JORDAN P. HAMM

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POSITIONS and APPOINTMENTS

10/2024 - current	Research Scientist 5 Nathan S. Kline Institute for Psychiatric Research Office of Mental Health, New York State Orangeburg, New York
10/2024 - current	Research Associate Professor Department of Psychiatry and Neuroscience Institute New York University Grossman School of Medicine
4/2024 -10/2024 9/2018 - 4/2024	Associate Professor Assistant Professor Neuroscience Institute Georgia State University

EDUCATION and TRAINING

2008	B.A.	University of Georgia, Philosophy
2010	M.S.	University of Georgia, Psychology
2013	Ph.D.	University of Georgia, Neuroscience Mentor: Brett A. Clementz, Ph.D.
2014 – 2018		Postdoctoral Research Fellow Columbia University Department of Biological Sciences Mentor: Rafael Yuste, M.D., Ph.D.

RESEARCH

FUNDING

Current:

2022-27 "Circuits for deviance detection in V1", National Institutes of Health. R01EY033950, **PI: J.P. Hamm.** Co-I: D.S. Peterka (Columbia University) (5 years; $250,000 per year direct).

2021-26 "Sex differences in microglia-neuron-circuit interactions in adolescence", National Institutes of Health. R01MH128176, **PI: J.P. Hamm.** (5 years; $250,000 per year direct)

2023-28 "Providing New Insight Into Adolescent Dendritic Development". R01 National Institutes of Health. R01MH132586, P.I.: M. Grubisha **Co-I: J.P. Hamm.** (5 years; $75,000 per year direct)

Completed:

2014-17 "Two-photon analysis of circuit-level mechanisms of schizophrenia biomarkers", National Institutes of Health. F32MH106265, **PI: J.P. Hamm**. Mentor: R. Yuste. Co-sponsors: D. Javitt, J. Gordon. (3 years. $53,000 per year direct)

2017-21 "Fronto-sensory circuit mechanisms of perceptual novelty processing", National Institutes of Health. K99/R00MH115082, **PI: J.P. Hamm.** Sponsor: R. Yuste. Consultants: A. Churchland; J. Gogos (5 years; $100,000-$250,000 per year total)

2019-23 "Mapping the role of basal forebrain projections to visual cortex in novelty processing", Whitehall Foundation. 2019-05-443, **PI: J.P. Hamm** (years; $75,000 per year total)

2022-24 "Transcriptomic Profiling of a Novel Subtype of Cortical Neurons Selective for Sensory Prediction Errors", Brain and Behavior Research Foundation (BBRF) Young Investigator Grant (NARSAD). 30149, **PI: J.P. Hamm** (2 years; $35,000 per year, direct).

2021-24 "Inverse neurovascular coupling in the hypothalamus and its role in positive feedback regulation of vasopressin neurons in health and disease", National Institutes of Health. R01HL162575, PI: J. Stern, A. **Co-I: J.P. Hamm.**

Mentored:

2024-27 "The adolescent development of top-down feedback for visual processing". F31 NRSA fellowship. F31EY036279 P.I.: A.M. Rader. **Mentor: J.P. Hamm.** Co-mentor: N.G. Forger

2019-23 "Large-scale monitoring of circuits for adaptation and novelty detection in primary visual cortex", National Institutes of Health. F32MH125445, PI: J.M. Ross (Hamm lab postdoc), **Mentor: J.P. Hamm**; Co-sponsors: H.E. Albers, Y. Molkov (3 years; $71,000 per year direct)

AWARDS

2025 Outstanding Mentor Award, Nathan S. Kline Institute
2022 Dean's Early Career Award, Georgia State University
2018 American College of Neuropsychopharmacology (ACNP) Travel Award
2018 Gordon Research Conference Travel Award for "Thalamocortical Interactions"
2017 International Congress on Schizophrenia Research (ICOSR) Young Investigator award
2013 Herbert Zimmer Award, University of Georgia

PUBLICATIONS

***Hamm** as corresponding author.

1. Shymkiv, Y., **Hamm, J.P.,** Escola, S., Yuste, R. (2025) Slow cortical dynamics generate context processing and novelty detection. *Neuron.* 113, 1-11. DOI: 10.1016/j.neuron.2025.01.011

2. Ross, J.M., ***Hamm, J.P.** (2024) An expanding repertoire of circuits mechanisms for visual prediction errors. *Trends in Neuroscience.* 47(12):963-964. DOI: 10.1016/j.tins.2024.10.007

3. Bastos, B., Holmes, J., Ross, J.M., Rader, A.M., Gallimore, C.G., Wargo, J.A., Peterka, D.S., ***Hamm. J.P.** (2023) Top-down input modulates visual context processing through an interneuron-specific circuit. *Cell Reports.* 42:9 133133 DOI: 10.1016/j.celrep.2023.113133

4. Van Derveer, A., Ross, J.M., ***Hamm. J.P.** (2023) Robust multisensory deviance detection in the mouse parietal associative area. *Current Biology*. 33(18): 3969-3976 DOI: 10.1016/j.cub.2023.08.002

5. Gallimore, C.G., Ricci, D., ***Hamm. J.P.** (2023) Spatiotemporal dynamics across a neocortical column support a predictive coding framework for interpreting visual mismatch responses. *Cerebral Cortex.* 33(15): 9417–9428. DOI: 10.1093/cercor/bhad215

6. Huang, L., Parker, D.A., Ethridge L.E., **Hamm. J.P.**, Keedy, S.S., Tamminga, C.A., Pearlson, G.D., Keshavan. M.S., Hill, S.K., Sweeney, J.A., McDowell, J.E., Clementz, B.A., (2023) Double dissociation between P300 components and task switch error type in healthy but not psychosis participants. *Schizophrenia Research.* 261: 161-169. DOI: 10.1016/j.schres.2023.09.025

7. Roy, R.K., Althammer, F., Seymour, J.A., Du, W., Biancardi, V.C., **Hamm, J.P.**, Filosa, J.A., Brown, C.H., Stern, J.E. (2021) Inverse neurovascular coupling contributes to positive feedback excitation of vasopressin neurons during a systemic homeostatic challenge. *Cell Reports.* 2021; 37:5 109925. DOI: 10.1016/j.celrep.2021.109925

8. ***Hamm, J.P.,** Shymkiv, Y., Han, S., Yang, W. Yuste, R. Cortical ensembles selective for context. (2021). *Proceedings of the National Academy of Sciences of the United States of America (PNAS).* 118(14):e2026179118. DOI: 10.1073/pnas.2026179118.

9. Van Derveer, A.B, Bastos, G, Ferrell. A.D., Gallimore, C.G., Greene, M.L., Holmes, J.T., Kubricka, V., Ross, J.M., ***Hamm, J.P.** (2020) A role for somatostatin-positive interneurons in neuro-oscillatory and information processing deficits in schizophrenia. *Schizophrenia Bulletin.* 47:5 1385–1398. DOI: 10.1093/schbul/sbaa184

10. Wenzel, M., ***Hamm, J.P.** (2020) Identification and quantification of neuronal ensembles in optical imaging experiments. *Journal of Neuroscience Methods.* 351, 109046. DOI: 10.1016/j.jneumeth.2020.109046

11. Ross, J.M., ***Hamm, J.P.** (2020) Cortical Microcircuit Mechanisms of Mismatch Negativity and Its Underlying Subcomponents. *Front Neural Circuits.* 14:13. DOI: 10.3389/fncir.2020.00013

12. Zhou ZC, Huang WA, Yu Y, Negahbani, E., Stitt, I.M., Alexander, M.L., **Hamm, J.P.,** Kato, H.K., Fröhlich, F. (2020). Stimulus-specific regulation of visual oddball differentiation in posterior parietal cortex. *Scientific Reports*. 10(1):13973. DOI: 10.1038/s41598-020-70448-6

13. ***Hamm, J.P.,** Shymkiv, Y., Gogos, J.A., Yuste, R. (2020). Aberrant cortical ensembles and schizophrenia-like sensory phenotypes in setd1a mice. *Biological Psychiatry*. 88(3):215-223. DOI: 10.1016/j.biopsych.2020.01.004

14. Wenzel, M., **Hamm, J.P.,** Peterka, D.S., Yuste, R. (2019) Acute focal seizures start as local synchronizations of neuronal ensembles. *Journal of Neuroscience.* 39(43);8562-75. DOI: 10.1523/JNEUROSCI.3176-18.2019

15. Bobilev, A.M., Hudgens-Haney, M.E., **Hamm, J.P.,** Oliver, W.T., McDowell, J.E., Lauderdale, J.D., Clementz, B.A (2019) Early and late auditory information processing show opposing deviations in aniridia. *Brain Research.* 1720:146307. DOI: 10.1016/j.brainres.2019.146307

16. Parker, D.P., **Hamm, J.P.,** McDowell, J.E., Keedy, S.K., Gershon, E.S., Ivleva, E.I., Pearlson, G.D., Keshavan, M.S., Tamminga, C. A., Sweeney, J.A., Clementz, B.A (2019) Auditory steady-state EEG response across the schizo-bipolar spectrum. *Schizophrenia Research.* 209: 218-226. DOI: 10.1016/j.schres.2019.04.014

17. Jayant, K., Wenzel, M., Bando, Y., **Hamm, J.P.,** Owen, J.S., Sahin, O., Shepard, K.L, Yuste, R. (2019). Targeted intracellular recordings from deep-layer cortical neurons *in vivo*. *Cell Reports.* 26 (1): 266-278. DOI: 10.1016/j.celrep.2018.12.019

18. Agetsuma, M., **Hamm, J.P.,** Tao, K., Fujisawa, S., Yuste, R. (2018) Parvalbumin-positive interneurons regulate neuronal ensembles in visual cortex. *Cerebral Cortex.* 28(5):1831:45. DOI: 10.1093/cercor/bhx169.

19. ***Hamm, J.P.,** Peterka, D.S., Gogos, J.A., Yuste, R. (2017) Altered cortical ensembles in mouse models of schizophrenia. *Neuron.* 94, 1, 153–167. DOI: 10.1016/j.neuron.2017.03.019.

20. Wenzel, M., **Hamm, J.P.,** Peterka, D.S., Yuste, R. (2017) Reliable and elastic propagation of cortical seizures *in vivo*. *Cell Reports.* 27;19 (13): 2681-2693. DOI: 10.1016/j.celrep.2017.05.090.

21. ***Hamm, J.P.**, Yuste, R. (2016). Somatostatin Interneurons Control a Key Component of Mismatch Negativity in Mouse Visual Cortex. *Cell Reports*. 16, 407–420. DOI: 10.1016/j.celrep.2016.06.037.

22. Clementz, B.A., Sweeney, J.A., **Hamm, J.P.,** Ivleva, E.I., Ethridge, L.E., Pearlson, G.D., Keshavan, M.S., Tamminga, C.A. (2016). Identification of Distinct Psychosis Biotypes

Using Brain-Based Biomarkers. *American Journal of Psychiatry.* 173(4):373-84. DOI: 10.1176/appi.ajp.2015.14091200.

23. Hayrynen, L.K., **Hamm, J.P.,** Sponheim, S.R., Clementz, B.A. (2016) Frequency-specific disruptions of neuronal oscillations reveal aberrant auditory processing in schizophrenia. *Psychophysiology.* 53(6):786-95. DOI: 10.1111/psyp.12635.

24. Mokhtari, M., Narayanan, B., **Hamm, J.P.,** Soh, P., Calhoun, V.D., Ruaño, G., Kocherla, M., Windemuth, A., Clementz, B.A., Tamminga, C.A., Sweeney, J.A., Keshavan, M.S., Pearlson, G.D. (2015) Multivariate Genetic Correlates of the Auditory Paired Stimuli-Based P2 Event-Related Potential in the Psychosis Dimension From the BSNIP Study. *Schizophrenia Bulletin.* 42(3):851-62. DOI: 10.1093/schbul/sbv147.

25. Carrillo-Reid L., Miller J.E., **Hamm, J.P.,** Jackson J., Yuste, R. (2015). Endogenous Sequential Cortical Activity Evoked by Visual Stimuli. *Journal of Neuroscience.* 35(23):8813-28. DOI: 10.1523/JNEUROSCI.5214-14.2015.

26. **Hamm, J.P.,** Oliver, W.T., Hudgens-Haney, M., Bobilev, A., McDowell, J.E., Buckley, P.F., Clementz, B.A. (2015). Stimulus Train Duration but Not Attention Moderates γ-band Entrainment Abnormalities in Schizophrenia. *Schizophrenia Research*. 165(1):97-102. DOI: 10.1016/j.schres.2015.02.016.

27. Ethridge, L.E., **Hamm, J.P.,** Pearlson, G.D., Tamminga, C.A., Sweeney, J.A., Keshavan, M.S., Clementz, B.A. (2015). Event-related Potential and Time-frequency Endophenotypes for Schizophrenia and Psychotic Bipolar Disorder. *Biological Psychiatry.* 77(2):127-36. DOI: 10.1016/j.biopsych.2014.03.032.

28. **Hamm, J.P.,** Ethridge, L.E., Boutros, N.N., Keshavan, M.S., Sweeney, J.A., Pearlson, G.D., Tamminga, C.A., Clementz, B.A. (2014). Diagnostic Specificity and Familiality of Early versus Late Evoked Potentials to Auditory Paired-Stimuli across the Schizophrenia-Bipolar Psychosis Spectrum. *Psychophysiology*. 51(4):348-57. DOI: 10.1111/psyp.12185.

29. **Hamm, J.P.,** Ethridge L.E., Shapiro J.R., Pearlson, G.D., Tamminga, C.A., Sweeney, J.A., Keshavan, M.S., Thaker, G., Clementz, B.A. (2013). Family History of Psychosis Moderates Early Auditory Cortical Response Abnormalities in Non-psychotic Bipolar Disorder. *Bipolar Disorders.* 15(7):774-86. DOI: 10.1111/bdi.12110.

30. Ivleva, E.I., Moates, A.F., **Hamm, J.P.,** Bernstein, I.H., Cole, D., Clementz B.A., Thaker, G., Tamminga C.A. (2013). Smooth Pursuit Eye Tracking, Prepulse Inhibition, and Auditory ERP Endophenotypes across the Schizophrenia - Bipolar Disorder Psychosis Dimension. *Schizophrenia Bulletin*. 40(3):642-52. DOI: 10.1093/schbul/sbt047.

31. Hudgens-Haney, M.E., **Hamm, J.P.,** Goodie, A.S., Krusemark, E.A., McDowell, J.E., Clementz, B.A. (2013). Neural Correlates of the Impact of Control on Decision Making in Pathological Gamblers. *Biological Psychology*. 92(2):365-72. DOI: 10.1016/j.biopsycho.2012.11.015.

32. **Hamm, J.P.**, Sabatinelli, D., Clementz, B.A. (2012) Alpha Oscillations and the Control of Voluntary Saccadic Behavior. *Experimental Brain Research*. 221(2): 123-128. DOI: 10.1007/s00221-012-3167-8.

33. **Hamm, J.P.,** Dyckman, K.A., McDowell, J.E., Clementz, B.A. (2012) Pre-cue Fronto-Occipital Alpha Phase and Distributed Cortical Oscillations Predict Failures of Cognitive Control. *Journal of Neuroscience*. 32(20):7034-41. DOI: 10.1523/JNEUROSCI.5198-11.2012.

34. **Hamm, J.P.,** Gilmore, C.S., Clementz, B.A. (2012) Augmented Gamma Band Auditory Steady-State Responses: Support for NMDA Hypofunction in Schizophrenia. *Schizophrenia Research*. 138(1): 1-7. DOI: 10.1016/j.schres.2012.04.003.

35. Ethridge, L.E., **Hamm, J.P.,** Shapiro, J.R., Summerfelt, A.T., Keedy, S.K., Stevens, M.C., Pearlson, G., Tamminga, C.A., Boutros, N.N., Sweeney, J.A., Keshavan, M.S., Thaker, G., Clementz, B.A. (2012). Neural Activations During Auditory Oddball Processing Discriminating Schizophrenia and Psychotic Bipolar Disorder. *Biological Psychiatry*. 72(9):766-74. DOI: 10.1016/j.biopsych.2012.03.034.

36. **Hamm J.P.,** Ethridge L.E., Shapiro J.R., Stevens M.C., Boutros N.N., Pearlson, G., Tamminga, C.A., Boutros, N.N., Sweeney, J.A., Keshavan, M.S., Thaker, G., Clementz, B.A. (2012) Spatiotemporal and Frequency Domain Analysis of Auditory Paired Stimuli Processing in Schizophrenia and Psychotic Bipolar Disorder. *Psychophysiology*. 49(4):522-30. DOI: 10.1111/j.1469-8986.2011.01327.x.

37. **Hamm, J.P.,** Gilmore, C.S., Picchetti, N, Sponheim, S.R., and Clementz, B.A. (2011). Abnormalities of Neuronal Oscillations and Temporal Integration to Low and High Frequency Auditory Stimulation in Schizophrenia. *Biological Psychiatry*. 69(10):989-96. DOI: 10.1016/j.biopsych.2010.11.021.

38. **Hamm, J.P.,** Dyckman, K.A., Ethridge, L.E, McDowell, J.E., and Clementz, B.A. (2010). Preparatory activations across a distributed cortical network determine express saccade production. *Journal of Neuroscience.* 30(21):7350-7. DOI: 10.1523/JNEUROSCI.0785-10.2010.

PREPRINTS and SUBMITTED MANUSCRIPTS

39. West, C.L.[#], Bastos, G.[#], Duran, A., Nadeem, S., Ricci, D.A., Rader, A.M., Wargo, J.A., Peterka, D.S., Van Leeuwen, N., ***Hamm J.P**. A Lasting Impact of Serotonergic Psychedelics on Visual Processing and Behavior. BioRxiv—7/6/2024 DOI: 10.1101/2024.07.03.601959. ([#]co-first authors)
40. Meng, J.H., Ross, J.M., **Hamm, J.P.**, Wang, X.J. Duet model unifies diverse neuroscience experimental findings on predictive coding. BioRxiv—8/29/2025 DOI: 10.1101/2025.07.12.664417. *Under Review*
41. Aizenbud, I., et al. Neural mechanisms of predictive processing: a collaborative community experiment through the OpenScope program. arXiv—4/13/2025. DOI: 10.48550/arXiv.2504.09614. *Under Review*

42. Rader Groves, A.M., Gallimore, C.G., Sutton, V.J., Ross, J.M., Sweet, R.A., Grubisha, M.J., ***Hamm, J.P**. Protein-coding variant links schizophrenia risk to layer-specific circuit dysfunction. *Under review*
43. Rader Groves, A.M., Ricci, D.A., Wargo, J.A., Sutton, V.J., Dalwai, H.S., Ferrell, A.D., Desai, B., Ross, J.M., Gallimore, C.G., West Jacobs, C.L., Bastos, G., Bolton, J.L., Imai, F., ***Hamm, J.P**. Mismatch negativity matures in adolescence and without sensitivity to microglial depletion. BioRxiv – 10/15.2025 DOI: 10.1101/2025.10.14.682114. *Under review*
44. Peterka, D.S., Imai, F., Bastos, G., Ross, J.M., Hornick, M., Rachmany, L., Gallimore, C.G., Hockley, A., ***Hamm, J.P**. Global context rapidly shapes sensory responses in V1. BioRxiv – 01/08/2026 DOI: 10.64898/2026.01.07.698143. *Under review*
45. Hockley, A., Gallimore, C.G., **Hamm, J.P.,** Malmierca. M.S. Cortical deviance detection represents a canonical difference signal. BioRxiv – 01/06/2026 DOI: 10.64898/2026.01.06.697993. *Under review*

BOOK CHAPTERS

Rader Groves, A.M., Gallimore, C.G., **Hamm, J.P**. (2024). Modern Methods for Unraveling Cell- and Circuit-Level Mechanisms of Neurophysiological Biomarkers in Psychiatry. In: Javitt, D.C., McPartland, J.C. (eds) Neurophysiologic Biomarkers in Neuropsychiatric Disorders. *Advances in Neurobiology,* vol 40. Springer, Cham. 10.1007/978-3-031-69491-2_7

Hamm, J.P. (2025). Analyzing Functional Neuronal Ensembles in a Between-Subjects Paradigm. In: Carrillo-Reid, L. (eds) Identification, Characterization, and Manipulation of Neuronal Ensembles. Neuromethods, vol 215. Humana, New York, NY. 10.1007/978-1-0716-4208-5_10

INVITED SEMINARS and KEYNOTES

(last 3 years; *future talks in italics*)

Hamm, J.P., *"Interacting roles of inhibitory interneuron subtypes in visual predictive processing and related biomarkers of schizophrenia" Invited speaker for the Mult institutional "Inhibitory neurons: shaping the cortical code" (IN-CODE) lecture series at Universitätsmedizin Berlin, in Berlin, Germany, March 16th, 2026*

Hamm, J.P., "Cell and circuit mechanisms of visual context processing in health and disease." Invited speaker for NRSC seminar series at the University of California Riverside, Riverside, CA, October 13th 2025

Hamm, J.P., "A cortical circuit for visual mismatch responses: schizophrenia, adolescence, and psychedelics." Invited keynote speaker for the Consortium for Vision and Oculomics in Psychiatry, Rochester, NY, June 27th, 2025

Hamm, J.P., "Brain circuits for visual context processing in health and disease." Invited speaker for Neuroscience Seminar Series at Northwestern University, Feinberg School of Medicine, Chicago, IL, May 30th, 2025

Hamm, J.P., "Cortex integrates sensory stimuli with context: circuit mechanisms, adolescence, and neuropathology." Invited speaker for Neuroscience Seminar Series at Children's National Hospital in Washington, D.C., May 7th, 2025

Hamm, J.P., "Predictive processing in the visual system: circuit mechanisms, psychosis, and psychedelics." Invited speaker for Neuroinformatics colloquium at University of Zurich and ETH Zurich, Zurich, Switzerland. April 11th, 2025

Hamm, J.P., "Brain circuits for visual context processing in health and disease" invited speaker for Mount Sinai Friedman Brain Institute Translational Neuroscience Seminar Series, Mt Sinai School of Medicine, New York, NY. November 2024

Hamm, J.P., "A cortical circuit for visual mismatch responses" Keynote speaker for the Mismatch Negativity International Conference (MMN2024) in Salamanca, Spain, September 2024

Hamm, J.P. invited speaker for Neuroscience Institute Seminar Series at the University of Tennessee, Memphis, TN Apr 2nd, 2024

Hamm, J.P., "Cell and circuit mechanisms of visual context processing in health and disease" Talk given for the Frontiers in Neuroscience Seminar, Emory University, Atlanta, G.A.. Nov 17th, 2023

Hamm, J.P., "Cell and circuit mechanisms of visual context processing in health and disease" Talk given at New York University Psychiatry Research Rounds, New York, NY October 13th, 2023

Hamm, J.P., "Cell and circuit mechanisms of visual context processing in health and disease" Talk given for Nathan Kline Institute Center for Biomedical Imaging and Neuromodulation, Orangeburg, NY October 2nd, 2023

Hamm, J.P., "Cell and circuit mechanisms for context processing in primary visual cortex" Talk given to the Atlanta Vision Research Community at Emory University Eye Clinic, Atlanta, GA September 19th, 2023

Hamm, J.P., "Cortical integration of sensory stimuli in context: cells, circuits, oscillations, and neuropathology" Talk given at Columbia University, New York, NY April 19th, 2023

Hamm, J.P., "Cortical circuits for predictive processing" Talk given at University of Illinois Chicago, Chicago, IL March 2nd, 2023

CONFERENCE PRESENTATIONS

last 3 years. #presenting author. *Talks in italics*.

Hamm, J.P.# *"Altered Visual Processing Biomarkers in Humans and Mice After Serotonergic Psychedelics Point to a Reorganization of Cortical Feedback Circuitry" Panel Speaker*

at the American College of Neuropsychopharmacology (ACNP) meeting, Nassau, Bahamas Jan 15th 2026

Gallimore, C.G. [#], Abraham, J., Hockley, A., **Hamm J.P.** (2025). Top-down inputs show context-selective synchronization with V1 spiking following focal N-methyl-D-aspartate receptor blockade. Poster presented at 2025 Society for Neuroscience Conference, San Diego, C.A., USA

Hamm, J.P. [#] *"Feedback modulation of V1 supports predictive processing through a neuron-type specific circuit during a passively viewed visual oddball sequence" Speaker for the Generative Adversarial Collaboration Workshop on Predictive Coding at the Cognitive and Computational Neuroscience Meeting in Cambridge, MA – August 8th, 2024*

West, C.L., Duran, A., Nadeem, S., Van Leeuwen, N., **Hamm J.P**[#]**.** (2023). Altered Belief Updating and Visual Prediction Error in Psychedelics Users. Poster presented at 2023 American College of Neuropsychopharmacology (ACNP) meeting, Tampa, F.L., USA

Gallimore C.G.[#], Ross J.M., **Hamm J.P.** (2023). Local V1 NMDA receptor blockade alters visual mismatch responses and augments prefrontal-V1 synchrony. Poster presented at 2023 Society for Neuroscience (SfN) Conference, Washington, D.C., USA

Rader, A.M.[#], Sutton, T.J., Ross, J.M., Sweet, R.A., Grubisha, M.J., **Hamm, J.P.** (2023). Schizophrenia-relevant mutation produces region-dependent dendritic remodeling. Poster presented at 2023 Society for Neuroscience (SfN) Conference, Washington, D.C.

Ricci, D.A.[#], Rader, A.M., West, C.L., Dalwai, H.S., Sutton, T.J., Wargo, J.A., Bastos, G., Prahl, J., Ross, J.M., **Hamm, J.P.** (2023). Adolescent microglial contribution to mature frontovisual circuitry for visual context processing. Poster presented at 2023 Society for Neuroscience (SfN) Conference, Washington, D.C.

West, C.L.[#], Duran, A., Nadeem, S., Van Leeuwen, N., **Hamm, J.P.** (2023). Atypical belief updating and novelty detection in psychedelic users during saccadic planning task. Poster presented at 2023 Society for Neuroscience (SfN) Conference, Washington, D.C.

Ross, J.M. [#], Robinson, M.L., **Hamm, J.P.** (2023) Sex-specific development of cortical circuits supporting sensory context processing. Poster presented at 2023 Society for Neuroscience (SfN) Conference, Washington, DC.

Bastos, G. [#], Holmes, J.T., Ross, J.M., Rader, A.M., Gallimore, C.G, **Hamm, J.P**. (2023). Prefrontal modulation of primary visual cortex is frequency and cell specific during context processing. Poster presented at 2023 Gordon Research Conference on Modulation of Neural Circuits and Behavior, Les Diablerets, VD, Switzerland

Rader, A.M. [#], Sutton, T.J., Ross, J.M., Sweet, R.A., Grubisha, M.J., **Hamm, J.P**. (2023). Perturbing the dendritic arbor in adolescence impairs long-range cortical synchrony and predictive processing. Poster presented at 2023 Gordon Research Conference on Dendrites, Barga, Italy.

Ross, J.M., Rader, A.M., **Hamm. J.P.** [#] (2022). Adolescent development of cortical circuits for predictive coding is sex-dependent and relates to maturation of prefrontal cortex. Poster presented at 2022 American College of Neuropsychopharmacology (ACNP) meeting.

Ross, J.M[#], **Hamm, J.P**. (2022). Sensory prediction error in cortical circuits develops across adolescence in a sex-specific manner. Poster presented at 2022 Society for Neuroscience (SfN) Conference, San Diego, CA.

Bastos, G. [#], Holmes, J.T., Rader, A.M., **Hamm, J.P**. (2022). Pre-frontal influence in context processing in early visual cortex in mice. Poster presented at 2022 Society for Neuroscience (SfN) Conference, San Diego, CA.

Rader, A.M. [#], Ferrell, A.D., Gallimore, C.G, Sutton, T.J., Sweet, R.A., Grubisha, M.J., **Hamm, J.P**. (2022). Reduced predictive processing mimics schizophrenia-like deficits in a genetic model of adolescent dendrite loss. Poster presented at 2022 Society for Neuroscience (SfN) Conference, San Diego, CA.

Van Derveer, A.B. [#], **Hamm, J.P**. (2022). Evidence of a Multisensory Predictive Coding Ensemble in Mammalian Posterior Parietal Cortex. Poster presented at 2022 Society for Neuroscience (SfN) Conference, San Diego, CA.

Hamm, J.P. [#] *(2022). Cortical microcircuit mechanisms of mismatch negativity and its underlying subcomponents. Invited talk for symposium at the 9th meeting for mismatch negativity research, MMN2022, Fukushima Medical University, Japan, Sept 22nd 2022.*

Hamm, J.P. [#] *(2022). Adolescent development of top-down circuits for bottom-up novelty detection. Invited talk for symposium at NEURO2022, 45th annual meeting for the Japan Neuroscience Society, Okinawa, Japan, July 2nd 2022.*

Bastos, G[#]., Holmes, J.T., Gallimore, C.G., Ross, J.M., **Hamm, J.P**. (2022). Cell-Type and Frequency-Specific Circuit for Mismatch Negativity in Mice. Poster presented at 2022 Society for Biological Psychiatry Conference (SOBP), New Orleans, LA, May 2022.

Ferrell, A.D. [#], Rader, A.M., Nisseau-Bey, Z., Sweet, R.A., Grubisha, M.J., **Hamm, J.P**. (2022). Mutations in Kalrn Disrupt Gamma-Band Oscillations in the Auditory Cortex of Adult Mice. Poster presented at 2022 Society for Biological Psychiatry Conference (SOBP), New Orleans, LA, May 2022.

Rader, A.M. [#], Ferrell, A.D., Sweet, R.A., Grubisha, M.J., **Hamm, J.P**. (2022). Kalrn Mutation Identified in Individuals with Schizophrenia Recapitulates Disease-relevant Neuro-oscillatory Aberrations in the Mouse Visual and Prefrontal Cortices. Poster presented at 2022 Society for Biological Psychiatry Conference (SOBP), New Orleans, LA, May 2022.

Gallimore, C.G. [#], **Hamm, J.P.** (2022). A sensory oddball paradigm evokes rhythmic signatures across neocortical layers consistent with predictive coding Poster presented at 2022 Cold Spring Harbor Laboratory Conference on Neural Circuits (CSHL), Cold Spring Harbor, N.Y. March 2022.

TEACHING

COURSES TAUGHT

2020 - present **Instructor of record**, Georgia State University
NEUR 8790- Modern Methods in Neuroscience (Spring 2024)
NEUR 4910- Neurobiology of Schizophrenia (Spring 2023)
NEUR 8020- Systems Neuroscience (Spring 2022)
NEUR 8000- Principles of Neuroscience (Fall 2021)
NEUR 8000- Principles of Neuroscience (Fall 2020)
NEUR 8020- Systems Neuroscience (Spring 2020)

Guest lectures, Georgia State University
PHIL 6340 – Philosophy and Cognitive Science (Spring 2024)
"Brain circuitry for predictive coding"
NEUR 6040-Sensation and Perception (Spring 2022)
"Central visual pathways and circuits"
NEUR 3020-Scientific Method in Neurosceicne (Fall 2023)
"Two-photon microscopy"(3 sections)

2010 - 2013 **Instructor of record**, University of Georgia
PSYC 3980- Research design (Fall 2013)
PSYC 3990- Research methods lab (Fall 2010)

MENTORING

Current Postdocs (NKI and NYU):

Imai, F., Ph.D., (2025-Present)

Rachmany, L., Ph.D., (2025-Present)

Hockley, A., Ph.D., (2025-Present)

Gallimore, C.G., Ph.D., (2025-Present)

Current-graduate students:

Rader, A. (2020-current). Ph.D. student, Neuroscience, GSU

Past postdocs:

Dr. Prahl, J.D. (2022-2023)- *Lab Leadership and Service Fellow at the Centers for Disease Control and Prevention (CDC), Atlanta GA.*

Dr. Ross, J.M. (2019-2024)- *Program Analyst, National Institutes of Health, Washington, D.C.*

Past students mentored:

Gallimore, C.G. (2019-2025). Ph.D. student, Neuroscience, GSU. Thesis title: "*Patterns of laminar engagement during visual mismatch processing"*

Bastos, G. (2019-2024). Ph.D. student, Neuroscience, GSU. Thesis title: "*Circuit, cell and molecular mechanisms for context processing in the mouse visual cortex"*

West, C. (2022-2024). Ph.D. student, Neuroscience, GSU. "*Relaxed beliefs after psychedelics: from sensory processing to mystical states."*

Van Derveer, A. (2019-2023). Ph.D. student, Neuroscience, GSU. Thesis title: *"Multisensory context processing in the cortical hierarchy and the impact of a schizophrenia-relevant gene mutation."*

Ricci, D. (2022-2023). M.S. student, Neuroscience, GSU. Masters non-thesis: Adolescent microglial contribution to mature frontovisual circuitry for visual context processing. —*accepted to Vanderbilt University Ph.D. program in Neuroscience, 2024.*

Sutton, T. (2023-2024). M.S. student, Neuroscience, GSU. Masters non-thesis: The Role of microglia in cortical development. —*Applying to medical school.*

Holmes, J.T. (2020-2022). M.S. student, Neuroscience, GSU. Chemicogenetic inhibition of VIP interneurons decreases deviance detection in V1. —*accepted to University of Southern California Ph.D. program in Gerosciences, 2024.*

Nsiangani, A.Y.T., (2019-2020). M.S. Biology, GSU. Systems and methods to quantify and improve intrinsic signal imaging of the mouse visual cortex.

Greene, M. (2018-2020). *Attending nursing school.*

Kubricka, V. (2019-2021). B.S. Neuroscience with distinction, GSU. A*ttending graduate school for a Masters in Medical Science.*

Nisseau-Bey, Z. (2020-2021). B.S. in Neuroscience, GSU. *Attending Medical School at Morehouse.*

Wargo, J. (2023-2024). Neuroscience Major, GSU—*Attending University of Oregon Ph.D. program in Neuroscience, 2024.*

Duran, A. (2023-2024). M.S. student, Neuroscience, GSU

Dissertation committee member:

Chang, A. (2024-present) Ph.D. candidate, NYU Grossman School of Medicine, Neuroscience

Xiong, Y. (2024-present). Ph.D. candidate, Vanderbilt University, Neuroscience

Ghane, M.A. (2020-2022). Ph.D. Georgia State University, Neuroscience

Bourahmah, J. (2020-2023). Ph.D. Georgia State University, Neuroscience

Donaldson, K. (2022-2025). Ph.D. Georgia State University, Neuroscience

Shymkiv, Y. (2021-2022). Ph.D. Columbia University, Neuroscience

SERVICE

Nathan S. Kline Institute for Psychiatric Research

Committee Member, Seed Grant Review Committee (October 2024-present)

Committee Member, Research Integrity Committee (January 2025-present)

Mentor, NKI Postdoc committee, (October 2024-present)

American College of Neuropsychopharmacology

Committee Member, Animal Research Committee (January 2025- January 2028)

Committee Member, Program Committee (January 2026- January 2029)

Georgia State University

Committee Chair, Research Facilities Committee. (August 2019 – December 2023).

Committee Member, New full-time lecturer search committee. (March 2021- May 2021).

Committee Member, New tenure-track faculty search committee (September 2019 - May 2020).

Committee Member, Undergraduate Program Committee. (August 2019 – May 2021).

Committee Chair, Brains and Behavior internal grant review panel. (2022, 2023).

Committee Member, Internal Grants Peer Review Committee. (January 2022-2025).

Committee Member, Laboratory Safety Committee. (July 2021-October 2024).

PROFESSIONAL ACTIVITIES

Professional Organizations:
2024-Present: Associate Member, American College of Neuropsychopharmacology
2009-Present: Society for Neuroscience
2021-Present: Society for Biological Psychiatry

Invited Manuscript Peer Reviewer for: *(*reviewed in the past 12 months)*

Nature Neuroscience, PNAS*, Neuropsychopharmacology*, Communications Biology*, Cell Reports*, Journal of Neuroscience*, Science Advances*, European Journal of Neuroscience*, Biology of Sex Differences*, Science, Nature Communications, Brain, Biological Psychiatry, Translational Psychiatry, Neurobiology of Disease, NPJ Schizophrenia, Schizophrenia Bulletin, Schizophrenia Research, Cerebral Cortex, PLOS ONE, Neuroimage: Clinical, Frontiers in Systems Neuroscience, Frontiers in Neural Circuits, Biological Psychology, Psychophysiology, International Journal of Psychophysiology, Scientific Reports, Experimental Brain Research.*

Invited Grant Reviewer (external):

National Institutes of Health- ZRG1 BN-F (92) S, November 2025;
National Institutes of Health- NVBP study section, October 2024;
National Institutes of Health- NVBP study section, February 2024;
National Institutes of Health- ZDA1 SXC-N (O1) R study section, June 2023;
National Institutes of Health- ZGM1 TWD-A(PR) study section, March 2023;
Moorfields Eye Charity, University College London, October 2022;
External Grant Reviewer, University of Rochester, June 2022;
National Institutes of Health- NVBP study section, February 2022;