

CURRICULUM VITAE Nicholas W. Gilpin

Current Title:	Associate Professor	
Business Address:	Department of Physiology, Room 72 1901 Perdido Street	205
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Business email Address:	ngilpi@lsuhsc.edu	
Citizenship:	U.S.A.	
Education:		
Undergraduate	University of Texas at Austin	1996-2000
	B.A. in Spanish Language	
Graduate/Medical	Purdue University	2001-2005
	Ph.D. in Psychology	
Post-Doctoral Fellowship	The Scripps Research Institute	2005-2011

Academic, Professional, and Research Appointments:

Assistant Professor, Physiology Department, LSUHSC	2011-2016
Assistant Professor, Neuroscience Ctr. of Excellence, LSUHSC	2011-2016
Assistant Professor, Alcohol & Drug Abuse Ctr. of Excellence, LSUHSC	2013-2016
Associate Director, Alcohol & Drug Abuse Ctr. of Excellence, LSUHSC	2015-
Associate Professor, Physiology Department, LSUHSC	2016-
Associate Professor, Neuroscience Ctr. of Excellence, LSUHSC	2016-
Associate Professor, Alcohol & Drug Abuse Ctr. of Excellence, LSUHSC	2016-

Membership in Professional Organizations:

Research Society on Alcoholism (RSA); member	2001-
Society for Neuroscience (SfN); member	2004-
Int'l. Society for Biomedical Res. on Alcoholism (ISBRA); member	2010-
National Hispanic Science Network on Drug Abuse (NHSN); member	2010-
The College on Problems of Drug Dependence (CPDD); member	2013-
International Drug Abuse Research Society (IDARS); member	2013-
American College of Neuropsychopharm. (ACNP), Assoc. member	2014-
Membership in ACNP is competitive and considered prestigious ir	n the fields of

neuroscience, pharmacology, and psychobiology.

Awards and Honors:

University of Texas at Austin Honors Colloquium Scholarship	1996
U. of Texas Academic Hispanic Award; 4-year academic scholarship	1996-2000
RSA Memorial Award, San Diego, CA	2009
Young Investigator Award; Alcoholism & Stress meeting, Volterra, Italy	2011
Awarded to 4 young alcohol researchers each 3 years for research	h excellence
NHSN National Award of Excellence in Research by a New Investigator	2011
Awarded to 1 young investigator each year for research excellenc	е
ACNP Travel Award	2012

Honorable Mention for Ziskind-Somerfeld Award, Soc. of Biol. Psychiatry 2012 Annual award for most outstanding research investigation in biological psychiatry IDARS Young Investigator Award 2013 Awarded to 1 young investigator each 2 years for research excellence
Presidential Early Career Award for Scientists & Engineers (PECASE) 2017 Awarded by the White House Office of Science & Technology to 102 scientists and engineers in the early stages of their independent research careers
Elected Co-Chair of Gordon Research Conference on Alcohol & CNS 2018 Will serve as co-vice chair 2018-2020 and co-chair 2020-2022.

TEACHING EXPERIENCE AND RESPONSIBILITIES

Curriculum Development/Implementation

Created curriculum for LSUHSC Physiology Special Topics Course (PHYSIO 289) titled "Biostatistics for Graduate Students." *This course includes lectures, discussions, and work with datasets.* Covered topics include bio-statistical concepts, statistical theory and foundations in probability, how to design experiments, design & statistical considerations related to using vertebrate animals in research, analysis of sex differences, decision-making in statistical tests, power analyses, data transformation, outlier tests, post-hoc tests, data interpretation, data ethics, data replication, and how to assess statistics in review of manuscripts and grants. <u>I am the creator of content for this course, an activity that consumed many hours before this class was offered the first time in Summer 2013.</u>

Creation of Enduring Teaching Materials None

Formal Course Responsibilities

Graduate Teaching

Course Director:

LSU Health Sciences Center

Human Physiology for dental students (DENT 1115) 2016-present 70 clock hours per year, D.D.S. students

This course covers whole-organism physiology for Dental students. My role as Director is to coordinate and oversee lectures, create and proctor exams, manage grades, and meet with students during office hours.

Biostatistics for graduate students (PHYSIO 289) 2013 & 2015 15 lecture hours, Ph.D students & post-doc fellows This course covers bio-statistical concepts for Ph.D. students and postdoctoral fellows training for research careers. My role as Director is to create course content, schedule all aspects of the course, and to deliver all material or recruit faculty to cover specialized topics.

Course Co-Director:

LSU Health Sciences Center

Human Physiology for dental students (DENT 1115) 2013-2016 88 clock hours per year, D.D.S. students *This course covers whole-organism physiology for Dental students. My* role as co-director is to, along with the course director, coordinate and oversee lectures, create and proctor exams, to manage grades, and meet with students during office hours.

Co-Instructor/Lecturer:

LSU Health Sciences Center

Human Physiology (DENT 1115)

2-10 lecture hours per year x 7 years

This course covers whole-organism physiology for Dental students. My lectures cover electrical properties of membranes, electrical and chemical aspects of synaptic transmission, sensory systems from receptors to brain, motor systems from brain to muscle, learning & memory, and sleep & behavior.

Modern Breakthroughs in Biomedical Sciences: 2014 A Focus on New Techniques and Technologies (PHYSIO 289) 2 lecture hours to Ph.D. students This course introduces graduate students to cutting-edge basic science techniques. My lectures cover optogenetics and chemogenetics.

Synaptic Organization of Behavior (ANAT 264) 2014 4 lecture hours to Ph.D. students This course relates synaptic transmission to behavior across organisms. My lectures cover the limbic system.

Molecular Neurobiology (NEURO 250) 2014 4 lecture hours to Ph.D. students This course emphasizes problem solving and experimental design as they

relate to hypothesis-driven research. My lectures cover neural control of behavior.

Dental Grand Rounds (DENT 4112) 2016-present 10 contact hours per year In this course, D.D.S. students (D1-D4) analyze a clinical case study and prepare a presentation, under the guidance of mentors, that describes the clinical problem, solution, and outcome. My role is basic science mentor.

Undergraduate Teaching Course Director:

San Diego State University

Statistical Methods in Psychology (PSY 270) 2008 30 lecture hours per semester x 1 semesters This course covered bio-statistical concepts for undergraduates. I was the course director and lecturer for all course material.

Univ. of California-San Diego Introduction to Statistics (PSYC 60) 2009-2011 30 lecture hours per semester x 2-3 semesters/year This course covered bio-statistical concepts for undergraduates. I was the course director and lecturer for all course material.

2011-present

Physiological Psychology (PSYC 106)201030 lecture hours per semester x 2 semesters2010This course covered behavioral neuroscience for undergraduates. I wasthe course director and lecturer for most course material.

Co-Instructor:

LSU Health Sciences Center

Human Physiology for nursing students (HS 2410)2011-20162-4 lecture hours per semester x 8 semesters2011-2016This course covers whole-organism physiology for nursing students. My2011-2016lectures cover motor systems from brain to muscle, learning & memory,2011-2016and sleep & behavior.2011-2016

Human Pathophysiology for nursing students (HS 3410) 2012-2016 2 lecture hours per semester x 6 semesters *This course covers whole-organism pathophysiology for nursing students. My lectures cover disorders of brain function and disorders of neuromuscular function.*

General & Oral Physiology for dental hygiene (DHY 3202) 2012 2 lecture hours Course covers whole-organism physiology for dental hygiene students. My lectures covered nerve excitation and sensory physiology.

Departmental/Interdisciplinary Teaching Conferences None

Junior Faculty Research Development Committee Chair:

- 1. Scott Edwards, Ph.D., Assistant Professor of Physiology, LSUHSC
- 2. Tiffany Wills, Ph.D., Assistant Professor of Cell Biology, LSUHSC
- 3. Liz Simon, Ph.D., Assistant Professor of Physiology, LSUHSC
- 4. Jason Gardner, Ph.D., Associate Professor of Physiology, LSUHSC
- 5. Lisa Harrison-Bernard, Ph.D., Assoc. Prof. of Physiology, LSUHSC
- 6. Flavia Souza-Smith, Ph.D., Assistant Professor of Physiology, LSUHSC
- 7. Xinping Yue, Ph.D., Assistant Professor of Physiology, LSUHSC
- 8. Stefany Primeaux, Ph.D, Assistant Professor of Physiology, LSUHSC
- 9. Robert Siggins, Ph.D., Assistant Professor of Physiology, LSUHSC

Undergraduate, Medical, or Graduate Students Trained: Post-Doctoral Fellows:

LSU Health Sciences Center 1. Brandon Baiamonte, Ph.D. 2012-2013 2. Emily Roltsch, Ph.D. 2012-2014 3. Annie Whitaker, Ph.D. 2012-2016 4. Christy Itoga, Ph.D. 2014-2016 5. Elizabeth Avegno, Ph.D. 2016-6. Marcus Weera, Ph.D. 2017-7. Udita Datta, Ph.D. 2017-2018 8. Amanda Pahng, Ph.D. (co-mentor) 2017-9. Elizabeth Fucich, Ph.D. (co-mentor) 2017-10. Lucas Albrechet-Souza, Ph.D. 2018-

Graduate Students

LSU Health Sciences Center

Major Professor

 Brittni Baynes; Physiology; chair M.S. committee Allyson Schreiber; Physiology; chair Ph.D. committee Alicia Ray-Botello; Physiology; chair M.S. committee Zachary Stielper; Physiology; chair Ph.D. committee Taylor Templeton; Physiology; chair Ph.D. committee 	2013-2014 2014-2018 2015-2017 2017- 2018-
 <u>Dissertation Committee (member)</u> 1. Xu "Sophie" Teng; Ph.D., LSUHSC Physiology 2. Travis Doggett; Ph.D., LSUHSC Physiology 3. Aram Asatryan; Ph.D., LSUHSC Neuroscience 4. Jacques Mayeux; Ph.D., LSUHSC Physiology 5. Alan Mouton; Ph.D., LSUHSC Physiology 6. Adrienne McGinn; Ph.D., LSUHSC Physiology 7. Xin Fu; Ph.D., Tulane Neuroscience 8. Jarrod Harman; M.S., LSUHSC Physiology 9. Krystal Belmonte; M.S., LSUHSC Physiology 	2012-2014 2013-2014 2013-2014 2014-2016 2014-2017 2015- 2016- 2017- 2018-
Medical Students Summer Research Rotations 1. Madelyn Weil 2. Abdelrahim Abdel	2012 2012
Foreign Research Interns 1. Pauline Estival Pharmacy student at Université d'Auvergne, France	2015
Undergraduate Student Researchers LSU Health Sciences Center	

Abigail Olinde, Andrew Schroth, Alissa Ice, Margaret Hazelton, Ryan Jones, Carrie Lloyd, many others

University of California-San Diego

Ben Isakson, Lisa Zazworsky, Hillary Cormier, Lindsey Ong, Darshan Patel, Shin Trieu, Alfonzo Luna, Casey Carmichael, Michael Barrus, Brent Costa, Tyler Sprague, Neha Jaiswal, Daniel Ramirez, Brittni Baynes, Eva Martinez

San Diego State University

Juliana Todesco

Undergraduate Student Teachers-in-Training University of California-San Diego

Joanna Ho (PSYC 60)

High School Student Researchers

LSU Health Sciences Center

2009

Reuben Hogan (1 st Place; LSUHSC Summer Research Poster Session),
many others

Grade School Teacher Researchers LSU Health Sciences Center Melissa Faucheux, Kathleen Stewart **Funding for Mentees** LSU Health Sciences Center Melissa Faucheux (New Orleans area science teacher) 2012 APS "Frontiers in Physiology" Award Melissa Faucheux (New Orleans area science teacher) 2013 APS "Frontiers in Physiology" Award Annie Whitaker (post-doctoral fellow) 2013 LSUHSC ADACE Pilot \$10,000 Glucocorticoid co-chaperone, FKBP5, as a target for stress-induced escalation of alcohol intake Brittni Baynes (graduate student) 2013 SPINES month-long Research Program in Woods Hole (all expenses paid) Kathleen Stewart (Atlanta area science teacher) 2014 APS "Frontiers in Physiology" Award Allyson Schreiber (graduate student) 2015 NIH/NIAAA NRSA F30 fellowship 2017 Elizabeth Avegno (post-doctoral fellow) NIH/NIAAA NRSA F32 fellowship Adrienne McGinn (graduate student in Edwards lab) 2017 NIH/NIAAA NRSA F31 fellowship Zachary Stielper (graduate student) 2018 NIH/NIAAA NRSA F30 fellowship Elizabeth Fucich (graduate student in Molina lab) 2018 NIH/NIAAA NRSA F32 fellowship University of California-San Diego Casey Carmichael (undergraduate research assistant) 2010 UCSD Warren College Undergraduate Research Award Awards for Mentees LSU Health Sciences Center Annie Whitaker (post-doctoral fellow) 2015 American Physiological Society CNS Section Excellence in Research Award

Awarded to 1-2 young investigators per year for meritorious research at EB.

Annie Whitaker (post-doctoral fellow) American College of Neuropsychopharmacology Travel Award This prestigious award funds travel to the 2015 ACNP meeting	2015 I 9.
Elizabeth Avegno (post-doctoral fellow) Volterra Stress & Alcohol Meeting Travel Award This award funds travel to the 2017 Stress & Alcohol meeting i	2017 in Volterra, Italy.
Elizabeth Avegno (post-doctoral fellow) Elected chair of the Gordon Research Seminar (GRS) on Alco	2018 hol & CNS
Allyson Schreiber (graduate student) LSUHSC Chancellor's Award for Most Outstanding Student This award is given to one Ph.D. graduate at LSUHSC each ye	2018 ear.
RESEARCH AND SCHOLARSHIP	
Grants and Contracts: Currently Funded 1R01AA023305-01 National Institutes of Alcoholism and Alcohol Abuse & General Medica Role of Neuropeptides in Stress-Induced Escalation of Alcohol Drinkin Role: Pl \$1,139,537 direct costs	2014-2020 al Sciences Ig
1F30AA023696-01 (PI: Allyson Schreiber) National Institute of Alcoholism and Alcohol Abuse Prefrontal Cortex Stress Peptides in Traumatic Stress-Induced Escala Drinking Role: Mentor \$211,908 direct costs	2015-2020 ation of Alcohol
1I01BX003451-01A1 Department of Veteran Affairs Targeting Melanocortin-4 Receptors to Reduce Pain in U.S. Veterans Role: PI \$937,823 direct costs	2017-2021
1R01AA026531-01 NIH/NIAAA Traumatic stress increases alcohol drinking via endocannabinoid disin basolateral amygdala Role: MPI (with Jeffrey Tasker) \$1,492,894 direct costs	2017-2022 hibition of
1R01AA026531 Supplement Cohen Veterans Biosciences (CVB) Traumatic stress increases alcohol drinking via endocannabinoid disin basolateral amygdala Role: Pl \$251,767 direct costs	2018-2020 hibition of

1R21AA025736-01 (PI: Scott Edwards) 2017-2019 NIH/NIAAA Role of GluA1 in the Escalation of Alcohol Drinking in Nicotine-Dependent Animals Role: Co-I \$275,000 direct costs 1R01HL135635-01 (PI: Jason Gardner) 2017-2021 NIH/NHLBI Chronic Nicotine Inhalation Increases Susceptibility to Cardiovascular and Pulmonary Diseases Through Inhibition of Local Compensatory Mechanisms. Role: Co-I \$1,470,000 direct costs 1F32AA025831-01 (PI: Elizabeth Avgeno) 2017-2020 NIH/NIAAA Brain Reward and Stress System Interactions in Alcohol Dependence This study examines the interaction of brain stress and reward systems in alcohol dependence. Role: Mentor \$170,094 direct costs 1F31AA025812-01A1 (PI: Adrienne McGinn) 2017-2019 NIH/NIAAA Alcohol Dependence and Pain: Role of Cingulate Cortex Glucocorticoid Receptors This study examines the neurobiological intersection of pain and alcohol dependence. Role: Co-mentor \$71,754 direct costs 1R44DA046300-01 (PI: Maury Cole) 2018-2020 NIH/NIDA Development of Nicotine Vapor Inhalation Chambers for Rodent Self-Administration This study develops and optimizes nicotine e-cigarette vapor self-administration in rats. Role: Subcontract PI \$114,001 direct costs in Phase 1 1R01AA025792-01A1 2018-2023 NIH/NIAAA Alcohol and Traumatic Brain Injury; Neuronal and Behavioral Consequences This study examines the neurobiological basis for traumatic brain injury effects on alcoholrelated behavior and physiology. Role: MPI (with Patricia Molina) \$1,125,000 direct costs 1F30AA026468-01A1 (PI: Zachary Stielper) 2018-2023 NIH/NIAAA The Role of Amygdalar Endocannabinoids in Alcohol Drinking after Traumatic Brain Injury (TBI) This fellowship trains an M.D./Ph.D. student in alcohol research and examines the neurobiological basis for TBI effects on alcohol-related behavior and physiology. Role: Mentor \$217,612 direct costs

1F32AA026779-01A1 (PI: Elizabeth Fucich) NIH/NIAAA	2018-2020
Stress effects on traumatic brain injury: neural mechanisms of escalated <i>This project tests the neurobiology underlying stress and TBI interaction drinking.</i>	alcohol drinking. effects on alcohol
Role: Co-mentor \$101,296 direct costs	
1F32HL140865-01 (PI: Tyler Basting)	2018-2020
ADAM17 Mediated Arterial Pressure Regulation in Conscious Mice: An C Role: Collaborator \$120,000 direct costs	Optogenetic Study
1R21AA026022-01A1	2018-2020
Generation and validation of a CRFR1-cre transgenic rat to study alcohol Role: PI \$258,388 direct costs	l dependence
Pending 1R21 AA026022-01 NIH/NIAAA	2018-2020
Generation and validation of a CRFR1-cre transgenic rat to study alcohol Role: PI \$275,000 direct costs	l dependence
Impact score = 10	
Completed Underrepresented minority supplement to R01AA12857 NIH/NIAAA	2002-2005
Neuropeptide Y and Alcohol Related Behaviors Role: Student (PI: Badia-Elder); 100% effort \$45,487 direct costs	
1F32 AA016436-01A1 Ruth L. Kirschstein NRSA Postdoctoral Fellowship NIH/NIAAA	2007-2009
Neuropeptide Y and Ethanol Abstinence Role: PI; 100% effort \$118,672 direct costs	
5R00 AA018400-05 K99/R00 Pathway to Independence (PI) Award NIH/NIAAA	2010-2015
Post-traumatic Stress Disorder and Alcohol Dependence Role: PI; 100% effort during K99 phase; 50% effort during R00 phase \$662,920 direct costs	
ABMRF	2013-2015

ABMRF Foundation for Alcohol Research Role of Melanocortin-4 Receptors (MC4Rs) in Chronic Alcohol-Induced Changes in Thermal Sensitivity Role: PI; 10% effort \$90,910 direct costs PFund Pilot Funding for New Research 2013 Louisiana Board of Regents Using Optogenetic Stimulation to Measure Reward Function in Drug- and Alcohol-Dependent Rats Role: PI; 0% effort \$10,000 direct costs 1R21 AA022690-01A1 2014-2016 NIH/NIAAA Ethanol-Induced Cardiac Fibrosis and Dysfunction are Mediated by NADPH Oxidases Role: Co-I (PI: Jason Gardner); 10% effort \$268,750 direct costs 2P60 AA009803-22 2014-2016 NIH/NIAAA LSUHSC-NO Comprehensive Alcohol-HIV/AIDS Research Center Role: PI of Information Dissemination Core \$50,775 direct costs P30 GM103340 2015-2016 NIH COBRE Pilot Synaptic Mechanism of Inhibitor-2 in the Escalated Anxiety in Alcohol Disorder Role: Collaborator (Pilot PI: Houhui Xia, Ph.D.) \$50,000 direct costs 3R01 AA023305-02S1 2015-2016 NIH Office of Research on Women's Health & NIAAA Role of Neuropeptides in Stress-Induced Escalation of Alcohol Drinking Role: PI \$68,493 direct costs Non-funded applications 1F32 AA022271-01 2012 NIH/NIAAA HPA Axis Dysfunction in Traumatic Stress-Induced Excessive Alcohol Drinking Role: Mentor (PI: Annie Whitaker); 0% effort Result: Not discussed 1R01 AA022395-01 2012 NIH/NIAAA Brain Stress Systems in Alcohol Reinforcement in Nicotine-Dependent Rats Role: PI Result: Not discussed 033A-13 2012 Louisiana Board of Regents Research Competitiveness Subprogram (RCS)

Characterization of Central Amygdala Projection Neurons Activated by Stress & Alcohol Role: PI Result: Ranked priority two by subject-area panels and considered for funding by final panel but not recommended for funding 2013 1R01 DA036620-01 NIH/NIDA Dual Dysregulation of Nicotinic Receptors and CRF Systems in Nicotine Dependence Role: PI Result: Not discussed McManus Trust 2013 Neural Mechanisms of Alcohol Abuse Driven by Nicotine Dependence Role: PI Result: Not funded Integrative Neuroscience Initiative on Alcoholism Pilot Grant Program 2013 Traumatic Stress-Induced Escalation of Alcohol Drinking Role: PI Result: Not funded 033A-14 2013 Louisiana Board of Regents Research Competitiveness Subprogram (RCS) Role of Central Amygdala Projections in Stress-Induced Alcohol Drinking Role: PI Result: Ranked priority one by subject-area panels and considered for funding by final panel but not recommended for funding Louisiana Clinical & Translational Science Center 2014 Translational Analysis of Alcohol Impact on Traumatic Brain Injury Pathology Role: PI Result: Not funded 2014-08-76 2014 Whitehall Foundation Central Amygdala Outputs in Anxiety & Pain in Alcohol-Dependent Rats Role: PI Result: Not funded 1 R01 DA039537-01 2014 NIH/NIDA Evaluation of Varenicline for Treatment of Co-morbid Nicotine and Alcohol Use Disorders in Humans and Rats Role: PI Result: Not discussed 1 R21 AA024936-01 2015 NIH/NIAAA Neural Correlates of Stress in Adults with HIV/AIDS and Alcohol Use Disorder Role: PI Result: Not discussed

1 K01 DE026009-01 NIH/NIDCR	2015
The effect of electronic cigarette vapor on oral cellular and immune homeonovel chronic intermittent rodent exposure model Role: Pl	ostasis using a
Result: Not discussed	
1 R01 AA024478-01A1 NIH/NIAAA Nicotine Neuropal Ensembles in Control of Alcohol Drinking	2015
Role: Pl	
Result: Impact score = 56 (percentile = 43%)	
LBCRP Program LA BoR	2016
Translational Studies on Stress Neurocircuitry in Co-Morbid HIV/AIDS and Disorder Role: PI	d Alcohol Use
Result: Not funded	
1 R01 AA026443-01 NIH/NIAAA Nicotine Neuronal Ensembles in Control of Alcohol Drinking	2017

Result: Not discussed

Journal Publications:

Refereed:

Empirical Articles:

- 1. **Gilpin, N.W.**, Stewart, R.B., Murphy, J.M., Li, T.-K., Badia-Elder, N.E. (2003). Neuropeptide Y reduces oral ethanol intake in alcohol-preferring (P) rats following a period of imposed ethanol abstinence. *Alcoholism: Clinical and Experimental Research* 27:787-94.
- 2. **Gilpin, N.W.**, Stewart, R.B., Murphy, J.M., Li, T.-K., Badia-Elder, N.E. (2004). Neuropeptide Y in the paraventricular nucleus of the hypothalamus increases ethanol intake in high- and low-alcohol-drinking rats. *Alcoholism: Clinical and Experimental Research* 28:1492-8.
- 3. **Gilpin, N.W.**, Stewart, R.B., Elder, R.L., Kho, Y., Murphy, J.M., Li, T.-K., Badia-Elder, N.E. (2004). Sedative and motor-impairing effects of neuropeptide Y and ethanol in selectively-bred P and NP rats. *Pharmacology, Biochemistry & Behavior* 78:65-73.
- 4. **Gilpin, N.W.**, Stewart, R.B., Murphy, J.M., Badia-Elder, N.E. (2005). Sensitized effects of neuropeptide Y on multiple ingestive behaviors in P rats following ethanol abstinence. *Pharmacology, Biochemistry & Behavior,* 81:740-9.
- 5. **Gilpin, N.W.**, Stewart, R.B., Badia-Elder, N.E. (2008). Neuropeptide Y (NPY) suppresses ethanol responding in ethanol-abstinent, but not non-ethanol-abstinent, Wistar rats. *Alcohol* 42:541-51.
- 6. **Gilpin, N.W.**, Badia-Elder, N.E., Elder, R.L., Stewart, R.B. (2008). Schedule-induced polydipsia in lines of rats selectively bred for high and low ethanol preference. *Behavior Genetics* 38:515-24.

- Gilpin, N.W., Richardson, H.N., Koob, G.F. (2008). Effects of CRF1-receptor and opioidreceptor antagonists on dependence-induced increases in alcohol drinking by alcoholpreferring (P) rats. *Alcoholism: Clinical and Experimental Research* 32:1535-42.
- 8. **Gilpin, N.W.**, Richardson, H.N., Lumeng, L., Koob, G.F. (2008). Dependence-induced alcohol drinking by alcohol-preferring (P) rats and outbred Wistar rats. *Alcoholism: Clinical and Experimental Research* 32:1688-96.
- 9. Roberto, M., **Gilpin, N.W.**, O'Dell, L.E., Morse, A.C., Siggins, G.R., Koob, G.F. (2008). Cellular and behavioral rationale for gabapentin treatment of alcohol dependence. *Journal of Neuroscience* 28:5762-71.
 - A. Press release by Journal of Neuroscience published in:
 - I. Nature News: online 28 May 2008; doi:10.1038/news.2008.859
 - II. Science Daily: online May 28, 2008; retrieved from http://www.sciencedaily.com-/releases/2008/05/080528121256.htm
 - **B.** Gilpin, N.W., Koob, G.F., Roberto, M. (2008) Response to "Anxious to drink: gabapentin normalizes GABAergic transmission in the central amygdala and reduces symptoms of ethanol dependence." *Journal of Neuroscience*.
- 10. **Gilpin, N.W.**, Stewart, R.B., Badia-Elder, N.E. (2008). Neuropeptide Y administration into the amygdala suppresses ethanol drinking in alcohol-preferring (P) rats following multiple deprivations. *Pharmacology, Biochemistry & Behavior* 90:470-4.
- 11. **Gilpin, N.W.**, Misra K., Koob G.F. (2008). Neuropeptide Y in the central nucleus of the amygdala suppresses dependence-induced increases in alcohol drinking. *Pharmacology, Biochemistry & Behavior* 90:475-80.
- 12. Ji, D.*, **Gilpin, N.W.***, Richardson, H.N., Rivier, C.L., Koob, G.F. (2008). Effects of naltrexone, duloxetine, and a CRF₁ receptor antagonist on binge-like alcohol drinking in rats. *Behavioral Pharmacology* 19:1-12.
- 13. **Gilpin, N.W.**, Smith, A., Cole, M., Weiss, F., Koob, G.F., Richardson, H.N. (2009) Operant behavior and alcohol levels in blood and brain of alcohol-dependent rats. *Alcoholism: Clinical and Experimental Research* 33:2113-23.
- 14. **Gilpin, N.W.**, Koob, G.F. (2010) Effects of β-adrenoceptor antagonists on alcohol drinking by alcohol-dependent rats. *Psychopharmacology* 212:431-9.
- Roberto M., Cruz M.T., Gilpin N.W., Sabino V., Schweitzer P., Cottone P., Madamba S.M., Stouffer D., Zorrilla E.P., Koob G.F., Siggins G.R., Parsons L.H. (2010) Corticotropin Releasing Factor–Induced Amygdala Gamma-Aminobutyric Acid Release Plays a Key Role in Alcohol Dependence. *Biological Psychiatry* 67:831-9.
 - A. Press release by The Scripps Research Institute published in:
 I. USA Today: online January 29, 2010; retrieved from http://www.usatoday.com/news/health/2010-01-29-stress-alcoholism N.htm?csp=usat.me
 - II. Science Daily: online January 26, 2010; retrieved from http://www.sciencedaily.com/releases/2010/01/100125173452.htm
- Gilpin, N.W., Wright, Jr., M.J., Dickinson, G., Vandewater, S.A., Price, J.U., Taffe, M.A. (2011) Influences of activity wheel access on the body temperature response to MDMA and methamphetamine. *Pharmacology, Biochemistry & Behavior* 99:295-300.
- 17. **Gilpin, N.W.**, Misra, K., Herman, M.A., Cruz, M.T., Koob, G.F., Roberto, M. (2011) Neuropeptide Y opposes alcohol effects on GABA release in amygdala and blocks the transition to alcohol dependence. *Biological Psychiatry* 69:1091-9.
 - A. Finalist for Ziskind-Somerfeld Award from the Society of Biological Psychiatry
 - **B.** Press release by The Scripps Research Institute published in:
 - I. Science Daily: online May 31, 2011; retrieved from http://www.sciencedaily.com/releases/2011/05/110531135703.htm
 - II. Drug Discovery News: online June 7, 2011; retrieved from

http://www.drugdiscoverynews.com/index.php?newsarticle=5056

- 18. **Gilpin, N.W.**, Stewart, R.B., Badia-Elder, N.E. (2011) Effects of neuropeptide Y (NPY) and ethanol on arousal and anxiety-like behavior in alcohol-preferring (P) rats. *Alcohol* 45:137-45.
- 19. **Gilpin, N.W.**, Karanikas, C.A., Richardson, H.N. (2012). Voluntary alcohol binge drinking early in adolescence alters drinking, anxiety, and amygdalar corticotropin releasing factor (CRF) cells in adult male rats. *PLoS One* 7: e31466. doi:10.1371/journal.pone.0031466.
- Kallupi, M., Vendruscolo, L.V., Carmichael, C.Y., George, O., Koob, G.F., Gilpin, N.W. (2013) Neuropeptide Y Y2R Blockade in the Central Amygdala Reduces Anxiety-Like Behavior but not Alcohol Drinking in Alcohol-Dependent Rats. *Addiction Biology* 19:755-7.
- Edwards, S., Baynes, B., Carmichael, C.Y., Zamora-Martinez, E.R., Barrus, M., Koob, G.F., Gilpin, N.W. (2013) Traumatic Stress Reactivity Promotes Excessive Alcohol Drinking and Alters the Balance of Prefrontal Cortex-Amygdala Activity. *Translational Psychiatry* 3:e296; doi:10.1038/tp.2013.70.
- Roltsch, E.A., Baynes, B.B., Mayeux, J.P., Whitaker, A.M., Baiamonte, B.A., Gilpin, N.W. (2014) Predator Odor Stress Alters Corticotropin-Releasing Factor-1 Receptor (CRF1R)-Dependent Behaviors in Rats. *Neuropharmacology* 79:83-89.
- 23. Baiamonte, B.A., Valenza, M., Roltsch, E.A., Whitaker, A.M., Baynes, B.B., Sabino, V., **Gilpin, N.W.** (2014) Nicotine dependence produces hyperalgesia: role of corticotropinreleasing factor-1 receptors (CRF1Rs) in the central amygdala (CeA). *Neuropharmacology* 77:217-223.
- 24. **Gilpin, N.W.**, Roberto, M., Koob, G.F., Schweitzer, P. (2014) Kappa opioid receptor activation decreases inhibitory transmission and antagonizes alcohol effects in rat central amygdala. *Neuropharmacology* 77:294-302.
- 25. **Gilpin, N.W.**, Whitaker, A.M., Baynes, B., Abdel, A.Y., Weil, M.T., George O. (2014) Nicotine vapor inhalation escalates nicotine self-administration. *Addiction Biology* 19:587-92.
- 26. El Hajj, E.C., Voloshenyuk, T.G., El Hajj, M.C., Mouton, A.J., Khoutorova, E., Hart, A.D., Baynes, B., Molina, P.E., **Gilpin, N.W.**, Gardner, J.D. (2014) Alcohol modulation of MMP and TIMP expression in the heart favors collagen accumulation. *Alcoholism: Clinical and Experimental Research* 38:448-56.
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 - **A.** Featured Article in *Journal of Neuroscience*.
 - B. Press release by UMass-Amherst published in:
 - I. Science Daily: online October 28, 2014; retrieved from http://www.sciencedaily.com/releases/2014/10/141028214137.htm
 - II. New England Public Radio: online October 30, 2014; retrieved from http://nepr.net/news/2014/10/30/study-binge-drinking-alters-brain-in-rats/
- Mayeux, J.P., Teng, X.T., Katz, P.S., Gilpin, N.W., Molina, P.E. (2015) Traumatic brain injury induces neuroinflammation and neuronal degeneration that is associated with escalated alcohol self-administration in rats. *Behavioural Brain Research* 279:22-30.
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- 30. Whitaker, A.M., **Gilpin, N.W.** (2015) Blunted hypothalamo-pituitary adrenal axis response to predator odor predicts high stress reactivity. *Physiology & Behavior*

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- 39. Avegno, E.M., Lobell, T.D., Itoga, C.A., Baynes, B.B., Whitaker, A.M., Weera, M.M., Edwards, S., Middleton, J.W., **Gilpin, N.W.** (2018) Central amygdala circuits mediate hyperalgesia in alcohol-dependent rats. *Journal of Neuroscience* 38:7761-73.
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- 41. Ninh, V.K., El Hajj, E.C., Mouton, A.J., El Hajj, M.C., **Gilpin, N.W.**, Gardner, J.D. (in press) Chronic ethanol administration prevents compensatory cardiac hypertrophy in pressure overload. *Alcoholism Clinical and Experimental Research*.
- 42. Fucich, E.A., Mayeux, J.P., McGinn, M.A., **Gilpin, N.W.**, Edwards, S., Molina, P.E. (in press) A novel role for the endocannabinoid system in ameliorating motivation for alcohol drinking and negative behavioral affect after traumatic brain injury in rats. *Journal of Neurotrauma*.
- * indicates that both authors contributed equally to the manuscript

Review Articles:

- 1. Badia-Elder, N.E., **Gilpin, N.W.**, Stewart, R.B. (2007). Neuropeptide Y modulation of ethanol intake: effects of ethanol drinking history and genetic background. *Peptides* 28:339-44.
- 2. **Gilpin, N.W.**, Koob, G.F. (2008). Overview: neurobiology of alcohol dependence with a focus on motivational mechanisms. *Alcohol Research & Health,* 31:185-95.
- 3. **Gilpin, N.W.**, Richardson, H.N., Cole, M., Koob, G.F. (2008). Vapor inhalation of alcohol in rats. *Current Protocols in Neuroscience* 44, 9.29.1-9.29.19.

- 4. June, H.L., **Gilpin, N.W.** (2010) Operant self-administration models for testing the neuropharmacological basis of ethanol consumption in rats. *Current Protocols in Neuroscience* Supplement 51:9.12.1-9.12.25.
- 5. **Gilpin, N.W.**, Roberto, M. (2012) Neuropeptide Modulation of Central Amygdala Neuroplasticity is a Key Mediator of Alcohol Dependence. *Neuroscience and Biobehavioral Reviews* 36:873-88.
- Gilpin, N.W. (2012) Corticotropin-releasing factor (CRF) and neuropeptide Y (NPY): Effects on inhibitory transmission in central amygdala, and anxiety- & alcohol-related behaviors. *Alcohol* 46:329-37.
- 7. **Gilpin, N.W.** (2012) Neuropeptide Y (NPY) in the extended amygdala is recruited during the transition to alcohol dependence. *Neuropeptides* 46:253-9.
- 8. Whitaker, A.W., **Gilpin, N.W.**, Edwards, S.E. (2014) Animal Models of Post-Traumatic Stress Disorder and Recent Neurobiological Insights. *Behavioural Pharmacology* 25:398-409.
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- 11. Schreiber A.L., **Gilpin, N.W.** (2018) Corticotropin-Releasing Factor (CRF) Neurocircuitry and Neuropharmacology in Alcohol Drinking. *Handbook of Experimental Pharmacology*.
- 12. Albrechet-Souza, L., **Gilpin, N.W.** (2019) The predator odor avoidance model of posttraumatic stress disorder in rats. *Behavioural Pharmacology*.
- 13. Avegno, E.A., **Gilpin, N.W.** (2019) Inducing alcohol dependence in rats using chronic intermittent exposure to alcohol vapor. *Bio-protocol*.

Books:

1. **Gilpin N.W.** (2009) Alcohol abstinence in vulnerable subpopulations of drinkers: a role for neuropeptide Y. Saarbrücken, Germany: VDM Verlag Dr. Müller.

Book Chapters:

- Roberto, M., Gilpin, N.W., Siggins, G.R. (2012) The Central Amygdala and Alcohol: Role of GABA, Glutamate and Neuropeptides. Cold Spring Harb Perspect Med (*Addiction*, eds. Paul Kenny & Christopher Pierce) doi: 10.1101/cshperspect.a012195. [Epub ahead of print].
- 2. Roberto, M., **Gilpin, N.W.** (2014) Central amygdala neuroplasticity in alcohol dependence. Elsevier (*Neurobiology of Alcohol Dependence*, eds. Antonio Noronha, Changhai Cui, Adron Harris & John Crabbe).

Videos, Electronic Media, and Multimedia:

1. **Gilpin, N.W.** in collaboration with Medical Directions, Inc., Rita Goldstein, PhD, and UCLA Laboratory of Neuroimaging (June 2010) Online Course titled *The Neurobiology of Addiction*. URL: <u>http://www.drugabuseresearchtraining.org</u>

Published Abstracts:

- 1. **Gilpin, N.W.**, Stewart, R.B., Murphy, J.M., Li, T.K., Badia-Elder, N.E. (2003) Neuropeptide Y reduces oral ethanol intake in alcohol-preferring (P) rats following a period of imposed ethanol abstinence. *Alcohol Clin Exp Res* 27(s6).
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- 8. Stewart, R.B., **Gilpin, N.W.**, Badia-Elder, N.E. (2006) Neuropeptide Y behavioral effects in alcohol-preferring rats. *FASEB J* 20:A416.
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- 10. **Gilpin, N.W.**, Stewart, R.B., Badia-Elder, N.E. (2006) Suppression of ethanol drinking by neuropeptide Y in the central nucleus of the amygdala of alcohol-preferring (P) rats depends on intermittence of prior ethanol exposure. *Alcohol Clin Exp Res* 30(s1).
- 11. **Gilpin, N.W.**, Stewart, R.B., Dodge, N.C., Henderson, A.N., Badia-Elder, N.E. (2006) Neuropeptide Y (NPY) suppresses light-enhanced acoustic startle reflex in alcoholpreferring (P) rats. *Alcohol Clin Exp Res* 30(s1).
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- 13. Ji, D., **Gilpin, N.W.**, Richardson, H.N., Rivier, C.L., Koob, G.F. (2007) Pharmacological validation of a novel animal model of binge alcohol drinking. *Alcohol Clin Exp Res* 31(s2).
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- 18. **Gilpin, N.W.**, Edwards, S., Koob, G.F. (2011) Exposure to Traumatic Stress in Rats Differentially Affects Alcohol-Related Behaviors and Brain ERK Phosphorylation. *Neuropsychopharmacology* 36(s1).

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- Mouton, A.J., Gilpin, N.W., Walker, M.K., El Hajj, M.C., Molina, P.E., Gardner, J.D. (2014) Alcohol induced cardiac fibrosis via TGF-beta1 and NADPH oxidase. *Alcohol Clin Exp Res* 38(s1).
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- Mayeux, J.P., Teng, S.X., Katz, P.S., Impastato, R.A., Gilpin, N.W., Molina, P.E. (2014) Injury severity is associated with increased alcohol drinking following traumatic brain injury in rats. *Alcohol Clin Exp Res* 38(s1).
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- 45. Mayeux, J., Katz, P., **Gilpin, N.W.**, Molina, P.E. (2015) Prefrontal cortex traumatic brain injury produces greater neurobehavioral dysfunction and delayed behavioral recovery versus TBI localized to the sensorimotor cortex. *FASEB J* 29:840.10.
- 46. **Gilpin, N.W.**, Roltsch E.A., Lu, Y.-L., Whitaker, A.M., Baynes, B.B., Baiamonte, B.A., Richardson, H.N. (2015) Traumatic stress promotes hyperalgesia via corticotropin-releasing factor signaling in central amygdala. *FASEB J* 29:983.7.
- 47. Di, S., Itoga C.A., Solomonow J., Roltsch E.A., **Gilpin N.W.**, Tasker, J.G. (2015) Stressinduced long-term depression of synaptic inhibition and anxiety are dependent on basolateral amygdala cannabinoid-1 receptors. *Society for Neuroscience program*.
- 48. Yang, H., Hou, H., Hellard, E.R., Itoga, C., Baynes, B., Tang, Y., **Gilpin, N.W.**, Xia, H. (2015) Inhibitor-2 (I-2), a regulator of protein phosphatase-1 (PP1), mediates alcohol withdrawal anxiety-like behavior in rats. *Society for Neuroscience program*.
- 49. Whitaker, A.M., Farooq, M.A., Edwards, S., **Gilpin, N.W.** (2015) Post-traumatic stress avoidance is attenuated by corticosterone and associated with brain levels of steroid receptor co-activator-1 in rats. *Neuropsychopharmacology*.
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- 51. **N.W. Gilpin**, E.A. Roltsch, R.I. Impastato (2016) Melanocortin-4 receptors (MC4Rs) in amygdala mediate thermal hyperalgesia in alcohol-dependent rats. *Neuropsychopharmacology*.
- 52. Schreiber, A.L., **Gilpin, N.W.** (2016) Role for corticotropin-releasing factor in the central amygdala in alcohol drinking after traumatic stress. *Society for Neuroscience program.*

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- 54. McGinn, M.A., Whitaker, A.M., Itoga, C.A., Farooq, M.A., Paulsen, R.I., Reppel, J.E., Gilpin, N.W., Edwards, S. (2016) Region-specific tolerance to alcohol-stimulated glutamate receptor phosphorylation in the context of nicotine dependence. *Alcohol Clin Exp Res* 40(s1).
- 55. Whitaker, A.M., **Gilpin, N.W.** (2016) ERK phosphorylation in the central amygdala mediates avoidance of a context paired with traumatic stress. *Alcohol Clin Exp Res* 40(s1).
- 56. Mayeux, J., **Gilpin, N.W.**, Edwards, S., Molina, P. (2016) Mild traumatic brain injury increases alcohol drinking: a potential mechanistic role for brain stress systems. *Alcohol Clin Exp Res* 40(s1).
- 57. Schreiber, A.L., **Gilpin, N.W.** (2016) Role for corticotropin-releasing factor in central amygdala in alcohol drinking after traumatic stress. *Alcohol Clin Exp Res* 40(s1).
- 58. Avegno, E.M., Whitaker, A.M., Lobell, T., Schreiber, A.L., **Gilpin, N.W.** (2017) Establishing a role for VTA-CeA projections in escalated alcohol drinking in alcoholdependent rats. *Alcohol Clin Exp Res* 41(s1).
- 59. Francis, M., Sayde, P., Blackwelder, C., Stielper, Z.F., Mayeux, J.P., **Gilpin, N.W.**, Edwards, S., Molina, P.E. (2017) Post-TBI alcohol consumption reduces memoryrelated hippocampal transcription factor expression. *Alcohol Clin Exp Res* 41(s1).
- 60. Yue X., Basting T.M., Flanagan T.W., Xu J., Lobell T.D., Gilpin N.W., Gardner J.D., Lazartigues E. (2018) Nicotine downregulates the compensatory angiotensinconverting enzyme 2/angiotensin type 2 receptor of the renin-angiotensin system. Ann Am Thorac Soc 15(s2):S126-S127.
- Fucich, E.A., Stielper, Z.F., Stoulig, P.J., Edwards, S., Middleton, J.W., Gilpin, N.W., Molina, P.E. (2018) Neurobiological underpinnings of escalated alcohol drinking after traumatic brain injury. *Alcohol Clin Exp Res* 42(s1).
- 62. Avegno, E.A., Kelley, L.K., Lobell, T.D., Middleton, J.W., **Gilpin, N.W.** (2018) Alcohol dependence impacts midbrain projections to central amygdala. *Alcohol Clin Exp Res* 42(s1).
- 63. Stielper, Z.F., Fucich, E.A., Stoulig, P., Edwards, S., Molina, P.E., **Gilpin, N.W.** (2018) Mild traumatic brain injury (TBI) alters brain endocannabinoid proteins in alcohol drinking rats. *Alcohol Clin Exp Res* 42(s1).
- 64. Weera, M.M., Pahng, A.R., Whiatker, A.M., **Gilpin, N.W.** (2018) Stress-induced brain activation in Avoider rats. *Alcohol Clin Exp Res* 42(s1).

Research Review Committee:

NIAAA Study Section AA-4 Neuroscience Review Subcommittee; ad hoc	2012
NIAAA Study Section ZAA1 DD (04) Special Emphasis Panel; ad hoc	2012
NIAAA Study Section ZAA1 DD (04) Special Emphasis Panel; chair	2013
NIAAA Study Section AA-4 Neuroscience Review Subcommittee; ad hoc	2014
NIAAA Study Section ZAA1 DD (04) Special Emphasis Panel; ad hoc	2014
CSR Study Section; Neurotoxicology of Alcohol (NAL); ad hoc	2015
NIAAA Study Section ZAA1 CC (01); Consortium review; ad hoc	2015
NIAAA Study Section ZAA1 DD (05) Special Emphasis Panel; chair	2015 (June)
NIAAA Study Section ZAA1 DD (05) Special Emphasis Panel; ad hoc	2015 (Nov)
NIAAA Study Section ZAA1 JJ (08) Special Emphasis Panel; member	2016
CSR Study Section; Neurotoxicology of Alcohol (NAL); standing member	2016-present
NIAAA Study Section ZAA1 CC (51); Center review; ad hoc	2018
NIAAA Study Section AA-4 Neuroscience Review Subcommittee; ad hoc	2018

NIAAA Study Section AA-4 Neuroscience Review Subcommittee; ad hoc 2019

Organized & Chaired Symposia:

National:

- 1. *Neuropharmacology of excessive alcohol drinking in rodent models*. RSA meeting in San Diego, CA, 2009. Role: Organizer & Chair.
- 2. *Negative affective states and addiction*. NHSN meeting in Miami, FL, 2011. Role: Organizer & Chair.
- 3. Vulnerability factors for excessive alcohol drinking and alcohol-related behavioral dysregulation. RSA meeting in Atlanta, GA, 2011. Role: Organizer & Chair.
- 4. *The translational intersection of depression and addiction*. NHSN meeting in San Antonio, TX, 2015. Role: Co-organizer & Co-chair.
- 5. *Corticotropin releasing factor: Novel molecular, cellular and system roles.* SfN meeting in Chicago, IL, 2015. Role: Mini-symposium co-chair.
- 6. Brain reward and brain stress system cross-talk in alcohol addiction. Research Society on Alcoholism (RSA) meeting in San Diego, CA, 2018. Organizer & Chair.
- 7. Ventral Tegmental Area (VTA) Cell Heterogeneity in Health & Disease. Mini-symposium at Society for Neuroscience (SFN) meeting in Chicago, IL, 2019. Organizer & Chair.

International:

- 1. *Post-traumatic stress disorder & alcohol dependence*. Alcoholism & Stress Meeting in Volterra, Italy, 2011. Role: Organizer & Chair.
- 2. Alcohol-induced plasticity in brain NPY systems. International NPY-PPY-PP Meeting, Montreal, Canada, 2012. Role: Organizer & Chair.
- 3. *Nicotine reinforcement & dependence: Neuroadaptations in "stop" & "go" signals.* IBNS meeting in Dublin, Ireland, 2013. Role: Organizer & Chair.
- 4. Brain reward and stress systems in excessive alcohol drinking. Alcoholism & Stress Meeting in Volterra, Italy, 2014. Role: Organizer & Chair.
- 5. Chronic alcohol effects on brain reward, stress & cognition systems: Mouse to monkey to man. ISBRA meeting in Berlin, Germany, 2016. Role: Organizer & Chair.
- 6. *Chronic alcohol induces plasticity in striatal and limbic circuits*. International Society on Biomedical Research on Alcohol (ISBRA), Kyoto, Japan, 2018. Organizer & Chair.

Scientific Presentations:

National:

- 1. Neuropeptide Y reduces oral ethanol intake in alcohol-preferring (P) rats following a period of imposed ethanol abstinence. Presented at RSA meeting in Fort Lauderdale, FL, 2003.
- 2. The effects of neuropeptide Y (NPY) in the paraventricular nucleus of the hypothalamus (PVN) on ethanol drinking in high- (HAD1) and low-alcohol-drinking (LAD1) rats. Presented at RSA meeting in Vancouver, Canada, 2004.
- 3. Dose-dependent effects of neuropeptide Y (NPY) on ethanol intake in alcohol-preferring (*P*) rats following multiple periods of imposed ethanol abstinence. Presented at RSA meeting in Vancouver, Canada, 2004.
- 4. Suppression of ethanol intake by neuropeptide Y (NPY) in Wistar rats depends on intermittence of prior ethanol exposure. Presented at RSA meeting in Baltimore, Maryland, 2006.
- 5. Behavioral and pharmacological validation of two models of pathological alcohol drinking. Presented at Winter Conference on Brain Research, Snowbird, Utah, 2008.
- 6. *Role of neuropeptide* Y (*NPY*) *in the transition to alcohol dependence*. Presented at RSA meeting in San Diego, CA, 2009.

- 7. An animal model of post-traumatic stress disorder & alcohol-related behaviors. Presented at NHSN meeting in Miami, FL, 2011.
- 8. A new animal model of PTSD and alcohol drinking: Effects of predator stress and conditioned stimuli on operant alcohol self-administration. Presented at RSA meeting in Atlanta, GA, 2011.
- 9. Exposure to traumatic stress in rats differentially affects alcohol drinking and neuronal *ERK* phosphorylation. Presented in nanosymposium at SfN meeting in New Orleans, LA, 2012.
- 10. Nicotine-dependent rats exhibit increases in alcohol self-administration and altered sensitivity to varenicline. Presented at CPDD meeting in Palm Springs, CA, 2012.
- 11. *Nicotine vapor inhalation escalates nicotine self-administration.* Presented in symposium at CPDD meeting in San Diego, CA, 2013.
- 12. *Traumatic brain injury increases alcohol drinking and promotes neuroinflammation in rats.* Presented at Society of Neuroimmune Pharmacology (SNIP) meeting in New Orleans, LA, 2014.
- 13. *High traumatic stress reactivity escalates alcohol drinking and recruits CRF in prefrontal-amygdala circuitry.* Presented at RSA meeting in Bellevue, WA, 2014.
- 14. Amygdalar CRF mediates stress effects on nociception and alcohol drinking. Presented in mini-symposium at SfN meeting in Chicago, IL, 2015.
- 15. Central Amygdala Regulation of Alcohol Withdrawal Hyperalgesia. Presented at Gordon Research Conference (GRC) on Amygdala in Easton, MA, 2017.
- 16. Amygdala endocannabinoids in alcohol withdrawal and traumatic stress induced escalation of alcohol drinking. Presented in the NIDA-NIAAA satellite symposium preceding the Society for Neuroscience meeting in Washington, D.C., 2017.
- 17. *Traumatic Stress Reactivity and Neural Mediators of Alcohol Drinking*. Presented at the Gordon Research Conference (GRC) on Alcohol & the Nervous System in Galveston, TX, 2018.

International:

- 1. A convergent pathway in the amygdala for brain stress peptides in alcohol dependence. Presented at IDARS meeting in Seoul, South Korea, 2009.
- 2. *Extending the utility of alcohol vapor dependence procedures*. Presented at ISBRA meeting in Paris, France, 2010.
- 3. *Neuropeptide* Y *suppresses alcohol drinking by decreasing inhibitory neurotransmission in central amygdala*. Presented at IDARS meeting in Rio de Janeiro, Brazil, 2010.
- 4. *A new animal model of post-traumatic stress disorder & alcohol dependence*. Presented at Alcoholism & Stress Meeting in Volterra, Italy, 2011.
- 5. Alcohol dependence recruits neuropeptide Y (NPY) systems in extended amygdala. Presented at ISBRA meeting in Sapporo, Japan, 2012.
- 6. *Neuropeptide Y in the extended amygdala of alcohol-dependent rats.* Presented at the International NPY-PPY-PP Meeting, Montreal, Canada, 2012.
- 7. *Nicotine vapor escalates nicotine self-administration & alters nAchR profiles.* Presented at IBNS meeting in Dublin, Ireland, 2013.
- 8. *High traumatic stress reactivity promotes alcohol drinking and recruits cortico-amygdalar circuitry.* Presented at IDARS meeting in Mexico City, Mexico, 2013.
- 9. Individual differences in stress-induced behavioral dysregulation mediated by corticotropin-releasing factor (CRF) in central amygdala (CeA). Presented at Alcoholism & Stress Meeting in Volterra, Italy, 2014.
- 10. Traumatic stress increases nociception & alcohol drinking: A role for corticotropinreleasing factor (CRF) signaling in the central amygdala (CeA). Presented at IDARS meeting in Sydney, Australia, 2015.

- 11. Central amygdala mediates hyperalgesia associated with traumatic stress & alcohol dependence. Presented at ISBRA meeting in Berlin, Germany, 2016.
- 12. *Traumatic stress effects on brain CRFR1 signaling, nociception & alcohol drinking.* Presented at Stress & Alcoholism meeting in Volterra, Italy, 2017.
- 13. The central amygdala is a hub for alcohol dependence, stress reactivity & pain. Presented at the Zardi-Gori scientific meeting titled "Alcohol Use Disorder: from Bench to Bedside" in Milan, Italy, 2017.
- 14. *The role of brain CRF-CRFR1 signaling in stress-alcohol interactions*. Presented at the Winter Conference on Brain Research in Whistler, Canada, 2018.
- 15. *Stress alters amygdala signaling & alcohol drinking*. Presented at the Neurobiology of Stress Meeting in Banff, Canada, 2018.
- 16. Central amygdala circuits mediate hyperalgesia in alcohol-dependent rats. Presented at ISBRA meeting in Kyoto, Japan, 2018.

Invited Presentations and Seminars:

Local (not including talks on the LSUHSC campus):

- 1. At the intersection of stress & alcohol use disorders. Invited talk at Tulane University, Neuroscience Department, New Orleans, LA, November 2011.
- 2. Stress & stress response affects alcohol-related behavior. Invited talk at Tulane University, Physiology Department, New Orleans, LA, April 2012.
- 3. *Traumatic stress reactivity facilitates excessive alcohol drinking and prefrontal cortexamygdala synchronicity*. Invited talk at Southeastern Louisiana University, Biology Department, Hammond, LA, November 2012.

National:

- 1. *Neuropeptide Y: The light side of the dark side of alcoholism*. Invited talk at Indiana University-Purdue University at Indianapolis, Psychology Department, Indianapolis, IN, November 2010.
- 2. At the intersection of stress & alcohol use disorders. Invited talk at National Institute of Alcoholism & Alcohol Abuse, Bethesda, MD, February 2012.
- 3. Amygdalar CRF in stress-induced escalation of alcohol drinking & hyperalgesia. Invited talk in NIAAA-sponsored satellite symposium at Society for Neuroscience 2014 meeting in Washington, D.C., November 2014.
- 4. Amygdalar CRF mediates individual differences in stress-induced avoidance and hyperalgesia. Invited talk at University of North Carolina, Psychology Department, Chapel Hill, NC, November 2015.
- 5. Amygdalar CRF mediates individual differences in stress-induced avoidance and hyperalgesia. Invited talk at University of Texas Medical School, Institute of Molecular Medicine, Houston, TX, May 2016.
- Amygdala mediates hyperalgesia associated with stress and alcohol dependence. Invited talk in 5th Purdue Symposium on Psychological Sciences titled "Emotion Dysregulation: Consequences and Mechanisms," Purdue University, West Lafayette, IN, May 2016.
- 7. Amygdalar CRF signaling mediates stress-induced hyperalgesia. Invited talk at Washington State University, Alcohol and Drug Abuse Research Program, Pullman, WA, September 2016.
- 8. *CRF signaling mediates stress-induced behavioral dysregulation*. Invited talk at Medical University of South Carolina, Alcohol Research Center, Charleston, SC, October 2016.
- 9. Central amygdala mediates alcohol dependence-induced hyperalgesia. Invited talk at Vanderbilt University, Alcohol Research Center, Nashville, TN, October 2017.
- 10. Traumatic stress alters brain CRF signaling & alcohol drinking. Invited talk at Marquette

University, Milwaukee, WI, October 2018.

- 11. Central amygdala mediates alcohol dependence-induced hyperalgesia. Invited talk at Texas A&M University, College Station, TX, October 2018.
- 12. Central amygdala is a hub for alcohol dependence. Invited talk at University of Maryland, Baltimore, MD, March 2019.

International:

1. Amygdalar CRF mediates individual differences in stress-induced avoidance and hyperalgesia. Invited talk at University of Calgary, Calgary, Alberta, Canada, June 2016.

Editorial Posts and Activities:

Journal Editorial Appointments:

Frontiers in Addictive Disorders and Behavioral Dyscontrol	2012-
Frontiers in Neuropharmacology	2016-
Neuropharmacology (Editorial Board member)	2016-
F1000 Faculty (member; Neuropharm. & Psychopharm. Section)	2018-

Special Topics Journal Editor:

Editor of "Brain Reward and Stress Systems in Addiction" 2013 Special Topic for *Frontiers in Addictive Disorders and Behavioral Dyscontrol* Issue can be accessed at: <u>http://journal.frontiersin.org/ResearchTopic/1039</u>

Reviewer Status (alphabetical):

Addiction Biology, Alcohol, Alcoholism: Clinical & Experimental Research, Behavioural Brain Research, Behavioural Pharmacology, Biological Psychiatry, BMC Neuroscience, Brain Research, British Journal of Pharmacology, Cellular & Molecular Neurobiology, Drug & Alcohol Dependence, European Journal of Neuroscience, European Neuropsychopharmacology, Genes Brain & Behavior, International Journal of Developmental Neuroscience, Journal of Addiction Medicine, Journal of Neuroscience, Neuropeptides, Neuropharmacology, Neuropsychopharmacology, Peptides, Pharmacology Biochemistry & Behavior, Physiology & Behavior, Progress in Neuropsychopharmacology, Regulatory Peptides, Toxicology & Applied Pharmacology

SERVICE ACTIVITIES

University/Institutional Service:

Departmental committees

Faculty Search Committee, Physiology, Member	2011-13, 2016-
Research Development Work-In-Progress, Physiology, Co-Chair	2012-2013
Post-Doctoral Development Committee, Physiology, Chair	2012-present
Faculty Research Development Program, Physiology, Director	2016-present

LSU School of Medicine (SOM) committees

Judge for Graduate Student Research Day	2011, 2014
Alcohol & Drug Abuse Center of Excellence, steering member	2012-present
Judge for Medical Student Research Day	2014
Alcohol & Drug Abuse Center of Excellence, Associate Director	2015-present
Research Enhancement Fund Grant Review Committee, member	2015-present
Faculty Guidance and Mentoring Committee	2015-present

LSUHSC committees

LSU Strategic Plan, Research & Core Facilities Group, member LSUHSC-NO Information Technology (IT) Committee, member	2013 2017-present
Professional society committees	
Research Society on Alcoholism (RSA)	
Program Committee for RSA Meeting, member	2013
Education Committee, member	2017-present
Board of Directors, member	2017-present
National Hispanic Science Network (NHSN)	
Planning Committee for NHSN Meeting, member	2013, 2015
Planning Committee for NHSN Meeting, co-chair	2012
Early Career Leadership Committee Core Group, member	2012-2014
American College of Neuropsychopharmacology (ACNP)	
Education & Training Committee, ad hoc member	2014
Education & Training Committee, standing member	2015-2017
Publications Committee, standing member	2018-
International Drug Abuse Research Society (IDARS)	
Organizing Committee for IDARS meeting, member	2017

Administrative Responsibilities:

None

Community Service Activities:

LSUHSC Comprehensive Alcohol Research Center (CARC)

2014-2016

Information Dissemination Core; Role: Director (PI)

The goal of this Core is to impact alcohol- and HIV-related knowledge, attitudes and behaviors by educating lay people, practicing and in-training health care providers, and scientists on the neurobiological basis and biomedical consequences of alcohol use and abuse, and the risk factors and biological underpinnings of HIV. These activities include community outreach and education initiatives. My role as Director was to seek out opportunities and coordinate these activities on campus and in the community.

Research Interest Narrative

I am a behavioral neuroscientist, and my research career has focused on examining the neurobiology of addiction, traumatic stress disorders, and pain in animal models, with the ultimate goal of contributing to our understanding of the neurobiology of addiction, as well as potential prevention and treatment strategies for these disorders.

My major research contribution to this point has been to the understanding of the neural changes that mediate the transition from alcohol use to alcohol dependence. In particular, pro-anxiety and anti-anxiety neuropeptide systems in the extended amygdala are recruited during the transition to alcohol dependence, and these systems become critical for mediating alcohol consumption and other alcohol-related outcomes in the alcohol-dependent organism. I have authored many empirical articles and several review articles that collectively seek to improve our understanding of the neuroadaptations that underlie the behavioral pathologies that define the diagnostic criteria for Alcohol Use Disorder (AUD).

My current research program continues to focus on understanding the neurobiology of addictive disorders. I am currently funded by NIAAA and the V.A. The current focus of my lab is to examine neurobiological mechanisms underlying the high rate of co-morbidity of addiction with traumatic stress disorders (e.g., PTSD) and pain. The goal of this work is to identify the neural interface for addiction with traumatic stress disorders and pathological pain, which are frequently co-morbid in civilian and military populations. The potential impact of this work on human health is to identify promising targets and strategies for treating human addicts with co-morbid stress and pain disorders.

I foresee three important areas of expansion for our research program in the future. First, we are incorporating circuit-based approaches into our pre-clinical models with the goal of defining the neurochemistry and neurocircuitry underlying alcohol abuse and pain in individuals living with addiction and traumatic stress disorders. Second, we are expanding our research program to include other drugs of abuse (i.e., nicotine and morphine). Third, we are looking for opportunities to translate our pre-clinical findings into clinical studies.