Department of Neuroscience

Washington University in St. Louis School of Medicine

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PROFESSIONAL EXPERIENCE

2023 - present	Assistant Professor Washington University School of Medicine
2013 - 2023	City College of New York (CUNY), Biology Department Associate Professor
2004 - 2013	Postdoctoral Fellow Cold Spring Harbor Laboratory, Cold Spring Harbor, NY

EDUCATION

1998 - 2004	New York University, Center for Neural Science, NY PhD in Neuroscience
1994 - 1998	Stockton University, NJ BS in Biology: track Neurobiology BA in Literature: track French Literature

RESEARCH SUPPORT (Last 5 years)

Ongoing:

NIH R01 03/2024 -02/2029
"Disruption of lateralized auditory cortical function in a mouse model of Rett Syndrome"
Role: principal investigator

Completed:

NIH R21 07/09/21-07/08/24
"Development of hemispheric specializations: comparing the critical period between the left and right Auditory Cortex"
Role: principal investigator

NSF CAREER award 02/01/17-01/31/23
"Mechanisms of lateralized auditory processing"
Role: principal investigator

NIH 1R01NS095123-01 07/01/16-06/30/21
"Effects of direct-current stimulation on synaptic plasticity"
Role: collaborator

PSC CUNY Award 07/01/19-06/30/20
"Decoding functional interactions underlying auditory streaming in cortex"
Role: principal investigator

Whitehall Foundation Research Grant 04/15/15 - 04/14/18
"Structure and function of unique connectivity motifs in the Auditory Cortex"
Role: principal investigator

HONORS AND AWARDS

2023	Roger Perlmutter Career Development Professorship
2016	Keystone Symposia ECITA Travel Award
2008 - 2010	Patterson Trust Fellowship. Program in Brain Circuitry
2006	Human Frontier Science Program (HFSP)
2002 - 2004	National Research Service Award (NRSA), NIH (NINDS)
1998 - 2001	National Science Foundation Minority Predoctoral Fellowship

PUBLICATIONS

- Reid A, Neophytou D, Levy R, Oviedo HV (2024) Mouse auditory cortex undergoes asynchronous maturation in the right and left hemispheres Biorxiv, doi.org/10.1101/2024.01.16.575905

- Differences in sound processing speeds between the right and left auditory cortex reflect the strength of recurrent synaptic connectivity (2022). Neophyte D, Arribas D, Arora T, Levy R, Park IM, HV Oviedo. *Plos Biology* doi.org/10.1371/journal.pbio.3001803.

- Effects of direct current stimulation on synaptic plasticity in a single neuron. Farahani F, Kronberg G, Oviedo HV, Parra LC (2021), *Brain Stimulation* March 22, 2021 doi.org/10.1016/j.brs.2021.03.001.

- Using neural circuit interrogation in rodents to unravel human speech decoding. Neophytou D and Oviedo HV (2020), *Frontiers in Neural Circuits* doi.org/10.3389/fncir.2020.00002

- Circuit asymmetries underlie functional lateralization in the Auditory Cortex. Levy R, Marquarding T, Reid A, Pun C, Renier N, Oviedo HV (2019), *Nature Communications*, 10(1):2783

- Connectivity motifs of inhibitory neurons in the mouse Auditory Cortex. Oviedo HV (2017), *Scientific Reports*, doi: 10.1038/s41598-017-16904-2

- Long-term cre-mediated retrograde tagging of neurons using a novel recombinant pseudorabies virus. Oyibo HK, Znamenskiy P, Oviedo HV, Enquist LW, Zador AM (2014) *Frontiers Neuroanatomy*, doi:10.3389/fnana.2014.00086

- Integration of subthreshold and suprathreshold excitatory barrages along the somatodendritic axis of pyramidal neurons. Oviedo HV and Reyes AD (2012) *PLoS ONE* 7(3): e33831

- PTEN regulation of local and long-range connections in mouse auditory cortex. Xiong Q, Oviedo HV, Trotman L and Zador AM (2012) *The Journal of Neuroscience*, volume 32(5) pp. 1643-52

- The functional asymmetry of auditory cortex is reflected in the organization of local cortical circuits. Oviedo HV, Bureau I, Svoboda K and Zador A (2010). *Nature Neuroscience*, volume 13(11) pp. 1413-20

- Variation of input-output properties along the somatodendritic axis of pyramidal neurons. Oviedo H and Reyes AD (2005) *The Journal of Neuroscience*, volume 25(20) pp. 4985-95

- Boosting of neuronal firing evoked with asynchronous and synchronous inputs in the dendrite. Oviedo H and Reyes AD (2002). *Nature Neuroscience*, volume 5(3) pp. 261-266

- Electron microscopic immunocytochemical detection of PSD-95, PSD-93, SAP-102, and SAP-97 at postsynaptic, presynaptic, and nonsynaptic sites of adult and neonatal rat visual cortex. Aoki C, Miko I, Oviedo H, Mikeladze-Dvali, T, Alexandre L, Sweeney N and Bredt DS (2001). *Synapse*, volume 40 pp. 239-257

INVITED TALKS (Last 5 years)

- Center for Neural Circuit Mapping "Brain Cell Types, Circuits and Disorders" Conference (August 2024)
- Washington University School of Medicine (April 2022)
- Rutgers University (March 2022)
- New York Medical College (January 2022)

- University of Pennsylvania's MindCore: EARS series (April 13, 2021)
- Harvard Medical School & Massachusetts Eye and Ear, Eaton-Peabody Laboratories of Auditory Research, Dept. of Otolaryngology (March 16, 2021)
- University of Texas at Austin, Center for Learning and Memory (March 2, 2021)
- University of Louisville School of Medicine, Department of Anatomical Sciences & Neurobiology (January 14, 2021)
- York College, Department of Biology, CUNY (October 23, 2020)

- University of Illinois at Urbana Champaign, Beckman Institute (August 27, 2020)
- NYU Center for Language, Music and Emotion (March 10, 2020)
- NYU Langone Neuroscience Institute (December 17, 2019).
- New York Institute of Technology (December 12, 2019)
- Stony Brook University, Department of Neurobiology and Behavior (December 7, 2019)

PANELS AND MEETINGS ORGANIZED

- Co-organizer of Auditory Function and Healthy Hearing (2024)
- Co-organizer of the Eastern Auditory Retreat (EAR meeting, 2018)
- Co-chair, panel on Circuit specialization across primary sensory and motor domains of cerebral cortex. 2016 Winter Conference on Brain Research.

COURSES DEVELOPED AND TAUGHT

- CUNY Graduate Center: Neural Science 1 (core doctoral course, taught for 5 years)
- CUNY Graduate Center: Neural Science 2 (core doctoral course, taught for 1 semester)
- CCNY: Introduction to Neurobiology (upper undergraduate level course, 2014-2022)
- CCNY: Brain Plasticity and Disease (course I developed. Upper undergraduate and master's level, 2015-2023)
- CCNY: Organismic Biology (core undergraduate course, 2013-2021)

OPEN EDUCATIONAL RESOURCES

For 5 years I led a Biology animation assistantship program. This was a team of Visual Arts and Biology students who work together to develop Open Educational Resources (OER). To view these resources please visit:
http://ccnydigitalscholarship.org/science-animation/
https://ccnydss.github.io/bioanimation/

MENTORSHIP

4 postdoctoral researchers
1 doctoral student
3 master students
15 undergraduate students
12 high school students

INTERNAL SERVICE

- Executive committee, Neuroscience doctoral program (CUNY graduate center)
- Admissions committee, Neuroscience doctoral program (CUNY graduate center)
- First doctoral exam committee, Neuroscience doctoral program (CUNY graduate center)
- Student liaison, Neuroscience doctoral program (CUNY graduate center)
- Co-program director of the MARC (Maximizing Access to Research Careers) program
- Graduate studies committee, Biology department (CCNY)
- Chaired the Honors and Awards Committee, Biology department (CCNY)
- Co-chair of the Honors and Independent Study Committee, Biology department (CCNY)
- Job search committee, Biology department (CCNY)
- Provost's tenure, promotion, pandemic committee (CCNY)
- IACUC member at the ASRC (CUNY's advanced research center)
- Served on 10 graduate thesis advisory committees

EXTERNAL SERVICE

- U24 steering committee (core facility for MAPseq/BARseq)
- 3 National Science Foundation grant review panels
- 1 National Institutes of Health study section
- Cosyne DEIA committee co-chair (2022-2024)
- Cosyne program committee (2022)

REFEREE SERVICE

Nature, Nature Neuroscience, Neuron, Nature Communications, Cerebral Cortex, Journal of Neuroscience, Journal of Comparative Neurology, Journal of Neurophysiology, Progress in Neurobiology, Plos Computational Biology, Cosyne, and I am an affiliate of BioRxiv.

COMMUNITY OUTREACH

Science Fair Judge at the Rye Neck School District (New York)
Elementary school classroom presentations on brain awareness in New York City public schools