

JORDAN P. HAMM

jph2164@columbia.edu

(404) 444-2295

Fax: (212)-854-4619

EDUCATION

- 2013 Ph.D. University of Georgia
Neuroscience
December 4, 2013
Advisor: Brett A. Clementz, Ph.D.
- 2010 M.S. University of Georgia
Psychology
- 2008 B.A. University of Georgia
Philosophy

RESEARCH TRAINING

- 2014 – Current Postdoctoral Research Fellow
Columbia University
Department of Biological Sciences
Advisor: Rafael Yuste, M.D., Ph.D.

FUNDING AND AWARDS

- 2017 International Congress on Schizophrenia Research (ICOSR) Young Investigator award and travel stipend (\$1425)
- 2016-17 “Translational neurophysiology of neuropsychiatric disorders: leveraging the BRAIN initiative” Interdisciplinary Research Initiatives Seed (IRIS) funding program, Columbia University. PI: D. Javitt. Co-PI: J.P. Hamm, R. Yuste. (\$100000)
- 2014-17 “Two-photon analysis of circuit-level mechanisms of schizophrenia biomarkers”, NIMH F32MH106265, PI: J.P. Hamm. Mentor: R. Yuste. Co-mentors: D. Javitt, J. Gordon. (\$155000)
- 2013 Herbert Zimmer Award, University of Georgia (\$150)
- 2010-12 Paul D. Coverdell Franklin Foundation Fellowship in Neuroimaging (\$9000)
- 2009 Multimodal Neuroimaging Training Program Workshop fellowship, Carnegie Mellon & University of Pittsburgh (\$2500).
- 2008 Travel Award, University of Georgia (\$250)

PUBLICATIONS

- Hamm, J.P.**, Peterka, D.S., Gogos, J.A., Yuste, R. (2017) Altered cortical ensembles in mouse models of schizophrenia. *Neuron*. 94, 1–15.
- Hamm, J.P.**, Yuste, R. (2016). Somatostatin Interneurons Control a Key Component of Mismatch Negativity in Mouse Visual Cortex. *Cell Reports*. 16, 407–420.

- 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
- 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.
- 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.
- 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.
- 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.
- 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..
- 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.
- 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.
- 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.
- 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.
- 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.

- 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.
- 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.
- 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.
- 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) Spatio-temporal and Frequency Domain Analysis of Auditory Paired Stimuli Processing in Schizophrenia and Psychotic Bipolar Disorder. *Psychophysiology*. 49(4):522-30.
- 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.
- 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.

MANUSCRIPTS UNDER REVIEW

- Agetsuma, M., **Hamm, J.P.**, Yuste, R. Spatial and temporal network dynamics are co-regulated by parvalbumin-positive interneurons in mouse primary visual cortex. Resubmission invited at *Cerebral Cortex*
- Wenzel, M., **Hamm, J.P.**, Peterka, D.S., Yuste, R. Reliable and elastic progression of cortical seizures *In vivo*. Resubmission invited at *Neuron*
- Bobilev, A., Hudgens-Haney, M., **Hamm, J.P.**, Oliver, W.T., McDowell, J.E., Lauderdale, J., Clementz, B.A. Stimulus Train Duration but Not Attention Moderates γ -band Entrainment Abnormalities in Schizophrenia. Resubmission invited at *Psychophysiology*
- Jayant, K., Wenzel, M., Bando, Y., **Hamm, J.P.**, Plante, I., Owen, J., Sahin, O., Shepard, K., Yuste., R. Targeted intracellular recordings from deep-layer cortical neurons in vivo. Under review.

PRESENTATIONS (Talks in italics)

- Hamm, J.P.,** Gogos, J.A. Yuste, R. Mismatch negativity depends on somatostatin interneurons and is affected in a genetic model of schizophrenia. Poster presented Nov 2016 at the Society for Neuroscience conference in San Diego, CA.
- Hamm, J.P.,** Yuste, R. Sensory cortical ensembles are functionally disorganized in mouse models of schizophrenia. Poster presented Nov 2016 at Cell Symposia: Big Questions in Neuroscience symposium in San Diego, CA.
- Hamm, J.P., Yuste, R. Contribution of Neocortical Interneurons to the Mismatch Negativity. Talk given May 2016 at the Society for Biological Psychiatry research conference (SOBP) in Atlanta, GA.*
- Wenzel, M., **Hamm, J.P.,** Peterka, D.S., Yuste, R. Two-photon imaging reveals the population dynamics of spatiotemporally compartmentalized ictal networks *In vivo*. Poster presented at Oct 2015 at the Society for Neuroscience Conference in Chicago, IL.
- Hamm, J.P., Peterka, D.S. Yuste, R.. Fragmented Cortical Microcircuit Motifs In An Nmdar-Hypofunction Mouse Model Support An Attractor Hypothesis Of Psychotic States. Talk given Oct 2015 at the Society for Neuroscience Conference in Chicago, IL.*
- Hamm, J.P.,** Yuste, R. Microcircuit mechanisms of deviance detection biomarkers of psychotic disease. Poster presented at August 2015 Gordon Conference on “Inhibition in the CNS”
- Hamm, J.P., Yuste, R. Two-Photon Calcium Imaging Of Visual Cortical Population Dynamics In A Chronic Ketamine Mouse Model Of Schizophrenia. Talk given April 2015 at the International Congress of Schizophrenia Research (ICOSR).*
- Hamm, J.P.,** Oliver, W.T., Hudgens-Haney, M., Bobilev, A., McDowell, J.E., Buckley, P.F., Clementz, B.A. Stimulus duration and context moderate gamma-band auditory neural abnormalities in schizophrenia. Poster presented at April 2013 at the International Congress of Schizophrenia Research (ICOSR), Grande Lakes, Florida
- Hamm, J.P.,** Dyckman, K.A, McDowell, J.E., Clementz, B.A. (2012). Intrinsic frontal alpha and occipital gamma oscillations predict express saccades and antisaccade errors. Poster presented at Society for Neuroscience (SFN) New Orleans, Louisiana
- Hudgens-Haney M.E., **Hamm J.P.,** Goodie A.S., Krusemark E.A., McDowell J.E., Clementz B.A. (2012). An MEG study of risk and overconfidence in pathological gamblers. To be presented at the Society for Neuroscience Annual Meeting, New Orleans LA.
- Oliver W., **Hamm J.P.,** Hetrick W.P., Clementz B.A. (2012). Auditory gating in schizophrenia: context or ISI? Presented at the Society for Psychophysiological Research Annual Meeting, New Orleans LA.
- Hayrynen L.K., **Hamm J.P.,** Sponheim S.R., Clementz B.A. (2012). Frequency-specific disruptions of neuronal oscillations reveal aberrant cortical network properties in schizophrenia. Presented at the Society for Psychophysiological Research Annual Meeting, New Orleans LA.

Hamm, J.P., Ethridge, L.E., Shapiro, J.R., Parker, E.M., Keshavan, M.S, Sweeney, J.S., Pearlson, G., Tamminga, C.A., Thaker, G., Clementz, B.A. (2012). Auditory Evoked Oscillations Discriminate Major Mood and Psychotic Diagnoses. Poster presented at Society of Biological Psychiatry (SOBP) Philadelphia, Pennsylvania.

Ethridge L.E., **Hamm J.P.**, Shapiro J.R., Summerfelt A.T., Keedy S.K., Stevens M.C., Pearlson G.D., Tamminga C.A., Boutros N.N., Sweeney J.A., Keshavan M.S., Clementz B.A.(2012). Late Beta Accentuation and Decreased N2 Amplitude to Auditory Oddball Stimuli Discriminate Psychosis Groups and Co-Occur in First-Degree Relatives. Presented at the Society for Biological Psychiatry Annual Meeting, Philadelphia PA, May.

Hudgens-Haney M., **Hamm J.P.**, Krusemark E.A., Goodie A.S., McDowell J.E., Clementz B.A. (2011). Neural correlates of perceived control and risky decision making in pathological gambling. Paper presented at the Society for Neuroscience Annual Meeting, Washington DC.

Hamm, J.P., Dyckman, K.A, McDowell, J.E., Clementz, B.A. (2011). Pre-trial alpha phase and beta power in frontal cortex predicts antisaccade errors. Poster presented at 2011 Society for Psychophysiological Research (SPR). Boston, Massachusetts.

***Hamm, J.P.**, Gilmore, C.S., and Clementz, B.A. (2011). High gamma (>60Hz) abnormalities in schizophrenia patients during auditory steady-state stimulation. Talk given at 2011 International Congress of Schizophrenia Research (ICOSR). Colorado Springs, Colorado.*

*Clementz B.A., **Hamm J.P.**, Ethridge L., Shapiro J. (2011). Auditory ERPs for discerning psychosis risk among bipolar and schizophrenia families. Presented as part of Electrophysiology Symposium to International Congress on Schizophrenia Research, Colorado Springs, CO.*

Hamm, J.P., Gilmore, C.S., Picchetti, N, Sponheim, S.R., and Clementz, B.A. (2010). Abnormal auditory cortical processing as a function of stimulus density in schizophrenia patients. Poster presented at 2010 Human Brain Mapping Conference (HBM) Barcelona, Spain.

***Hamm, J.P.**, Gilmore, C.S., Picchetti, N, Sponheim, S.R., and Clementz, B.A. (2010). Schizophrenic patients display abnormal neural responses in auditory cortex to increasing rates of stimulation. Talk given at 2010 South East Nerve Net and Georgia-South Carolina Neuroscience Consortium conference. Emory University, Atlanta, Georgia.*

Goodie A.S., Hudgens-Haney M., **Hamm J.P.**, Krusemark E., McDowell J.E., Clementz B.A. (2010). Neural Correlates of the Impact of Control on Decision Making in Pathological Gamblers. Presented at the NCRG Annual Conference on Gambling and Addition, Las Vegas NV.

Hamm, J.P., Dyckman, K.A., Ethridge, L.E, McDowell, J.E., and Clementz, B.A. (2009). Pre-gap alpha phase and preparatory cortical signals determine express vs regular saccade generation. Poster presented at 2009 Event related Potentials International Congress (EPIC). Bloomington, Indiana.

EXPERIENCE

RESEARCH

- 2014 – present **Research Fellow**, Yuste Laboratory
(Rafael Yuste, M.D., Ph.D.) – Department of Biological Sciences,
Columbia University
- 2008 – 2013 **Research Assistant**, Clinical and Cognitive Neuroscience Laboratory
(Brett Clementz, Ph.D. and Jennifer McDowell, Ph.D.) – Department of
Psychology, University of Georgia
- May-Aug 2007 **Research Assistant**, Comparative Cognition Laboratory
(Jonathan Crystal, Ph.D.) –Neuroscience and Behavior Program,
Department of Psychology, University of Georgia
- Sept-Dec 2007 **Research Assistant**, Human Cognitive Processing Laboratory
(Richard Marsh, Ph.D.) – Cognitive Program, Department of Psychology,
University of Georgia

TEACHING

- 2010 - 2013 **Instructor on record**, University of Georgia
Psychology 3980- Research design (Fall 2010)
Psychology 3990- Research methods lab (Fall 2013)
- 2012 **Instructor on record**, “EEG Oscillations Bootcamp” workshop, Arizona
State University (Summer)
- 2008 – 2011 **Graduate Teaching Assistant**, University of Georgia
Psychology 6430 – Applied Regression (Fall 2011)
Psychology 3230 – Abnormal Psychology (Spring 2009 and Fall 2009)
Psychology 2101 – Psychology of Adjustment (Fall 2008)

PROFESSIONAL ACTIVITIES

Professional Organizations:

2009-Present: Society for Neuroscience

2011-2013: Society for Psychophysiology

Peer Reviewer for: *Journal of Neuroscience, Psychophysiology, Schizophrenia Bulletin, Schizophrenia Research, Biological Psychology, Neuroimage: Clinical, PLOS ONE, Frontiers in Systems Neuroscience, International Journal of Psychophysiology*