Curriculum Vitae for
Jessica Hotard Chancey, Ph.D.

100 E. 24th St.
NHB 2.128
Austin, TX 78712
jessica.chancey@austin.utexas.edu

Positions

Aug. 2023-present	**Assistant Professor of Instruction** Biology Instructional Office and Neuroscience Department University of Texas at Austin, Austin, TX
Sept. 2019-August 2023	**Research Associate**, Center for Learning and Memory, Department of Neuroscience, University of Texas at Austin, Austin, TX Project: Investigating cellular and circuit dysfunction in mouse models of genetic and acquired epilepsy
Spring 2020-Spring 2022	**Lecturer**, Biology Instructional Office University of Texas at Austin, Austin, TX
Sept. 2017-Aug. 2019	**Postdoctoral Fellow**, Center for Learning and Memory, Department of Neuroscience, University of Texas at Austin, Austin, TX Advisor: MacKenzie A. Howard, PhD Project: Understanding cellular and circuit dysfunction in mouse models of Dravet Syndrome
Nov. 2013-June 2017	**Postdoctoral IRTA Fellow**, Laboratory for Integrative Neuroscience, National Institute on Alcohol Abuse and Alcoholism, National Institutes of Health, Rockville, MD Advisor: David M. Lovinger, PhD Project: Dopamine modulation of striatal cholinergic interneurons controls striatal plasticity and sequence learning
2008-2013	**Graduate Research Assistant**, University of Alabama at Birmingham, Birmingham, AL
2006-2008	**Graduate Research Assistant**, Southeastern Louisiana University, Hammond, LA
2005-2006	**Graduate Teaching Assistant**, Southeastern Louisiana University, Hammond, LA
Spring 2002	**Undergraduate Teaching Assistant**, Louisiana State University, Baton Rouge, LA

Education

August 2008-October 2013	**University of Alabama at Birmingham** Birmingham, AL Ph.D. in Neurobiology, October 2013 Graduate advisor: Linda Overstreet-Wadiche, PhD Thesis: Experience-dependent synaptogenesis in adult-generated neurons

August 2005- May 2008	**Southeastern Louisiana University** Hammond, LA Master's of Science in Biology, May 2008 Graduate advisor: John O'Reilly, PhD Thesis: Relative Resistance to Slow Inactivation of hNav1.5 is Reversed by Lysine or Glutamine Substitution at Position V930 in D2-S6
January 2004- May 2005	**Southeastern Louisiana University** Hammond, LA Bachelor's of Science, May 2005 *Suma Cum Laude* Major: Biological Sciences, Concentration: Molecular Biology Minor: Chemistry Independent undergraduate researcher Advisor: Penny Shockett, PhD Project: Inducible RAG Transgenic Mice: A Tool for Studying the Constraints on V(D)J Recombination
August 1999- August 2002	**Louisiana State University** Baton Rouge, LA Major: Microbiology 104 hours completed toward Bachelor's of Science

Teaching experience

Spring 2024- present	Neural Systems 1 (NEU330) instructor University of Texas at Austin
Spring 2020- Present	Neurophysiology lab (NEU365L) instructor University of Texas at Austin
Fall 2025	Physics 2 (PHY 303L) guest lecturer University of Texas at Austin
Spring 2019	Synaptic Physiology and Plasticity (NEU 366D) guest lecturer University of Texas at Austin
2015-2016	High school biochemistry teacher Home Scholar Academy, Gaithersburg, MD
Spring 2011- 2012	Molecular Mechanisms of Memory teaching assistant University of Alabama at Birmingham
Fall 2011	Biochemistry, Genetics and Cell Biology tutor University of Alabama at Birmingham, Cellular and Molecular Biology Graduate Program
Fall 2005- Fall2006	Introductory Biology Lab instructor Southeastern Louisiana University
Spring 2002	Inorganic Chemistry Lab teaching assistant Louisiana State University, Chemistry Dept.

Publications

Chancey, Jessica H., Alisha Ahmed, Fernando Isaac Guillèn and MacKenzie A. Howard. 2023. Complex synaptic and intrinsic interactions disrupt input/output functions in the hippocampus of *Scn1b* knockout mice. *Journal of Neuroscience* 43(49): 8562-8577.

Chancey, Jessica H. and MacKenzie A. Howard. 2022. Synaptic integration in CA1 pyramidal neurons in intact despite deficits in GABAergic transmission in the *Scn1a* haploinsufficiency mouse model of Dravet syndrome. *eNeuro:* 9(3).

Augustin, Shana M., Jessica H. Chancey, David M. Lovinger. 2018. Dual dopaminergic regulation of corticostriatal plasticity by cholinergic interneurons and indirect pathway medium spiny neurons. *Cell Reports:* 24(11): 2883-93.

Abrahao, Karina P., Jessica H. Chancey, C. Savio Chan, David M. Lovinger. 2016. Ethanol-sensitive Pacemaker Neurons in the Mouse External Globus Pallidus. *Neuropsychopharmacology:* 42: 1070-1081.

Gremel, Christina, Jessica H. Chancey, Brady Atwood, G. Luo, R. Neve, C. Ramakrishnan, Karl Deisseroth, David. M. Lovinger, Rui Costa. 2016. Endocannabinoid modulation of orbitostriatal circuits gates habit formation. *Neuron:* 90(6): 1312-24.

Chancey, Jessica H., Doug J. Poulsen, Jacques I. Wadiche, Linda Overstreet-Wadiche. 2014. Hilar mossy cells provide the first glutamatergic synapses to adult-born dentate granule cells. *Journal of Neuroscience*: 34(6): 2349-54.
*Recommended by Faculty of 1000

Chancey, Jessica H., Elena W. Adlaf, Matthew C. Sapp, Phyllis C. Pugh, Jacques I. Wadiche, Linda Overstreet-Wadiche. 2013. GABA depolarization is required for experience-dependent synapse unsilencing in adult born neurons. *Journal of Neuroscience*: 33(15): 6614-22.
*Recommended by Faculty of 1000

Dieni, Cristina*, Jessica H. Chancey*, Linda Overstreet-Wadiche. 2012. Dynamic functions of GABA signaling during granule cell maturation. *Frontiers in Neural Circuits:* 6:113.
* authors contributed equally

Sierra, Amanda, Juan M. Encinas, Juan J. P. Deurdero, Jessica H. Chancey, Grigori Enikolopov, Linda S. Overstreet-Wadiche, Stella E. Tsirka, Mirjana Maletic-Savatic. 2010. Microglia shape adult hippocampal neurogenesis through apoptosis-coupled phagocytosis. *Cell Stem Cell:* 7(4): 483-495.
*Recommended by Faculty of 1000

Chancey, Jessica H., Penny E. Shockett, John P. O'Reilly. 2007. Relative resistance to slow inactivation of human cardiac Na+ channel hNav1.5 is reversed by lysine or glutamine substitution at V930 in D2-S6. *American Journal of Physiology: Cell Physiology:* 293:1895-1905.

Abstracts/poster presentations

Jamie L. Edwards, Jessica H. Chancey, and MacKenzie A. Howard. Histological analysis of hippocampal interneuron populations in the *Scn1b* knockout mouse model of Dravet syndrome. Annual Society for Neuroscience Meeting: November 2023.

Akshi Pant, MacKenzie A. Howard and Jessica Hotard Chancey. Sex specific aggressive behavior in the pilocarpine mouse model of temporal lobe epilepsy. Annual Society for Neuroscience Meeting: November 2023.

Chancey, Jessica H. and MacKenzie A. Howard. Enhanced input/output functions in the hippocampus of *Scn1b* knockout mice. Annual Society for Neuroscience Meeting: November 2022.

Chancey, Jessica H. and MacKenzie A. Howard. Enhanced input/output functions in CA1 pyramidal neurons of the *Scn1b* knockout mouse model of Dravet syndrome. Gordon Research Conference, Mechanisms of Epilepsy and Neuronal Synchronization. August 2022.

Chancey, Jessica H., Alexandra McConnell Buckner, Alisha Ahmed, Naren Gundapaneni, Lillie Godinez, and MacKenzie Howard. Synaptic plasticity is altered in the hippocampus of *Scn1b* knockout mice. Gordon Research Conference, Mechanisms of Epilepsy and Neuronal Synchronization. August 2022.

Chancey, Jessica H., Lance Chu, Naren Gundapeneni, MacKenzie A. Howard. 2021. Enhanced input/output functions in CA1 pyramidal neurons of the *Scn1b* knockout mouse model of Dravet syndrome. American Epilepsy Society Annual Meeting: December 2021.

Ahmed, Alisha A., Jessica H. Chancey, and MacKenzie A. Howard. 2021. Dendritic morphology in the *Scn1b* knockout mouse model of Dravet syndrome. SFN Global Connectome: January 2021.

Chancey, Jessica H, Alisha A. Ahmed, Alexandra G. McConnell, and MacKenzie A. Howard. 2020. Altered excitability, synaptic properties, and plasticity in the *Scn1b* knockout mouse model of Dravet syndrome. American Epilepsy Society Annual Meeting: December 2020.

Chancey, Jessica H. and MacKenzie A. Howard. 2019. Enhanced intrinsic excitability and synaptic integration in CA1 pyramidal cells in the *Scn1b* mouse model of Dravet syndrome. 49th Annual Society for Neuroscience Meeting: November 2019.

McConnell, Alexandra, Jessica H. Chancey, and MacKenzie A. Howard. 2019. Disrupted hippocampal synaptic plasticity in the *Scn1b* knockout model of Dravet syndrome. 49th Annual Society for Neuroscience Meeting: November 2019.

Chancey, Jessica H. and MacKenzie A. Howard. 2019. Altered excitability and synaptic integration in a mouse model of Dravet syndrome. Austin Conference on Learning and Memory: April 2019.

Chancey, Jessica H. and MacKenzie A. Howard. 2018. Altered synaptic integration in a mouse model of Dravet Syndrome. American Epilepsy Society Annual Meeting: December 2018.

Chancey, Jessica H and David M. Lovinger. 2017. Dopaminergic modulation of striatal cholinergic interneurons governs sequence learning. 47th Annual Society for Neuroscience Meeting: November 2017.

Chancey, Jessica H and David M. Lovinger. 2016. Removal of D2 receptors on striatal cholinergic interneurons impairs sequence learning. Gordon Research Conference, Basal Ganglia: March 2016.

Chancey, Jessica H. and David M. Lovinger. 2015. Removal of D2 receptors on striatal cholinergic interneurons impairs sequence learning. 45th Annual Society for Neuroscience Meeting: October 2015.

Chancey, Jessica H. and David M. Lovinger. 2015. Removal of D2 receptors on striatal cholinergic interneurons impairs sequence learning. 9th World Congress of the International Brain Research Organization: July 2015.

Chancey, Jessica H., Matthew Sapp, Phyllis C. Pugh, Elena W. Adlaf, Jacques Wadiche, Linda Overstreet-Wadiche. 2012. GABAergic depolarization promotes excitatory synaptogenesis on adult-generated neurons. 42th Annual Society for Neuroscience Meeting: October 2012.

Chancey, Jessica H., Matthew Sapp, Phyllis C. Pugh, Elena W. Adlaf Jacques Wadiche, Linda Overstreet-Wadiche. 2012. GABAergic depolarization promotes excitatory synaptogenesis on adult-generated neurons. National Institutes of Health Graduate Student Research Conference: October 2012.

Chancey, Jessica H., Elena Adlaf, Linda Overstreet-Wadiche. 2011. Experience promotes GABAergic input and conversion of silent synapses in adult-generated neurons during their critical period. Gordon Research Conference, Inhibition in the CNS: July 2011.

Chancey, Jessica H., Matthew Sapp, Phyllis C. Pugh, Jacques Wadiche, Linda Overstreet-Wadiche. 2010. Environmental enrichment enhances synaptic input to newborn neurons during their critical period. 40th Annual Society for Neuroscience Meeting: November 2010.

Chancey, Jessica H., Penny E. Shockett, John P. O'Reilly. 2007. Lysine Substitution

at V930 in D2-S6 of hNav1.5 Greatly Enhances Slow Inactivation. *Biophys J Supp.* 2007 Biophysical Society Meeting Abstracts: Abstract 473-Pos.

Invited Scientific Talks

2025-02-11 *SETBP1* Society Quarterly Collaboration Call
Presentation title: Basic electrophysiological properties of CA1pyramidal neurons in the Setbp1 loss of function mouse

Financial Awards

2024-2025 CNS Pathways Grant Recipient
Project: Early lab Experience for Neuroscience Majors

2020-2021 American Epilepsy Society Postdoctoral Fellowship

2019 Dravet Syndrome Foundation Postdoctoral Fellow Award

2018 American Epilepsy Society Fellows Program (travel award)

2016 NIH Fellows Award for Research Excellence (FARE)

2016 Society for Neuroscience Travel Award to attend the IBRO World Congress

2016 IBRO US/Canada Regional Committee IBRO World Congress Travel Grant
(declined due to dual funding)

Feb. 2012-
Jan. 2014 NIH F31 NS078887 (Predoctoral NRSA)
Experience-Dependent Synaptogenesis in Adult-Generated Neurons
Role: PI

Oct. 2009-
Sept. 2010 NIH T32 NS061788
UAB Dept. of Neurobiology and McKnight Brain Institute Cognition and Cognitive Disorders Training Grant
Role: Trainee

May 2009 UAB Cellular and Molecular Biology Program
Dan Hardin Memorial Scholarship

May 2005 SLU Distinguished Graduate Fellowship

Other Awards/Honors

2019 & 2020	Abstract selected for Investigator Workshop at the American Epilepsy Society annual meeting
Feb. 2013	UAB Neuroscience Day invited speaker
Oct. 2012	NIH National Graduate Student Research Conference attendee
April, 2005	SLU Biology Department Outstanding Graduating Senior Award

Professional Memberships

2020-present	Reviewer: Journal of Neuroscience
2009-2024	Society for Neuroscience
2018-2024	American Epilepsy Society
2006-2008	Biophysical Society

Laboratory Skills

- **Slice electrophysiology**: in vitro patch clamp and field recording in acute brain slices from mice and rats, including gramicidin perforated patch, dendritic patching, and optogenetics
- **In vivo electrophysiology**: chronic *in vivo* single unit and LFP recordings in awake, freely moving mice
- **Molecular and cellular biology:** immunohistochemistry; PCR; site-directed mutagenesis/cloning; western blotting; cell culture
- **Microscopy:** brightfield; epifluorescence; confocal; 2-photon calcium imaging; experience with Olympus, Leica, and Zeiss systems
- **Animals:** stereotactic mouse survival neurosurgery (viral injections, chronic optical fiber and electrode implantation); mouse behavioral assays; mouse and rat perfusion and brain slicing; mouse husbandry and colony management; genotyping
- **Data analysis / software:** Axograph, Clampex, GraphPad, Adobe Illustrator, MATLAB, Plexon Sorter, NeuroExplorer, Image J, Microsoft Office, Python novice, Igor novice

Community Outreach

Spring 2025	Texas Teach Up; opened classroom for teaching observation
2022-2025	STEM Muse Mentor
2022-2023	Society for the Advancement of Gender Equity in STEM (SAGES) executive committee Member; University of Texas at Austin

2021-2024	Letters to a Pre-scientist pen pal
2020-2021	Society for the Advancement of Gender Equity in STEM (SAGES) postdoctoral committee member; University of Texas at Austin
2020-22; 2024-25	University of Texas at Austin Undergraduate Research Forum Volunteer Judge
2019	Explore UT, Institute for Neuroscience, volunteer University of Texas at Austin
2014-2017	Science Fair Judge Rosemont Elementary School, Gaithersburg, MD
2016	NIH FARE judge
2015	NIH Graduate Student Research Symposium judge
April 2012	Physiology Understanding (PhUn) Week Volunteer Deer Valley Elementary, Hoover, AL Creek View Elementary, Maylene, AL
2010-2011	Brain Awareness Week Committee Member and Volunteer McWane Science Center, Birmingham, AL