CURRICULUM VITAE

Alan Seth Lewis, M.D., Ph.D.
Assistant Professor of Psychiatry and Behavioral Sciences
Vanderbilt University Medical Center

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DATE AND PLACE OF BIRTH: December 23, 1982, Albany, NY

MARITAL STATUS: Married to Trisha C. Lewis, L.C.S.W.

CHILDREN: Luke Theodore Lewis, 11/25/2015

EDUCATION

College	University of Pennsylvania College of Arts and Sciences Philadelphia, PA B.A., Chemistry (Summa Cum Laude)	2005
Graduate	Northwestern University The Graduate School Chicago, IL Ph.D., Neuroscience Dissertation title: The role of TRIP8b in neuronal HCN channel trafficking and function Advisor: Dane M. Chetkovich, M.D., Ph.D.	2010
Professional	Northwestern University Feinberg School of Medicine Chicago, IL M.D.	2012
Clinical training	Internship in Psychiatry Residency in Psychiatry Yale-New Haven Hospital New Haven, CT	2012-2013 2013-2016
Research fellowship	Neuroscience Research Training Program Department of Psychiatry Yale University School of Medicine Mentor: Marina R. Picciotto, Ph.D.	2016-2018

LICENSURE

Connecticut Medical License 53231	2014
Tennessee Medical License 57846	2018
Federal DEA License FL4854851	2014
Federal DEA "X" License XL4854851	2014

BOARD CERTIFICATION

Diplomate, American Board of Psychiatry and Neurology	2016

ACADEMIC APPOINTMENTS

Yale School of Medicine

Department of Psychiatry

Lecturer in Psychiatry	2017-2018
Instructor in Psychiatry	2018

Vanderbilt University School of Medicine | Vanderbilt University Medical Center

Department of Emergency Medicine (secondary)

Assistant Professor	2022-present

Department of Psychiatry and Behavioral Sciences

Assistant Professor (physician-scientist (tenure) track)	2018-present

Department of Neurology (secondary)

Assistant Professor	2018-present

Vanderbilt Center for Addiction Research Member	2021-present

Vanderbilt Kennedy Center

Member	2018-present

Center for Cognitive Medicine
Department of Psychiatry and Behavioral Sciences

Member	2018-present

Vanderbilt Brain Institute

Training Faculty	2018-present

HOSPITAL APPOINTMENTS

Yale-New Haven Psychiatric Hospital, New Haven, CT

Attending Psychiatrist	2017-2018

Vanderbilt University Adult Hospital and Vanderbilt Psychiatric Hospital, Nashville, TN

Attending Psychiatrist	2018-present

EMPLOYMENT

Silver Hill Hospital, New Canaan, CT

Per Diem Psychiatrist	2014-2016

Griffin Hospital, Derby, CT
Per Diem Psychiatrist 2016-2018

PROFESSIONAL ORGANIZATIONS

Society for Neuroscience	2008-present
Society of Biological Psychiatry	2018-present
American Psychiatric Association	2011-present
Tennessee Psychiatric Association	2018-present
Connecticut State Medical Society	2012-2018
Connecticut Psychiatric Society	2012-2018
Pavlovian Society	2020-present
American College of Neuropsychopharmacology, Associate Member	2022-present

PROFESSIONAL ACTIVITIES

Intramural service

Yale School of Medicine | Yale-New Haven Hospital

Graduate Medical Education Committee	2013-2014
Psychiatry Residency/ Neuroscience Research Training Program Recruitment	2015-2017

Vanderbilt University School of Medicine | Vanderbilt University Medical Center

Admissions interviewer for psychiatry residency, Interdisciplinary Graduate Program, and Medical Scientist Training Program	2018-present
VUSM buddies faculty mentor	2018-2019
VUMC Annual Research Forum judge	2019
Vanderbilt Postdoctoral Symposium poster judge	2019
Kennedy Center Science Day poster judge	2019
Psychiatry Grand Rounds Committee	2019-present
Academic Psychiatry Day Committee	2020-present
Psychiatry research track residency program advisor for basic and translational research	2020-present
VBI Brain Blast faculty panel participant	2021
VBI Outreach Committee	2021-present
VUSM Interdisciplinary Science Curriculum Consultation group	2022-present

Extramural service

Journal editorships
Associate editor: Neuroscience Letters 2021-present

Journal editorial boards
Journal of Autism and Developmental Disorders 2019-present

Journal reviewer
Behavioral Brain Research
Biological Psychiatry
Brain Pathology

Child and Adolescent Psychiatry and Mental Health
Cognitive and Behavioral Neurology
Frontiers in Molecular Neuroscience
Frontiers in Psychiatry
Journal of Autism and Developmental Disorders
Journal of Child and Adolescent Psychopharmacology
Journal of Neurophysiology
Journal of the Canadian Academy of Child and Adolescent Psychiatry
Neuroscience and Biobehavioral Reviews
Neuroscience Letters
Psychopharmacology
SAGE Open Medical Case Reports
Schizophrenia Research
The Primary Care Companion for CNS Disorders
World Journal of Biological Psychiatry

NIH CSR study sections, *ad hoc* reviewer

Neurobiology of Motivated Behavior (NMB)	3/2021
Fellowships: Behavioral Neuroscience (F02A)	10/2021
Fellowships: Behavioral Neuroscience (F02A)	6/2022

Other grant review

Research grant review, Medical Research Council, UKRI	8/2022

Program planning committee

Society of Biological Psychiatry	2022-2025

Special awards or recognition for professional activities

Phi Beta Kappa 2005
University of Pennsylvania

Morton Heller Award for Exemplary Research 2009
Medical Scientist Training Program
Northwestern University

Ruth L. Kirschstein National Research Service Award for Individual Predoctoral MD/PhD Fellows 2009
National Institute of Neurological Disorders and Stroke

McNeil Research Award 2013
Department of Psychiatry
Yale School of Medicine

Research Colloquium for Junior Investigators 2014
American Psychiatric Association

Seymour L. Lustman Resident Research Award 2015
Department of Psychiatry
Yale School of Medicine

Meixner Postdoctoral Fellowship in Translational Research 2015

Autism Speaks

Travel Fellowship Award 2015
Society of Biological Psychiatry

Laughlin Foundation Merit Award 2016
Department of Psychiatry
Yale School of Medicine

Career Development Institute for Psychiatry 2017
University of Pittsburgh and Stanford University

Travel Award 2017
American College of Neuropsychopharmacology

Annual Meeting Senior Researcher Award 2018
American Academy of Child and Adolescent Psychiatry

Young Physician Scientist Award 2020
American Society for Clinical Investigation

Early Career Reviewer Program 2021
National Institutes of Health

Associate Member 2022
American College of Neuropsychopharmacology

TEACHING ACTIVITIES

Didactic

Northwestern University Feinberg School of Medicine

Teaching assistant: Neuroanatomy for medical students	2008
Group tutor: Structure-function course for medical students	2008

Yale School of Medicine

Small group facilitator: PREP didactic for PGY1 residents	2017-2018
Lecture to pediatrics residents: *Psychogenic non-epileptic seizures in children and adolescents*	2016

Vanderbilt University School of Medicine | Vanderbilt University Medical Center

NURO8326: NRSA proposal writing mentor	Spring 2019
Psychiatry resident weekly supervision	2019-present
Psychiatry residency OSCE and OSTE preceptor	2019-present
Grand Rounds Educational Discussion Lecture	Sept 2020
NURO8365: Neurobiology of Disease lecture: *Schizophrenia: Clinical presentation and diagnosis*	Feb 2021
Lecture to psychiatry PGY1 residents: *Pharmacogenomics*	April 2021
Lecture to psychiatry PGY1 residents: *Pharmacogenomics*	Feb 2022
Psychiatry resident journal club course director	2021-2022
Shade Tree Clinic, volunteer attending physician/preceptor	2022-present

PHAR8338: Principles of Pharmacology in Neuroscience Research lecture: *Dentate gyrus mossy cell networks and memory regulation* March 2022
PHAR8338: Principles of Pharmacology in Neuroscience Research lecture: *Journal club* March 2022
Human Biology and Disease: *Schizophrenia: Management* May 2022
Lecture to psychiatry PGY2 residents: *Chemical neurotransmission* Sept 2022
Consult-liaison psychiatric didactics: *Approach to anxiety in the consultation setting* Oct 2022

Research supervision

Undergraduate

Katherine Garvey; Yale undergraduate student	2015
Elizabeth Chamiec-Case; Avielle Foundation summer intern and UConn undergraduate student	2017
Dawson Stout; Avielle Foundation summer intern and Tufts undergraduate student	2016, 2018
Lena Walton; Tufts undergraduate student	2016
Justin Chan; Yale undergraduate student	2018
Ashleigh Grindon; Univ. of Southern California Undergrad	2019
Wooseok Sam Kwon; Vanderbilt undergraduate student	2019-present
Yuval Guetta; BP-Endure summer student	2022

Graduate

Chantel Wilson (IGP prequalifying student)	2019-2020
Juliana Quay (QCB rotation student)	2020
Sarah Guagliardo (IGP rotation student)	2020
Matthew Houpert (IGP rotation student)	2021
Jack Trapani (MSTP rotation student)	2021

Technician

Sarah Lowrey	2019-2020
James Bauer Currently neuroscience graduate student at UPenn	2020-2022
Leann Seanez	2020-present
Catherine Cerroni	2022-present

Vanderbilt thesis and qualifying committees

Undergraduate thesis committees

Price Withers (Conn and Foster Labs)	2020-2021
Michelle Kwon (Siciliano Lab)	2022-2023

Graduate school qualifying committees

Niharika Loomba	May 2022

RESEARCH PROGRAM

Active grants

K23MH116339-01 (**Lewis**)	04/13/2018-03/31/2023	9.00 calendar months

NIH/NIMH Total cost: $900,054
A translational approach to understand hippocampal neural circuitry regulating impulsive aggression
The major goals of this project are to provide career development training in systems and translational neuroscience. Research toward this goal will determine how neurons in the mouse dentate gyrus regulate aggression, and will use a pharmacological challenge in humans with schizophrenia to determine how alpha-7 nicotinic agonists influence impulsive responding to emotional cues.

Hobbs Discovery Grant (**Lewis**) 11/01/2021-10/31/2022 0 calendar months
Vanderbilt Kennedy Center Total cost: $30,000
Circuit mechanisms of neurogenesis deficits in the 22q11 deletion mouse model
The major goal of this pilot project is to determine whether mossy cell activity deficits in a mouse model of neurodevelopmental disorders are causal for reduced adult neurogenesis.

Completed grants

Hobbs Covid-19 Discovery Grant (**Lewis**) 11/01/2020-10/31/2021 0 calendar months
Vanderbilt Kennedy Center Total cost: $10,000
Neurodevelopmental effects on hippocampal novelty circuitry
The major goal of this pilot project is to determine whether ventral mossy cells are hyperactive and/or show novelty habituation deficits in a mouse model of neurodevelopmental disorders.

Grant #9699 **(Lewis)** 12/01/2015 – 4/30/2018
Autism Speaks Total cost: $185,000
Nicotinic cholinergic modulation as a novel treatment strategy for aggression associated with autism
This Meixner Postdoctoral Fellowship in Translational Autism Research supports training and research experiences in clinical and basic research related to aggression in autism.

F30NS064757 (**Lewis**) 01/05/09-05/31/12
NIH/NINDS Total cost: $125,191
The Role of TRIP8b in Neuronal HCN Channel Trafficking
This fellowship award supported my predoctoral work with Dr. Dane Chetkovich at Northwestern to determine how TRIP8b, an auxiliary subunit of the hyperpolarization-activated cyclic nucleotide-gated (HCN) channels, regulates HCN channel trafficking and function in the hippocampus.

PUBLICATIONS AND PRESENTATIONS

Articles in refereed journals

1. Hansen DB, **Lewis AS**, Gavalas SJ, Joullié MM (2006) A stereoselective synthetic approach to (2S, 3R)-N-(1',1'-dimethyl-2',3'-epoxypropyl)-3-hydroxytryptophan, a component of cyclomarin A. ***Tetrahedron Asymmetry*** 17:15-21.

2. Chung WK, Shin M, Jaramillo TC, Leibel RL, LeDuc CA, Fischer SG, Tzilianos E, Gheith AA, **Lewis AS**, Chetkovich DM (2009) Absence epilepsy in apathetic, a spontaneous mutant mouse lacking the h channel subunit, HCN2. ***Neurobiology of Disease*** 33:499-508.

3. **Lewis AS**, Schwartz E, Chan CS, Noam Y, Shin M, Wadman WJ, Surmeier DJ, Baram TZ, Macdonald RL, Chetkovich DM (2009) Alternatively spliced isoforms of TRIP8b differentially control h channel trafficking and function. ***Journal of Neuroscience*** 29:6250-6265.

4. **Lewis AS**, Estep CM, Chetkovich DM (2010) The fast and slow ups and downs of HCN channel regulation. ***Channels (Austin)*** 4:215-231.

5. **Lewis AS**, Chetkovich DM (2011) HCN channels in behavior and neurological disease: too hyper, or not active enough? ***Molecular and Cellular Neuroscience*** 46:357-67.

6. Chan CS, Glajch KE, Gertler TS, Guzman JN, Mercer JN, **Lewis AS**, Goldberg AB, Tkatch T, Shigemoto R, Fleming SM, Chetkovich DM, Osten P, Kita H, Surmeier DJ (2011) HCN channelopathy in external globus pallidus neurons in models of Parkinson's disease. ***Nature Neuroscience*** 14:85-92.

7. **Lewis AS**, Vaidya SP, Blais CA, Liu Z, Stoub TR, Brager DH, Chen X, Bender RA, Estep CM, Popov AB, Kang CE, van Veldhoven PP, Bayliss DA, Nicholson DA, Powell CM, Johnston D, Chetkovich DM (2011) Deletion of the HCN channel auxiliary subunit TRIP8b impairs hippocampal I_h localization and function and promotes antidepressant behavior in mice. ***Journal of Neuroscience*** 31:7424-7440.

8. Han Y, Noam Y, **Lewis AS**, Gallagher JJ, Wadman WJ, Baram TZ, Chetkovich DM (2011) Trafficking and gating of hyperpolarization-activated cyclic nucleotide-gated channels are regulated by interaction with tetratricopeptide repeat-containing Rab8b-interacting protein (TRIP8b) and cyclic AMP at distinct sites. ***Journal of Biological Chemistry*** 286:20823-20834.

9. Khurana S, Liu Z, **Lewis AS**, Rosa K, Chetkovich D, Golding NL (2012) An essential role for modulation of hyperpolarization-activated current in the development of binaural temporal precision. ***Journal of Neuroscience*** 32:2814-2823.

10. Wilkars W, Liu Z, **Lewis AS**, Stoub TR, Ramos EM, Brandt N, Nicholson DA, Chetkovich DM, Bender RA (2012) Regulation of Axonal HCN1 Trafficking in Perforant Path Involves Expression of Specific TRIP8b Isoforms. ***PLoS One*** 7:e32181.

11. Marcelin B, Liu Z, Chen Y, **Lewis AS**, Becker A, McClelland S, Chetkovich DM, Migliore M, Baram TZ, Esclapez M, Bernard C (2012) Dorsoventral Differences in Intrinsic Properties in Developing CA1 Pyramidal Cells. ***Journal of Neuroscience*** 32:3736-3747.

12. Bankston JR, Camp SS, DiMaio F, **Lewis AS**, Chetkovich DM, Zagotta WN (2012) Structure and stoichiometry of TRIP8b interaction with HCN channels. ***Proceedings of the National Academy of Sciences of the United States of America*** 109:7899-7904.

13. Marcelin B, Lugo JN, Brewster AL, Liu Z, **Lewis AS**, McClelland S, Chetkovich DM, Baram TZ, Anderson AE, Becker A, Esclapez M, Bernard B (2012) Differential dorso-ventral distributions of Kv4.2 and hyperpolarization-activated cyclic adenosine monophosphate gated channel (HCN) proteins confer distinct integrative properties to hippocampal CA1 pyramidal cell distal dendrites. ***Journal of Biological Chemistry*** 287:17656-17661.

14. Huang Z, Lujan R, Martinez-Hernandez J, **Lewis AS**, Chetkovich DM, Shah MM (2012) TRIP8b-Independent Trafficking and Plasticity of Adult Cortical Presynaptic HCN1 Channels. ***Journal of Neuroscience*** 32: 14835-48.

15. **Lewis AS**, Picciotto MR (2013) High-affinity nicotinic acetylcholine receptor expression and trafficking abnormalities in psychiatric illness. ***Psychopharmacology*** 229:477-85.

16. Brager DH, **Lewis AS**, Chetkovich DM, Johnston D (2013) Short- and long-term potentiation in CA1 neurons from mice lacking the h-channel auxiliary subunit TRIP8b. ***Journal of Neurophysiology*** 110:2350-2357.

17. **Lewis AS**, Mineur YS, Smith PH, Cahuzac ELM, Picciotto MR (2015) Modulation of aggressive behavior in mice by nicotinic receptor subtypes. ***Biochemical Pharmacology*** 97:488-497.

18. Picciotto MR, **Lewis AS**, van Schalkwyk GI, Mineur YS (2015) Mood and anxiety regulation by nicotinic acetylcholine receptors: a potential pathway to modulate aggression and related behavioral states. ***Neuropharmacology*** 96:235-243

19. Heuermann R, Jaramillo TC, Ying S-W, Suter BA, Han Y, Lyman K, **Lewis AS**, Hampton TG, Goldstein PA, Shepherd GMG, Chetkovich DM (2015) Reduction of thalamic and cortical Ih by deletion of TRIP8b produces a mouse model of human absence epilepsy. ***Neurobiology of Disease*** 85:81-92.

20. **Lewis AS**, Oberleitner L, Morgan PT, Picciotto MR, McKee SA (2015) Association of cigarette smoking with interpersonal and self-directed violence in a large community-based sample. ***Nicotine and Tobacco Research*** 18:1456-62.

21. **Lewis AS**, Oldham M (2015) Delusional infestation with black mold presenting to the general hospital setting. ***Primary Care Companion for CNS Disorders*** 17:eCollection.

22. van Schalkwyk GI*, **Lewis AS***, Qayyum Z, Koslosky K, Picciotto MR, Volkmar FR (2015) Reduction of aggressive episodes after repeated transdermal nicotine administration in a hospitalized adolescent with Autism Spectrum Disorder. ***Journal of Autism and Developmental Disorders*** 45: 3061-3066. (*denotes equal contribution)

23. **Lewis AS**, van Schalkwyk GI, Bloch MH (2017) Alpha-7 nicotinic agonists for cognitive deficits in neuropsychiatric disorders: a translational meta-analysis of rodent and human studies. ***Progress in Neuropsychopharmacology and Biological Psychiatry*** 75:45-53.

24. van Schalkwyk GI, **Lewis AS**, Beyer C, Johnson J, van Rensburg S, Bloch MH (2017) Efficacy of antipsychotics for irritability and aggression in children: a meta-analysis. ***Expert Review of Neurotherapeutics*** 17:1045-1053.

25. **Lewis AS**, Olincy A, Buchanan RW, Kem WS, Picciotto MR, Freedman R (2017) Effects of a nicotinic agonist on the Brief Psychiatric Rating Scale five-factor subscale model in schizophrenia. ***Schizophrenia Research*** 195:568-569.

26. **Lewis AS**, Pittenger ST, Mineur YS, Stout D, Smith PH, Picciotto MR (2018) Bidirectional regulation of aggression in mice by hippocampal alpha-7 nicotinic acetylcholine receptors. ***Neuropsychopharmacology*** 43:1267-1275.

27. **Lewis AS**, van Schalkwyk GI, Ortiz Lopez M, Volkmar FR, Picciotto MR, Sukhodolsky DG (2018) An Exploratory Trial of Transdermal Nicotine for Aggression and Irritability in Adults with Autism Spectrum Disorder. ***Journal of Autism and Developmental Disorders*** 48:2748-2757.

28. Michaelsen KC, **Lewis AS**, Morgan PT, McKee SA, Wasser TD (2018) Forensic Rotations for Residents: Navigating the Challenges. ***The Journal of the American Academy of Psychiatry and the Law*** 46(3):322-328.

29. **Lewis AS**, van Schalkwyk GI (2019) Systematic Review: Distribution of Age and Intervention Modalities in Therapeutic Clinical Trials for Autism Spectrum Disorder. ***Journal of Autism and Developmental Disorders*** 50(6):2208-2216.

30. Chan J, Stout D, Pittenger ST, Picciotto MR, **Lewis AS** (2019) Induction of reversible bidirectional social approach bias by olfactory conditioning in male mice. ***Social Neuroscience*** 15(1):25-35.

31. **Lewis AS**, Picciotto MR (2020) Regulation of aggressive behaviors by nicotinic acetylcholine receptors: animal models, human genetics, and clinical studies. ***Neuropharmacology*** 167: 107929.

32. Roeske MJ, Konradi C, Heckers S, **Lewis AS** (2021) Hippocampal volume and hippocampal neuron density, number and size in schizophrenia: a systematic review and meta-analysis of postmortem studies. ***Molecular Psychiatry*** 26(7):3524-3535.

33. Kim A, Rader SL, Fernandez TV, Vandekar SN, **Lewis AS** (2021) Leveraging aggression risk gene expression in the developing and adult human brain to guide future precision interventions. ***Molecular Psychiatry*** 26(7):2680-2682.

34. **Lewis AS**, Calipari ES, Siciliano CA (2021) Toward standardized guidelines for investigating neural circuit control of behavior in animal research. ***eNeuro*** 8(2): ENEURO.0498-20.2021.

35. Bauer JP, Rader SL, Joffe ME, Kwon W, Quay J, Seanez L, Zhou C, Conn PF, **Lewis AS** (2021) Modeling intrahippocampal effects of anterior hippocampal hyperactivity relevant to schizophrenia using chemogenetic excitation of long axis-projecting mossy cells in the mouse dentate gyrus. ***Biological Psychiatry: Global Open Science*** 1(2):101-111.

36. Steiner A, Owen BM, Bauer JP, Seanez L, Kwon S, Biddinger JE, Huffman R, Ayala JE, Nobis WP, **Lewis AS** (2022) Glucagon-like peptide-1 receptor differentially controls mossy cell activity across the dentate gyrus longitudinal axis. ***Hippocampus***. In press.

37. Conley AC, Albert KM, Armstrong K, Johnson JV, Kem WR, Newhouse PA, **Lewis AS** (2022) A pilot study of transdermal nicotine effects on facial emotion responding in non-smoking healthy controls and individuals with schizophrenia: feasibility and effect size estimates. ***Schizophrenia Research***. In press.

38. **Lewis AS** (2023) Emergency medicine practitioner perspectives on caring for patients with psychiatric and substance use disorders in a large academic medical center. ***General Hospital Psychiatry***. In press.

Books, book chapters, invited reviews

Letters to editor, book reviews, editorials

1. **Lewis AS** (2016) Testing a new approach for easing self-harm and dangerous outbursts. ***Autism Speaks Blog***.

2. Furman K, **Lewis AS** (2016) Neuroscience in the Media: Heroin Vaccine. ***National Neuroscience Curriculum Initiative***.

3. **Lewis AS** (2021) How to avoid common pitfalls when parsing circuit control of social behavior. ***Spectrum***.

Preprints and other research products

1. Bauer JP, Rader SL, Joffe ME, Kwon W, Quay J, Seanez L, Zhou C, Conn PF, **Lewis AS** (2021) Modeling intrahippocampal effects of anterior hippocampal hyperactivity relevant to schizophrenia using chemogenetic excitation of long axis-projecting mossy cells in the mouse dentate gyrus. **bioRxiv**.

2. Steiner A, Owen BM, Bauer JP, Seanez L, Kwon S, Biddinger JE, Huffman R, Ayala JE, Nobis WP, **Lewis AS** (2022) Glucagon-like peptide-1 receptor differentially controls mossy cell activity across the dentate gyrus longitudinal axis. **bioRxiv**.

3. Exploring memory circuit changes in neurodevelopmental disorders, Vanderbilt Kennedy Center "The Promise of Discovery" podcast. November 14, 2022.

Abstracts and poster presentations

1. Alternative splicing of the putative h channel trafficking protein TRIP8b controls subcellular localization in the hippocampus. 2008. *Gordon Research Conference on Epilepsy and Mechanisms of Neuronal Synchronization, Waterville, ME*.

2. Alternatively spliced isoforms of TRIP8b localize to distinct subcellular regions and control HCN1 surface trafficking. 2008. *Annual Meeting, Society for Neuroscience, Washington, D.C.*

3. The TRIP8b knockout mouse is a model for loss of I_h without genetic disruption of HCN subunit proteins. 2009. *Annual Meeting, Society for Neuroscience, Chicago, IL.*

4. Deletion of the HCN channel auxiliary subunit TRIP8b in mouse impairs neuronal I_h and is a model for studying the role of I_h in neurological disease. 2010. *ASCI/AAP Joint Meeting, Chicago, IL.*

5. Deletion of TRIP8b eliminates I_h expression in CA1 pyramidal neurons by impairing HCN channel dendritic trafficking and protein levels. 2010. *Gordon Research Conference on Cellular and Molecular Neurobiology, Hong Kong, China.*

6. Visualizing nicotinic acetylcholine receptor calcium signal transduction in rodent brain regions relevant to neuropsychiatric disorders. 2014. *APA Research Colloquium for Junior Investigators, New York, NY*.

7. Reduction of aggressive behavior in mice by nicotinic acetylcholine receptor modulation. 2015. *Annual Meeting, Society of Biological Psychiatry, Toronto, Canada*.

8. Reduction of aggressive behavior in mouse models by the selective □7 nicotinic partial agonist GTS-21. 2015. *Nicotinic Acetylcholine Receptors as Therapeutic Targets Symposium, Chicago, IL*.

9. Comparison of alpha-7 nicotinic receptor-selective compounds in human clinical trials for cognitive dysfunction and laboratory models of rodent cognition: meta-analysis and systematic review. 2016. *Annual Meeting, Society of Biological Psychiatry, Atlanta, GA*.

10. Regulation of aggressive behavior in mice by hippocampal alpha7 nicotinic receptors. 2017. *Annual Meeting, Society for Neuroscience, Washington, DC*.

11. Alpha-7 nicotinic receptors in the hippocampus bidirectionally regulate aggressive behavior in mice. 2017. *Annual Meeting, American College of Neuropsychopharmacology, Palm Springs, CA.*

12. Optical recording of dentate gyrus activity during social interaction. 2018. *Gordon Research Conference on Optogenetic Approaches to Understanding Neural Circuits and Behavior, Newry, ME*.

13. Activity of neuronal subpopulations in the mouse dentate gyrus correlates with specific social and exploratory behaviors. 2018. *Annual Meeting, American College of Neuropsychopharmacology, Hollywood, FL.*

14. Exploring the role of ventral hilar mossy cells in social and aggressive behaviors. 2019. *Annual Meeting, Society for Neuroscience, Chicago, IL*.

15. Genetic variation between individuals with autism and high or low levels of aggressive behaviors matched on clinical and demographic variables. 2019. *Annual Meeting, American College of Neuropsychopharmacology, Orlando, FL.*

16. Regulation of Aggressive Behavior by Mossy Cells in the Caudal Dentate Gyrus. 2020. *Annual Meeting, Society of Biological Psychiatry.* Accepted abstract, presentation canceled due to COVID19.

17. Postmortem Studies of Hippocampal Subfields in Schizophrenia: Systematic Review and Meta-Analysis. 2020. *Annual Meeting, Society of Biological Psychiatry.* Accepted abstract, presentation canceled due to COVID19.

18. Activation of mossy cells in the ventral dentate gyrus suppresses social isolation-induced aggressive behavior in male mice. ASCI/AAP Joint Meeting. Accepted abstract, presentation canceled due to COVID19.

19. Exploring the role of ventral hilar mossy cells in social and aggressive behaviors. 2019. *Vanderbilt Academic Psychiatry Day, Nashville, TN*.

20. Activation of mossy cells in the ventral dentate gyrus suppresses social isolation-induced aggressive behavior in male mice. 2021. ASCI YPSA virtual poster session.

21. Hyperactivity of ventral hippocampal mossy cells degrades dorsal hippocampal mnemonic function via longitudinal projections. 2021. AAP/ASCI Joint Meeting virtual poster session.

22. Exploring dentate gyrus circuitry in 22q11 deletion syndrome mice. 2021. Vanderbilt Undergraduate Research Forum. ***Presented by Wooseok Kwon, undergraduate in Lewis Lab.**

23. Hyperactivity of ventral hippocampal mossy cells degrades dorsal hippocampal mnemonic function via longitudinal projections. 2021. Vanderbilt Kennedy Center Science Day. ***Presented by James Bauer, research assistant in Lewis Lab.**

24. Neural Circuit Recruitment and Adult Neurogenesis Abnormalities in the Dentate Gyrus of the Df(h22q11)/+ Mouse Model of 22q11.2 Deletion Syndrome. 2021. *Annual Meeting, American College of Neuropsychopharmacology, San Juan, Puerto Rico.*

25. Hippocampal Mossy Cells Are Regionally Reduced in Adolescent and Adult 22q11.2 Deletion Syndrome Model Mice. 2022. *Annual Meeting, American College of Neuropsychopharmacology, Phoenix, Arizona.*

Scientific presentations

1. Regulation of aggression by nicotinic acetylcholine receptors in animal models and potential translation to human disorders. June 2015. *Department of Psychiatry Grand Rounds, Yale University*. Invited presentation.

2. Neuronal nicotinic receptors as potential pharmacological targets to treat pathological aggression. Sept 2015. *Child Study Center Grant Rounds, Yale University*. Invited presentation.

3. Your brain in a dish. Aug 2015. National Neuroscience Curriculum Initiative Symposium, Yale University. Invited presentation.

4. Regulation of aggression by targeting neuronal nicotinic receptors: translation from mouse models to clinical trials. Nov 2016. *Department of Psychiatry Biological Sciences Training Program, Yale University*. Invited presentation.

5. A translational approach to identify novel treatment targets for refractory aggressive behavior in neuropsychiatric disorders. Feb 2018. *Department of Psychiatry Grand Rounds, University of Iowa*. Invited presentation.

6. A translational approach to identify novel treatment targets for refractory aggressive behavior in neuropsychiatric disorders. Feb 2018. *Department of Psychiatry Seminar, Vanderbilt University Medical Center*. Invited presentation.

7. Nicotinic receptors as a potential therapeutic target for challenging behaviors in neurodevelopmental disorders. Oct 2018. *ATP1A3 in Disease Symposium, Chicago, IL*. Invited presentation.

8. A pharmacological and systems neuroscience approach to identify potential regulators of aggressive behavior in neuropsychiatric disorders. Oct 2018. *American Academy of Child and Adolescent Psychiatry Annual Meeting, Seattle, WA.* Peer-reviewed presentation.

9. Identifying cognitive and emotional circuits to regulate aggressive behavior. Sept 2019. *Vanderbilt Brain Institute Annual Retreat, Nashville, TN*. Invited presentation.

10. Genetic and neural circuit approaches for understanding aggression in neuropsychiatric disorders. Oct 2019. *Vanderbilt Medical Research Building III Faculty Luncheon Seminar Series.* Invited presentation.

11. Investigations of aggression in neuropsychiatric disease across multiple units of analysis. Oct 2019. *Department of Psychiatry Grand Rounds, Vanderbilt University Medical Center*. Invited presentation.

12. Hippocampal mechanisms of aggression and social behavior. April 2020. *University of Cincinnati*. Invited presentation. Presentation canceled due to COVID19.

13. What is Schizophrenia? January 2021. *Department of Psychiatry Grand Rounds, Vanderbilt University Medical Center*. Invited presentation.

14. Careers of a Physician Scientist. January 2022. *Southeastern Medical Scientist Symposium*. Virtual conference. Invited roundtable presenter.

15. Exploring regional hippocampal dysfunction in neuropsychiatric disorders through a mossy cell lens. August 2022. *Vanderbilt Center for Addiction Research Work in Progress Seminar Series, Nashville, TN*. Invited presentation.

16. Exploring regional hippocampal dysfunction in neuropsychiatric disorders through a mossy cell lens. September 2022. *Yale University Department of Psychiatry Biological Sciences Training Program Seminar Series. New Haven, CT*. Invited presentation.

17. Breaking and fixing a vulnerable memory circuit in genetic risk models of psychiatric illness. *Department of Psychiatry Grand Rounds, University of Tennessee Health Science Center, Memphis, TN*. Invited presentation.

18. Control of memory formation by internal states and external environments. *Vanderbilt Department of Psychiatry and Behavioral Sciences 75th Anniversary Research Symposium, Nashville, TN*. Invited presentation.