

JULIANNE D. JETT, PH.D.

CURRICULUM VITA

PRISM Collaborative
Department of Community and Behavioral Health
Washington State University
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EDUCATION

- 2016 University of Texas Health San Antonio (UTHSA)
PhD Neuroscience and Pharmacology
Advisor: David Morilak, PhD
Thesis: *Noradrenergic modulation of glutamate transmission in the medial prefrontal cortex: A potential mechanism for stress-induced cognitive deficits in rats*
- 2007 Texas State University - San Marcos
BS Psychology, Summa Cum Laude
Advisors: Augustus Lumia, PhD, Lynette Daws, PhD
Honors Thesis: *Effects of stress on norepinephrine clearance in the CA3 region of the mouse hippocampus*

RESEARCH EXPERIENCE

- 2020 - Present Postdoctoral Research Associate, Behavioral Clinical Trials Research
Department of Community and Behavioral Health
Washington State University (WSU) Spokane
Mentor: Michael McDonell, PhD
- Assessed if alcohol biomarkers, stress biomarkers, and cognitive impairment are associated with treatment outcomes in populations with alcohol use disorder and/or serious mental illnesses
 - Utilized the Addictions Neuroclinical Assessment framework in experimental design and selection of clinical measures
 - Established procedures to elicit and measure stress response in the lab
- This work has resulted in 3 publications, with an additional manuscript under review and a manuscript in preparation.*
- 2009 - 2016 Graduate Student Teaching Assistant, UTHSA
Mentor: David Morilak, PhD
- Utilized pharmacological, anatomical and behavioral techniques to assess if local blockade of noradrenergic and glutamatergic receptors in the rat medial prefrontal cortex during stress prevented chronic stress-induced cognitive impairments
 - Applied complex behavioral-cognitive and anxiety assays, intracranial drug administration, in situ hybridization, *in vivo* electrophysiology, and *in vivo* microdialysis
- This work resulted in 4 publications*

- 2007 - 2009 Senior Research Assistant, UTHSA
Mentor: David Morilak, PhD
- Assisted projects investigating the role that norepinephrine and serotonin play in the development and treatment of stress-induced cognitive impairments in rats.
 - Applied behavioral assays, intracranial and osmotic mini pump implants, and *in vivo* microdialysis
- This work resulted in 2 publications*
- 2006 - 2007 Mitte Honors Thesis
Mentors: Augustus Lumia, PhD, Lynette Daws, PhD
- Contributed to research on low-affinity, high-capacity, serotonin transporter systems in the CA3 region of the mouse hippocampus. Applied the forced swim test, western blot assays, and *in vivo* voltammetry.
- 2006 Research Trainee, University of Texas San Antonio
Behavioral Neurobiology Trainee Program
Mentors: Marilyn McGinnis, PhD, Augustus Lumia, PhD
- Gained experience in laboratory etiquette, animal care, preclinical surgical techniques and behavioral assays

RESEARCH GRANTS

Current

- 2021 - 2023 *Using psychological and biological measures of stress to predict current and future drinking in individuals with co-occurring alcohol use disorder and serious mental illness*
Alcohol and Drug Abuse Research Program Award (ORSO# 1406870): \$15,000
Role: Principal Investigator
Description: This grant investigates if stress biomarkers evoked by a stimulus in the lab are associated with levels of negative affect and alcohol consumption over a subsequent 4-week period.
- 2020 - 2022 *Novel EtG-based Contingency Management for Alcohol Use in the Severely Mentally Ill*
NIAAA Award (R01AA0202048): \$3,238,977
Principle Investigator: Michael McDonell
Role: Postdoctoral Research Associate
Description: Randomized controlled trial investigating the efficacy of two different contingency management adaptations in outpatients whose pre-treatment ethyl glucuronide levels are associated with poor treatment response.

Completed

- 2020 - 2022 *PEth-Based Contingency Management to Reduce Alcohol Use and Improve Housing Outcomes*
NIAAA Award (R21AA027045): \$398,192
Principle Investigator: Michael McDonell
Role: Postdoctoral Research Associate
Description: This treatment project developed and tested the feasibility of a phosphatidylethanol (PEth)-based contingency management intervention designed to reduce alcohol use and increase housing tenure.

2020 - 2021 *WSU Center for Rural Opioid Prevention, Treatment and Recovery: CROP-TR (CSAT/SAMHSA)*
 Principle Investigators: Michael McDonell, Elizabeth Weybright
 Role: Postdoctoral Research Associate
 Description: The objective of this grant was to provide training and technical support on opioid use prevention, treatment, and recovery to rural communities through WSU's extension offices.

Pending

2022 *Assessing the Clinical and Cost-Effectiveness of a Virtual PEth-based Contingency Management for Adults with Alcohol Use Disorders*
 NIAAA Award (R01): Under review
 Principle Investigator: Michael McDonell
 Role: Postdoctoral Research Associate
 Description: This treatment project will use the alcohol biomarker PEth to assess alcohol use and determine the administration of incentives for reduced alcohol consumption in a telehealth-based contingency management intervention.

2023 *Machine Learning-Driven Identification of Social Determinants of Health (SDOH) Associated with Clinically Significant Cognitive Impairment*
 National Alzheimer's Coordinating Center: Under review
 Principle Investigator: Solmaz Amiri
 Role: Co-Investigator
 Description: a retrospective study that uses geographic information systems, neuropsychological tools, and machine learning to discover the association of 50 social determinants of health with clinically significant cognitive impairment among individuals with co-occurring alcohol use disorders and serious mental illnesses.

FELLOWSHIPS

2012 - 2013 Translational Science Training Scholar, UTHSA
 Role: Graduate Student
 \$26,000

2007 Program for Undergraduate Research Experience
 Role: Research Fellow
 \$3,000

2006 Summer Undergraduate Research Fellowship
 American Society for Pharmacology and Experimental Therapeutics
 Role: Research Fellow
 \$3,000

HONORS & AWARDS

2017 **Civilian Volunteer of the Year Award**, 31st Fighter Wing: United States Air Force

2015 **Travel Award**, International Behavioral Neuroscience Society (\$350)

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| 2014 | Travel Award , International Behavioral Neuroscience Society (\$700) |
| 2014 | Outstanding Poster Award , International Behavioral Neuroscience Society |
| 2014 | Graduate Student of the Year Award , Department of Pharmacology, UTHSA |
| 2013 | Outstanding Poster Award , Pharmacology Graduate Student Symposium, UTHSA |
| 2013 | Third Place: Poster Competition , Center for Biomedical Neuroscience Retreat, UTHSA |
| 2009 | Second Place: Poster Competition , Center for Biomedical Neuroscience Retreat, UTHSA |
| 2008 | First Place: Poster Competition , Center for Biomedical Neuroscience Retreat, UTHSA |
| 2007 | Undergraduate Research Grant , Psi Chi (\$1,000) |
| 2007 | Liberal Arts Commencement Speaker , Texas State University |
| 2007 | Summa Cum Laude , Texas State University |
| 2007 | Lyndon B. Johnson Outstanding Senior , Texas State University |
| 2007 | Outstanding Senior , Department of Psychology, Texas State University |
| 2006 | Mitte Honors Research Grant , Texas State University (\$500) |
| 2006 | First Place: Poster Competition , Texas State University |
| 2005 | International Education Fee Scholarship , Study Abroad: Oxford, England (\$2,000) |
| 2005 | William James Scholarship (\$500) |
| 2004 - 2007 | Mitte Honors Program Graduate , Texas State University |
| 2004 - 2006 | Academic Excellence Award , Texas State University |
| 2004 | Best in Medal Casting Award , Ellen Noel Art Museum |
| 2002 | Outstanding Writer Award , Sam Houston State University |
| 2001 - 2005 | Terrell Dave Finley Memorial Scholarship (\$12,000) |
| 2001 | Partners Art Scholarship (\$1,000) |
| 2001 | W.D. Wilkerson Memorial Scholarship (\$1,000) |

PUBLICATIONS

Pending

Lu T, Parent S, Chaytor N, Amiri S, Palmer K, McPherson S, **Jett J**, Ries R, McDonell MG, Murphy SM (2023; under review) A Budget Impact Tool for Estimating the Treatment Cost of Contingency Management for Alcohol Use Disorders Among Persons with Serious Mental Illness.

Jett JD, Beck R, Tyutyunnyk D, Sanchez J, Weeks DL, Lopez-Cruzan M, Kriegel L, Ginsburg BC, Cabassa L, Javors MA, Hill-Kaptureczak N, McDonell MA (2023, in preparation) Feasibility of a telehealth-based contingency management intervention for alcohol use disorders using the phosphatidylethanol (PEth) alcohol biomarker: A pilot randomized trial.

Published

Jett JD, Beck R, Tyutyunnyk D, Sanchez J, Lopez-Cruzan M, Ginsburg BC, McPherson SM, Javors MA, McDonell MG, Hill-Kapturczak N (2023, In Press) Validation of the quantification of phosphatidylethanol (PEth) 16:0/18:1 concentrations in TASSO-M20 Devices. *Alcohol Clin Exp Res*.

Jett JD, Kordas G, Parent S, Keshtkar M, Shin R, King P, McPherson SM, Ries R, Roll JM, McDonell MG, Chaytor N (2022) Assessing clinically significant cognitive impairment using the NIH Toolbox in individuals with co-occurring serious mental illness and alcohol use disorder. *J Addict Med*. *Ahead of Print*. DOI: 10.1097/ADM.0000000000001105

Frazer ER, Hill-Kapturczak N, **Jett J**, Beck R, Oluwoye O, Kriegel LS, Alcover KC, McPherson S, Cabassa LJ, Javors M, McDonell MG (2021) Mixed-methods trial of a phosphatidylethanol-based contingency management intervention to initiate and maintain alcohol abstinence in formerly homeless adults with alcohol use disorders. *Contemp Clin Trials Commun*, 22, 1-9. DOI: 10.1016/j.conctc.2021.100757

Jett JD, Bulin SE, Hatherall LC, McCartney CM, Morilak DA (2017) Cognitive deficits induced by chronic unpredictable stress are associated with impaired glutamate transmission in the rat medial prefrontal cortex. *Neuroscience*, 346, 284-297. DOI: 10.1016/j.neuroscience.2017.01.017

Jett JD, Boley AM, Girotti M, Shah A, Lodge DJ, Morilak DA (2015) Antidepressant-like cognitive and behavioral effects of acute ketamine administration associated with plasticity in the ventral hippocampus to medial prefrontal cortex pathway. *Psychopharmacology*, 232, 3123-33. PMID: 25986748. DOI: 10.1007/s00213-015-3957-3

Heisler JM, Morales J, Donegan J, **Jett JD**, Redus L, O'Connor J (2015) The attentional set shifting task: A measure of cognitive flexibility in mice. *J. Vis. Exp.*, 96, PMID: 25741905. DOI: 10.3791/51944

Jett JD, Morilak DA (2013) Too much of a good thing: Blocking noradrenergic facilitation in medial prefrontal cortex prevents the detrimental cognitive effects of chronic stress. *Neuropsychopharmacology*, 38, 585-595. DOI: 10.1038/npp.2012.216

Bondi CO, **Jett JD**, Morilak DA (2010) Beneficial effects of desipramine on cognitive function of chronically stressed rats are mediated by α_1 -adrenergic receptors in medial prefrontal cortex. *Prog Neuropsychopharmacol Biol Psychiatry*, 34, 913-923. DOI: 10.1016/j.pnpbp.2010.04.016

Lapiz-Bluhm MDS, Bondi CO, **Doyen J**, Rodriguez G, Bedard-Arana T, Morilak DA (2008) Behavioural assays to model cognitive and affective dimensions of depression and anxiety in rats. *J Neuroendocrinol*, 20, 1115-1137. DOI 10.1111/j.1365-2826.2008.01772

PRESENTATIONSInvited Talks, Panels, Webinars, Workshops

Jett JD (2022) *Webinar*, TASSO device blood collection for the virtual assessment of alcohol use. Alcohol Biomarker Update Workshop, University of California San Francisco

Jett JD (2020) *Webinar*, Neurobiology of opioid misuse and addiction, Center for Rural Opioid Prevention, Treatment, and Prevention (CROP+TR), Webinar

Jett JD (2020) *Webinar Host*, Co-occurring substance misuse and mental health conditions, a peer perspective,

Center for Rural Opioid Prevention, Treatment, and Recovery

Jett JD (2017) Being mission ready: Chronic stress, fatigue, and mental health, 31st FW Command Center, Aviano Air Base, Italy

Jett JD (2017) Chronic stress, mental health, and neuroplasticity. American Red Cross Redtalk Event, Aviano Air Base, Italy

Jett JD, Adams W (2016) *Workshop*, Tips for negotiating job offers, Annual International Behavioral Neuroscience Society, Budapest, Hungary

Jett JD (2015) Effects of chronic stress on markers of plasticity associated with mPFC mediated cognitive flexibility in rats. Annual International Behavioral Neuroscience Society Data Blitz. Victoria, British Columbia, Canada

Jett JD (2015) Glutamate transmission: A potential target for stress-induced deficits in cognitive flexibility, White Board Session, UTHSA, San Antonio, TX

Jett JD, Evans TE, Bria L (2015) *Panel*, The science of Inside Out, Filmgineer, Mind Science Foundation, San Antonio Texas: <https://youtu.be/O9HntyztAIY>

Jett JD (2013) Norepinephrine: A potential mechanism for stress-induced cognitive dysfunction, South Texas Research Organizational Network Guiding Studies on Trauma and Resilience (STRONG STAR), San Antonio, TX

Jett JD (2012) Noradrenergic dysregulation of glutamate neurotransmission: A potential mechanism for stress-induced cognitive deficits. Department of Pharmacology, UTHSA, San Antonio, TX

Jett JD (2012) Noradrenergic signaling in the prefrontal cortex promotes stress-induced cognitive deficits. Graduate School of Biomedical Sciences Admissions, UTHSA, San Antonio, TX

Jett JD (2010) Assessing prefrontal cortical network activity: An indicator of stress-induced cognitive deficits in rats. Neuroscience Practicum Forum, UTHSA, San Antonio, TX

Jett JD (2007) The effects of chronic stress on low affinity-high capacity serotonin transporter systems in the CA3 region of the hippocampus. Pharmacology Undergraduate Research Symposium, UTHSA, San Antonio, TX

Jett JD (2007) Effects of stress on norepinephrine clearance in the hippocampus. Mitte Honors Thesis Forum, Texas State University, San Marcos, TX

Abstracts

Kriegel LS, Hamplilos K, Weybright E, **Jett J**, Hill L, Roll J, McDonell M, (2023) Training needs of opioid prevention, treatment, and recovery urban-based and rural-based providers in rural Washington. Presented at the Society for Social Work and Research Conference. Phoenix, AZ

JettJD, Shin R, Kordas G, Parent S, Keshtkar M, King P, Chaytor N, McPherson S, Ries R, Roll J, McDonell M (2022) Association between emotionality, stress, and the alcohol biomarker ethyl glucuronide in outpatients with co-occurring disorders. Presented at the Research Society on Alcoholism Conference. Orlando, FL

Jett JD, Kordas G, Keshtkar M, Beck R, Parent S, Chaytor N, McDonell M (2021) Application of the NIH Toolbox to assess neurocognitive function in individuals with co-occurring serious mental illness and alcohol use disorder. Presented at the International Behavioral Neuroscience Society Conference (Virtual)

- Jett JD**, Evans LC, Patton M, David DA (2015) Chronic unpredictable stress dysregulates glutamate transmission in the rat medial prefrontal cortex: a potential role for noradrenergic modulation. Presented at the Society for Neuroscience Conference. Chicago, IL
- Jett JD**, Evans LC, Morilak D (2015) Effects of chronic stress on markers of plasticity associated with mPFC mediated cognitive flexibility in rats. Presented at the International Behavioral Neuroscience Society Conference. Victoria, British Columbia, Canada
- Jett JD**, Morilak DA (2014) Prefrontal cortical plasticity and behavioral effects of chronic stress. Presented at the Society for Neurosciences Conference, Washington D.C.
- Jett JD**, Morilak DA (2014) Noradrenergic dysregulation of glutamate in the mPFC: A potential mechanism for cognitive dysfunction in rats exposed to chronic unpredictable stress. Presented at the International Behavioral Neuroscience Society Conference, Las Vegas, NV
- Jett JD**, Evans LC, Lodge DJ, Morilak DA (2013) Effects of acute ketamine administration on chronic stress-induced cognitive deficits in rats. Presented at the Society for Neurosciences Conference, San Diego, CA
- Lodge D, Carreno F, Shah A, **Jett J**, Delgado P, Morilak D, Frazer A (2012) Neuronal systems underlying the antidepressant response to ketamine. Presented at the American College of Neuropsychopharmacology Conference, Hollywood, FL
- Jett JD**, Bingham BP, Morilak DA (2012) Chronic unpredictable stress dysregulates glutamate neurotransmission, neuronal plasticity and cognitive flexibility in the rat medial prefrontal cortex. Presented at the American College of Neuropsychopharmacology Conference, Hollywood, FL
- Jett JD**, Morilak, DA (2012) Noradrenergic dysregulation of glutamate afferent activation of the medial prefrontal cortex: a potential mechanism for stress-induced cognitive deficits in rats. Presented at the Society for Neurosciences Conference, New Orleans, LA
- Jett JD**, Morilak, DA (2011) Changes in prefrontal cortical response to thalamic afferent activation: a potential mechanism for stress-induced cognitive deficits in rats. Presented at the Society for Neurosciences Conference, Washington D.C.
- Jett JD**, Bedard T, Rodriguez G, Morilak DA (2008). Blockade of adrenergic receptors during chronic unpredictable stress prevents the detrimental effects on cognitive flexibility in rats. Presented at the Society for Neuroscience Conference, Washington D.C.
- Bondi CO, **Jett JD**, Morilak DA (2008) Effects of acute atipamezole treatment on performance in an attentional set-shifting test after chronic unpredictable stress. Presented at the Society for Neuroscience Conference, Washington D.C.
- Lapiz M, **Jett JD**, Rodriguez G, Morilak DA (2008) Temporal characterization of the cognitive deficit induced by chronic intermittent cold stress on an attentional set-shifting test in rats. Presented at the Society for Neuroscience Conference, Washington D.C.

Baganz NL, Carneiro AMD, Horton RE, Alvarado S R, **Jett JD**, Owens WA, Blakely RD, Daws LC (2008) Reduced serotonin clearance in hippocampus after forced swim: is a “stressed-out” serotonin transporter to blame? Presented at the Society for Neuroscience Conference, Washington D.C.

TEACHING EXPERIENCE

- 2021 **Lecturer**, *Neuroscience of opioid use and addiction*
 Series: 1) Neurobiology 101, 2) Endogenous opioids, 3) Exogenous opioids, 4) Tolerance, dependence, withdrawal, 5) Opioid treatment
 Youth Participatory Action Research
 Center for Rural Opioid Prevention, Treatment & Recovery
- 2015 **Guest Lecturer**, *Neuroscience: The brain, the mind, and mental illness*
 Voelcker Biomedical Research Academy, UTHSA
- 2015 **Guest Lecturer**, *The neuroscientist in you*
 High School Career Explorations Workshop, UTHSA
- 2014 **Guest Lecturer**, *Applications of neuroscience*
 Voelcker Biomedical Research Academy, UTHSA
- 2013 **Guest Lecturer**, *Neuroanatomical techniques*
 Summer Undergraduate Research Experience, Department of Pharmacology, UTHSA
- 2012 **Guest Lecturer**, *Neuroscience: From molecular to behavioral*
 Voelcker Biomedical Research Academy, UTHSA
- 2006 **Teaching Assistant**, Pharmacology (10-week course)
 Department of Psychology, Texas State University
- 2006 **Laboratory Instructor**, Brain and Behavior (10-week course)
 Department of Psychology, Texas State University

MENTORING EXPERIENCE

- 2014 Mentor for Mijail Rojas, MS
Current status: Graduate student, University of Calgary
- 2013 Mentor for James Ryan, PhD
Current status: Intellectual Property Intern, Center for Technology Licensing
- 2012 Mentor for Justin Drerup, MD/PhD
Current status: Anesthesiology Resident, UT Southwestern Medical Center
- 2008 - 2012 Mentor for Alexandra Vaiana, PhD
Current status: Associate Director for the Michael J Fox Foundation

SERVICE AND OUTREACH

- 2019 - 2022 **Board Director**
National Alliance on Mental Illness - Spokane
- 2020 **Program Chair**
International Behavioral Neuroscience Society
Virtual Annual Meeting
- 2019 - 2020 **Program Coordinator**
National Alliance on Mental Illness - Spokane
- 2018 - 2020 **Chair, Membership and Communications Committee**
International Behavioral Neuroscience Society
- 2016 – 2018 **Community Leader, American Red Cross**
Services to the Armed Forces
31st Fighter Wing - United States Air Force
- 2016 - 2017 **Member, Community Action Information Board**
31st Fighter Wing - United States Air Force
- 2016 **Member, Program Committee**
International Behavioral Neuroscience Society
- 2014 - 2019 **Guest-Editor, Member newsletter**
International Behavioral Neuroscience Society
- 2014 - 2015 **Council Member, Student Representative**
International Behavioral Neuroscience Society
- 2013 - 2017 **Member, Membership and Communications Committee**
International Behavioral Neuroscience Society
- 2015 **Chair, Graduate Student Committee**
University of Texas Health San Antonio
- 2011 - 2014 **Member, Graduate Student Committee**
University of Texas Health San Antonio