007).

Supervised 2 Graduate Directed Studies: Rhagav Jha, Hessung Park (2022) and 40 Undergraduate Independent Studies: C Alix (2021); S. Alexander, A. Hodges, K. Brownwell, C. Clore, H. Henson (2020); M Letsky, C McGovern, H Hoyns (2019), A Wilson, K Sobredilla (2018); Alexa Pianta (2017), Lora Derflinger (2016), Kathleen Harbolick, Jordan Justis (2015-16), Erin Gatti, Michelle Devine, Megan Eitel, Molly Young (2013); Leigh Anne Bacon, Jennifer Garbarini (2012); Laura O'Connor, Irene Beam, Amy Byers (2011); Whitney Powell (2010). Co-supervised Engineering Capstone Project (2011-2014) with ten students from engineering, business, and CSD. Other undergraduates who have volunteered in my lab include S. Shelton, T Huong, P. Davis, J. Denton, C. VanGeluwe, C. Alix, A. Connors (2020-1) Allen Derina (2013-4); Kelsey Seymour, Lauren Pesta, Kelsey Ambrose, Nicholas Rischcoff, Melisa Maddox (2012-3); Julie Vest, Hillary Scott (2012); Lauren Curtis, Laura Stepp, Tyler Vick (2011); Jenna Pellicori, Logan Douglas, Brittany Fielding, Jessica Green, Lauren O'Baugh, Kelly Chamberlain, Quintin Brubaker, Sarah Kavianpour (2010); Melissa Class, Whitney Powell, Bethany McGee, (2009).

#### **CURRENT TEACHING RESPONSIBILITIES:**

Neuroanatomy and Neurogenic Communication Disorders, (CSD/BIO415) annually for ~100 undergraduates and Cross listed with Biology as key part of a Neuroscience Concentration

Research in Communication Sciences, (CSD620) annually for AuD students.

Psychoacoustics (CSD523) annually for AuD and other graduate students

Supervision of AuD dissertations.

Analyze data for many AuD students and assist in technical issues.

Guest lecturers: Hearing and Cleft Palate (CSD200), Methods of Measurement (PhD Seminar, measuring electricity and perceptions);

### **Past Teaching Responsibilities:**

Neuroanatomy and Gross Anatomy Laboratory (ExEd 305; 2018-19);

Mentor: Honors200: Research in Practice (2015).

Guest lectures in Audiology (CSD302), “Auditory Plasticity” (CSD513); “The Art of Being an Investigator” (CSD600), Auditory Development (CSD 711),

Strategies for Making Sense of Complex and Variable Data, Advanced Seminar in CSD, in a rotation of courses for Ph.D. students.

Problem Based Learning, facilitate student-directed clinical learning experience, annually for 2nd year medical students, 1994 – 1999; two to four times yearly, 2000 - 5.

Art of Observation, quantify learning in an elective course offered with Museum of Fine Arts Houston, 2002-5.

Developmental Anatomy, head, neck & ear development, annually to 1st-year medical students 1983-5.

Advanced Neurobiology II, developmental plasticity, bi-annually to graduate students 1990 - 2002.

Prepare multi-media neuroscience Web-based syllabus on auditory system, 2000-5.

Introduction to Computers. Summer Enrichment and Pre-Entry Programs, 1996- 2005.

Neuroscience, lecturer and group leader for Otolaryngology clinical correlations, annually for 1st-year medical students, 1990 - 2005.

Otolaryngology Grand Rounds, as needed, 1982- 2005.

Basic Otolaryngology Science, 2 hours on development and sound for residents, 1994 – 2005.

Computers in Research and Medicine, data acquisition and experimental control, biannually for M.D./Ph.D. students, 1988 - 2000.

Quantitative Biology, introductory statistics and data analysis, annually for graduate students, 1994 - 9.

Developmental Anatomy, Interim Course Director, 1994; Lecture on nervous system 1993-5.

Neuroscience, laboratory instructor and lecturer, annually for first-year medical students, 1983-1995. Lab leader (cranial nerve examination) 1990-1996.

First to make use of interactive Internet graphics in Grand Rounds at UT Dental Branch and M.D. Anderson Cancer Center, 1997.

Supervised research by 2nd-year medical students in 1990, 1994, 2001; Undergraduates in 1993, 1996, M.D./Ph.D. in 1991, 2004. Reviewed developmental anatomy, monthly for 4th-year medical students, 1991-1993; Seminar on Evolution at Baylor College of Medicine, 1991; One-hour lectures on basic science in Otolaryngology, quarterly for 3rd-year medical students 1983-91; Otolaryngology Research Electives, 1988, 1989; Real-time Computer Programming (two semester hour GSBS course) 1984, 1985; Taught Sensory Systems to Nurses 1987-1995.

Sponsorship of postdoctoral fellows: Imma Schneider, M.D. (1989-90); Joe Ramzy, M.D. (1986).

### **CURRENT ADMINISTRATIVE EXPERIENCE**

College Faculty Development Committee 2016 - present. (review in-house grants, awards, sabbaticals for Dean)

Undergraduate Honors-Projects Liaison, 2009- present.

University Conflict of Interest Review Committee, 2018- present.

### **Past Administrative Experience (selected)**

Communication Sciences and Disorders, Research Seminar Series Coordinator, 2008-2018.

Promotions and Tenure Committee, Department of Health Professions 2017.

University Research Council, JMU, 2006 - 2019.

Promotions and Tenure Committee, Dept CSD, 2011-2014.

Chair, Institute for Innovations in Health and Human Services Research/Scholarship Community (2007 - 2011).

Howard Hughes Medical Institute Grant Committee, JMU 2007 - 08.

Chair, Medical School Educational Computer Services Advisory Committee, 1987- 1995 (helped implement the first requirement for medical students to have access to a computer and then implement a laptop requirement).

Medical School Admissions Committee and Otolaryngology Resident Selection Committee: regular interviewer 1989- 1995.

President, Health Science Center Academic Computing Committee, 1991-96 (First elected chair). President's Medical School Appointee, 1988-96. Network Subcommittee, 1990. Wireless Steering Committee: 2000–04. Computer Coordinating Committee, 1987-1989.

Chair, Information Services Self-study Committee, for Southern Association of Colleges and School's accreditation of the University of Texas Health Science Center at Houston, 1987-1990.

Medical School Curriculum Committee: 1994 – 2005.

University Chemical Safety Committee: 1998 - 2005.

LCME Committee on Resources for Educational Programs 2002-4 (for successful accreditation).

School of Health Information Sciences, 5 year review committee, 2003.

Faculty Developmental Leave Committee: 1998 - 2003.

Task Force on Educational Initiatives, 1992-1993 (developed recommendation for problem-based learning in a medical curriculum).

Orthopedics Residency Program Review Committee, 1991.

Medical School Animal Care Committee, 1985-1990. Chairman, Policy subcommittee, 1989-1990. (Supervised preparation of new forms after the Animal Welfare Act).

Medical School Faculty Senate, 1983-1989.

Technology Assessment Team, Institutional Accreditation for Southern Association of Colleges and Schools, 1998-2000.

Community Advisory Council, University of Texas School of Nursing, 1994-7.

Gulf Coast Regional Consortium for the Assessment of Performance Research Working Group, 1991-3 (devise research on medical education with standardized patients).

Committee on the Status of Women, 1989-91; dependent care subcommittee, 1990.

## **GRANT SUPPORT:**

### **Competitive External Support (Public and Private Sources):**

1. Co-Investigator. "Role of Microglia in Sculpting Multisensory Midbrain Circuits, NIH 1R15DC018885-01 , 2020-2023 (\$423,678)
2. Co-Investigator. "Emergence of Modularity and Discrete Multimodal Maps in the Inferior Colliculus" NIH R15 DC015353. 2017-2020 (\$427,773)
3. Fulbright-Nehru Academic and Professional Excellence Awards under Research Flex category, 2016-2018 (~\$15,000)
4. Collaborator. (M. Gabriele, P.I.) NIH R15 - DC012421-01 Eph-ephrin signaling in Mapping Auditory Midbrain Circuitry. 2012-14 (\$320,135)
5. Co-Principal Investigator (M. Gabriele PI). Establishing complex auditory circuits: Molecular mechanisms and functional implications for treating the hearing impaired. Commonwealth Health Research Board (#1 proposal in VA in 2009). 7/1/2009-6/30/2011. (\$194,463)
6. Co-Principal Investigator, (B. Kesser, M.D., PI) Surgical Repair of Unilateral Congenital Aural Atresia, \$31,290, Richmond Eye and Ear Foundation, 2009-10.
7. Principal Investigator, "Early Development of Auditory Temporal Processing" NIH RO1 DC4303 (\$753,426), 2001-2009.
8. Principal Investigator, "Functional Maps of Disease Spread: Visual Summary of Underlying Trends, Automated Detection of Unusual or Novel Events, and Interactive Education., Institute for Defense and Homeland Security, \$54,000, 2006.
9. Collaborator (5% effort). "Effects of Noise on Newborns < 1000g Birthweight", NIH RO1 HD42639 R. Lasky P.I. (\$1,112,018), 2004-2005.
10. Principal Investigator. "Early Development of Auditory Temporal Processing" March of Dimes #12 – FY00-0166 (\$179,951), 2000-2002.

11. Co-principal Investigator with J. Breier, P.I. and J. Fletcher "Auditory Temporal Processing in Children with Dyslexia" NIH (\$703,000) 1998-2002 (also approved for funding by March of Dimes, \$128,000 1998-2000, but not activated)
12. Consultant to Baylor College of Medicine's Department of Family Practice, "Predoctoral Training in Primary Care", Bureau of the Health Professions, Public Health Service (\$375,330) 2000-2003.
13. Principal Investigator with A. Holian, Co.P.I. "How Environmental Toxins Affect Perceptual Development" NIH RO3 ES08622 (\$75,000), 1996-2000.
14. Principal Investigator. "Maps of Cancer" NASA/TMC contract (\$130,000) 1996-2000. Selected by sponsor to receive addition funds after successful completion of initial aims.
15. Fulbright Fellowship "Research on patterns of cancer in Asia and Africa" (\$38,000) 1997-8.
16. Principal Investigator with R. Jahrsdoerfer, Co.P.I. "Roles of Early Experience in Development of Hearing," NIH (\$849,000), 1990-1998 (also approved by NSF for 1990-1993 but not activated).
17. Co-Principal Investigator with M. K. Philbin, P.I. "Developing an Avian Model of Prematurity" NIH (\$50,000), 1993-1997.
18. Principal Investigator "Predicting the Spread of Cancer," Cray Research, Inc. (\$23,000), 1994-1996.
19. Principal Investigator with M. K. Philbin, Co.P.I. "Perinatal Influences on Developing Auditory Perceptions," NIH (\$293,630), 1991-1994.
20. Principal Investigator. "Neonatal Development of Auditory Responsiveness," NIH (\$249,869), 1987-1992.
21. Principal Investigator with R. Jahrsdoerfer, Co.P.I. "Roles of Auditory Experience in Human Hearing," Deafness Research Foundation, 1988.
22. Principal Investigator. "Neonatal Development of Auditory Frequency Selectivity," NIH, 1984-1987 (also approved by NSF for 1984-1987 but not activated).
23. Principal Investigator with E. Rubel, Co.P.I. "Experiential Influences on Perceptual Development," NIH, 1980-1982.

### **Internal Institutional Grants:**

1. Madison Trust Awards: "To train our service members diagnosed with traumatic brain injury to avoid distractibility due to normal background sounds" and "Toward a new hearing test and training for central auditory processing disorders and distractibility by background sounds: when listeners miss the forest for the trees, (with R. Nagel, B. Kesser; D. Bernstein) \$13,730, 2015-present. (success in inaugural competition to alumni investors)
2. CHBS Collaborative Grant, 'Hearing in Aging Mice' (with S. Baker and C. Clinard) \$3763 2019-2020.
3. To quantify uncontrolled variance in deployed stereo-hearing tests (with B. Kesser) 4Va Research Consortium (\$500; more than requested) 2017.
4. To build two more deployable stereo-hearing test systems (for deployment to Seattle and Auckland). Lions' of Virginia (with B. Kesser). \$1086 June 2016.
5. Continuing Constructed Cartography, CHBS mini-grant, (\$399) Feb 2015 for updated software.
6. Deployment of a Working Prototype for Stereo Hearing Tests (with R. Nagel and B. Kesser) 4Va Research Consortium (\$1200) 2014.
7. Explore scientific and teaching collaborations in India, \$2950, 2014.
8. Auditory masking in a rodent model of ADHD (with J. Dyché) CHBS Collaborative and Interprofessional Initiative (\$9,639) 2013.
9. A Deployable Stereo Hearing Test System (with R. Nagel and B. Kesser) 4Va Research Consortium (\$4620) 2013.
10. CHBS Teaching/Research Award for Matlab support (\$1294) 2013.
11. "An Animal Model of ADHD" (with J. Dyché) CHBS Mini-grant (\$860) 2013.
12. "The Many Benefits of Working with New Zealand Otolaryngologists", Competitive Research Grant, JMU (\$4000), 2011.

13. "Travel to Stockholm", CISAT Mini-grant (\$930), 2011, to work on breast cancer models at the Karolinska.
14. Principal Investigator, "Toward a Computerized Constructive Cartography and Communication Center". Institute for Information and Infrastructure Assurance, JMU (\$26,540) Summer, 2008.
15. Principal Investigator, "Distractibility among College Students", Competitive Mosier Award, College of Integrated Science and Technology, James Madison University, \$3000, 2006-9.
16. Principal Investigator. "On-line methods for peer-review in Problem Based Learning, University of Texas Houston Medical School Educational Scholars Fellowship Program, (\$60,000), 2002-2005; approved for 2005-2008 (\$30,000).
17. Travel grants to the United Kingdom for research and student supervision, (\$1500/yr) 1999, 2001 & 2002.
18. Collaborator: MK Philbin PhD/RN (P.I.), J Sparks MD, M Verklan PhD/RN, L Kramer MD, L Gray PhD, I Butler MD. "Unique Neurobehavioral responses of newborns to magnetic resonance imaging: An investigation of the relationship between auditory stimulation, autonomic regulation, and cardiovascular function in the neonate. UT Collaborative Research Award, \$76,884, 1995-7.
19. Visiting Scholar, University of Texas Center for High Performance Computing, "Visualizing Complex Patterns in the Spread of Head and Neck Cancers".
20. Small Educational Grants: from Center for Instructional Technology at JMU in 2010 to record lectures, from the U TX Graduate School of Biomedical Sciences in 1987, 1989 and 1995 to teach laboratory data acquisition to M.D./Ph.D. students; and from Medical School Office of Academic Affairs in 1988 for computer-assisted instruction in Developmental Anatomy.
21. Student Stipends from UTX Summer Research Program: 1.5 in 2005 (\$5000 each), 2 in 1990, 2 in 1993 (\$1,000 each) 2 in 1994 (\$2,000 each) to support students working in my lab.

**PUBLICATIONS:**

ResearchGate reports 1500 citations of these articles as of June 2017.

**Refereed Original Articles In Journals:**

1. Peng, E.Z., Waz, S., Buss, E., Shen, Y., Richards, V., Bharadwaj, H., Stecker, G. C., Beim, J. A., Bosen, A.K., Braza, M.D., Diedesch, A.C., Dorey, C.M., Dykstra, A.R., Gallun, F.J., Goldsworthy, R.L. **Gray, L.**, Hoover, E.C, Ihlefeld A., Koelewijn, T., Kopun, J.G., Mesik, J., Shub, D.E., Venezia, J. J . FORUM: Remote testing for psychological and physiological acoustics. *Journal of the Acoustical Society of America*. 2022. <https://doi.org/10.1121/10.0010422>
2. Casazza, G.C, **Gray, L.C.** Hildebrand, D. Kesser, B.K., Acoustic Reflexes in Aural Atresia Patients: Evidence of an Intact Efferent System? *Annals of Otology, Rhinology & Laryngology*. 130: 1004-1009, 2021. PMID: 33491463
3. Louthan, A, **Gray, L.C.**, Gabriele, M. Multi-sensory (auditory and somatosensory) prepulse inhibition in mice. *Physiology & Behavior* 222:112901, 2020 PMID: 32360813
4. Imbery, T.E., Champaloux E., **Gray, L. C.**, Kesser, B.W. Long-Term Audiometric Outcomes after Atresiaplasty for Congenital Aural Atresia. *Otology & Neurotology*, 41: 371-378, 2020. PMID 31821263.
5. Hogan, A. E., Spindel, J. H, **Gray, L. C.** Quantification of Head Acceleration during Vestibular Rehabilitation Exercises. *Journal of the American Academy of Audiology*, 29:15-24, 2018..DOI: 10.3766/jaaa.16026. PMID: 29309020.
6. McRuer, D., **Gray, L.**, Horne, L-A, Clark, E. Incidence of Free-roaming Cats Interaction on Wildlife Admitted to the Wildlife Center of Virginia, 2000 to 2010. *Journal of Wildlife Management and Wildlife Monographs* 81: 163–173, 2016. doi:10.1002/jwmg.21181.
7. Kesser, B, Cole, E., **Gray, L.**, Emergence of Binaural Summation after Surgical Correction of Unilateral Congenital Aural Atresia. *Otology Neurotology*, 37: 499-503, 2016. PMID: 26963665
8. Liuzzo, A., **Gray, L.**, Wallace, M., Gabriele, M. Effects of Eph-ephrin mutations on pre-pulse inhibition in mice. *Physiology & Behavior*, 135: 232–236, 2014. PMID: 24949848



9. Kesser, B; Krook, K, **Gray, L.** Impact of Unilateral Conductive Hearing Loss Due to Aural Atresia on Academic Performance in Children. *Laryngoscope* 123: 2270-2275, 2013. PMID: 23483556
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### **Abstracts and Major Presentations .**

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45. Gray, L. Consistency of Student Peer-Review. Teaching and Learning with Technology Conference. James Madison University, 2007.
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### **ODD AND MISCELLANEOUS FACTS:**

Can write computer programs in Matlab and SPSS. Could (at one time) write in Fortran, C, Java, Basic, Pascal, assembly language, Unix shell scripts, HTML

Could (at one time) speak, read, and write French, Arabic and Marathi (~Hindi), probably retain enough to get by or relearn.

Was distance runner in high-school and college (~5.5 min/mile in teens and many pounds ago, and so far able to keep time in mile from increasing more than 1 min/decade = +16ms/day)

A bike commuter, canoer (MN heritage), and hiker (too often humbled by small sections of the Appalachian Trail). Have ridden many 'centuries' (100-mile bike rides) in past decades.

Once worked as professional bird watcher. Licensed falconer in high school. Raptor rehabilitator in college. Recent volunteer 'PeFa Interpreter' in Shenandoah National Park (talking to visitors about Peregrine Falcons).

Certified Virginia Master Naturalist (2018- present)

Have trekked over 14,000 feet of elevation on Kanchenjunga in the Himalayas (3<sup>rd</sup> highest mountain in the world) and in Pakistan's Karakorum Range (of which K2 is the highest peak).

Published my junior-high-school science-fair project.

Started to learn harp as a senior citizen (with no talent).

Got my name because I am related to Abraham Lincoln's step mother's sister. Also 12<sup>th</sup> generation descendant of Roger Williams, who founded the colony of Rhode Island in 1636.  
Started teaching about sensory systems first to ENT residents, then medical students, then graduate students, then undergraduate students, and now to kindergarten students.