

Curriculum Vitae

Ben Richardson, Ph.D.

801 N Rutledge St
Springfield, IL 62702
(217) 545-7216
brichardson29@siumed.edu

Last updated: 2/23/2022

Current Position(s)

Assistant Professor, Pharmacology
Southern Illinois University – School of Medicine (SIU-SOM)
Springfield, Illinois

Education

Postdoctoral Associate, Washington State University, Pullman, WA	2014-2017
Postdoctoral Associate, University of Florida, Gainesville, FL	2012-2014
Ph.D., Pharmacology & Neuroscience, SIU-SOM, Springfield, IL	2008-2012
B.S., Psychology (summa cum laude), Illinois College, Jacksonville, IL	2004-2008

Academic Appointments

Assistant Professor (Tenure Track) Department of Pharmacology Southern Illinois University – School of Medicine Springfield, Illinois	2020 - Present
Assistant Research Professor (Non-Tenure Track) Department of Medical Education/Biological Engineering University of Idaho Moscow, Idaho	2017-2020

Professional Positions and Experience

NIH Study Section Service Role: Reviewer (ad hoc) Agency: National Institutes of Health Review Group: LMND and AUD Member Conflict (ZRG1 IFCN-E (02) M)	2021
NIH Study Section Service Role: Reviewer (ad hoc) Agency: National Institutes of Health Review Group: Neurotransporters, Receptors, and Calcium Signaling (NTRC)	2020
Graduate Research Fellowship Program Review Panel Role: Reviewer Agency: National Science Foundation Review Group: GRFP Panel	2020
Affiliate Assistant Professor Department of Pharmacology University of Washington Seattle, WA	2018-2020
Grass Foundation Fellow Marine Biological Laboratory Woods Hole, MA	2017

Curriculum Vitae

Certification and Licensure

None

Areas of Specialization

Pharmacology, pharmacodynamics, pharmacokinetics, ion channels, neuroscience, electrophysiology, synaptic physiology, neural coding, cerebellum, thalamus, sensory processing, alcohol use and abuse

Professional Development

Early Career Faculty Development Course, SIU-SOM, cHOP 2020-2021
Mentoring Master Class: Maximizing Trainee Success in Career Transitions, SfN 2019

Professional Memberships and Activities

Society for Neuroscience (SfN), Member 2009-Present
Association for Research in Otolaryngology (ARO), Member 2010-Present
Research Society on Alcoholism (RSA), Member 2014-2016

Editorial Board Appointments

Journal of Neuroscience, Reviewer (ad hoc, 4) 2020-Present
European Journal of Neuroscience, Reviewer (ad hoc, 2) 2020-Present
Cerebral Cortex, Reviewer (ad hoc, 1) 2021
Hearing Research, Reviewer (ad hoc, 1) 2021
Neurobiology of Aging, Reviewer (ad hoc, 1) 2021
Journal of the Association for Research in Otolaryngology, Reviewer (ad hoc, 1) 2020

Committee Assignments and Administrative Services

National

National Institutes of Health, Study Section Reviewer (ad hoc, 2) 2020-2021
National Science Foundation GRFP Review Panel 2020

Local/Institutional

University of Idaho Optical Imaging Core Advisory Committee, Member 2018-2020
University of Idaho Position Search Committee (2x), Member 2018-2019
University of Idaho, WWAMI Faculty 3rd Year Review, Member 2018
University of Idaho, WWAMI Faculty Recognition Awards, Member 2018

Clinical / Quality Improvement Activities

None

Educational Activities

Educational Administration – None

Educational and Training Committees – None

Course Director – None

Course/Curriculum Development

SIU-SOM, Pharmacology Seminar, PHRM500, Seminar Coordinator 2020-Present
WWAMI-University of Idaho, Site Pharmacology Thread Lead 2017-2020

Didactic Courses/Sessions

Graduate

SIU-SOM, Neuroscience, PHRM577, Lecturer 2021-Present
-Neuroanatomy, electrophysiology, neurotransmitters, receptors
SIU-SOM, Principles of Pharmacology A, PHRM550A, Lecturer 2021-Present
-Pain, opioids, migraine, spasmolytics, neuromuscular blockers, drugs of abuse
SIU-SOM, Advanced Pharmacology, PHRM530, Lecturer 2022-Present
-Control and modulation of neural circuits

Curriculum Vitae

Medical Student

SIU-SOM, Neuromuscular and Behavioral Unit, Resource Session/Lecturer	
-Spasmolytics & Neuromuscular Blockers, Lecture	2021-Present
-Pain, Opioids, Headache, and Migraine, Lecture & Flipped Classroom	2021-Present
WWAMI-UI, Circulatory System (Pharmacology), Lecturer	2018-2020
-Pharmacology of autonomic vascular control, cardiac electrophysiology, heart failure, antiarrhythmics, ischemic heart disease, COPD, diuretics, hypertension	
WWAMI-UI, Energetics & Homeostasis (Pharmacology), Lecturer	2018-2020
-Pharmacology of Type I and II Diabetes, anti-emetics, prokinetics, gastric acid modifiers, hyperlipidemia	
WWAMI-UI Molecular and Cellular Basis of Disease, Lecturer	2017-2019
-Pharmacodynamics, pharmacokinetics, pharmacogenomics, autonomic pharmacology, NMJ	
WWAMI-UI Invaders and Defenders, Lecturer	2017-2019
-Pharmacology of antibiotics, antivirals, antifungals, antiparasitics, immunosuppressants	
WWAMI-UI Mind, Brain and Behavior, Lecturer	2017-2019
-Pharmacology of neurotransmitters, Movement disorders, multiple sclerosis, antiepileptics, opioids	
WWAMI-UI Lifecycle and Reproduction, Lecturer	2017-2019
-Pharmacology of sex hormones, labor and delivery, contraceptives, menopause, polypharmacy, aging	

Medical Resident

SIU-SOM, Neurology Residency Training Program, Lecturer	
-Membrane properties, Action Potentials, & Neurotransmitters	2020-Present
-Vesicular release & neurotransmitter receptors	2020-Present

Small Group/Problem Based Learning

SIU-SOM, Cardiovascular-Renal-Respiratory, Tutor - Group C	2020-Present
WWAMI-UI, Circulatory System, Small Group Guide	2018-2020
WWAMI-UI, Energetics & Homeostasis, Small Group Guide	2018-2020
WWAMI-UI Molecular and Cellular Basis of Disease, Small Group Guide	2017-2019
WWAMI-UI Invaders and Defenders, Small Group Guide	2017-2019
WWAMI-UI Mind, Brain and Behavior, Small Group Guide	2017-2019
WWAMI-UI Lifecycle and Reproduction, Small Group Guide	2017-2019

Trainee Mentorship

Graduate Student Research

Major Professor

Savannah Brannan, PhD Candidate, Pharmacology, SIU-SOM	2022-Present
Rajaram Kshetri, PhD Candidate, Pharmacology, SIU-SOM,	2020-Present
Mohammadali Nezakatiasmaelizedah, M.Engr., Bio. Eng., UI	2018-2020

Graduate Student Dissertation Committee Member

Emmanuel Ojo, PhD Candidate, Pharmacology, SIU-SOM	2021-Present
Sujata Pandey, PhD Candidate, Pharmacology, SIU-SOM	2021-Present
Madan Ghimire, PhD Candidate, Pharmacology, SIU-SOM	2020-2022
Joseph Schmalz, PhD, Chemical Engineering, UI	2019-2021
Sophia Theodossiou, PhD, Biological Engineering, UI	2018-2020

Curriculum Vitae

Medical Student Research

- Tate Cowley, M.D., University of Idaho/University of Washington 2019
-*Evaluating an antimicrobial stewardship in a rural hospital*, Abstract
-Next Position: Medical Student, UI-WWAMI
- Ethan Hansen, M.D., University of Idaho/University of Washington 2018
-*Atypical afferents of the thalamic reticular nucleus*, Abstract, Manuscript
-Next Position: Medical Resident, University of Washington

Undergraduate Student Research

- Allison Ellingson, B.S., Electrical Engineering, UI 2017-2019
-*Improving cell health in cerebellar slice preparation*, Abstract
-Next Position: Graduate Student, OHSU
- Jake Varney, B.S., Biological Engineering, UI 2017-2019
-*In vivo tetrode recordings in rodent models*
-Next Position: Software Engineer, Revature
- Rob Litz, B.S. Movement Sciences, UI 2018-2019
-*Cerebellar granule cell development review*
-Next Position: Laboratory Technician
- Ahmer Iqbal, B.S., Chemistry, UI 2019
-*Coupling of locomotor and auditory neurons in kangaroo rats*, Abstract
-Next Position: EMT
- Ramona Hyde B.S., Biology, UI 2018-2020
-*Shank3 expression at excitatory synapses in cerebellar cortex*, Abstract
-Next Position: Graduate Student, Albert Einstein
- Katie Farris, B.S., Biological Engineering, University of Idaho 2018-2020
-*Shank3 and cerebellar granule cell dendrite development*
-Next Position: Graduate Student, Boise State University
- Ethan Overfelt, B.S., Biological Engineering, University of Idaho 2018-2020
-*Early life stress reactivity affects cognitive behavior*, Abstract
-Next Position: Medical Student, UI-WWAMI
- Carmen Remolina, B.S., Molecular and Cellular Biology, UIUC 2021
- *Shank3 expression in cerebellum shapes behavioral phenotype*
-Next Position: Medical Student, SIU-SOM
- Alex Remolina, B.S., Biology, UIUC 2021
- *Dscaml1 and cerebellar granule cell dendrite development*
-Next Position: Undergraduate Student, UIUC
- Will Drake, B.S., Molecular and Cellular Biology, UIUC 2021-2022
-*Aging-related changes in cerebellar astrocytes*
-Next Position: Undergraduate Student, UIUC
- James Beavers, Biology, UIS 2021-Present
-*Behavioral phenotyping of Shank3 mutant mice*
-Next Position: Researcher, SIU-SOM
- Joel Ryan, Biology, UIUC 2022
-*Shank3 expression in cerebellum shapes behavioral phenotype*
-Next Position: Undergraduate Student, UIUC

Curriculum Vitae

Honors and Awards

Outstanding Research Mentor Award, University of Washington – WWAMI	2019
Early Career Faculty Teaching Excellence, University of Idaho – WWAMI	2018
Grass Foundation Fellow, Marine Biological Laboratory	2017
Outstanding Poster, BBC: Translational Research in Addiction	2014
Postdoc Travel Award, BBC: Translational Research in Addiction	2014
Graduate Student Travel Award, Society for Neuroscience	2011
Hemal Vahkaria Memorial Award, SIU-SOM	2011
Summa Cum Laude, Illinois College	2008
Phi Beta Kappa, Illinois College	2008

Grants and Contract Awards

Current

External

Title: Cerebellar granule cell dysfunction in Shank3 mutant mice

Role: PI (5.4 CM)

PI: Richardson, Ben

Source: NIH-NIMH, R01 MH129749

Time Span: 06/15/22 - 06/14/27

Total Dollar Amount: \$1,855,624 (\$1,250,000 direct)

Scope/Purpose: Determine how the neurodevelopmental disorder gene/protein, *Shank3*/SHANK3, affects glutamatergic signaling and morphology in developing and adult cerebellar granule cells and how absence of this gene from cerebellar granule cells shapes motor and non-motor behavioral phenotype.

Title: Network modulators of auditory thalamocortical feedback inhibition

Role: PI (4.0 CM)

PI: Richardson, Ben

Source: NIH – NIDCD, R21 DC018365

Time Span: 08/03/20 - 07/31/23

Total Dollar Amount: \$442,500 (\$300,000 direct)

Scope/Purpose: Identify the network impacts of projections from the cerebellar nuclei and amygdala to the thalamic reticular nucleus within the auditory domain.

Title: Coding in Auditory Neurons: Effects of Amino Acids

Role: Co-I (0.6 CM)

PI: Caspary, Donald

Source: NIH-NIDCD, R01 DC000151

Time Span: 12/01/19 - 11/30/24

Total Dollar Amount: \$2,558,285 (\$1,734,430 direct)

Scope/Purpose: Characterize distribution, function, and age-related changes in nAChRs and their role in age-related changes in auditory processing all within the auditory thalamus.

Title: Nicotinic Receptor Pathology in Tinnitus

Role: Co-I (0.6CM)

PI: Caspary, Donald

Source: DOD, W81XWH1910017

Time Span: 07/15/19 - 07/14/22

Total Dollar Amount: \$1,712,585

Scope/Purpose: Determine whether nicotinic acetylcholine receptor modulators can alter selective attention behavior and correspondingly normalize central auditory system neuron signaling pathology in a rat sound exposure model of tinnitus.

Pending

External

Curriculum Vitae

Title: Coding in Auditory Neurons: Effects of Amino Acids

Role: Co-I (0.6 CM)

PI: Caspary, Donald

Source: NIH-NIDCD, R01 DC000151

Time Span: 12/01/22 - 11/30/27

Total Dollar Amount: \$3,271,634 (\$2,194,221 direct)

Scope/Purpose: This project will characterize distribution, function, and age-related changes in nAChRs and their role in age-related changes in auditory processing all within the auditory midbrain.

Title: The Impact of Early Life Stress on Amygdala Circuitry and Chronic Excessive Aggression

Role: Co-I (0.6CM)

PI: Nordman, Jacob

Source: NIH-NIMH

Time Span: 2/01/23 - 1/31/26

Total Dollar Amount: \$442,500 (\$300,000 direct)

Scope/Purpose: Understand the specific synaptic and structural changes that occur within the amygdala of an animal model that experience early life stress and go on to display heightened aggression.

Title: NMDA receptors in early life stress-induced aggression

Role: Co-I (1.2 CM)

PI: Nordman, Jacob

Source: NIH-NIMH

Time Span: 06/01/23 - 05/31/28

Total Dollar Amount: \$1,843,750 (\$1,250,000 direct)

Scope/Purpose: Determine how NMDA receptors in the medial amygdala shape early life stress-induced excessive aggression.

Title: The impact of early life stress on the neurocircuitry of aggression

Role: Co-I (0.8 CM)

PI: Nordman, Jacob

Source: The Whitehall Foundation

Time Span: 09/01/22 - 01/01/23

Total Dollar Amount: \$284,607 (\$270,053 direct)

Scope/Purpose: Determine how early life stress alters activity in the medial amygdala and may produce plasticity underpinning the development of aggression.

Past

External

Title: Cerebellar contributions to alcohol use disorder

Role: PI (3.0)

PI: Richardson, Ben

Source: Grass Foundation Research Fellowship

Time Span: 05/29/17-09/02/17

Total Dollar Amount: N/A

Internal

Title: Sensitivity of the cerebellar circuit to Autism-linked factors

Role: PI

PI: Richardson, Ben

Source: University of Idaho ORED Advancing Collaborative Efforts

Time Span: 7/01/19-05/31/20

Total Dollar Amount: \$25,001 (direct)

Curriculum Vitae

Title: Network modulators of auditory thalamocortical feedback inhibition

Role: PI

PI: Richardson, Ben

Source: Idaho INBRE Pilot Grant (NIGMS P20 GM103408)

Time Span: 05/01/2019-05/01/2020

Total Dollar Amount: \$50,000 (direct)

Title: Shank3 and cerebellar granule cell glutamatergic transmission

Role: PI (3.6 CM)

PI: Richardson, Ben

Source: Idaho INBRE Tech Access Grant (NIGMS P20 GM103408)

Time Span: 08/29/18-03/30/19

Total Dollar Amount: \$2,700 (direct)

Title: Identifying neural circuits coding alcohol reward

Role: PI

PI: Richardson, Ben

Source: University of Idaho Seed Grant

Time Span: 7/01/18-08/31/19

Total Dollar Amount: \$11,986 (direct)

Title: The role of neuronal nitric oxide synthase in stress-induced alcohol consumption

Role: PI

PI: Richardson, Ben

Source: Washington State University ADARP Postdoc Grant

Time Span: 1/01/15-06/30/16

Total Dollar Amount: \$15,000 (direct)

Title: Contributions of cerebellar unipolar brush cells to genetic risk for alcohol abuse

Role: PI

PI: Richardson, Ben

Source: Washington State University ADARP Postdoc Grant

Time Span: 1/01/17-06/30/18

Total Dollar Amount: \$15,000 (direct)

Not Funded

External

Title: Identifying causal mechanisms of cerebellar granule cell signaling in Autism

Role: PI (3.6 CM)

PI: Richardson, Ben

Source: DOD – Autism Research Program

Time Span: 02/01/22 - 01/31/25

Total Dollar Amount: \$740,917 (\$500,000 direct)

Internal

Title: Identifying the role for cerebellum in Autism

Role: PI (1.2 CM)

PI: Richardson, Ben

Source: SIU-SOM Research Seed Grant

Time Span: 01/01/22 - 12/31/22

Total Dollar Amount: \$15,000 (\$15,000 direct)

Peer-Reviewed Publications

Curriculum Vitae

Research Articles

1. Erikson CM, Douglas KT, Thuet TO, **Richardson BD**, Mohr C, Shiina H, Kaplan JS, Rossi DJ. Independent of differences in taste, B6N mice consume less alcohol than genetically similar B6J mice, and exhibit opposite polarity modulation of tonic GABA_AR currents by alcohol. *Neuropharmacology*. 2021 Dec 20; 206:108934. doi: 10.1016/j.neuropharm.2021.108934.
2. Pisano TJ, Dhanerawala ZM, Kislin M, Bakshinskaya D, Engel EA, Hansen EJ, Hoag AT, Lee J, de Oude NL, Venkataraju KU, Verpeut JL, Hoebeek F, **Richardson BD**, Boele HJ, Wang SSH. Homologous organization of cerebellar pathways to sensory, motor, and associative forebrain. *Cell Rep*. 36 (12), 109721.
3. Higginbotham J, **Richardson BD**, Shiina H, Rossi DJ, Fuchs RA. (2021) "Cannabinoid Type 1 Receptor-Mediated Effects on Cocaine Memory Reconsolidation and Subsequent Drug Context-Induced Cocaine-Seeking Behavior." *J Neurosci*. 41 (4), 613-629.
4. Sambo D, Lin M, Owens W, Lebowitz J, **Richardson B**, Jagnarine D, Madhur S, Rodriguez M, Alonge T, Ali M, Katz, J, Yan L, Febo M, Henry K, Bruijnzeel A, Daws L, Khoshbouei, H. (2017) The Sigma-1 receptor modulates methamphetamine dysregulation of dopamine neurotransmission. *Nat Commun*. 8(1):2228.
5. McClendon E, Shaver D, Degener-O'Brien K, Gong X, Nguyen T, Hoerder-Suabedissen A, Molnar A, Mohr C, **Richardson BD**, Rossi D, and Back SA. (2017) Transient Hypoxemia Chronically Disrupts Maturation of Preterm Fetal Ovine Subplate Neuron Arborization and Activity. *J Neurosci*. 37(49): 11912-11929.
6. **Richardson BD**, Rossi DJ. (2017) Ethanol enhances synaptic inhibition of cerebellar unipolar brush cells via pre- and postsynaptic mechanisms. *J Neurophys*. 118(1): 267-279.
7. Sirohi S, **Richardson BD**, Vancleef A, Rossi DJ, Davis JF. (2017) Impact of Roux-en-Y gastric bypass surgery on appetite, alcohol intake behaviors, and midbrain ghrelin signaling in the rat. *Obesity*. 25: 1228-1236.
8. Arguello AA, **Richardson BD**, Hall JL, Wang R, Hodges MA, Mitchell MP, Stuber GD, Rossi DJ, Fuchs RA. (2017) Role of lateral orbital frontal cortex-basolateral amygdala circuit in cue-induced cocaine-seeking behavior. *Neuropsychopharm*.42(3): 727-735.
9. Cai R, **Richardson BD**, Caspary DM. (2016) Responses to predictable vs. random temporally complex stimuli form single units in auditory thalamus: impact of aging and anesthesia. *J Neurosci*. 36(41): 10696-10706.
10. Kaplan JS, Nipper M, **Richardson BD**, Jensen J, Finn DA, Rossi DJ. (2016) Pharmacologically counteracting a phenotypic difference in cerebellar GABA_A receptor response to alcohol prevents excessive alcohol consumption in high alcohol consuming rodent genotype. *J Neurosci*. 36(35): 9019-9025.
11. **Richardson BD**, Saha K, Krout D, Cabrera E, Felts B, Henry LK, Swant J, Zou MF, Newman AH, Khoshbouei H. (2016) Membrane potential shapes regulation of dopamine transporter trafficking at the plasma membrane. *Nature Commun*. 7(10423).
12. Saha K, Sambo D, **Richardson BD**, Lin LM, Butler B, Villarroel L, Khoshbouei H. (2014) Intracellular methamphetamine prevents the dopamine-induced enhancement of neuronal firing. *J Biol Chem*. 289(32):22246-57.
13. **Richardson BD**, Hancock KH, Caspary DM. (2013) Single unit novelty detection in auditory thalamus of awake rat. *J Neurophys*. 110(8):1892-902.
14. **Richardson BD**, Ling LL, Uteshev VV, Caspary DM. (2013) Reduced GABA_AR-mediated tonic inhibition in aged rat auditory thalamus. *J Neurosci*. 33(3). 1218-1227.
15. **Richardson BD**, Ling LL, Uteshev VV, Caspary DM. (2011) Extrasynaptic GABA_A receptors and tonic inhibition in rat auditory thalamus. *PLoS ONE*. 6(1):e16508.
16. Brozoski TJ, Caspary DM, Bauer CA, **Richardson BD**. (2010) The effect of supplemental dietary taurine on tinnitus and auditory discrimination in an animal model. *Hear Res*. 270(1-2): 71-80.

Review Articles & Book Chapters

17. **Richardson BD**, Sotille S, Caspary DM. (2021) "Mechanisms of GABAergic and cholinergic neurotransmission in auditory thalamus: Impact of aging." *Hear Res*. 402, 108003.
18. Rossi DJ and **Richardson BD**. (2018) "The Cerebellar GABA_AR System as a Potential Target for Treating Alcohol Use Disorders." *The Neural Circuitry of Alcohol*. Eds. David Lovinger and Kathy Grant.

Curriculum Vitae

19. **Richardson BD**, Brozoski TJ, Ling LL, Caspary DM. (2012) Targeting inhibitory neurotransmission in tinnitus. *Brain Res.* 1485:77-87.

Oral Presentations

Invited Presentations

1. **Richardson BD***, Recasting the cerebellum as more than a motor structure. Southern Illinois University - Carbondale, Department of Physiology Seminar, 2021. Carbondale, IL.
2. **Richardson BD***, New Roles for cerebellar circuits. SIU-School of Medicine, Department of Pharmacology Seminar, 2020. Springfield, IL.
3. **Richardson BD***, New Roles for cerebellar circuits: alcohol use disorder. Texas Tech University, Department of Biological Sciences Seminar, 2018. Lubbock, TX.
4. **Richardson BD***, New Roles for cerebellar circuits: alcohol use disorder. University of Idaho, Department of Biological Engineering Seminar, 2017. Moscow, ID.
5. **Richardson BD***, Rossi DJ. The Cerebellum's Role in Drug Abuse. Washington State University, Neuroscience Undergraduate Seminar, 2016. Pullman, WA.

National/International Meetings

6. **Richardson BD**, Caspary DM*. Targeting Inhibitory Amino Acid Neurotransmission in Animal Models of Tinnitus. 5th International TRI Tinnitus Research Conference, August 2011. Buffalo, NY. Invited.

Local/Regional Meetings – None

7. **Richardson BD**, Rossi DJ*. Alcohol Enhances synaptic inhibition of cerebellar unipolar brush cells via pre- and postsynaptic mechanisms. Washington State University, Integrative Physiology and Neuroscience Data Blitz, 2016. Pullman, WA.

Peer-reviewed Presentation - None

Grand Rounds Presentations - None

Poster Presentations

National/International Meetings

1. Kshetri R, Kindall A, Remolina AD, Fuerst PG, **BD Richardson**, DSCAML1 shapes cerebellar granule cell dendrite length and complexity. Society for Neuroscience Meeting, 2021, Chicago, IL.
2. D.J. Rossi, C.M. Erikson, K.T. Douglas, T.O. Thuet, N.A. McLean, **B.D. Richardson**, High and low alcohol consuming rodent genotypes exhibit divergent impacts of 10mM alcohol on cerebellar processing, cerebellar output to VTA, and cerebellar dependent behavior. Society for Neuroscience Meeting, 2021, Chicago, IL.
3. Erikson CM, Mohr C, Shina H, **Richardson BD**, Rossi DJ. Compared to C57BL/6J mice, C57BL/6N exhibit reduced ethanol consumption, increased cerebellar nNOS and opposite polarity ethanol modulation of tonic GABA_AR currents. Research Society on Alcoholism, 2019, Minneapolis, MN.
4. Hansen EJ, **Richardson BD**. Atypical afferents of the thalamic reticular nucleus. Society for Neuroscience Meeting, 2019, Chicago, IL.
5. Hyde R, **Richardson BD**. Assessment of Shank3 expression at excitatory synapses in cerebellar cortex. Society for Neuroscience Meeting, 2019, Chicago, IL.
6. Rossi DJ, Shiina H, Kinlein SA, **Richardson BD**. 10mM alcohol has genotype selective impacts on cerebellar processing, cerebellar output to VTA, and cerebellar dependent behavior. Research Society on Alcoholism, 2018, San Diego, CA.
7. **Richardson BD**, Shiina H, Kinlein SA, Davis J, Karatsoreos IN, Rossi DJ. 10mM alcohol alters signal propagation through the cerebellum, which has direct excitatory synaptic connections to the ventral tegmental area (VTA). Research Society on Alcoholism, 2017, Denver, CO.
8. Mohr C, **Richardson BD**, Jensen JP, Nipper MA, Finn DA, Rossi DJ. Hippocampal mIPSC frequency is reduced and neurosteroid enhanced mIPSC frequency is lost during ethanol withdrawal in withdrawal seizure prone mice. Research Society on Alcoholism, 2017, Denver, CO.
9. Kaplan JS, Nipper MA, **Richardson BD**, Jensen J, Finn DA, Rossi DJ. Counteracting a difference in cerebellar GABA_A response to alcohol prevents excessive alcohol consumption in a high alcohol

Curriculum Vitae

- consuming rodent genotype. Research Society on Alcoholism, 2016, New Orleans, LA.
10. **Richardson BD**, Rossi DJ. Physiologically relevant ethanol enhances glycinergic and GABAergic synaptic inhibition of cerebellar unipolar brush cells. Gordon Research Conference – Cerebellum, 2015, Lewiston, ME.
 11. **Richardson BD**, Rossi DJ. Ethanol enhances both glycinergic and GABAergic synaptic inhibition of cerebellar unipolar brush cells. Research Society on Alcoholism, 2015, San Antonio, TX.
 12. **Richardson BD**, Cartier E, Saha K, Swant J, Khoshbouei H. Voltage-Dependent Regulation of Dopamine Transporter Trafficking. BBC: Translational Research in Addiction, 2015, San Antonio, TX.
 13. Caspary DM, **Richardson BD**, Kalappa B, Ling LL, Sametskiy E. Differential Plasticity of Sensory Thalamic GABAA Receptors: Aging vs. Tinnitus. Society for Neuroscience Satellite Meeting, 2014, Pentagon City, VA.
 14. Cai R, **Richardson BD**, Caspary DM. Responses to SAM Stimuli in Auditory Thalamic Neurons of Young and Aged Awake Rats. ARO Midwinter Meeting, 2014, San Diego, CA.
 15. **Richardson BD**, Cartier E, Saha K, Swant J, Khoshbouei H. Voltage-Dependent Regulation of Dopamine Transporter Trafficking. Society for Neuroscience. 2013, San Diego, CA.
 16. Tignor E, **Richardson BD**, Ling L, Sametskiy E, Caspary DM. Dendritic Extent in Aged Auditory Thalamus. ARO Midwinter Meeting, 2013, Baltimore, MD.
 17. **Richardson BD**, Hancock K, Caspary DM. Stimulus Specific Adaptation in the Auditory Thalamus of Awake Rats. ARO Midwinter Meeting, 2013, Baltimore, MD.
 18. **Richardson BD**, Ling LL, Uteshev VV, Caspary DM. Age-related changes in GABA_ARs in the medial geniculate body. Society for Neuroscience Meeting, 2011. Washington, D.C.
 19. **Richardson BD**, Caspary DM. In vitro and in vivo studies of GABA_A mediated inhibition in rat medial geniculate body. ARO Midwinter Meeting, 2010. Anaheim, CA.
 20. **Richardson BD**, Ling LL, Uteshev VV, Caspary DM. Presence and function of extrasynaptic GABA_A receptors in the medial geniculate body. Society for Neuroscience Meeting, 2009. Chicago, IL.

Local/Regional Meetings

21. Kshetri R, **Richardson BD**. Identifying a Role for Cerebellum in Autism Spectrum Disorder Using Shank3 Δ 4-22 Mouse Model. 32nd Annual SIU Trainee Research Symposium, 2022.
22. Iqbal A, McGowan CP, **Richardson BD**. Anatomical coupling of locomotor and auditory neurons in desert kangaroo rats (*dipodomys deserti*). University of Idaho Undergraduate Research Symposium. 2019, Moscow, ID.
23. Hansen EJ, **Richardson BD**. Direct monosynaptic projections from the cerebellar nuclei to thalamic reticular nucleus. Idaho INBRE Statewide Research Conference, 2018, Moscow, ID.
24. Ellingson AJ, **Richardson BD**. Improving tissue preparation to preserve inhibition in adult cerebellar brain slices. University of Idaho Engineering Expo, 2018, Moscow, ID.

Social Media

None

Other Creative Products

None

Other Scholarly Products

“Science and Narrative” - CALS Speaker Series, University of Idaho, Invited Panelist April 5, 2018

Patents and Technology Transfer

None

Professional Community Activities

None