

MELISSA L. CARAS, Ph.D.

Contact Information

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Positions

2019 - present	Assistant Professor I Department of Biology University of Maryland College Park
2013 - 2019	Postdoctoral Fellow I Center for Neural Science New York University

Education

2013	Ph.D. Neurobiology and Behavior I University of Washington
2007	B.S. Neuroscience, Biology I Brandeis University

Research Support and Fellowships

2023 - 2028	NIH/NIDCD R01 Research Project Grant
2017 - 2022	NIH/NIDCD K99/R00 Pathway to Independence Award
2015 - 2017	NIH/NIDCD F32 NRSA Postdoctoral Fellowship
2010 - 2013	NIH/NIDCD F31 NRSA Predoctoral Fellowship
2008 - 2010	NIH/NIDCD T32 Research Training in Speech and Hearing Sciences

Honors and Awards

2025	APAN Junior Faculty Award
2025	Geraldine Dietz Fox Young Investigator Award, ARO
2024 - 2028	NIH AUD Study Section, Standing Member
2023	Schacht Lecturer in Auditory Science, Kresge Hearing Research Institute
2021 - 2024	Brain and Behavior Research Foundation NARSAD Young Investigator Award
2015 - 2020	NIH/NIDCD Pediatric Loan Repayment Program Award
2016	Travel Award, Auditory System Gordon Research Conference
2016	Travel Award, Advances and Perspectives in Auditory Neuroscience
2010	Travel Award, International Society for Neuroethology Student
2010	Travel Award, Graduate and Professional Student Senate
2010	Travel Award, Association for Research in Otolaryngology
2009	Honorable Mention, NSF Graduate Research Fellowship Program
2007-2009	Achievement Reward for College Scientists (ARCS) Foundation Fellowship

Peer-Reviewed Publications and Preprints

Macedo-Lima, M., McCollum, M., **Caras, M.L.** (2026) Perceptual training selectively strengthens top-down signaling to sensory cortex. [BioRxiv]. [Preprint] <https://doi.org/10.64898/2026.06.25.734556>. Under review.

Winne, J., Schrader, R., Anfuson, M., **Caras, M.L.** (2026) Experience-dependent modulation of extracellular matrix integrity supports perceptual skill learning and memory. *Proceedings of the National Academy of Sciences (PNAS)*. In Press.

- Ying, R., Stolzberg, D., **Caras, M.L.** (2025) Neural correlates of perceptual plasticity in the auditory midbrain and thalamus. *Journal of Neuroscience*. 45(10):e0691242024
- Macedo-Lima, M., Hamlette, L., **Caras, M.L.** (2024) Orbitofrontal cortex modulates auditory cortical sensitivity and sound perception in Mongolian gerbils. *Current Biology*. 34(15):3354-3366.
- Ying, R., Hamlette, L., Nikoobakht, L., Balaji, R., Miko, N., **Caras, M.L.** (2023) Organization of orbitofrontal-auditory pathways in the Mongolian gerbil. *Journal of Comparative Neurology*. 531(14):1459-1481.
- Caras, M.L.**, Happel, M.F.K., Chandrasekaran, B., Ripollés, P., Keesom, S.M., Hurley, L.M., Remage-Healey, L., Holt, L.L., Wright, B.A. (2022) Non-sensory influences on auditory learning and plasticity. *Journal of the Association of Research in Otolaryngology*. doi:10.1007/s10162-022-00837-3.
- Wang, L., **Caras, M.L.**, Karayannis T., Froemke, R.C. (2021) Editorial: Mechanisms underlying experience-dependent plasticity of cortical circuits. *Frontiers in Cellular Neuroscience*. 15:687297.
- Mowery, T.M.*, **Caras, M.L.***, Hassan, S., Wang, D., Dimidschstein, J., Fishell, G., Sanes, D.H. (2019) Preserving inhibition during developmental hearing loss rescues auditory learning and perception. *Journal of Neuroscience*. 39(42):8347-8361. (*equal contribution)
- Caras, M.L.** and Sanes, D.H. (2019) Neural variability limits adolescent skill learning. *Journal of Neuroscience*. 39(15):2889-2902.
- Featured article in This Week in the Journal: Esch, T. (2019) More neuronal variability, slower learning in adolescents. *Journal of Neuroscience*. 39(15):2775.
- Caras, M.L.**, Sanes, D.H. (2017) Top-down modulation of sensory cortex gates perceptual learning. *Proceedings of the National Academy of Sciences (PNAS)*. 114(37): 9972-9977.
- Larson, T.A., Lent, K.L., Bammler, T.K., MacDonald, J.W., Wood, W.E., **Caras, M.L.**, Thatra, N.M., Budzillo, A., Perkel, D.J., Brenowitz, E.A. (2015) Network analysis of microRNA and mRNA seasonal dynamics in a highly plastic sensorimotor neural circuit. *BMC Genomics*. 16:905.
- Caras, M.L.**, Sanes, D.H. (2015) Sustained perceptual deficits from transient sensory deprivation. *Journal of Neuroscience*. 35(30):10851-10865.
- Caras, M.L.**, Sen, K., Rubel, E.W., Brenowitz, E. (2015) Seasonal plasticity of precise spike timing in the avian auditory system. *Journal of Neuroscience*. 35(8): 3431-3445.
- Buran, B., Sarro, E., Manno, F., Kang, R., **Caras, M.L.**, Sanes, D.H. (2014) A sensitive period for the impact of hearing loss on auditory perception. *Journal of Neuroscience*. 34(6):2276-84.
- Caras, M.L.** (2013) Estrogenic modulation of auditory processing: a vertebrate comparison. *Frontiers in Neuroendocrinology*. 34(4):285-299.
- Larson, T.A., Wang, T., Gale, S.D., Miller, K.E., Thatra, N.M., **Caras, M.L.**, Perkel, D.J., Brenowitz, E.A. (2013) Post-Synaptic Neural Activity Regulates Neuronal Addition in the Adult Avian Song Control System. *Proceedings of the National Academy of Sciences*. 110(41):16640-16644.
- Caras, M.L.**, O'Brien, M., Brenowitz, E.A. and Rubel, E.W. (2012) Estradiol selectively enhances auditory function in avian forebrain neurons. *Journal of Neuroscience*. 32(49):17597-17611.
- Caras, M.L.**, Brenowitz, E. and Rubel, E.W. (2010) Peripheral auditory processing changes seasonally in Gambel's white-crowned sparrows. *Journal of Comparative Physiology A*. 196(8): 581-599.
- Caras, M.L.**, MacKenzie, K., Rodwin B., and Katz, D.B. (2008) Investigating the motivational mechanism of altered saline consumption following 5-HT_{1A} manipulation. *Behavioral Neuroscience*. 122(2): 407-415.

Book Chapters

- Caras, M.L.** and Remage-Healey, L. (2016) Control of peripheral and central auditory processing by estrogen in birds. pp 77-100. In: *Hearing and Hormones. Springer Handbook of Auditory Research*. A. Bass, J. Sisneros, Fay, D. and Popper, A. eds. Springer Science and Business Media, LLC, New York.

Invited Seminars and Lectures

2026	Biology of Hearing and Balance Course, Marine Biological Laboratory, Woods Hole, MA.
2025	15th Annual Workshop on Auditory Processing. Cody, WY. Association for Research in Otolaryngology Seminar Series. Virtual Platform. University of Rochester, Rochester, NY.
2024	Colorado State University, Fort Collins, CO. Stony Brook University, Stony Brook, NY. National Institute of Deafness and Communication Disorders, Bethesda, MD.
2023	University of Michigan, Ann Arbor, MI. University of Western Ontario, London, Ontario, CA. Brandeis University, Waltham, MA.
2022	University of Illinois, Urbana-Champaign, IL. (Virtual platform.) Biology of the Inner Ear Course, Marine Biological Laboratory, Woods Hole, MA. University of Virginia, Charlottesville, VA. (Virtual platform.) University of Bristol, Bristol UK. (Virtual platform).
2021	Ear Institute, University College London, England. (Virtual platform.) University of Maryland School of Medicine, Baltimore, MD. Johns Hopkins University, Baltimore, MD.
2020	EARS (Electronic Auditory Research Seminars). Crowdcast. https://www.crowdcast.io/e/ears
2018	C-CEBH/NIDCD Joint Meeting. College Park, MD. Auditory SPLASH meeting. Philadelphia, PA. University of Maryland, College Park, MD Emory University, Atlanta, GA University of Colorado, Denver, CO University of Utah, Salt Lake City, UT Northeast Ohio Medical University, Rootstown, OH. Stanford University, Palo Alto, CA.
2017	University of Iowa, Iowa City, IA. University of Pittsburgh, Pittsburgh, PA. Mass Eye and Ear, Boston, MA. Cornell University, Ithaca, NY. Georgia State University, Atlanta, GA. Lehigh University, Bethlehem, PA. York College, York, PA.
2016	New York University, New York, NY.
2015	University of Massachusetts, Amherst, MA.
2014	Brooklyn College, New York, NY.
2012	University of Washington, Seattle, WA.
2011	ARCS Annual Spring Luncheon, Seattle, WA.
2010	University of Washington, Seattle, WA.

Podium Presentations

- Zhou, X., Schumacher, J., Cherkas, K., Stolzberg, D., **Caras, M.L.**, Scarcelli, G. (2026). Total internal reflection waveguide for depth-resolved light delivery. *SPIE Photonics West*. San Francisco, CA, United States.
- Caras, M.L.** (2026). Orbitofrontal-auditory signaling during perceptual learning. *Gordon Research Conference on the Auditory System*. Easton, MA. *Invited Talk.
- Caras, M.L.** (2026) Orbitofrontal-auditory signaling during perceptual learning. *Conference on Cognition, Aging, and Speech Communication*. St. Louis, MO. *Invited talk.
- Caras, M.L.** (2026) Orbitofrontal-auditory signaling during perceptual learning. *Winter Conference on Brain Research*. Big Sky, MT. *Invited talk.
- Caras, M.L.** (2025) Extracellular Matrix dynamism during auditory perceptual learning. *6th Joint Meeting of the Acoustical Society of America/Acoustical Society of Japan*. Honolulu, HI. *Invited talk.
- Caras, M.L.** (2025) Extracellular matrix plasticity enables and stabilizes auditory learning. *Advances and Perspectives in Auditory Neuroscience*. San Diego, CA. *Invited talk. Junior Faculty Spotlight.
- Winne, J., Schrader, R., Anfuson, M., **Caras, M.L.** (2025) The role of perineuronal nets in auditory perceptual learning. *Association for Research in Otolaryngology Midwinter Meeting*. Orlando, FL.
- Caras, M.L.** (2025) Orbitofrontal cortex shapes auditory cortical sensitivity and sound perception. *Association for Research in Otolaryngology Midwinter Meeting*. Orlando, FL. *Invited talk
- Macedo-Lima, M., Hamlette, L.S., **Caras, M.L.** (2024) Orbitofrontal cortex shapes auditory cortical and perceptual sensitivity. *Association for Research in Otolaryngology Midwinter Meeting*. Anaheim, CA.
- Macedo-Lima, M., Hamlette, L.S., **Caras, M.L.** (2023) Orbitofrontal cortex shapes auditory cortical and perceptual sensitivity. *Advances and Perspectives in Auditory Neuroscience*. Washington, DC.
- Macedo-Lima, M., Hamlette, L.S., **Caras, M.L.** (2023) Orbitofrontal cortex shapes auditory cortical and perceptual sensitivity. *Auditory SPLASH*. Philadelphia, PA.
- Macedo-Lima, M., Hamlette, L., **Caras, M.L.** (2022) Activity of orbitofrontal cortical neurons that project to auditory cortex correlates with perceptual sensitivity. *International Conference on the Auditory Cortex*. Magdeburg, Germany.
- Macedo-Lima, M., Jones, L., Ying, R., **Caras, M.L.** (2022) The role of orbitofrontal cortex in auditory perceptual learning. *Gordon Research Conference: Auditory System*. Smithfield, RI.
- Macedo-Lima, M., Jones, L., Ying, R., **Caras, M.L.** (2022) Orbitofrontal Cortex Activity Modulates Auditory Cortex Responses and Sound Detection and Correlates With Perceptual Sensitivity. *Association for Research in Otolaryngology Midwinter Meeting*. San Jose, CA.
- Caras, M.L.**, Wright, B. (2021) Contributions of top-down circuits to perceptual learning. *Association for Research in Otolaryngology Midwinter Meeting*. Virtual platform due to COVID-19.
- Caras, M.L.**, Mowery, T.M., Hassan, S., Wang, D., Sanes, D.H. (2018) Increasing inhibitory gain during development enhances perception. *Gordon Research Conference: Auditory System*. Smithfield, RI.
- Caras, M.L.**, Wang, D., Sanes, D.H. (2017) Cortical mechanisms of perceptual learning. *Association for Research in Otolaryngology Midwinter Meeting*. Baltimore, MD.
- Caras, M.L.**, Brenowitz E.A., Rubel, E.W. (2012) Reproductive hormones modulate spike-timing based auditory intensity discrimination. *Northwest Auditory and Vestibular Research Meeting*. Oregon Health and Sciences University, Portland, OR.
- Caras, M.L.**, Brenowitz E.A., Rubel, E.W. (2012) Estradiol selectively enhances auditory function. *Gordon Research Seminar: Auditory System*. Lewiston, ME.
- Caras, M.L.**, Brenowitz E.A., Rubel, E.W. (2011) The effects of breeding condition on auditory processing in a wild songbird. *Gordon Research Seminar: Neuroethology: Behavior, Evolution & Neurobiology*. Easton, MA.
- Caras, M.L.**, Brenowitz E.A., Rubel, E.W. (2010) Hormonal effects on auditory processing in a wild songbird. *Northwest Auditory and Vestibular Research Meeting*. University of Washington, Seattle, WA.

Conference Abstract

- Renee, M., Stolzberg, D., **Caras, M.L.** (2026) Laminar cortical dynamics during perceptual learning. *Association for Research in Otolaryngology Midwinter Meeting*. San Juan, PR.
- Macedo-Lima, M., McCollum, M., **Caras, M.L.** (2026) Orbitofrontal cortex transmits acoustic and learning-related signals to the auditory cortex during perceptual training. *Association for Research in Otolaryngology Midwinter Meeting*. San Juan, PR.
- Zhou, X., Schumacher, J.S., Cherkas, K., Stolzberg, D.J., **Caras, M.L.**, Scarcelli, G. (2026) Total internal reflection waveguide for depth-resolved light delivery. *SPIE Photonics West*. San Francisco, CA.
- Anfuson, M., Winne, J., Schrader, R., **Caras, M.L.** (2025) Assessing the role of perineuronal nets in the auditory cortex during perceptual learning. *Association for Research in Otolaryngology Midwinter Meeting*. Orlando, FL.
- Ying, R., Miko, N., Stolzberg, D., **Caras, M.L.** (2024) Cortico-subcortical interactions during auditory perceptual learning. *Neural Mechanisms of Acoustic Communication Gordon Research Conference and Seminar*. Sunday River, Maine.
- Winne, J., Schrader, R. **Caras, M.L.** (2024) Auditory learning affects the intensity of parvalbumin-positive (PV+) cell immunostaining and expression of perineuronal nets in the auditory cortex. *Association for Research in Otolaryngology Midwinter Meeting*. Anaheim, CA.
- Ying, R., Miko, N., Stolzberg, D., **Caras, M.L.** (2024) Cortico-subcortical interactions during auditory perceptual learning. *Association for Research in Otolaryngology Midwinter Meeting*. Anaheim, CA.
- Ying, R., Miko, N., Stolzberg, D., **Caras, M.L.** (2023) Cortico-subcortical interactions during auditory perceptual learning. *Society for Neuroscience Annual Meeting*. Washington, DC.
- Ying, R., Miko, N., Stolzberg, D., **Caras, M.L.** (2023) Cortico-subcortical interactions during auditory perceptual learning. *Advances and Perspectives in Auditory Neuroscience*. Washington, DC.
- Winne, J., Schrader, R. **Caras, M.L.** (2023) Auditory learning affects the intensity of parvalbumin-positive (PV+) cell immunostaining and expression of perineuronal nets in the auditory cortex. *Society for Neuroscience Annual Meeting*. Washington, DC.
- Winne, J., Schrader, R. **Caras, M.L.** (2023) Auditory learning affects the intensity of parvalbumin-positive (PV+) cell immunostaining and expression of perineuronal nets in the auditory cortex. *Advances and Perspectives in Auditory Neuroscience*. Washington, DC.
- Macedo-Lima, M., Hamlette, L.S., **Caras, M.L.** (2023) Orbitofrontal cortex shapes auditory cortical and perceptual sensitivity. *Society for Neuroscience Annual Meeting*. Washington, DC.
- Ying, R., Hamlette, L., Nikoobakht L., Miko, N., Balaji, R., **Caras, M.L.** (2023) Organization of orbitofrontal-auditory pathways in the Mongolian gerbil. *Auditory SPLASH*. Philadelphia, PA.
- Ying, R., **Caras, M.L.** (2023) Subcortical plasticity during perceptual learning. *Association for Research in Otolaryngology Midwinter Meeting*. Orlando, FL.
- Macedo-Lima, M., Jones, L.S., Ying, R., **Caras, M.L.** (2023) Orbitofrontal cortex shapes auditory cortical and perceptual sensitivity. *Association for Research in Otolaryngology Midwinter Meeting*. Orlando, FL.
- Ying, R., **Caras, M.L.** (2022) Subcortical plasticity during perceptual learning. *Gordon Research Conference: Auditory System*. Smithfield, RI.
- Ying, R., **Caras, M.L.** (2021) Determining the role of the auditory midbrain in perceptual learning. *Association for Research in Otolaryngology Midwinter Meeting*. Virtual format due to COVID-19.
- Macedo-Lima, M., Jones, L.S., Ying, R., **Caras, M.L.** (2021) Orbitofrontal cortex activity modulates auditory cortex responses and sound detection and correlates with perceptual sensitivity. *Advances and Perspectives in Auditory Neuroscience*. Virtual format due to COVID-19.
- Ying, R., **Caras, M.L.** (2021) Determining the role of the auditory midbrain in perceptual learning. *Advances*

and Perspectives in Auditory Neuroscience. Virtual format due to COVID-19.

- Caras, M.L.,** Sanes, D.H. (2019) Neural variability limits adolescent skill learning. *Association for Research in Otolaryngology Midwinter Meeting*. Baltimore, MD.
- Caras, M.L.,** Mowery, T.M., Hassan, S., Wang, D., Sanes, D.H. (2018) Increasing inhibitory gain during development enhances perception. *Gordon Research Seminar: Auditory System*. Smithfield, RI.
- Caras, M.L.,** Sanes, D.H. (2017) Cortical mechanisms of perceptual learning in juveniles. *Society for Neuroscience Annual Meeting*. Washington, D.C.
- Caras, M.L.,** Sanes, D.H. (2017) Cortical mechanisms of perceptual learning in juveniles. *Advances and Perspectives in Auditory Neuroscience*. Washington, D.C.
- Caras, M.L.,** Sanes, D.H. (2017) Cortical mechanisms of perceptual learning in juveniles. *International Conference on the Auditory Cortex*. Banff, Alberta, Canada.
- Caras, M.L.,** Wang, D., Sanes, D.H. (2016) Cortical mechanisms of perceptual learning. *Society for Neuroscience Annual Meeting*. San Diego, CA.
- Caras, M.L.,** Wang, D., Sanes, D.H. (2016) Cortical mechanisms of perceptual learning. *Advances and Perspectives in Auditory Neuroscience*. San Diego, CA.
- Caras, M.L.,** Sanes, D.H. (2015) Cortical encoding in juvenile animals during a psychometric task. *Association for Research in Otolaryngology Midwinter Meeting*. Baltimore, MD.
- Caras, M.L.,** Sanes, D.H. (2014) Transient hearing loss disrupts subsequent amplitude modulation detection. *Advances and Perspectives in Auditory Neurophysiology*. Washington, DC.
- Caras, M.L.,** Sanes, D.H. (2014) Transient hearing loss disrupts subsequent amplitude modulation detection. *Society for Neuroscience Annual Meeting*. Washington, DC.
- Caras, M.L.,** Sanes, D.H. (2014) Transient hearing loss disrupts subsequent amplitude modulation detection. *Auditory System Gordon Research Seminar and Conference*. Lewiston, ME.
- Woods, V., **Caras, M.L.,** Zheng, Z., Wang, J., Bink, H., Bossi, S., Triumpis, M., Insanally, M., Froemke, R., Sanes, D.H., Viventi, J. (2014) Recording and stimulation of the cortical surface for modulation of evoked auditory potentials. *Neural Interfaces Conference*. Dallas, TX.
- Caras, M.L.,** Sanes, D.H. (2014) A brief period of developmental hearing loss transiently disrupts amplitude modulation detection. *Association for Research in Otolaryngology Midwinter Meeting*. San Diego, CA.
- Caras, M.L.,** Sanes, D.H. (2013) A brief period of developmental hearing loss transiently disrupts auditory perception. *NYU Center for Neural Science Biannual Retreat*. Montauk, NY.
- Caras, M.L.,** O'Brien, M., Brenowitz, E., Rubel, E.W. (2012) Estradiol selectively enhances auditory function in monotonically driven forebrain neurons. *Society for Neuroscience Annual Meeting*. New Orleans, LA.
- Caras, M.L.,** O'Brien, M., Brenowitz, E., Rubel, E.W. (2012) Estradiol selectively enhances auditory function in monotonically driven forebrain neurons. *Gordon Research Conference: Auditory System*. Lewiston, ME.
- Caras, M.L.,** Brenowitz, E., Rubel, E.W. (2011) Hormonal effects on forebrain auditory processing in male and female songbirds. *Society for Neuroscience Annual Meeting*. Washington, D.C.
- Caras, M.L.,** Pollak, J., Fung, S., Mehravari, A., Watari, H. (2011) Sustainability of outreach programs over time: A look back through the first five years. *Society for Neuroscience Annual Meeting*. Washington, D.C.
- Caras, M.L.** (2011) The effects of breeding condition on auditory processing in a wild songbird. *Gordon Research Seminar: Neuroethology: Behavior, Evolution & Neurobiology*. Easton, MA.
- Smarr, B., Corke, A., Lee, M., Georgi, S., Watari, H., **Caras, M.L.,** Chudler, E. (2010) Expanding out reach: Using technology and the internet in neuroscience outreach. *Society for Neuroscience Annual Meeting*. San Diego, CA.

- Caras, M.L.**, Brenowitz, E. and Rubel, E.W. (2010) Peripheral auditory processing changes seasonally in Gambel's white-crowned sparrows. *International Congress for Neuroethology*. Salamanca, Spain.
- Caras, M.L.**, Brenowitz, E. and Rubel, E.W. (2010) Peripheral auditory processing changes seasonally in Gambel's white-crowned sparrows. *Association for Research in Otolaryngology Midwinter Meeting*, Anaheim, CA.
- Georgi, S., Harris, R., Watari, H., White, B., **Caras, M.L.**, Smarr, B., Chudler, E. (2008) Expanding our reach: Ideas and resources for neuroscience outreach. *Society for Neuroscience Annual Meeting*. Washington, D.C.
- Caras, M.L.**, MacKenzie, K., Rodwin B., and Katz, D.B. (2007) Investigating the motivational mechanism of altered saline consumption following 5-HT_{1A} manipulation. *Society for Neuroscience Annual Meeting*. San Diego, CA.

Teaching

2021 - present	Principles of Neuroscience/ Cellular and Molecular Neuroscience Instructor I University of Maryland, College Park, MD
2019 - present	Neurobiology of Extraordinary Senses Instructor I University of Maryland, College Park, MD
2016	Development and Dysfunction of the Nervous System Teaching Assistant I New York University, New York, NY
2011	Undergraduate Neurobiology Journal Club Instructor I University of Washington, Seattle, WA
2008	Introduction to Neurobiology Teaching Assistant I University of Washington, Seattle, WA

Trainees and Mentorship

Postdoctoral Researchers

2025 - present	Mason McCollum
2022 - 2025	Jéssica Winne
2020 - present	Matheus Macedo-Lima
2020 - 2021	Lashaka (Jones) Hamlette

Graduate Students

2024 - present	Marissa Renee
2021	Johena Sanyal (BISI rotation student)
2020 - 2026	Rose Ying

Undergraduate Student Researchers

2026-	Victor Bhattacharjee
2026-	Derrick Antwi (REACH scholar)
2025 -	Kiana Sadreddini
2025 -	Lydia Timbo
2025 -	Kody Johnson
2025 -	Hasini Sade
2025 -	Adam Mathew
2025 -	Kay Angeh
2025 -	Alicia Antony

2025 -	Nivi Srinivas	
2025	Vibha Ramu	
2025	Tanvi Kotta	
2024 - 2026	Makayla Anfuson	(MiNDS Scholar)
2024 - 2026	Jasmine Martin	Biology Honors Student
2024 - 2026	Asbah Qadri	Biology Honors Student
2023	Omatola Fadeyi	(NIH STEP-UP Summer Scholar)
2023 - 2024	Jaclyn Villareal	
2023 - 2024	Rebecca Schrader	
2022 - 2023	Kiefer Cure	
2022 - 2023	Neema Aalemansour	
2022 - 2024	Shakira Knight	
2021 - 2022	Laudan Nikoobakht	
2021 - 2024	Nicole Miko	Biology Honors Student- High Honors
2019 - 2023	Rakshita Balaji	Biology Honors Student- High Honors
2019 - 2022	Gabriel Dayanim	

High School Students

2014 -2017	Lucero Torres	iMentor Partnership, New York City
2010 - 2011	Scott Mitchell	NWABR, Seattle, WA

Other

2022 - present	Shreya Gunda	BIOL dept. sponsor for Honors Program
2022 - present	Sarah Ou	BIOL dept. sponsor for Honors Program
2021 - 2022	Debbie Adam	BIOL dept. sponsor for Honors Program
2020 - present	Cathy Sung	spARO Mentorship Program
2015	Charlotte Nahley	High school job shadow, New York City

Professional Service

Conference organization and service

2026 - 2028	Chair, Advances and Perspectives in Auditory Neuroscience Program Committee
2020 - 2023	Member, Advances and Perspectives in Auditory Neuroscience Program Committee
2020 - 2023	Member, Association for Research in Otolaryngology Travel Awards Committee
2021	Symposium Chair, Association for Research in Otolaryngology
2021	Panelist, Association for Research in Otolaryngology Job Search Panel
2018	Chair, Auditory System Gordon Research Seminar
2016	Vice Chair, Auditory System Gordon Research Seminar
2016	Panelist, Auditory System Gordon Research Seminar Career Panel

Editorial service

2020 - present	Review Editor, Frontiers in Neural Circuits
2019 - present	Review Editor, Frontiers in Cellular Neuroscience

Ad Hoc Grant Reviewer

NIH Special Emphasis Panel (SEP) review ZDC1 SRB K(13)L
NIH AUD Study Section
NIH F01B Fellowship Panel
Royal National Institute for Deaf People
NSF

Ad Hoc Journal Reviewer (selected list)

Nature Communications
Journal of Neuroscience
Journal of Physiology

Journal of Neurophysiology

PLOS Biology

Scientific Reports

For full list see

<https://publons.com/author/1217033/melissa-l-caras#profile>

Professional memberships

2009 - present Member, Association for Research in Otolaryngology

2007 - present Member, Society for Neuroscience

University and Departmental Service

Department, program, college, and university committees

2026 Member, NACS Director Search Committee

2025-present Member, NACS Executive Committee

2023 Member, Inclusive Excellence (IE3) / STEM Equity Learning Community

2023-2025 Member, Biology Department Faculty Affairs Committee

2023-2024 Member, Biology Department Faculty Search Committee

2021 - 2022 Member, Biology Department HR Manager Search Committee

2021 - 2024 Member, NACS Executive Committee

2021 Member, University of Maryland Faculty Animal Planning and Advisory Committee

2020 - 2023 Founder and Chair, NACS Diversity and Inclusion Committee

Service on trainee committees

2026 William Finch, Undergraduate BIOL Honors student, Juntti Lab

2025 - present Lucy Irvine, BISI-PSYS student, Araneda Lab

2025 Ibrahim Sartaj, NACS student, Aradena Lab

2024 - present Sarah Perry, NACS student, Roesch Lab

2023 Salonee Patel, Anatomy and Cell Biology Student at Western University, Ontario (Role: External Thesis Examiner)

2022 Chengjie (Gary)Huang, Postdoc, Anderson and Goupell labs (Role: K99 co-advisor)

2022 - present Jeffrey Baffoe-Bonnie, NACS student, Burgess Lab NIH (Role: UMD co-advisor)

2022 - present Jason Putnam, NACS student, Francis Lab

2021 Kevin Schenider, NACS student, Roesch Lab

2021 - 2025 Vladimir Butyrkin, NACS student, Corbin Lab

2020 - present Bingham Xue, MOCB student, Kanold Lab

2020 - present Jiachen Liu, NACS student, Butts Lab

2020 - 2023 Norma Peña-Flores, NACS student, Herberholz Lab

2020 - 2023 Andrew Borrell, NACS student, Quinlan Lab

2020 Jeong-Yoon Wu, Undergraduate Student, Kanold Lab

2019 - 2026 Rachel Thompson, NACS student, Slevc Lab

2019-2021 Ira Kraemer, NACS student, Carr Lab

Public Outreach and Advocacy

2025 Podcast Interview. On auditory perceptual learning and having fun in science. Stories of Win: Women in Neuroscience. Published July 2025.
Available at: <https://www.storiesofwin.org/podcast>

2015 - 2019 Volunteer, NYU Neuroscience Outreach Group

2014 Media interview. Song Bird Study Could Lead to Improved Prosthetic Limbs (For Humans). National Public Radio. WABE, Atlanta, GA. 11 Dec. 2014.

2012 SfN Host for Neuroscience Olympiad Champion, New Orleans, LA.

2012	Presenter, Expanding Your Horizons Workshop for High School Girls, Bellevue, WA
2011	UW Brain Awareness Week Open House Coordinator, Seattle, WA
2009	American Society for Biochemistry and Molecular Biology Representative, Capitol Hill Lobbying Day. Washington, D.C.
2007- 2013	K-12 Liaison and Webmaster, UW Neurobiology and Behavior Community Outreach