

Curriculum Vitae

Jeffrey G. Edwards

Work:

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ACADEMIC EMPLOYMENT

Aug. 2018- Present	Brigham Young University <u>Full Professor</u> ; Department of Physiology and Developmental Biology.
Aug. 2013- 2018	Brigham Young University <u>Associate Professor</u> ; Department of Physiology and Developmental Biology
Jan. 2007- Aug. 2013	Brigham Young University <u>Assistant Professor</u> ; Department of Physiology and Developmental Biology
Aug. 2005- Dec. 2006	Brigham Young University-Idaho <u>Faculty</u> ; Department of Biology
Aug. 2003- Aug. 2005	Rhode Island College <u>Adjunct Faculty</u> ; Department of Biology
Spring 2002	Salt Lake Community College <u>Adjunct Faculty</u> ; Department of Biology

ACADEMIC AFFILIATIONS

July 2021- Sept 2025	Brigham Young University <u>Director</u> of the Neuroscience Center
May 2015- July 2021	Brigham Young University <u>Associate Director</u> of the Neuroscience Center
May 2007- Present	Brigham Young University <u>Member</u> of the Neuroscience Center

Feb. 2017- **Brigham Young University**
Present Member of the Gerontology Program

EDUCATION

Mar. 2003 **University of Utah**
Ph.D.
School of Medicine, Department of Physiology.

Dec. 1994 **Brigham Young University**
Bachelor of Science
Department of Zoology (Human Biology).

RESEARCH EXPERIENCE

Postdoctoral Fellowship: Brown University

Apr. 2003-
Aug. 2005 Dr. Julie Kauer lab, Department of Molecular Pharmacology, Physiology and Biotechnology. Using the hippocampus I investigated mechanisms of synaptic plasticity. Plasticity is thought to be the primary cellular mechanism mediating learning and memory in the brain. Specifically, I helped determine the location from which newly inserted AMPA glutamate receptors arrive at the synapse during long-term potentiation in hippocampal CA1 pyramidal cells. I simultaneously characterized endocannabinoid-mediated LTD, initiated by metabotropic glutamate receptors and induced by transient receptor potential vanilloid 1 in hippocampal CA1 inhibitory interneurons. These interneurons are extremely important in controlling activity levels of the output pyramidal cells. Both projects incorporated electrophysiology, pharmacology (Kauer lab) and molecular biology techniques (collaboration with Michel Ehlers lab at Duke University).

Graduate Research: University of Utah

Feb. 1998-
Mar. 2003 Dr. William C. Michel lab, Department of Physiology.
Dissertation research included mapping ionotropic glutamate receptor distribution within olfactory bulb neurons and demonstrating their activation following *in vivo* odor stimulation within distinct chemotopic regions based on the class of odorant applied. Acetylcholine was also shown for the first time in any species to modulate glutamate release at the primary synaptic input

of the bulb. This work demonstrates that odor processes within the olfactory bulb are more regional specific than previously thought.

Aug. 2000-
Dec. 2000

Dr. Karen Wilcox lab, Department of Pharmacology and Toxicology. Lab Rotation. Electrophysiological studies of N-Methyl-D-Aspartate receptor activation within hippocampal CA3 and entorhinal cortex neurons.

Sept. 1995-
Feb. 1998

Dr. William D. Odell lab (retired 1998), Departments of Physiology and Internal Medicine. Characterization of an hCG-like receptor protein in the bacteria, *Xanthomonas maltophilia*, which regulated bacterial growth.

TEACHING EXPERIENCE

Faculty:

Brigham Young University

Fall 2021-
Present

Neuroscience 205: Neurobiology.

This is a introductory neuroscience course for neuroscience majors. I teach the entire 3 credit hour lecture course. The course covers topics ranging from action potentials, neuroanatomy, chem senses, brain/motor function, etc.

Fall 2020-

CELL 550R: Synaptic Physiology: Memory and Addiction. This course employs lecture, journal/club format, lab demonstrations, among others to teach the cellular mechanisms of memory and addiction including Alzheimer's, etc. The heavy involvement in student presentation of articles allowed for a flexible course that enhanced student communication skills and writing.

Winter 2014-
Present

CELL 362: Advanced Human Physiology.

This is a human physiology course for science majors who are mostly pre-professionals including nursing, pre-medicine, pre-dentistry, etc. I conduct the entire lecture portion of this entire course.

Winter 2008-
Present

CELL 305: Human Physiology.

This is a human physiology course for non-majors who are pre-professionals including nursing, pre-medicine, pre-dentistry, etc. I conduct the lecture portion of this entire course.

Fall 2007-
Present

Neuroscience 480: Advanced Neuroscience.

Team taught course directed and mainly taught by Mike Brown, covering advanced topics in neuroscience. I teach two lectures of this course every fall and winter semester to neuroscience and PDBio majors covering receptors, synaptic transmission, plasticity and second messengers.

- Fall 2007-
Present **PDBio 601: Cell and Molecular Physiology.**
Team taught graduate level physiology course. I teach a one week segment of this course covering synaptic transmission and integration.
- Fall 2007-
Present **PDBio 568: Cellular Electrophysiology and Biophysics.**
Team taught graduate level biophysics course. I teach one fourth of this course covering electrophysiology as well as trafficking, movement and stabilization of different types of receptor at the synapse.
- Winter 2007-
Present **PDBio 349R, PDBio 494R, PDBio 495R, PDBio 550R, PDBio 649R, PDBio 650R, PDBio 669R, PDBio 779R, Neuro 449R, Neuro 649R, Neuro 699R, etc.**
Various repeatable courses for graduate and undergraduate students involved in my research and teaching.

Brigham Young University-Idaho

- Fall 2006 **Biology 240: Neurobiology.** This course was an in depth introduction to the neurosciences for undergraduates that included both lecture and lab.
- Fall 2006 **Biology 475: Evolution.** This is the capstone course for biology majors at BYU-Idaho and included both lecture and dry lab.
- Fall 2005-
2006 **Biology 264 & 265: Human Anatomy and Physiology parts I & II.**
This course was for pre-professional students. Class management included preparing lectures, exams, laboratory, etc. These courses were part of a year-long series. I taught all the lectures and labs of both courses.
- Fall 2005-
2006 **Biology 100: Introduction to Biology.**
GE course required for non-biology major students. I taught and managed the entire course.

Adjunct Faculty:

Rhode Island College

- Fall 2003-
Sum. 2005 **Biology 335: Human Physiology;** upper division human physiology lecture and lab for science majors and nursing undergraduates.
I taught both the lecture and lab portions of the course. Student and Biology Department faculty evaluations are available upon request from myself or the Biology Department Chair (Edythe Anthony).

Salt Lake Community College

- Spring 2002 **Biology 1110: Anatomy and Physiology.** Prepared and taught lectures

for the undergraduate human anatomy and physiology course. Class management included preparing lectures and administering and grading tests and quizzes.

Tutor:

University of Utah

Aug. 2001- **Medical Students: Physiology Curriculum**. Tutored individuals on
Mar. 2003 particular details of physiology as needed for individual improvement
or general reviews for those taking the medical board exam.

Lab Instructor:

University of Utah

Oct. 1998 **Neuroscience Blk 2: Medical student neuroscience**; Properties of
evoked potentials.

May 1997 **Physiology 771: Physiology proseminar**; Taught two-week course on
bioassays, radioimmunoassays and dose response curves.

Sept. 1995- **Physiology 691: Clinical neurophysiology lab**; Taught medical students
2002 principles of EEG, EOG, and EMG (taught yearly for four weeks).

Teacher development:

Rhode Island College

Jan. 2004 **Adjunct Faculty workshop: "Using students' life experiences to
enhance learning"**.

FUNDED GRANTS

NIH

NIDA: 2R15DA049260-02A1 (Edwards, Jeff- PI). Ventral Tegmental Area
GABA Neurons: Plasticity & Opiate Receptors at Inhibitory inputs. 09/01/2024-
08/31/2027. \$454,500 total funds.

NIDA: 1R15DA049260-01A1 (Edwards, Jeff- PI). Ventral Tegmental Area
GABA Neurons: Plasticity & Opiate Receptors at Inhibitory inputs. 09/30/2020-
08/31/2024. \$450,000 total funds.

NIDA: 1R15DA038092-01A1 (Edwards, Jeff- PI). Ventral Tegmental Area
GABA Neurons: A novel target of marijuana drug abuse. 09/15/2016-08/17/2020.
\$450,000 total funds.

NIDA: 1R01DA035958-01A1 (Steffensen, Scott- PI; Edwards, Jeff- Co-Investigator) Nicotine and alcohol co-dependence. 06/01/**2014-05/31/2019**. \$2,100,000 total funds.

NINDS: 1R15NS078645-01 (Edwards, Jeff-PI). Identification of GPR55 cellular expression within hippocampal cells and its physiology. 02/01/**2012- 01/31/2016**. \$362,500 total funds.

NIAAA: 1R01AA020919-01A1 (Steffensen, Scott- PI; Edwards, Jeff- Co-Investigator) Neuroplasticity with alcohol dependence. 08/01/**2012- 07/31/2017**. \$1,500,000 total funds.

NIAAA: 5R01AA013666-06 (Steffensen, Scott- PI; Edwards, Jeff- Faculty) Neuropharmacological substrates of alcohol addiction. I received supply money and 1-month summer salary from this grant. 08/01/**2006-07/31/2011**.

NINDS: 1F32NS049779-01A1. (Edwards, Jeff- PI) Characterization of CA1 hippocampal interneuron LTD. 01/01/**2005- 12/31/2008**. (Terminated early to take faculty position).

Society for Neuroscience

2015- Chapter Grant (\$900). This grant was used to host our SfN chapter branch chapter meeting at Snowbird, Utah in October 2015, and to provide for a poster session and prizes.

2014- Chapter Grant (\$1,200). This grant will be used to host our SfN branch chapter meeting at Snowbird, Utah in October 2014, and to provide for a poster session and prizes.

2013- Chapter Grant (\$2,000). This grant was used to organize and carry out a “Utah Brain Education Alliance” where undergraduate and graduate students along with faculty from around the state of Utah came together for a day retreat focusing on enhancing instruction, education, creating resources, sharing lesson plans and community outreach for neuroscience.

BYU

Life Science CEMENT Award. November, 2025. College Award to facilitate undergraduate research for in external funded labs. \$5,000 each.

Life Science CEMENT Award. November, 2024. College Award to facilitate undergraduate research for in external funded labs. \$5,000 each.

James Bobbitt Alzheimer's Research Award. 2023. This award was for a faculty member conducting research in the area of Alzheimer's disease. Our project is examining the impact of inflammation on Alzheimer's disease induction. \$18,000.

Life Science CEMENT Award. November, 2023. College Award to facilitate undergraduate research for in external funded labs. \$5,000 each.

Grants on the Edge. June 2020. College Award to fund faculty who have grants close to being funded from an external funding agency and need money to push the grant to the funding level. \$12,000.

Grants on the Edge. July 2019. College Award to fund faculty who have grants close to being funded from an external funding agency and need money to push the grant to the funding level. \$10,000.

Life Science CEMENT Award. November, 2022, 2021, 2020, 2019, 2018. College Award to facilitate undergraduate research for in external funded labs. Total funding \$5,000 each. They are for two years each.

MEG: Mentored Environment Grants. These grants are competitive awards that can be applied for yearly by faculty through the university in order to mentor undergraduate and graduate students in research. Each award was \$20,000.

2016- Cocaine and Marijuana-induced synaptic modifications of excitatory inputs to ventral tegmental area GABA neurons: A novel mechanism mediating addiction.

2015- Synaptic Modification of Inhibitory Inputs to GABA Neurons in the Ventral Tegmental Area: A novel potential target mediating reward and addiction in the brain

2014- The Neuroprotective Effect of Exercise on Memory Impairment Induced by Stress

2014- Co-PI with Scott Steffensen (PI). Alcohol and Nicotine Co-Dependence II

2013- Long-term Depression of Excitatory Inputs to GABAergic Neurons in the Ventral Tegmental Area: A novel potential target of Marijuana drug abuse in the reward pathway of the brain

2012- A study of a novel G-protein coupled receptor and its role in hippocampal function.

2009- TRPV1 involvement in febrile seizure induction.

2008- TRPV1 mediated alteration of hippocampal synaptic plasticity.

2007- A study on hippocampal synaptic plasticity and endocannabinoids using electrophysiology and RT-PCR.

Life Science Mentoring Grant. January 2018-2020. College Award to fund undergraduate research. Total funding \$10,000 for two years.

Grants on the Edge. August 2016. College Award to fund faculty who have grants close to being funded from an external funding agency and need money to push the grant to the funding level. \$16,500. (Most of this money I returned to the college after I received my NIH funding).

James Bobbitt Alzheimer's Research Award. 2014. This award was for a faculty member conducting research in the area of Alzheimer's disease. \$10,000.

Course Development Project Grant. This grant was awarded to enhance teaching and learning in my PDBio 305 physiology course. June 4, 2007.

BYU undergraduate CURA competitive grant Awards

2026- CURA award: Brenton Valentine. Alzheimer's and Ozempic: How a Diabetes Drug May Help Slow the Effects of Alzheimer's Disease

2026- CURA award: Porter Lorange. Circuit-Specific Plasticity of VTA GABA Neurons: Defining Inhibitory Pathways for Addiction Recovery

2026- CURA award: Rachel Bonney. Exploring the potential of LSD to reverse chronic morphine-induced alterations to VTA mRNA expression.

2025- CURA award: Isaac Forbush and Hannah Urey. Using Rabies virus to map synaptic connections of VTA GABAergic cells and their unique plasticity.

2025- CURA award: Thomas Fuller. Understanding addiction modulation: identifying the mode of plasticity in VTA GABAergic projection neurons

2024- CURA award: Isaac Forbush and Hannah Urey. Immunohistochemistry of the risk/reward VTA neural network.

2024- CURA award: Thomas Fuller. Understanding addiction modulation: Identifying the mode of plasticity in VTA GABAergic projection neurons to the NA, PPT, and VL.

2024- CURA award: Braden Hinzte. Cellular dynamics in addiction: a novel approach to mapping GABAergic control of dopaminergic neurons in the ventral tegmental area.

2024- CURA award: Addison Smartt and Rebekah Jones. Reward Pathways: VTA GABA neuron subtypes.

2024- CURA award: Jared Weight and Bryson Reed. The effect of the ketogenic diet on Long-Term Potentiation in the hippocampus.

2023- CURA award: Daniel Isemonger. Examine the effects that chronic polydrug exposure of morphine and THC on behavioral measures of drug dependence and withdrawal.

2023- CURA award: Jed Christensen: Effects of the Ketogenic Diet on Long-Term Potentiation in the CA1 region of the Hippocampus in young rodents.

2023- CURA award: Bryson Reed. The Effect of the Ketogenic Diet on Long-Term Potentiation in the Adult Hippocampus.

2023- CURA award: Connor Morgan and Michael Dew. Metabotropic Glutamate Receptor 5 Mediated Depotential.

2022- CURA award: Daniel Isenmonger and Zach Ward. Investigation of dopamine and GABAergic neuron connections within the VTA using modified rabies virus mediated monosynaptic tracing.

2022- CURA award: Darien Reed and Nicholas Bever. The Impact of the Ketogenic Diet on Hippocampal Long-Term Potentiation.

2022- CURA award: Addison Beaslin and Isaac Cress. Epigenetic Mechanisms of Morphine Addiction in the VTA

2022- CURA award: Logan Garr. Examination of orexin receptor expression in the ventral tegmental area neurons.

2022- ELA award (CELL dept): Cami Staker.

2021- CURA award: Anna Everett, Matt Holdaway, Parker Skousen, Noah Valentine. Exploring the Mechanism of “Forgetting” with Electrophysiology.

2021- CURA award: Calvin Smith and Isaac Cress. Ventral Tegmental Area Gene expression in Delta-9-tetrahydrocannabinol treated Mice.

2020- CURA award: Devin Bird, Abe Coomer, Tyler Haskings. Understanding Drug Addiction through Optogenetics.

2020- CURA award: Tanner Blaylock, Anna Everett, Adam Brantley. Ketogenic diet effect on learning and memory.

2019- CURA award: Eric Winzenried, Eliza Neal, Taylor Johnson et al.
Prophylactic Treatment with Propranolol and Mifepristone in a Rat PTSD
Model Caused Changes in LTP and mRNA.

2019- CURA award: Devin Moffat and Gabriel Melendez. Prophylactic Drug
Treatment to Reduce PTSD Behavioral Symptoms in Rats.

BYU undergraduate ORCA competitive grant Awards

2017- ORCA award: James Kranewitter-Call and Brandon Anderson. Examining
the Potential Role of GPR18 and GPR119 in Learning and Memory

2016- ORCA award: Paul Baker. Role of Exercise and Stress in Memory and
Learning of the Hippocampus

2015- ORCA award: Tyler Hammond. The Effects of Stress on Learning and
Memory in the Hippocampus

2015- ORCA award: Michael Christensen. Novel G-protein Coupled Receptor
Expression and Modulation of Synaptic Plasticity

2014- ORCA award: Zachary Hopkins. Endocannabinoid Biosynthetic Enzyme
mRNA Expression in Ventral Tegmental Area Dopaminergic and
GABAergic Cells.

2014- ORCA award: Bradley Prince. The Role of Endocannabinoid Receptor
GPR55 on Learning and Memory.

2014- ORCA award: Jacob Trotter. The Countering Effects of Exercise on Stress
Reduced Long-term Potentiation in Mouse Hippocampi

2014- ORCA award: Teresa Nufer. The Effects of Exercise and Stress on
Learning and Memory

2013- ORCA award: Spencer Bell. Role of GPR55 in hippocampal LTD.

2013- ORCA award: Ryan Williamson. Endocannabinoid biosynthetic enzymes
in hippocampal neurons.

2013- ORCA award: Rachel Schneider. GPR55 function in the hippocampus

2012- ORCA award: David Marriot. Neuroprotective effects of exercise on stress
induced decreases in LTP.

2012- ORCA award: Ryan Williamson. Endocannabinoid biosynthetic enzymes

in hippocampal neurons.

2012- ORCA award: Spencer Bell. Cellular mechanism behind memory formation. Does TRPV1 induced LTD in young hippocampus.

2012- ORCA award: Adam Field. Neuroprotective effects of exercise on stress induced decreases in LTD.

2011- ORCA award: Michael McNeil. Using immunocytochemistry to confirm the presence of endocannabinoid enzymes in hippocampal interneurons.

2011- ORCA award: Andrew Wallmann. TRPV1 plasticity in the hippocampus

2011- ORCA award: Jared Weed. Effect of TRPV1 on LTD

2011- ORCA award: Ryan Williamson. Molecular expression profiles of stratum oriens interneurons

2009- ORCA award: Jacob Blickenstaff. Studying voltage changes mediated by GAP junctions

2009- ORCA award: Douglas Bennion. Studying TRPV1 mediated increases in LTP.

2008- ORCA award: Tyron Jensen. Studying interneuron plasticity.

2008- ORCA award: Douglas Bennion. Studying postsynaptic involvement in LTD.

BYU-Idaho

Thomas E. Ricks grant. This grant was awarded in order to travel to the Neuroscience conference in Atlanta, 2006 and using the experience there to develop curriculum for a new advanced neuroscience course and laboratory. March 2006.

ACADEMIC AWARDS

2023- **Thomas L. Martin Professorship:** College of Life Science three year
2026 professorship/award. The college's most prestigious faculty award.

2019 **BYU Phi Kappa Phi Award:** University award for excellence in scholarly and creative endeavors, and contributions to BYU through citizenship and service. (\$1,000 cash award).

2018 **Graduate Mentoring Award:** Competitive award from BYU graduate school

supporting mentoring of my graduate students, Teresa Nufer and Isaac Ostlund. \$15,000.

- 2016 **Dept. of Physiology and Developmental Biology; Outstanding Achievement and Service Award.** (\$1,000 cash award)
- 2013 **Faculty for Undergraduate Neuroscience (San Diego, CA):Honors Award**
- 2012 **Faculty for Undergraduate Neuroscience Research (New Orleans, LA): Honors Award** “For dedication and commitment to undergraduate education in neuroscience.”
- 2011 **Graduate Mentoring Award:**
This award was given to me from the BYU graduate school to support mentoring of my graduate student, Corinne Badgley. \$4,000
- 2011 **Faculty for Undergraduate Neuroscience research (Washington, DC): Honors Award**
- 2010 **Graduate Mentoring Award:**
This award was given to me from the BYU graduate school to support mentoring two of my graduate students, Tyron Jensen and Collin Merrill. \$4,000
- 2002 & **Association for Chemoreception Sciences:**
2001 Don Tucker Memorial Award Nominee; best graduate student presentation.
- 2001 **Intermountain Chapter Society for Neuroscience (UT, ID, WY):**
Awarded first place for most outstanding presentation.
- 1999- **Association for Chemoreception Sciences student travel/housing award**
2002 (1999, 2000, 2001, 2002).

PATENTS

2025 (January)- Patent for morphine-dependence prevention using psychedelics.

PEER-REVIEWED PUBLICATIONS

Michael Von Gunten ¹, Tenna Russell ¹, Isaac Stirland ², Seth Parks ², Timothy Jenkins ², Jeffrey G Edwards. LSD Restores Synaptic Plasticity in VTA of Morphine-Treated Mice and Disrupts Morphine-Conditioned Place Preference. **Submitted: iScience. In Revision. bioRxiv. PMID: 40661365. DOI: [10.1101/2025.06.12.658958](https://doi.org/10.1101/2025.06.12.658958)**

Bridget J. Wu^b, Seth Hoffman^a, Hannah Urey^a, Isaac Forbush^b, Devin Bird^b, Craig Brailsford^b, and Jeffrey G. Edwards. VTA GABA Cell Bipotential Induction of iLTP or iLTD Synaptic Plasticity is Input Selective, where iLTD is Uniquely Eliminated by Cocaine. **Submitted: Biological Psychiatry. In Review. bioRxiv.** doi: <https://doi.org/10.1101/2025.10.06.680313>

Isaac Ostlund, Michael Von Gunten & Jeffrey G. Edwards. Chronic Morphine Differentially Impacts Glutamatergic Synaptic Plasticity in the Ventral Tegmental Area of Adults versus Adolescent Mice. **Submitted: Neuropharmacology. In Revision.**

*Payne, A.J., *Obray, J.D., Williams, B.M., Campbell, R.J., Ford, L.H., Ronstrom, J.W., Nelson, C.A., Murcia, J.D.G., Freitas, C.M.T., Chapman, C.J., Baldridge, J.K., Boyce, J.Z.J, Edwards, J.G., Weber, K.S., Yorgason, J.T., and Steffensen, S.C. 2026. The role of lymphocytic CD5 in the effects of ethanol on dopamine circuitry and seeking behavior. **Brain, Behavior, and Immunity** (Impact factor: 7.6)

Michael Von Gunten^b, Seth Hoffman^b, Addison Beaslin Smartt^a, Jeffrey G. Edwards. 2025. Three-Day THC Exposure Eliminates LTD in Ventral Tegmental Area of Young, but not Adult Mice. **Journal of Cannabis Research.** PMID: **40450354**. DOI: [10.1186/s42238-025-00287-7](https://doi.org/10.1186/s42238-025-00287-7) (Impact factor: 4.6)

Eric T Winzenried, Anna C Everett, Erin R Saito, Roxanne M Miller, Taylor Johnson, Eliza Neal, Zachary Boyce, Calvin Smith, Chloe Jensen, Spencer Kimball, Adam Brantley, Gabriel Melendez, Devin Moffat, Erin Davis, Lyndsey Aponik, Tyler Crofts, Bryson Dabney, Jeffrey G Edwards. 2023. Effects of a True Prophylactic Treatment on Hippocampal and Amygdala Synaptic Plasticity and Gene Expression in a Rodent Chronic Stress Model of Social Defeat. **International Journal of Molecular Science.** DOI: [10.3390/ijms241311193](https://doi.org/10.3390/ijms241311193). PMID: **37446371** (Impact Factor: 5.7).

T. M. Nufer, B. J. Wu, Zachary Boyce, S. C. Steffensen, and J. G. Edwards. 2023. Ethanol Blocks a Novel Form of LTD, but not LTP of Inhibitory Inputs to VTA GABA Neurons. **Neuropsychopharmacology.** DOI: [10.1038/s41386-023-01554-y](https://doi.org/10.1038/s41386-023-01554-y) PMID: **36899030** (Impact Factor: 8.3)

Isaac Ostlund, Michael Von Gunten, Calvin Smith, & Jeffrey G. Edwards 2023. Chronic Δ9-tetrahydrocannabinol impact on plasticity, and differential activation requirement for CB1-dependent long-term depression in ventral tegmental area GABA neurons in adult versus young mice. **Frontiers in Neuroscience.** DOI: [10.3389/fnins.2022.1067493](https://doi.org/10.3389/fnins.2022.1067493) PMID: **36699526** (Impact Factor: 5.15)

Erin R. Saito, Cali E. Warren, Cameron M. Hanegan, John G. Larsen, Johannes D. du Randt, Mio Cannon, Jeremy Y. Saito, Rachel J. Campbell, Colin M. Kemberling, Gavin S. Miller, Jeffrey G. Edwards and Benjamin T. Bikman. 2022. A Novel Ketone-Supplemented Diet Improves Recognition Memory and Hippocampal Mitochondrial

Efficiency in Healthy Adult Mice. **Metabolites**. DOI: [10.3390/metabo12111019](https://doi.org/10.3390/metabo12111019) PMID: 36355101 (Impact Factor: 5.58). **Editor's Choice Award- 2024.**

Jeffrey G. Edwards, Luigia Cristino, Dan P Covey. 2022. The Emerging Role of Endocannabinoids in Synaptic Plasticity, Reward, and Addiction. Editorial. **Frontiers in Synaptic Neuroscience**. DOI: [10.3389/fnsyn.2022.898090](https://doi.org/10.3389/fnsyn.2022.898090) PMID: 35615441 (Impact factor: 4.5).

L.N. Friend, B. Wu, and J.G. Edwards. 2021. Acute Cocaine Exposure Reversibly Occludes LTD in Ventral Tegmental Area GABA Neurons. **Neurochemistry International**. Feb 19:105002. doi: 10.1016/j.neuint.2021.105002. (Impact factor: 4.0). PMID: 33617930.

Teresa M. Nufer, Collin Merrill, Lindsey Friend, Michael Jake Petersen, Zach Hopkins, Zach Boyce, and Jeffrey G. Edwards. 2019 Expression of mGluR5 Predicts Plasticity Type in Hippocampal Stratum Radiatum Interneurons. **Neuroscience Letters**. Sep 6;712:134472. doi: 10.1016/j.neulet.2019.134472. PMID:31499135. (Impact factor: 3.0)

L.N. Friend, R.C. Williamson, C.B. Merrill, S.T. Newton, M.T. Christensen, B. Wu, I. Ostlund, and J.G. Edwards. 2019. Hippocampal Stratum Oriens Interneurons Undergo CB1-Dependent Long-Term Potentiation and Express Endocannabinoid Biosynthetic Enzymes. **Molecules**. Special Issue: Emerging Topics in (Endo)Cannabinoid Signaling. [https://www.mdpi.com/journal/molecules/special_issues/\(Endo\)Cannabinoid_Signalling](https://www.mdpi.com/journal/molecules/special_issues/(Endo)Cannabinoid_Signalling) <https://www.mdpi.com/1420-3049/24/7/1306> (Impact factor: 4.9). PMID:30987110.

Stephanie B. Williams, Jordan T. Yorgason, Ashley C. Nelson, N Lewis, Teresa M. Nufer, Jeff G. Edwards, and Scott C. Steffensen. 2018. Glutamate Transmission on Ventral Tegmental Area GABA Neurons Is Altered by Acute and Chronic Ethanol. **Alcohol Clin Exp Res** (2018) Sep 11. doi: 10.1111/acer.13883. [Epub ahead of print] PMID: 30204234. (Impact Factor: 3.2).

Roxanne M. Miller, David Marriott, Tyler Hammond, Jacob Trotter, Dane Lyman, Tim Call, Ryan De Roque, Jacob Welch, Bethany Walker, Nathaniel Christensen, Deson Haynie, Zoie Badura, Myriah Lewis, and Jeffrey G. Edwards. 2018. Running Exercise Mitigates the Negative Consequences of Increased Corticosterone on Hippocampal Long-Term Potentiation due to Stress. **Neurobiology of Learning and Memory**. doi: 10.1016/j.nlm.2018.01.008. PMID: 29408274. (Impact Factor: 3.6). Highlighted in The New York Times.

Lindsey Friend, Jared Weed, Philip Sandoval, Teresa Nufer, Isaac Ostlund, Jeffrey G. Edwards. 2017. CB1-dependent LTD in Ventral Tegmental Area GABA Neurons: a Novel Target for Marijuana. **Journal of Neuroscience**. 37(45):10943-10954. doi: 10.1523/JNEUROSCI.0190-17.2017. PMID: 29038246 (Impact factor: ~7-8). Highlighted by Newsweek, KSL TV, BYUradio, etc.

Steffensen, S.C., Shin, S.I., Nelson, A.C., Pistorius, S.S., Williams, S.B., Woodward, T.J., Park, H.J., Friend, L., Gao, M., Gao, F., Taylor, D.H., Olive, M.F., Edwards, J.G., Sudweeks, S.N., Buhlman, L.M., McIntosh, J.M., and Wu, J. 2017. $\alpha 6$ subunit-containing nicotinic receptors mediate low-dose ethanol effects on ventral tegmental area neurons and ethanol reward. **Addiction Biology** (2017) doi: 10.1111/adb.12559: PMID: 28901722. (Impact Factor: ~5.58).

Katrina Hurst, Corinne Badgley, Tanner Ellsworth, Spencer Bell, Lindsey Friend, Brad Prince, Jacob Welch, Zack Cowan, Brandon Anderson, Ryan Williamson, Chris Lyon, Brian Poole, Michael Christensen, Jarrod Call, Michael McNeil and Jeffrey G. Edwards. 2017. The Putative Cannabinoid Receptor GPR55 Modulates Hippocampal Synaptic Plasticity. **Hippocampus. Cover Article**. DOI:10.1002/hipo.22747 PMID: 28653801. (Impact Factor: 4.1).

Cordner D, Friend L, Mayo J, Ventura J, Badgley C, Wallmann A, Ventura JS, Chidsey BA, Rogers A, Edwards JG, Bridgewater LC. 2017. The nuclear variant of BMP2, nBMP2, affects hippocampal function in a mouse model. **Scientific Reports**. Apr 18;7:46464. doi: 10.1038/srep46464. PMID: 28418030 (Impact Factor: 5.58).

Merrill CB, Friend LN, Newton ST, Hopkins ZH, Edwards JG. 2015. Ventral tegmental area dopamine and GABA neurons: Physiological properties and expression of mRNA for endocannabinoid biosynthetic enzymes and type I metabotropic glutamate receptors. **Scientific Reports**. Nov 10;5:16176. doi: 10.1038/srep16176. PMID: 26553597. (Impact Factor: 5.58).

Taylor D., Burman PN, Hansen MD, Wilcox R., Larsen BR, Blanchard JK, Merrill CB, Edwards JG, Sudweeks, SN, Wu J, Arias HR, and Steffensen SC. 2013. Nicotine Enhances the Excitability of Gaba Neurons in the Ventral Tegmental Area via Activation of Alpha 7 Nicotinic Receptors on Glutamate Terminals. **Biochemistry and Pharmacology**. S1.ISSN: 2167-0501. (Impact factor: 3.72).

Merrill C, McNeil M, Williamson R, Poole B, Nelson B, Sudweeks S and Edwards JG. 2012. Identification of mRNA for endocannabinoid biosynthetic enzymes within hippocampal pyramidal cells and CA1 stratum radiatum interneuron subtypes using quantitative real-time PCR. **Neuroscience**. 218:89-99. Epub 2012 May 17. DOI: 10.1016/j.neuroscience.2012.05.012. NIHMS 387707. PMID 22609938. (impact factor: 3.380)

Jensen T and Edwards JG. 2012. Calcineurin is required for TRPV1-induced long-term depression of hippocampal interneurons. **Neuroscience Letters**. 510:82-87. PMID: 22260796. (impact factor: 3.0)

Bennion D, Jensen T, Walther C, Hamblin J, Wallmann A, Couch J, Blickenstaff J, Castle M, Dean L, Beckstead S, Merrill C, Muir C, St. Pierre T, Williams B, Daniel S, and Edwards JG. 2011. Transient Receptor Potential Vanilloid 1 agonists modulate

hippocampal CA1 LTP via the GABAergic system. **Neuropharmacology**. 61(4):730-8. PMID: 21069781. (impact factor: 4.677).

Steffensen SC, Bradley KD, Hansen DM, Wilcox JD, Wilcox RS, Allison DW, Merrill CB and Edwards JG. 2010. The role of Connexin-36 GAP junctions in alcohol intoxication and reward. **Synapse**. 65(8):695-707. (impact factor: 2.925)

Edwards JG*, Gibson HE, Jensen T, Nugent F, Walther C, Blickenstaff J, Kauer JA. 2010. A novel non-CB1/TRPV1 endocannabinoid-mediated mechanism depresses excitatory synapses on hippocampal CA1 interneurons. **Hippocampus**. DOI: 10.1002/hipo.20884. 22(2):209-21 ***corresponding author** (impact factor: 5.745)

Wang Z, Edwards JG, Riley N, Provance DW, Karcher R, Li X, Davison IG, Ikebe M, Mercer JA, Kauer JA, Ehlers MD. 2008. Myosin Vb mobilizes recycling endosomes and AMPA receptors for postsynaptic plasticity. **Cell**. 135(3):535-48. (impact factor: 32.401). Highlighted nationally, CBS/Channel 5, etc.

Gibson HE*, Edwards JG*, Page RS, Van Hook MJ, Kauer JK. 2008. TRPV1 channels mediate long-term depression at synapses on hippocampal interneurons. **Neuron**. 57(5): 746-59. ***co-first authors**. (impact factor: 14.926). Highlighted in USA Today, etc.

Edwards JG, Greig A, Sakata Y, Elkin D, Michel WC. 2007. Cholinergic innervation of the zebrafish olfactory bulb. **Journal of Comparative Neurology**. 504(6): 631-45. (impact factor: 3.774)

Park M, Penick EC, Edwards JG, Kauer JA, and Ehlers MD. 2004. Recycling endosomes supply AMPA receptors for LTP. **Science**. 305(5692): 1972-5 (impact factor: 30.927)

Edwards JG and Michel WC. 2003. Pharmacological characterization of ionotropic glutamate receptors within the zebrafish olfactory bulb. **Neuroscience**. 122(4): 1037-47. (impact factor: 3.41)

Edwards JG* and Odell WD. 2003. Partial characterization of chorionic gonadotropin-like binding sites from the bacteria *Xanthomonas maltophilia*. **Experimental Biology & Medicine**. 28(8):926-934. (impact factor: 2.954) ***corresponding author**

Edwards JG and Michel WC. 2002. Odor-stimulated glutamatergic neurotransmission in the zebrafish olfactory bulb. **Journal of Comparative Neurology**. 454(3): 294-309. (impact factor: 3.774)

Citations: >1,500 (Web of Science as of 07-18-24). H index: 18. Impact Factor Ave: 7.05

PUBLISHED BOOKS/CHAPTERS

Edwards JG. 2014. TRPV1 in the Central Nervous System: Synaptic Plasticity, Function, and Pharmacological Implications. In: Omar M.E., editor. Progress in Drug Research: Capsaicin as a Therapeutic Molecule. VIIIth ed. vol. 68 p. 321. **Springer**.

ACKNOWLEDGEMENTS

Jason Paxman, Brady Hunt, David Hallan, Samuel R. Zarbock and Dixon J. Woodbury. Drunken Membranes: Short-Chain Alcohols Alter Fusion of Liposomes to Planar Lipid Bilayers. 2017. **Biophysical Journal**. 112: 121-132.

Sakata Y, Olson JK, Michel WC. 2003. Assessment of neuronal maturation and acquisition of functional competence in the developing zebrafish olfactory system. **Methods Cell Sci**. 25(1-2):39-48.

Lipschitz DL and Michel WC. 1999. Physiological Evidence for the Discrimination of L-arginine from Structural Analogues by the Zebrafish Olfactory System. **J. Neurophysiol**. 82, 3160-3167.

PUBLISHED ABSTRACTS (See end of CV for full list):

- 2022: 13 abstracts with oral/poster presentations from seven different conferences, 5 international, 4 national, 2 regional, and 2 state. For full list see the end of the CV.
- 2021: 7 abstracts from three conferences, 1 international, 1 state and 1 local. For full list see the end of the CV.

CHIASM PUBLICATIONS- BYU Undergraduate Journal of Neurosciences

James Kranewitter-Call. Examining the Potential Role of GPR18 and GPR119 in Learning and Memory. **2017**. Page 3, Volume 9.

Doug Bennion. Learning and Memory Modulation by Activation of the Hot Pepper Receptor: TRVP1 Modulation of Synaptic Plasticity in the Hippocampus. **2009**. Page 18. Volume 1

GRADUATE STUDENTS THESIS/DISSERTATION IN MY LAB

2025- Michael Von Gunten. PhD in Neuroscience. The Effects of Morphine, THC, and LSD on Synaptic Plasticity of the Ventral Tegmental Area.

2024- Bridget Wu. PhD in PDBio. Drug Modification of Synaptic Plasticity at the Inhibitory Synapses Involving GABA Neurons in the Ventral Tegmental Area

2022- Isaac Ostlund. PhD in PDBio. The Influence of THC, Opioids, and Age on the Plasticity of Excitatory Inputs to Ventral Tegmental Area GABA Neurons.

2018- Teresa Nufer. PhD in Neuroscience. Variable Modulation of Inputs to GABA Cell in the Ventral Tegmental Area and Hippocampus.

2017- Roxanne Miller. PhD in PDBio. Pharmaceutical and Natural (Exercise) Mechanisms to Mitigate the Negative Impact of PTSD and Chronic stress on Synaptic Plasticity and Memory.

2017- Katrina Hurst. PhD in PDBio. Modulation of Synaptic Plasticity: Endocannabinoids and Novel G-Protein Couple receptors Expression and Translational Effects in Interneurons.

2016- Lindsey Friend. PhD in Neuroscience. Endocannabinoid-Mediated Synaptic Plasticity in the Ventral Tegmental Area and Hippocampus.

2014- Collin Merrill. PhD in PDBio. Endocannabinoid Biosynthetic Enzyme mRNA: Patterns of expression in Hippocampus and Ventral Tegmental Area and Effects on Synaptic Plasticity.

2013- Jared Weed. MS in PDBio. Endocannabinoid-Dependent Long-Term Depression of Ventral Tegmental Area GABA Neurons.

2012- Philip Sandoval. MS in PDBio. Long-Term Depression of Excitatory Inputs to GABAergic Neurons in the Ventral Tegmental Area.

2012- Corinne Badgley. MS in PDBio. The Putative Cannabinoid Receptor GPR55 Modulates Synaptic Plasticity in the Hippocampus.

2011- Tyron Jensen. MS in PDBio. Calcineurin is Required for TRPV1-Induced LTD of CA1 Stratum Radiatum Interneurons.

HONORS UNDERGRADUATE THESIS OF STUDENTS MENTORED IN MY LAB

2024- Michael Dew. Undergraduate Honors Thesis. THE ROLE OF AGE, SEX, AND MGLUR5 RECEPTORS IN HIPPOCAMPAL DEPOTENTIATION IN MICE.

2023- Jed Christensen. Undergraduate Honors Thesis. Effects of the Ketogenic Diet on Spatial Memory and Long-Term Potentiation in the CA1 Region of the hippocampus in Young Rodents.

2017- James Kranewitter-Call. Undergraduate Honors Thesis.

2017- Morgan Homan. Undergraduate Honors Thesis.

2013- David Marriott. Undergraduate Honors Thesis. The effects of exercise on synaptic plasticity in the CA1 region of the hippocampus in mice who experience acute stress.

2009- Douglas Bennion. Undergraduate Honors Thesis.

MENTORING IN MY LAB

2024- **“Life Science First Generation Inspiring Learning Scholarship Mentoring”** of Jasmin Cummings.

2021-2022 **FHSS Student Research Academy:** I mentored students in this academy focused on minority students who go on for advanced degrees including Dasani Del Rosario.

Undergraduate Lab Mentoring

2025 Mentored 34 students in my research lab.

2014-2024 Mentored 25-30 students in my research lab on average per semester.

2011-2013 Mentored 15-20 students in my research lab on average per semester.

2007-2010 Mentored 10-15 students in my research lab on average per semester.

INVITED LECTURES/PRESENTATIONS/SEMINARS (ORAL)

Nov. 2025 International Society for Neuroscience Meeting: San Diego, CA
Nanosymposium. Oral Presentation. “Cocaine blocks a novel form of inhibitor iLTD, but not iLTP of VTA GABA neurons.”

Nov. 2024 Honors Student Leadership Council. BYU. Honors Lecture. Applications for the study of brain synaptic plasticity: From Memory to Drug-Induced Alterations

Jan. 2024	Neuroscience Center Seminar. Applications for the study of brain synaptic plasticity: THC impact in adults vs. adolescence and a prophylactic treatment for PTSD in mice.
Nov. 2022	International Society for Neuroscience Meeting; Chicago, Nanosymposium. Oral Presentation.
Jun. 2022	International Cannabis Research Society; Galway Ireland. Oral Presentation.
Oct. 2019	International Society for Neuroscience Meeting; Chicago, Nanosymposium. Oral Presentation.
Sept. 2019	Universitat Autònoma de Barcelona; Barcelona, Spain. Oral Presentation.
Aug. 2019	National Research Council (CNR) of Italy; Naples, Italy. Oral Presentation
Jul. 2019	Gordon Conference; Casteldefels, Spain.
Jun. 2019	International Conference on Neurology and Brain Disorders; Paris, France. Oral Presentation.
Apr. 2019	University of South Dakota; Seminar. Oral Presentation.
Nov. 2018	BYU; Psychology Department. Graduate/Faculty Seminar.
Sep. 2017	Brigham Young University, PDBio Seminar (Full Professor review)
May 2017	MMBio, BYU; Research Presentation.
Nov. 2014	Uniformed Services University Health Sciences; Neuroscience; Maryland. Oral Presentation
Mar. 2014	Spring Brain Conference; Sedona, Arizona. Oral Presentation
Mar. 2014	Physiology and Developmental Biology Seminar
Jul. 2013	LDLSLR Symposium. Plenary Session. Oral Presentation.
Feb. 2012	Brigham Young University, PDBio Seminar (CFS review)
Feb. 2010	Brigham Young University, PDBio Seminar (3 rd year review)
Feb. 2009	Brigham Young University, Neuroscience Program.
Jan. 2009	Southern Utah University; Department of Biology

- Jan. 2009 Utah Science Fair; Presented to High School Teachers
- Dec. 2005 Brigham Young University; Department of Physiology and Developmental Biology.
- Aug. 2004 Brown University; Department of Molecular Pharmacology, Physiology and Biotechnology.
- June 2002 Yale University; Department of Neurobiology.
- June 2002 University of Baltimore; Department of Anatomy and Neurobiology.
- April 2002 University of Kentucky; Department of Neuroscience.
- Feb. 2001 Jackson Hole, Wyoming; Intermountain Chemosensory Conference.

CONFERENCES ATTENDED/PRESENTED AT (Including Grads/Undergrads)

Since arriving at BYU

Spring Brain Conference: *National*

- 2023, 2022, 2018, 2017, 2016 and 2015 co-chair of program, 2014 (oral presentation).

Society for Neuroscience (SfN): *International*

- 2025 (3 posters & 2 oral presentations); 2024 (3 posters), 2023 (3 posters), 2022 (2 oral and 2 poster presentations), 2021 (4 poster presentations- virtual), 2019 (2 oral presentations, 1 poster), 2018 (1 oral nanosymposium presentation, 2 posters), 2017 (3 posters), 2016 (4 posters), 2015 (4 posters), 2014 (4 posters), 2013 (4 posters), 2012 (3 posters), 2011 (4 posters), 2010 (4 posters), 2009 (2 posters), 2008 (1 poster)

Gordon Conference- Cannabinoids: *International*

- 2023 (1 poster), 2019 (1 poster), 2013 (1 poster)

Gordon Conference- Excitatory Synapses: *International*

- 2017 (presentation)

Faculty for Undergraduate Neuroscience (FUN): *International*

- 2025 (1 poster), 2024 (1 poster), 2023 (1 poster), 2022 (1 poster), 2019 (1 poster), 2018 (1 poster), 2017 (1 poster), 2016 (1 poster), 2015 (1 poster), 2014 (1 poster), 2013 (1 poster), 2012 (1 poster), 2011 (1 poster), 2010 (1 poster), 2009 (1 poster), 2008 (1 poster)

International Cannabinoid Research Society (ICRS): *International*

- 2022 (1 oral presentation by me), 2017 (1 presentation), 2012 (1 presentation)

Alzheimer's Association International Conference (AAIC): *International*

- 2012

LDS Life Science Research Symposium (LDSLSRS): *National*

- 2013 (1 oral presentation)

National Conference on Undergraduate Education (NCUR): *National*

- 2012 (2 undergraduate oral presentations)

Intermountain Graduate Research Symposium (IGRS): *Regional*

- 2012 (2 graduate student oral presentations), 2011 (2 graduate student oral presentations), 2010 (2 graduate student oral presentations)

Intermountain Chapter Society for Neuroscience: *Regional/Snowbird, UT*

- 2025 (1 poster), 2024 (2 posters), 2023 (3 posters), 2022 (3 posters), 2019 (1 poster), 2018 (2 posters), 2017 (3 posters), 2016 (2 posters), 2015 (1 poster), 2014 (3 posters), 2013 (1 poster), 2012 (1 poster), 2011 (1 poster), 2010 (3 posters),

Utah Conference on Undergraduate Research (UCUR): *State*

- 2025 (2 oral presentations), 2024 (2 oral presentations), 2023 (3 oral), 2022 (3 oral presentations), 2021 (2 oral presentations- 4 students), 2020 (5 oral presentations- 5 students); 2019 (3 oral presentations – 6 students), 2018 (4 oral presentations), 2017 (3 oral undergrad presentations), 2016 (2 oral undergrad presentations), 2015 (2 oral undergraduate presentations), 2014 (2 oral undergraduate presentations), 2013 (4 oral undergraduate presentations), 2011 (1 oral undergraduate presentation), 2009 (1 oral undergraduate presentation).

Roseman Symposium: *State*

- 2019 (2 posters)

Utah Academy of Sciences: *State*

- 2019 (1 poster)

Mary Lou Fulton Conference: *Local*

- 2020 (1 poster), 2019 (2 posters), 2018 (2 posters), 2011 (2 posters), 2010 (2 posters), 2009 (2 posters)

Life Science Poster Session: *Local*

- 2025 (3 posters), 2023, 2022, 2021 (1 poster), 2020 (1 poster), 2019 (1 poster), 2018 (1 poster), 2011 (2 posters), 2010 (2 posters)

BYU Library Poster Competition: *Local*

- 2025 (1 poster), 2024 (1 poster), 2023 (1 poster), 2022 (1 poster), 2021 (2 posters), 2020 (1 poster), 2019 (2 posters), 2018 (1 poster), 2017 (1 poster)

BYU Grad Expo: *Local*

- 2018 (1 poster)

CURA: *Local*

- 2024 (2 posters), 2023 (3 posters), 2022 (4 posters), 2021 (3 posters), 2020 (2 posters), 2019 (2 posters)

Before arriving at BYU

Society for Neuroscience:

2007, 2006, 2005, 2004

Gordon Research Conference: Excitatory Amino Acids and Brain Function.

2003

Association for Chemoreception Sciences (AChemS):

2002, 2001, 2000, 1999

Intermountain Chapter Society for Neuroscience

2002, 2001

Intermountain Chemosensory Conference:

2001

Neuronal Information Processing System

1998

GRANT STUDY SECTIONS

2025- March	NIH Study Section. NIGMS; ZGM1 RCB-T; Ad-Hoc reviewer
2024- Oct.	NIH Study Section, NIH, BRLE; Ad-Hoc Reviewer
2023- Jun.	NIH Study Section, NIHS; ZES1 VSM-S (PD); Ad-Hoc Reviewer
2022 (Jan-Feb)	Tobacco-Related Disease Research Program (TRDRP) grant review study section for California. Approved by NIH
2020-2021	Tobacco-Related Disease Research Program (TRDRP) grant review study section for California. Approved by NIH

2020- Apr.	Tobacco-Related Disease Research Program (TRDRP) grant review study section for California. Approved by NIH.
2019- Mar.	National Science Centre (Poland's National Research Funding Agency).
2018- Dec.	Tobacco-Related Disease Research Program (TRDRP) grant review study section for California.
2018- July	NIH Study Section, NBM; Ad-Hoc Reviewer
2018- Mar.	Tobacco-Related Disease Research Program (TRDRP) grant review study section for California.
2016	Medical Research Council ; Ad-Hoc Reviewer (Great Britain's leading funding organization- similar to NIH in the US.).
2015	NIH Study Section, MNPS; Ad-Hoc Reviewer

PROFESSIONAL SOCIETY AND JOURNAL LEADERSHIP/EXPERIENCE

2022-Present	<u>Associate Editor</u> ; <i>Frontiers in Synaptic Neuroscience</i> .
2017- Present	<u>Associate Editor</u> ; <i>BMC Neuroscience</i> .
2015-Present	<u>Associate Editor</u> ; <i>Scientific Reports</i> , a Nature Publishing Group journal.
2019- Present	<u>Reviewing Editor</u> ; <i>Frontiers in Synaptic Neuroscience</i> .
2020- 2022	<u>Topic Editor</u> ; <i>Frontiers in Synaptic Neuroscience</i> . Special Issue: I was a lead editor for a special issue in the journal entitled "The Emerging Role of Endocannabinoids in Synaptic Plasticity, Reward, and Addiction". This was done in collaboration with Dr. Luigia Cristino and Dr. Dan Covey.
2015-2023	<u>Organizing Committee</u> ; <i>Spring Brain Conference</i> annual meeting (annual meeting not held from 2020-2021).
2012- 2015	<u>President</u> - <i>Society for Neuroscience Intermountain Chapter</i>

PROFESSIONAL CONFERENCES/EVENTS THAT I ORGANIZED

- 2023- Spring Brain Conference. Sedona, Arizona. Co-chair. Assist planning meeting.

- 2022- Spring Brain Conference. Sedona, Arizona. Co-chair. Assist planning meeting.
- 2017- Spring Brain Conference. Sedona, Arizona. Co-chair. Assist planning meeting.
- 2016- Spring Brain Conference. Sedona, Arizona. Co-chair. Assist planning meeting.
- 2014- Snowbird, Utah. Organized Intermountain Society for Neuroscience Branch Poster Session.
- 2013- Snowbird, Utah. Organized Intermountain Society for Neuroscience Branch Poster Session.
- 2013- Salt Lake City Utah, Brain Awareness Week- Utah Brain Education Alliance. Consisted of members from several local universities to coordinate BAW activities.
- 2012- Snowbird, Utah. Organized Intermountain Society for Neuroscience Branch Poster Session.

PROFESSIONAL SOCIETY MEMBERSHIPS

2004-Current	Society for Neuroscience
2007-Current	Association for the Advancement of Science.
2012-Current	International Cannabinoid Research Society
2020- 2022	Sigma Xi- Scientific Research Honor Society.
2000-2003 & 2007-Current	Intermountain Chapter- Society for Neuroscience.
1998-2007 & 2018-Current	American Physiological Society.
2005-2006	Idaho Academy of Science.
1999-2004	Association for Chemoreception Sciences (AChemS).

PROFESSIONAL PEER-REVIEWS

Journals

- 1) Journal of Neuroscience
- 2) Journal of Neurophysiology
- 3) Neuroscience
- 4) Frontiers in Synaptic Neuroscience
- 5) Frontiers in Neuroscience
- 6) British Journal of Pharmacology
- 7) Neuroscience Letters
- 8) Neurochemistry International
- 9) Proceedings of the National Conference on Undergraduate Research (NCUR)
- 10) Pharmacological Reports
- 11) Pharmacological Research
- 12) Pharmacological Reviews
- 13) Behavior Brain Research
- 14) Brain Research
- 15) Brain Research Bulletin

- 16) Scientific Reports
- 17) Molecular Metabolism
- 18) Planta Medica
- 19) Etc.

Textbooks

- 1) McGraw Hill-Fox Physiology
- 2) McGraw Hill- Sealey Anatomy and Physiology

BYU UNIVERSITY SERVICE

2025-Present	CELL Research Committee- Oversee travel funds, CURA Awards, NIH external research
2023-Present	CELL Rank and Status Committee Member:
2021-2025	Director; Neuroscience Center (University)
2024	Spring Faculty Seminar- Led discussion on integrating religious faith and professional life.
Fall 2021-Wint 2022	LS Dean Search Committee Member:
2020-2022	CELL Rank and Status Committee (Professional Development):
2020	Neuroscience Administrative Oversight Committee: This committee was charged to determine the best long-term solution for the Neuroscience Center
2015-2021	Associate Director; Neuroscience Center (University),
2017	Graduate Fellowship Review Committee (College):
2015, 2016, 2017	Spring Faculty Development Seminar. Presented on attaining NIH external funding.
2015-2018	Honors Program Coordinator (Dept.)
2015-2016	PDBio Search Committee Chair (Depart.):
2013	Mentoring Environment Grant (MEG) Review Committee Chair (College)-
2011, 2012	Mentoring Environment Grant (MEG) Review Committee Member (College)-
2011-2012	Committee assignment for Academic Unit Review- Unit Strategic Plan (Depart.);
Fall 2010- Fall 2014	Learning Objective Categories Coordinator for PDBio 305 (Dept)
2010-2011, 2011-2012, 2014	PDBio Search Committees (Dept.).
2008- 2013	College Computer Committee (College):
2007- 2014	College Scholarship Committee (College):

EXTERNAL CITIZENSHIP- OTHER (2025-Present)

2025 Peer-review for and letter of recommendation for University of Virginia Vice President of Research Lori McMahon, as requested by UVA Dean of Medical School.

COMMUNITY SERVICE/OUTREACH

2025 **Women's Health Magazine.** I gave an interview, with writer Korin Miller, regarding a research study relevant to my work that was included in Women's Health Magazine.

2025 **BYU Media.** I gave an interview to BYU regarding research of mine and colleagues that will be highlighted by BYU in January, 2026.

2023 **Interviewed with the Daily Universe** for a story regarding my students research and experience presenting at the international Society for Neuroscience Meeting.

2023 **Interviewed with BYU media, KSL radio,** etc. for a publication that was highlighted in the media locally and national regarding a prophylactic treatment for PTSD.

2021 PodCast- Sprinkled with Hope- Discuss of drug addiction.

2019 **Judge for LS College CURA Awards.** CURA LS Research symposium

2018 **Interviewed by the Canadian Broadcast Corporation (CBC):**
Quirks & Quarks. This interview was regarding the addictive potential of marijuana use in a broadcast coinciding with the legalization of medicinal and recreational use of marijuana in Canada. Links: [cbc.ca/1.4860201](https://www.cbc.ca/1.4860201) or [cbc.ca/1.4860221](https://www.cbc.ca/1.4860221)

2018 **Interviewed for KSL TV** regarding my recent research on exercise and its ability to mitigate the negative impact of stress on memory. This research was highlighted on KSL TV and radio, as well as KUTV.

2018 **Interviewed for New York Times** regarding my recent research on exercise and its ability to mitigate the negative impact of stress on memory, which was included in their online and print version of the paper.

2018 **Interviewed for BYU-Idaho radio** regarding my recent research on exercise and its ability to mitigate the negative impact of stress on memory.

- 2017 **Interviewed for KBYU TV** regarding my recent research on marijuana and potential effects on adolescents.
- 2017 **Top of Mind, BYU Radio.** Participated in a live interview broadcast at BYU broadcasting regarding our research on Marijuana.
- 2017 **Food for Thought.** BYU Neuroscience Club. I was discussed research and careers in the Neuroscience Field to BYU undergraduates.
- 2017 **Presented** at BYU Neuroscience Club FHE Opening Social.
- 2012-2017 **Judge** (yearly) for the Intermountain Society for Neuroscience Poster Session
- 2015 **Top of Mind, BYU Radio.** Participated in a live interview broadcast on BYU campus during Education Week regarding learning and memory and dementia. September.
- 2015 **WatchDOGS.** Volunteer mentoring experience of males being a presence in Utah County Elementary Schools. December.
- 2013 **“Utah Brain Education Alliance”.** A day retreat for faculty and students across Utah focusing on enhancing instruction, education, creating resources, sharing lesson plans and community outreach for neuroscience.
- 2012 **Interview for Chiasm.** Gave an interview for BYU’s undergraduate Neuroscience publication, Chiasm.
- 2012-2013 **Judge** for Annual Intermountain Society for Neuroscience Poster Session.
- Feb. 2012 **Presented** a question and answer session for the BYU Women in Science Club. The purpose was to inspire women in science majors and discuss how to be successful.
- 2012-2013 **Utah County Delegate**
- 2010 & 2012 **Judge** for Intermountain Graduate Research Symposium oral presentations.
- 2010-2011 **Outreach** to congress to enhance NIH budget and increase awareness of science. This was done by email and in a visit to Washington DC in 2011.
- 2010 & 2011 **Judge** for College of Life Science Poster Presentation
- Dec. 2011 **Interviewed for Channel 11 news** for a program regarding stress effects on students.

- Mar. 2010 **Brain Awareness week:** Demonstration and discussion of human brain/
Timpview High School
- Mar. 2009 Presentation for Utah Science Fair; given to high school teachers
regarding learning and memory techniques.
- Aug. 2009 **Wrote an article for BYU Wellness** Newsletter regarding important steps
to maintain and sharpen memory.
- Nov. 2008 **Interviewed for KBYU TV** regarding my research and life as a scientist.
- Oct. 2008 **Interviewed for KSL channel 5** news and the newspaper Deseret News
regarding my research.
- Mar. 2002 **Brain Awareness week:** Demonstration and discussion of human brain

PUBLISHED ABSTRACTS

Published abstracts since arriving at BYU

2026

Cummings, Jasmin, other, Edwards, Jeff. The Role of Age, Sex, and Glutamate Receptors, mGluR5 and NMDA on CA1 Hippocampal Depotentiation in Mice. 2026. UCUR.

Bonney, Rachel, Dahl, M; Edwards, JG. Bipotential plasticity of VTA GABA neurons is partially output specific. 2026. UCUR.

Warner, Annie. Etc. Cocaine Blocks a Novel Form of Inhibitory iLTD, but not iLTP of VTA GABA Neurons. 2026. UCUR.

Horsley, Will, etc. Cocaine and the GABAergic inhibitory networks in the Ventral Tegmental Area. 2026. UCUR.

2025

Thomas Fuller, Hannah Urey, Matt Real, Jeffrey G. Edwards. Understanding addiction modulation: Identifying the mode of plasticity in VTA GABAergic interneurons and NAc projection neurons. 2025. BYU Library competition.

S. HOFFMAN¹, B. WU², R. BONNEY¹, T. FULLER¹, J. G. EDWARDS³. Cocaine Blocks a Novel Form of Inhibitory iLTD, but not iLTP of VTA GABA Neurons. 2025. Oral Presentation. Society for Neuroscience Meeting planner.

S. HOFFMAN¹, *R. BONNEY¹, T. FULLER², M. DAHL², J. G. EDWARDS.
Bipotential plasticity of VTA GABA neurons is partially output specific. 2025. Oral Presentation. Society for Neuroscience Meeting planner.

***J. G. EDWARDS¹, M. VON GUNTEN², T. RUSSELL¹, C. BERRETT.** Lsd restores morphine-eliminated synaptic plasticity in the ventral tegmental area and reverses morphine-induced behavioral preference. 2025. Society for Neuroscience Meeting planner.

C. BERRETT¹, R. BONNEY², I. OSTLUND³, M. VON GUNTEN⁴, I. CRESS¹, J. G. EDWARDS. Chronic morphine differentially impacts glutamatergic synaptic plasticity in the ventral tegmental area of adults versus adolescent mice. 2025. Society for Neuroscience Meeting planner.

A. TERRY¹, J. WEIGHT¹, M. DEW⁵, E. SAITO², B. REED³, A. C. EVERETT⁴, J. G. EDWARDS. Ketogenic Diet impact on Long-Term Potentiation in the Dorsal CA1 Hippocampal Region and Memory Behavior in Young and Adult Rodents. 2025. Society for Neuroscience Meeting planner.

Rachel Bonney, Seth Hoffman, Thomas Fuller, Matthew Dahl, Jeffrey G. Edwards. Bipotential plasticity of VTA GABA neurons is partially output specific. 2025. Faculty for Undergraduate Neuroscience. FUN Abstract book.

Will Horsely, Ella Hewett, Levi Kraus, Jeff Edwards. Immunohistochemistry of optogenetic labeling to activate select VTA GABA cell inputs. 2025. Intermountain Society for Neuroscience Branch Meeting. Snowbird, UT. Abstract book.

Brenton Valentine, Anna Terry, Thomas Wang, Jasmin Cummings, Austin Willyerd, Jeff Edwards. Impact of semaglutide on LTP in an Alzheimer's Disease mouse model. 2025. Life Science/CURA Poster Presentation.

Jasmin Jenkins, Michael Dew, Jed Christensen, Jeff Edwards. Depotential mechanisms of forgetting in the Hippocampus. 2025. Life Science/CURA Poster Presentation.

Matthew Dahl, Seth Hoffman, Rachel Bonney, Jeff Edwards. GABA Cell Classification in Neural Addiction Pathways. 2025. Life Science/CURA Poster Presentation.

Oral Presentation. UCUR.

2024

***J. EDWARDS¹, J. WEIGHT¹, J. CHRISTENSEN², M. DEW³, E. SAITO⁴, A. C. EVERETT⁵, E. BARTHOLOMEUSZ.** Ketogenic Diet impact on Long-Term Potentiation in the Dorsal CA1 Hippocampal Region and Memory Behavior in Young and Adult Rodents. 2024. Society for Neuroscience Meeting planner.

***S. B. HOFFMAN¹, B. WU², H. UREY¹, J. G. EDWARDS³. Cocaine Blocks a Novel Form of iLTD, but not iLTP of Inhibitory Inputs to VTA GABA Neurons.** 2024. Society for Neuroscience Meeting planner.

M. VON GUNTEN¹, T. RUSSELL¹, J. G. EDWARDS. Lsd reverses morphine-induced elimination of plasticity in vta gaba cells and attenuates morphine-induced conditioned place preference. 2024. Society for Neuroscience Meeting planner.

M. VON GUNTEN¹, S. HOFFMAN², J. G. EDWARDS³. Three days of THC Exposure Abolishes CB1-Dependent LTD in VTA GABA Neurons of Young, but not Adult Mice. 2024. Society for Neuroscience Meeting planner.

J. WEIGHT¹, J. CHRISTENSEN², M. DEW³, E. SAITO⁴, A. C. EVERETT⁵, E. BARTHOLOMEUSZ, J. G. EDWARDS³. [Ketogenic diet impact and acute BHB impact on long-term potentiation in the dorsal CA1 hippocampal region in young and adult rodents.](#) 2024. Faculty for Undergraduate Research pdf document.

Addie Smart, Tim Smart, Jeff Edwards. Chronic morphine induced mRNA changes in the Ventral Tegmental Area that could underlie Dependence. 2024. Oral presentation. UCUR.

Justin Webb, Jeff Edwards. The Requirement for mGluR5 in Hippocampal CA Depotentiation. 2024. Oral presentation. UCUR

Isaac Forbush, Hannah Urey, Ben Daynes, Jeff Edwards. Immunohistochemistry of the risk/reward VTA neural network. 2024. CURA award poster session.

Thomas Fuller, Jeff Edwards. Understanding addiction modulation: Identifying the mode of plasticity in VTA GABAergic projection neurons to the NA, PPT, and VL. 2024. CURA award poster session.

Jared Weight, Bryson Reed, Michael Dew, Jed Christensen, Jeff Edwards. The effect of the ketogenic diet on Long-Term Potentiation in the hippocampus. 2024. CURA award poster session.

Michael Von Gunten, Tenna Russell, Jeff Edwards. Psychedelic LSD reverses Chronic Morphine Occluded Synaptic Plasticity in the Ventral Tegmental Area. 2024. Intermountain SfN Branch, Snowbird Utah.

Seth Hoffman, Bridget Wu, Hannah Urey, Jeff Edwards. Cocaine blocks a novel form of synaptic plasticity, LTD in the reward circuit, but not LTP. 2024. Intermountain SfN Branch, Snowbird Utah.

Thomas Fuller, Hannah Urey, Jeff Edwards. Retrobead injections and immunohistochemical assessment of ventral tegmental area projections of the reward system. 2024. Intermountain SfN Branch, Snowbird Utah.

2023

Poster Competition. Jed Christensen. 2023.

***M. VON GUNTEN**^{1,2}, S. HOFFMAN³, D. ISEMONGER¹, A. AVILA¹, J. G. EDWARDS. [Short-term THC exposure abolishes CB1-dependent ltd in VTA GABA neurons of young, but not adult mice](#). 2023. Society for Neuroscience Meeting planner. **Michael Von Gunten received a \$1,500 travel award from NIH.

J. R. CHRISTENSEN¹, ***M. P. DEW**², E. SAITO³, B. REED², A. EVERETT², J. WEIGHT², N. VALENTINE³, C. KEMBERLING³, B. T. BIKMAN³, J. G. EDWARDS³. [Ketogenic diet impact on long-term potentiation in the dorsal CA1 hippocampal region in young and adult rodents](#). 2023. Society for Neuroscience Meeting planner.

***B. WU**¹, T. M. NUFER⁴, A. BEASLIN¹, H. UREY¹, J. G. EDWARDS², S. HOFFMAN³. [Vta gaba neuron inhibitory plasticity type is input specific](#). 2023. Society for Neuroscience Meeting planner.

Michael Dew, many others, Jeff Edwards. [Ketogenic diet impact on long-term potentiation in the dorsal CA1 hippocampal region in young and adult rodents](#). 2023. Faculty for Undergraduate Neuroscience. **Received a \$750 travel award to the Society for Neuroscience Meeting.

Kaj Anderson, Addie Beaslin, Jeff Edwards. GABA cell characterization in the Ventral Tegmental Area. 2023. UCUR. Oral

Dylan Kendall, Michael Von Gunten, Jeff Edwards, The Effects of Exercise on THC Reduction of Learning and Memory. 2023. UCUR. Oral

James Morgan, Michael Dew, many others, Jeff Edwards. Metabotropic Glutamate Receptor 5 Mediated Long Term Depotentiation. 2023. UCUR. Oral.

Bryson Reed, many others, Jeff Edwards. The Effect of the Ketogenic Diet on Long-Term Potentiation in the Hippocampus. 2023. UCUR. Oral.

Daniel Isenmonger, Jeff Edwards. 2023. CURA. Poster

Michael Dew, James Morgan, Jeff Edwards, 2023. CURA. Poster. **Third place award.**

Michael Dew, Jeff Edwards. Intermountain Society for Neuroscience Branch. 2023. Poster.

Michael Von Gunten, Jeff Edwards. Intermountain Society for Neuroscience Branch. 2023. Poster.

[Effects of the Ketogenic Diet on Hippocampal CA1 Long Term Potentiation in Young Rodents](#) J. R. CHRISTENSEN¹, M. P. DEW², E. SAITO³, A. EVERETT², J. WEIGHT², N. VALENTINE³, C. KEMBERLING³, B. BIKMAN³, ***J. G. EDWARDS**³. 2022. Society for Neuroscience Meeting planner

[A novel ketone-supplemented ketogenic diet improves recognition memory and hippocampal mitochondrial efficiency](#) ***E. R. SAITO**¹, C. E. WARREN¹, C. M. HANEGAN¹, J. LARSEN¹, J. D. DU RANDT¹, M. CANNON¹, R. J. CAMPBELL¹, J. Y. SAITO¹, C. M. KEMBERLING¹, G. S. MILLER¹, J. G. EDWARDS², B. T. BIKMAN¹. 2022. Society for Neuroscience Meeting planner

[Differential Activation of CB1-Dependent Long-Term Depression in Ventral Tegmental Area GABA Neurons in Adult versus Adolescent Mice](#) ***M. VON GUNTEN**¹, I. OSTLUND², S. HOFFMAN¹, J. G. EDWARDS³. 2022. Society for Neuroscience Meeting planner

[Ethanol Blocks a Novel Form of LTD, but not LTP of Inhibitory Inputs to VTA GABA Neurons](#) **J. G. EDWARDS**¹, T. M. NUFER⁵, Z. BOYCE², S. STEFFENSEN³, ***B. WU**⁴. 2022. Society for Neuroscience Meeting planner

Michael Dew, Jed Christensen, 5 others, JG Edwards. Impact of Keto diet on cognition. Faculty for Undergraduate Neuroscience. 2022. Abstract book.

Michael Von Gunten, Seth Hoffman, Issac Ostlund, JG Edwards. THC impact on plasticity impairment and differential plasticity in adult versus adolescent VTA. 2022. Snowbird Symposium. Abstract book.

Jed Christensen, Michael Dew, several others, JG Edwards. Impact of Ketogenic diet on hippocampal cognition. 2022. Snowbird Symposium. Abstract book.

Payne, A.J., Obray, J.D., Williams, B.M., Small, S.A., Yorgason, J.T., Edwards, J.G., Weber, K.S., and Steffensen, S.C. CD5 knockout modulates effects of alcohol consumption in mouse models. *American Academy of Neurology*. 2022. Online.

Payne, A.J., Obray, J.D., Williams, B.M., Small, S.A., Yorgason, J.T., Edwards, J.G., Weber, K.S., and Steffensen, S.C. Changes in measures of alcohol sedation and consumption in CD5 knockout mice. *Alcoholism: Clin. Exp. Res.* (2022) 46(S1) 78A (040).

Reed, Darien; Bever, Nicholas; Edwards, JG. 2022. The Impact of the Ketogenic Diet on Hippocampal Long-Term Potentiation. UCUR abstract

Isenmonger, Daniel; Ward, Zach; Edwards, JG. 2022. Investigation of dopamine and GABAergic neuron connections within the VTA using modified rabies virus mediated monosynaptic tracing. UCUR abstract.

Christensen, Jed; Dew, Michael; Stake, Cami; Edwards, JG. 2022. Identifying the Culprits of "Forgetting" in Neurodegenerative Diseases. UCUR abstract #364.

Erin Saito, Jeff Edwards, Ben Bikman. 2022. A Low-carbohydrate, Ketogenic Diet Enhances Hippocampal Mitochondrial Bioenergetics and Efficiency. Experimental Biology.

Anna Everett, Darien Reed, Jeff Edwards. 2021. Ketogenic impact on Learning and Memory Mechanisms. Oral Presentation. Utah Conference on Undergraduate Research, Abstract book.

Austin Stewart and Jeff Edwards. 2021 Synaptic Plasticity: Learning and Unlearning. Oral Presentation. Utah Conference on Undergraduate Research, Abstract book.

P112.05 - Differential activation of CB1-dependent long-term depression in ventral tegmental area GABA neurons in adult versus adolescent mice 2021. ***I. OSTLUND**, M. VON GUNTEN, J. G. EDWARDS; Society for Neuroscience.

P112.01 - The modulation of inhibitory inputs onto vta gaba neurons 2021. ***B. WU**¹, T. M. NUFER², J. G. EDWARDS¹; Society for Neuroscience.

P080.04 - Ventral tegmental area mRNA expression changes in delta-9-tetrahydrocannabinol exposed young mice 2021. **C. SMITH**, I. CRESS, *J. EDWARDS; Society for Neuroscience.

P111.09 - Effects of prophylactic treatment on hippocampal and amygdalar synaptic plasticity and gene expression in a rodent model of PTSD 2021. ***A. C. EVERETT**, R. MILLER, E. SAITO, E. WINZENRIED, C. SMITH, Z. BOYCE, J. G. EDWARDS. Society for Neuroscience.

P736.01 - Cd5 knockout mice exhibit alterations in measures of ethanol sedation and consumption. 2021 ***A. J. PAYNE**, J. D. OBRAY, B. M. WILLIAMS, C. A. SMALL, S. M. BAUSERMAN, J. T. YORGASON, J. G. EDWARDS, K. S. WEBER, S. C. STEFFENSEN; Noorda Col. of Osteo. Med., Pleasant Grove, UT; Brigham Young Univ., Provo, UT; Med. Univ. of South Carolina, Charleston, SC. Society for Neuroscience.

Moore, Zachary; Kemberling, Colin; Barlow, Spencer; Saito, Erin; and Edwards, Jeffrey PhD, "Effects of the Ketogenic Diet on Learning and Memory" (2021). *Library/Life Sciences Undergraduate Poster Competition* 2021. 25. https://scholarsarchive.byu.edu/library_studentposters_2021/25

Holdaway, Matt; Bever, Nick; Valentine, Noah; and Edwards, Jeff, "Exploring the Mechanism of "Forgetting" with Electrophysiology" (2021). *Library/Life Sciences Undergraduate Poster Competition* 2021. 21. https://scholarsarchive.byu.edu/library_studentposters_2021/21

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Eric Winzenried. True Prophylactic Treatment effect in a Rat PTSD Model on Synaptic Plasticity in Ventral Hippocampal and Lateral Amygdala. 2020. Utah Conference of Undergraduate Research Abstract Book.

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T. Johnson. E. Winzenried, C. Jensen, G. Melendez, R. Miller, J.G. Edwards. 2019. Prophylactic treatment for PTSD. Snowbird symposium abstract book.

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Hippocampal stratum oriens interneurons express endocannabinoid biosynthetic enzymes and undergo CB1 and anandamide-dependent potentiation. 2018. **I. OSTLUND**¹, L. N. FRIEND³, C. B. MERRILL⁴, M. B. CHRISTENSEN⁵, S. NEWTON⁶, R. WILLIAMSON⁷, J. G. EDWARDS². Program No. 444.07. 2018 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2018. Online.

True prophylactic treatment effect in a rat PTSD model on plasticity in ventral hippocampal, lateral amygdala, and medial prefrontal cortex and molecular target. 2018. **R. M. MILLER**¹, E. SAITO², B. DABNEY², R. HANSEN², G. MELENDEZ², S. M. PICKARD², C. EDWARDS², L. APONIK², T. CROFTS², S. MANGUM², J. G. EDWARDS. Program No. 682.26. 2018 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2018. Online.

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THE ORPHAN G PROTEIN-COUPLED RECEPTOR, GPR18 IS EXPRESSED IN HIPPOCAMPAL PYRAMIDAL CELLS. 2017. Kranewitter-Call, J, Anderson, B, Jarmon, T, Call, T, Hurst, K, Edwards, J. Faculty for Undergraduate Neuroscience Agenda and Abstract Book. Page 32

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