

CURRICULUM VITAE  
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h-index: 24; i-10 index: 32 (according to Google Scholar, 8/21/20)

**EDUCATION**

2004 Bachelor of Science in Psychology, University of California, San Diego  
2007 Master of Science in Psychology, University of Kentucky  
Thesis: Post-Choice Stimulus Review by Pigeons  
Mentor: Dr. Thomas Zentall  
2010 Doctor of Philosophy in Psychology, University of Kentucky  
Thesis: A Translational Model of Mood-Based Rash Action  
Mentors: Dr. Michael T. Bardo and Dr. Thomas Kelly  
2010-2015 Post-Doctoral Fellow, Kalivas laboratory, Medical University of South Carolina

**PROFESSIONAL EXPERIENCES**

2015-June 30, 2020 Assistant Professor, Department of Psychology, Arizona State University, Tempe, AZ  
2010-2015 Post-Doctoral Researcher, Medical University of South Carolina, Charleston, SC  
2005-2010 Graduate Research Assistant, University of Kentucky, Lexington, KY  
2005-2007 Teaching Assistant: Behavioral Neuroscience and Learning/Behavior, Department of Psychology, University of Kentucky, Lexington, KY  
2002-2004 Undergraduate Research Assistant: Department of Psychology (Dr. John T. Wixted), University of California, San Diego, La Jolla, CA  
2002-2004 Undergraduate Research Assistant: Department of Psychology (Dr. Edmund Fantino), University of California, San Diego, La Jolla, CA  
2001-2002 Undergraduate Research Assistant: Department of Psychology (Drs. Victor Ferreira and Tamar Gollan), University of California, San Diego, La Jolla, CA

**ACADEMIC APPOINTMENTS**

2010-2015 Post-Doctoral Fellow  
Department of Neurosciences  
Medical University of South Carolina

2015-2020      Assistant Professor  
Department of Psychology  
Arizona State University

## **TEACHING ACTIVITIES**

### Certification:

2019: Certificate in Effective College Instruction  
The Association of College and University Educators and the American Council on Education

### Courses Taught:

**Psychopharmacology** (PSY470, Arizona State University): Spring 2016, Spring 2019, Fall 2019  
Upper level undergraduate course (enrollment = 40)  
Evaluation score: 1.3 (scale 1-5, 1=outstanding, 5=unsatisfactory)

**Your Brain on Drugs** (PSY307, Arizona State University), Spring 2018  
Lower level undergraduate course (enrollment = 100)  
Evaluation score: 1.6 (scale 1-5, 1=outstanding, 5=unsatisfactory)

**Neuropsychopharmacology** (PSY591, Arizona State University) Spring 2017  
Graduate course (enrollment = 9)  
Evaluation score: 2.1 (scale 1-5, 1=outstanding, 5=unsatisfactory)

## **ADVISING ACTIVITIES**

### Graduate Trainees

1. Mark Namba: Masters defense completed Spring 2019  
NRSA awarded: 2019 (NIDA)

### Post-Doctoral Trainees

1. Dr. Gregory Powell (2015-2018)  
Current position: Administrative coordinator for the R25 in the Neisewander laboratory  
Arizona State University
2. Dr. Jonna Leyrer-Jackson (2018-2020)  
NRSA awarded: 2019 (NIAAA)  
Current position: Post-Doctoral Fellow, Lab of Dr. Foster Olive
3. Dr. Erin Maher (2020-present)

### First Year Project, Master's Thesis, Comprehensive Examinations, and Dissertations

#### Director

Mark Namba      First Year Project (Behavioral Neuroscience)      (2018)

Mark Namba      Master's Thesis (Behavioral Neuroscience)      (Spring 2019)

Member

Veronica Peña      Masters Committee (Behavioral Neuroscience)      (Summer 2019)

Honors Thesis Defenses, Chair

Joseph McCallum (2017)  
Gabiella Cabrera-Brown (2018)  
Hanaa Ulangkaya (2019)  
Aronee Hossain (2020)

Honors Thesis Defenses, Member

Korrina Romero (2017)  
Paula Overby (2017)  
Shea Forcade (2017)  
Thai Nguyen (2018)  
Derek Yang (2018)  
Andrew Carlson (2018)  
Shiv Shah (2019)

Student and Post-Doctoral Fellow Awards and Recognition

Dr. Jonna Leyrer-Jackson (June 2019): NIDA's Women and Sex/Gender Differences Junior Investigator Travel Award Program (to attend the College on Problems of Drug Dependence)

Mark Namba (Fall, 2018): ASU Graduate and Professional Student Association Travel Award

Mark Namba (Fall, 2018): Society for Neuroscience "Neuroscience Scholars Program" Associate membership

Mark Namba (Summer, 2018): Cold Spring Harbor Laboratories Cellular Biology of Addiction course acceptance

Mark Namba (Spring, 2018): ASU Graduate and Professional Student Association Outstanding Research Award

Mark Namba (Spring, 2018): ASU College of Liberal Arts & Sciences Graduate Excellence Award

Gabiella Cabrera-Brown (February, 2018): Award to present an E-poster at the undergraduate research poster session at the American Association for the Advancement of Science (AAAS) conference

Mark Namba (Fall, 2017): ASU Graduate and Professional Student Association Travel Award

Mark Namba (Fall, 2017): Diversity Scholars Travel Award or the Society for Neuroscience annual meeting

Mark Namba (Fall, 2017): NIDA Travel Award for National Hispanic Science Network Conference 2017

Mark Namba (Spring, 2017): ASU College of Liberal Arts & Sciences Graduate Excellence Award

Armani del Franco (Summer, 2016): School of Life Sciences Undergraduate Travel Grant to attend the College on Problems of Drug Dependence

Armani del Franco (Fall, 2016): School of Life Sciences Undergraduate Research (SOLUR) award

Armani del Franco (Fall, 2016): College of Liberal Arts and Sciences (CLAS) Undergraduate Summer Enrichment Award

Mark Namba (Fall, 2016): Diversity Scholars Travel Award for the Society for Neuroscience annual meeting

Mark Namba (Fall, 2016): NIDA Diversity Supplement Award (R00 DA036569-03S1)

Mark Namba (Spring, 2016): ASU Department of Psychology Research Excellence Award

Former Undergraduate Research Assistants or Research Technicians Who are Currently in Graduate Programs

Armani del Franco: Ph.D. graduate student in the Neuroscience program at the University of Minnesota (Lab: Dr. Eric Newman)

Broc Pagni: Ph.D. graduate student in the Department of Speech and Hearing, Arizona State University (Lab: Dr. Blair Braden)

John Joseph McCallum: Masters student in the Science of Health Care Delivery program, Arizona State University

Julianna Goenaga: Ph.D. graduate student in the Neuroscience program at the University of Minnesota (Labs: Drs. Alfonso Araque and Paul Mermelstein)

Megan Brickner: Ph.D. graduate student in the Neuroscience program at the University of Minnesota

**ADMINISTRATIVE ACTIVITIES AND UNIVERSITY SERVICE**

University and Departmental Service Conducted at ASU:

University Service

Responsible Conduct of Research Instructor, “Mentorship” (2016)

Responsible Conduct of Research Instructor, “Peer Review and Authorship” (2017)

Department Service

Psychology Freshman Orientation Lunch (2015)

PSY 394: Careers in Psychology presentation (2015)

ASU Psychology PAC Elected Member (2017-2018)

ASU Psychology PAC Elected Member (2018-2019)

ASU Psychology “Work-Life Balance Panel” for Graduate Students (Eisenberg graduate course, 2018)

ASU Psychology K99 Grant Discussion for Graduate Students (Eisenberg graduate course, 2018)

ASU Psychology Search Committee: Behavioral Neuroscience Full Professor position for Dr. Jonathan Gewirtz (2019)

**HONORS & AWARDS**

2005

Graduate School Research Fellowship, University of Kentucky.

2007

Society for the Advancement of Behavior Analysis Student Presenter Grant.

2008

NIDA Predoctoral Traineeship, Department of Behavioral Science and the National Institute of Drug Abuse, University of Kentucky (T32 DA007304).

2009

NIDA Director's Travel Award, College on Problems of Drug Dependence, Reno, NV.

NIDA Predoctoral Traineeship, Department of Behavioral Science and the National Institute of Drug Abuse, University of Kentucky (T32 DA007304).

2010

Center for Drug and Alcohol Research Petite Grant Award.

Dissertation Year Fellowship. The Graduate School, University of Kentucky.

NIDA Director's Travel Award, College on Problems of Drug Dependence, Scottsdale, AZ.

**National Research Service Award, National Institute of Drug Abuse (F31 DA028018).**

**Title: A Translational Model of Mood-Based Drug Abuse**

American Psychological Association Dissertation Research Award, APA Science Directorate.

NIDA Post-Doctoral Traineeship, Department of Neurosciences and the National Institute of Drug Abuse, Medical University of South Carolina (T32 DA007288).

2011

Early Career Investigator Award, College on Problems of Drug Dependence, Hollywood FL.

American Psychological Association, Division 28 Outstanding Dissertation Award.

Washington, D.C.

Behavioral Neuroscience and Psychopharmacology Student Achievement Award, Department of Psychology, University of Kentucky.

NIDA Post-Doctoral Traineeship, Department of Neurosciences and the National Institute of Drug Abuse, Medical University of South Carolina (T32 DA007288).

2012

**National Research Service Award, National Institute on Drug Abuse (F32 DA033690).**

**Title: Chronic Adaptations in Glutamatergic and Dopaminergic Signaling in Nicotine Abuse**

Young Investigator Award, Society for Research on Nicotine and Tobacco, to present a poster at the NIDA presymposium at the Society for Neuroscience, New Orleans, LA.

Travel Award to present a poster at the 6<sup>th</sup> Annual Julius Axelrod symposium (NIDA), Society for Neuroscience, New Orleans, LA.

Travel Award, American College of Neuropsychopharmacology (ACNP), Hollywood, FL.

First place poster award for MUSC Research Day, Charleston, SC

2013

Travel Award, College on Problems of Drug Dependence, to present a poster at the NIDA presymposium, Society for Neuroscience, San Diego, CA

Society for Neuroscience Chapter Travel Award, San Diego, CA

2014

Young Psychopharmacologist Award, Division 28, American Psychological Association, Washington, DC

**K99/R00 Transition to Independence Grant, National Institute on Drug Abuse (K99 DA036569)**

**Title: Contributions of Glial Glutamate Transport and NMDA Receptors in Nicotine Relapse**

NIDA Notes spotlight article, June issue, “New Insight Into Cue-Induced Relapse to Cocaine”.  
<http://www.drugabuse.gov/news-events/nida-notes/2014/05/new-insight-how-cues-cause-relapse-to-cocaine>

2017

Society of Biological Psychiatry Early Career Investigator Travel Award  
ASU nominee for the 2017 Takeda Innovator Early Career Scientist Award  
Early Career Investigator Showcase Travel Award, NIDA/NIAAA mini-convention at Society for Neuroscience, Washington, DC.  
Associate Member, ACNP

2018

Society for Research on Nicotine and Tobacco Travel Award for Outstanding Abstract Submission  
Awarded front cover of journal issue for most frequently downloaded article since publication: Gipson & Olive (2017), *Genes, Brain, and Behavior*, issue 16(1).  
Research Highlight- College on Problems of Drug Dependence: <https://cpdd.org/highlighting-members-research-preclinical/>

2019

“Best Paper in 2018” in *Nicotine and Tobacco Research*, awarded at the 2019 Society for Research on Nicotine and Tobacco conference, San Francisco, CA.  
Society for Neuroscience – Abstract chosen as a “Dynamic Poster” and “Hot Topic” for the 2019 meeting: “Chemogenetic inhibition of accumbens cholinergic interneurons inhibits cue-induced nicotine seeking”.

**PROFESSIONAL ACTIVITIES, PUBLIC SERVICE & PROFESSIONAL DEVELOPMENT**

Short Courses, Seminars, and Workshops

2011 Cold Spring Harbor Cellular Biology of Addiction course, Cold Spring Harbor, NY (travel awardee)

Professional Affiliations

American College of Neuropsychopharmacology, (Associate Member, 2018)  
American Psychological Association (Member, 2018)  
College on Problems of Drug Dependence (Member, 2015-present)  
Society for Neuroscience (Member, 2013-present)  
Society for Research on Nicotine and Tobacco (Member, 2013-present)  
Association for Psychological Science (Member, 2015-present)  
Society of Biological Psychiatry (Associate Member, 2016-present)

Service Activities

2009-2010 Board Member and Membership Coordinator. Society for the Quantitative Analysis of Behavior (SQAB)  
2013-2017 Society for Research on Nicotine and Tobacco (SRNT) abstract reviewer  
2018-2020 Society for Research on Nicotine and Tobacco (SRNT) Program Committee

2013-2014 Society for Neuroscience Host and Mentor, *Career Development Topics: A Mentoring and Networking Event* at the “Pre- and Post- Doctoral National Research Service Awards (NRSAs) table.  
2017-2018 Network Operations Coordinator: Basic Science Network Advisory Committee, Society for Research on Nicotine and Tobacco.  
2016 Intel ISEF Special Award Judge for the National Institute on Drug Abuse, Phoenix AZ.  
<https://www.drugabuse.gov/news-events/news-releases/2016/05/link-between-stress-mindset-factors-influence-addiction-vulnerability-focus-top-nih-addiction>.  
2019 Intel ISEF Special Award Judge for the National Institute on Drug Abuse, Phoenix AZ.  
2017-2021 College on Problems of Drug Dependence Program Committee  
2020-2023 American College of Neuropsychopharmacology Education and Training Committee

### Editorial Boards

*Experimental and Clinical Psychopharmacology* (1/2017-12/2021)

### Ad Hoc Peer Reviewer (N=26 journals)

*Nature Communications, Drug and Alcohol Dependence, Biological Psychiatry, Addiction Biology, Neuropsychopharmacology, Journal of Neuroscience, Psychopharmacology, Behavioural Pharmacology, PLoS ONE, Behavioural Brain Research, Current Biology, Brain Structure and Function, Brain Research, Physiology & Behavior, European Journal of Neuroscience, Experimental and Clinical Psychopharmacology, ACS Chemical Neuroscience, Prevention Science, Global Pediatric Health, Molecular Neuropsychiatry, Neuropharmacology, Brain, Behavior, and Immunity, Physiology & Behavior, CNS Drugs, Journal of Neuroscience Research, eNeuro*

### Grant Review Panels

2018-2020 Tobacco-Related Disease Research Program of California, Neuroscience Review Committee Panelist

2019 Early Career Review Program, Biobehavioral Regulation, Learning, and Ethology (BRLE) Study Section Panelist

2019 NIH Review Panelist: 2020/01 ZRG1 MDCN-R (04) M. Member Conflict: Neuropharmacology

2020 NIH Review Panelist: ZCA1 RPRB-J O1 P. National Cancer Institute Special Emphasis Panel, NCI Program Project (P01) Review

### Community Service

ASU Brain Fair for Children (2016)

ASU Brain Fair for Children (2017)

Spirit of the Senses Guest Speaker, “Addiction and the Brain”, Phoenix, AZ (2018)

### **SPEAKING ENGAGEMENTS**

1. **Gipson, C.D.** A translational model of mood-based drug abuse. Invited talk for the Outstanding Dissertation Award, American Psychological Association Division 28 (August 2011), Washington, DC.
2. **Gipson, C.D.,** Kupchik, Y., Reissner, K.J., & Kalivas, P.W. (oral presentation). Nicotine relapse is associated with rapid synaptic potentiation: Role of GluR1 and NMDA2B-containing receptors. Society for Research on Nicotine and Tobacco (March 2013), Boston MA.

3. **Gipson, C.D.**, & Kalivas, P.W. (invited talk). Preclinical approaches to preventing cigarette use: Understanding the neurobiology of addiction to discover new pharmacotherapeutic targets. Tobacco Research Interest Group, Medical University of South Carolina, Charleston, S.C.
4. **Gipson, C.D.**, Shen, H., Kupchik, Y.M., & Kalivas, P.W. (invited oral presentation). Prelimbic cortex and ventral tegmental area modulate nucleus accumbens core synaptic plasticity during cue- and cocaine-reinstated drug seeking. *Dopamine* (May 2013), Alghero, Sardinia.
5. **Gipson, C.D.** (Chair and oral presenter in a minisymposium). Rapid synaptic potentiation and alterations in glutamatergic signaling: New pharmacotherapeutic targets in reversing nicotine addiction. *College on Problems of Drug Dependence, San Diego*.
6. **Gipson, C.D.** (invited oral presentation). Contributions of glial glutamate transport and NMDA receptors in nicotine relapse. Invited talk for Young Psychopharmacologist Award, American Psychological Association Division 28, Washington DC.
7. **Gipson, C.D.** Rapid synaptic plasticity in nicotine and cocaine relapse. Yale, Department of Psychiatry, Invited Speaker. August 2014.
8. **Gipson, C.D.** Rapid synaptic plasticity in nicotine and cocaine relapse. Rockefeller University, September 2014.
9. **Gipson, C.D.** N-Acetylcysteine Prevents Nicotine Relapse-Associated Synaptic Plasticity. Scientific Retreat on Tobacco Related Research: "Making Tobacco History: Accelerating Efforts to Reduce Harm Caused by Tobacco". October 2014, MUSC.
10. **Gipson, C.D.** Rapid, transient plasticity in cocaine and nicotine relapse: new pharmacotherapeutic avenues. University of Mississippi Medical Center, October 2014.
11. **Gipson, C.D.** Rapid plasticity in cocaine and nicotine relapse: new pharmacotherapeutic treatment strategies to reduce relapse vulnerability. Johns Hopkins Departmental Research Conference, Department of Psychiatry and Behavioral Sciences, November 2014.
12. **Gipson, C.D.** The potentiated synapse in addiction: Identifying novel targets to inhibit relapse vulnerability. Arizona State University, Department of Psychology Colloquium Series, February 2015.
13. **Gipson, C.D.** Synaptic plasticity in nicotine addiction. Barrow Neurological Institute, Phoenix, Arizona, November 2015.
14. **Gipson, C.D.** "Relapse triggered by memory cues elicits different neurobiological changes depending on the cue type." Neuroscience 6<sup>th</sup> Research Symposium, Barrow Neurological Institute, Phoenix, Arizona, January 2016.
15. **Gipson, C.D.** "Aberrant synaptic plasticity in drug relapse: new therapeutic targets and treatment strategies to reduce relapse vulnerability." Neuroscience 7<sup>th</sup> Research Symposium, Arizona State University, Phoenix Arizona, January 2017.
16. **Gipson, C.D.** "Aberrant synaptic plasticity in cued nicotine seeking: new therapeutic targets and treatment strategies to reduce nicotine relapse vulnerability". Center for Drug Discovery, Research Triangle Institute Research Seminar, Invited Speaker, July 2017.
17. **Gipson, C.D.** "Neuroinflammation, glutamate, and nicotine relapse". Temple University, Invited Speaker, February 2018.
18. **Gipson, C.D.** "Searching for New Pharmacotherapeutic Targets for Addiction in Glutamate Plasticity". Barrow Neurological Institute, Phoenix, AZ, May 2018.
19. **Gipson, C.D.** "Neuroimmune Mechanisms of Nicotine Addiction". University of Arizona, Downtown Medical Campus, February 2019.



20. **Gipson, C.D.** “Translating Addiction Neuroscience: Discovering New Therapeutic Targets and Treatment Strategies”. University of Kentucky, Department of Family and Community Medicine. August 2019.
21. **Gipson, C.D.** “Translating Addiction Neuroscience: Discovering New Therapeutic Targets and Treatment Strategies”. Virginia Commonwealth University, Department of Pharmacology and Toxicology. September 2019.
22. Leyrer-Jackson, J., **Gipson, C.D.** “Using viral vectors to control neuronal activity and manipulate nicotine relapse in a rodent self-administration model”. Invited talk for my post-doctoral fellow, Viroholics Seminar Series, Center for Immunotherapy, Vaccines, and Virotherapy, ASU. November 2019.

## RESEARCH & INTELLECTUAL CONTRIBUTIONS

### PUBLICATIONS

55. **Gipson, C.D.**, Bimonte-Nelson, H.A. (in press). Interactions between Reproductive Transitions during Aging and Addiction: Promoting Translational Crosstalk between Different Fields of Research. *Behavioural Pharmacology*. **Impact Factor: 2.2.**
54. Leyrer-Jackson, J.M., Pina, J.A., McCallum, J., Olive, M.F., **Gipson, C.D.** (2020). Direct administration of ifenprodil and citalopram into the nucleus accumbens inhibits cue-induced nicotine seeking and associated glutamatergic plasticity. *Brain Structure and Function*. **Impact Factor: 3.62.**
53. Leyrer-Jackson, J.M., Overby, P.F., Bull, A., Marusich, J.A., **Gipson, C.D.** (2020). Strain and sex matters: Differences in nicotine self-administration between outbred and recombinase-driver transgenic rat lines. *Experimental and Clinical Psychopharmacology*. PMID: 32297781. **Impact Factor: 2.35.**
52. **Gipson, C.D.**, Dunn, K.E., Bull, A., Ulangkaya, H., Hossain, A. (2020). Establishing preclinical withdrawal syndrome symptomatology following heroin self-administration in male and female rats. *Experimental and Clinical Psychopharmacology*. PMID: 32297787. **Impact Factor: 2.35.**
51. Leyrer-Jackson, J.M., Nagy, E.K., Hood, L.E., Newbern, J.M., **Gipson, C.D.**, Olive, M.F. (2020). Ethanol has concentration-dependent effects on hypothalamic POMC neuronal excitability. *Alcohol*. PMID: 32304714. **Impact Factor: 2.01.**
50. Powell, G.L., Beckmann, J.S., Marusich, J.A., **Gipson, C.D.** (2020). Nicotine reduction does not alter essential value of nicotine or reduce cue-induced reinstatement of nicotine seeking. *Drug and Alcohol Dependence*. PMID: 32362438. **Impact Factor: 3.32**
49. Dunn, K.E., Huhn, A.S., Bergeria, C.L., **Gipson, C.D.**, Weerts, E.M. (2019). Non-opioid neurotransmitter systems that contribute to opioid withdrawal syndrome: A review of preclinical and clinical evidence. *Journal of Pharmacology and Experimental Therapeutics*. pii: jpet.119.258004. doi: 10.1124/jpet.119.258004. **Impact Factor: 3.87.**

48. Namba, M.D., Kupchik, Y.M., Spencer, S.M., Garcia-Keller, C., Goenaga, J.G., Powell, J.L., Vicino, I.A., Hogue, I.B., **Gipson, C.D.** (2019). Accumbens Neuroimmune Signaling and Dysregulation of Astrocytic Glutamate Transport Underlie Conditioned Nicotine Seeking Behavior. *Addiction Biology*. e12797. doi: 10.1111/adb.1279. **Impact Factor: 5.93.**
47. Roberts-Wolfe, D.J., Heinsbroek, J.A., Spencer, S.M., Bobadilla, A.C., Smith, A.C.W., **Gipson, C.D.**, Kalivas, P.W. (in press). Transient synaptic potentiation in nucleus accumbens shell during refraining from cocaine seeking. *Addiction Biology*. **Impact Factor: 5.93.**
46. Siemsen, B.M., Reichel, C.M., Leong, J.C., Garcia-Keller, C., **Gipson, C.D.**, Spencer, S.M., McFaddin, J.A., Hooker, K.N., Kalivas, P.W., Scofield, M.D. (2019). Effects of methamphetamine self-administration and extinction on astrocyte structure and function in the nucleus accumbens core. *Neuroscience*, doi: 10.1016/j.neuroscience.2019.03.040. PMID: 30926546. **Impact Factor: 3.38**
45. Powell, G.L., Namba, M.D., Cabrera-Brown, G., Neisewander, J.L., Marusich, J.A., Beckmann, J.S., **Gipson, C.D.** (in press). Analysis of economic demand for nicotine using an abbreviated behavioral economic protocol in rats. *Drug and Alcohol Dependence*. **Impact Factor: 3.32**
44. Powell, G.L., Del Franco, A., Goenaga, J., Spencer, S., Schwartz, D., Stankeviciute, N., & **Gipson, C.D.** (2019). Effects of N-Acetylcysteine on accumbens synaptic plasticity and nicotine seeking. *Physiological Reports*.
43. Goenaga\*, J., Powell\*, G.L., Piña, J., Namba, M.D., Koebele, S., Prakapenka, A., McClure, E.A., Bimonte-Nelson, H.B., **Gipson, C.D.** (2019). N-Acetylcysteine inhibits cue-induced reinstatement of nicotine seeking in a sex-specific manner. *Addiction Biology*. **Impact Factor: 5.93**
42. Kleykamp, B.A., **Gipson, C.D.**, Maynard, O.M., Treur, J.L., & Oliver, J.A. (2018). Rethinking the career landscape for nicotine and tobacco trainees and early career professionals. *Nicotine & Tobacco Research*. PMID: 29660013. **Impact Factor: 3.81**
41. Namba, M., Tomek, S.E., Olive, M.F., Beckmann, J.S., & **Gipson, C.D.** (2018). The winding road to relapse: Forging a new understanding of cue-induced reinstatement models and their associated neural mechanisms. *Frontiers in Behavioral Neuroscience*. PMID: 29479311. **Impact Factor: 3.10**
40. Overby, P.F., Daniels, C.W., Goenaga, J., Powell, G.L., Del Franco, A.P., **Gipson, C.D.**, & Sanabria, F. (2018). Effects of nicotine self-administration on incentive salience in male Sprague-Dawley rats. *Psychopharmacology*, 235(4), 1121-1130. PMID: 29374305. **Impact Factor: 3.31**
39. Romero, K., Daniels, C., **Gipson, C.D.**, & Sanabria, F. (2018). Suppressive and enhancing effects of nicotine on food-seeking behavior. *Behavioral Brain Research*, 339, 130-139. PMID: 29175447 **Impact Factor: 3.00**
38. Bobadilla, A.C., Heinsbroek, J.A., **Gipson, C.D.**, Griffin, W., Fowler, C.D., Kenny, P., & Kalivas, P.W. (2017). Corticostriatal plasticity, neuronal ensembles, and regulation of drug-seeking

- behavior. *Progress in Brain Research* vol. "Addiction in Brain Research", 235: 93-112. PMID: 29054293.
37. Fowler, C.D.\*, **Gipson, C.D.\***, Kleykamp, A., Rupperecht, L.E., Rees, V.W., Gould, T.J., Oliver, J., Bagdas, D., Damaj, I., Schmidt, H.D., Harrell, P.T., Duncan, A., De Biasi, M. (2017). Basic science and public policy: Informed regulation for nicotine and tobacco products. *Nicotine and Tobacco Research*. PMID: 29065200. \*these authors contributed equally to this work. **Impact Factor: 3.81**
36. Smith, A.C.W.\*, Scofield, M.D.\*, Heinsbroek, J.A.\*, **Gipson, C.D.\***, Neuhofer, D., Roberts-Wolfe, D.J., Spencer, S., Stankeviciute, N.M., Smith, R., Allen, N.P., Lorang, M.R., Griffin III, W.C., Boger, H.A., & Kalivas, P.W. (2017). Accumbens nNOS interneurons regulate cocaine relapse. *Journal of Neuroscience* 37(4), 742-756. \*These authors contributed equally to this work. PMID: 27920147. **Impact Factor: 6.34**
35. **Gipson, C.D.**, & Olive, M.F. (2017). Structural and functional plasticity of dendritic spines – cause or consequence of behavior? *Genes, Brain, and Behavior* 16(1), 101-117. PMID: 27561549. **Impact Factor: 3.66**
34. **Gipson, C.D.** (2016). Treating addiction: Unraveling the relationship between N-Acetylcysteine, glial glutamate transport, and behavior. *Biological Psychiatry* 80(3), e11-12. PMID: 27402473. **Impact Factor: 11.21**
33. Scofield, M.D., Heinsbroek, J., **Gipson, C.D.**, Spencer, S., Smith, A.C.W., Kalivas, P.W. (2016). The Nucleus Accumbens: Mechanisms of Addiction Across Drug Classes Reflect the Importance of Glutamate Homeostasis. *Pharmacological Reviews* 68(3), 816-71. PMID: 27363441. **Impact Factor: 17.10**
32. Garcia-Keller, C., Kupchik, Y.M., **Gipson, C.D.**, Brown, R.M., Spencer, S., Bollati, F., Esparza, M.A., Roberts-Wolfe, D.J., Heinsbroek, J., Bobadilla, A-C., Cancela, L.M., Kalivas, P.W. (2016). Glutamatergic mechanisms of comorbidity between acute stress and cocaine self-administration. *Molecular Psychiatry* 21(8), 1063-9. **Impact Factor: 14.50**
31. Darna, M., Beckmann, J.S., **Gipson, C.D.**, Bardo, M.T., Dwoskin, L.P. (2015). Effect of environmental enrichment on dopamine and serotonin transporters and glutamate neurotransmission in medial prefrontal and orbitofrontal cortex. *Brain Research*, 1599, 115-25. PMID: 25536304. **Impact Factor: 2.7**
30. Yates, J., Darna, M., **Gipson, C.D.**, Dwoskin, L.P., Bardo, M.T. (2015). Dissociable roles of dopamine and serotonin transporter function in a rat model of negative urgency. *Behavioural Brain Research*, 291, 201-8. PMID: 26005123. **Impact Factor: 3.00**
29. Smith, A.W., Kupchik, Y.M., Scofield, M.D., **Gipson, C.D.**, Wiggins, A.T., Thomas, C.A., & Kalivas, P.W. (2014). Synaptic plasticity mediating cocaine relapse requires matrix metalloproteinases. *Nature Neuroscience* 17(12), 1655-7. PMID: 25326689. **Impact Factor: 16.72**

28. **Gipson, C.D.**, & Kalivas, P.W. (2014). More Cocaine = More Glutamate = More Addiction. *Biological Psychiatry*, 76(10), 765-6. PMID: 25442059. **Impact Factor: 11.21**
27. McClure, E.A., Baker, N.L., **Gipson, C.D.**, Carpenter, M.J., Roper, A., Froeliger, B., Kalivas, P.W., & Gray, K.M. (2014). An open-label pilot trial of N-acetylcysteine and varenicline in adult cigarette smokers. *The American Journal of Drug and Alcohol Abuse*, 41(1), 52-6. PMID: 25062287. **Impact Factor: 1.82**
26. Kalivas, P.W. & **Gipson, C.D.** (2014). "Mourning" a Lost Opportunity. Commentary on: A *multistep general theory of transition to addiction* by Piazza and Deroche-Gamonet (2013), *Psychopharmacology*, 231(19), 3921-2. PMID: 24862367. **Impact Factor: 3.86**
25. Reissner, K.J., **Gipson, C.D.**, Knackstedt, L.A., Scofield, M.D., & Kalivas, P.W. (2015). Glutamate Transporter GLT-1 Mediates N-acetylcysteine Inhibition of Cocaine Reinstatement. *Addiction Biology*, 20(2) 316-23. PMID: 24612076. **Impact Factor: 5.93**
24. McClure, E.A., **Gipson, C.D.**, Malcolm, R., Kalivas, P.W., Gray, K.M. (2014). Potential Role of N-Acetyl-Cysteine in the Management of Substance Use Disorders. *CNS Drugs* 28(2), 95-106. PMID: 24442756. **Impact Factor: 5.11**
23. Shen, H., **Gipson, C.D.**, Huijts, M.J., & Kalivas, P.W. (2013). Prelimbic cortex and ventral tegmental area modulate synaptic plasticity differentially in nucleus accumbens during cocaine-reinstated drug seeking. *Neuropsychopharmacology*, 39(5), 1169-77. PMID: 24232172. **IF: 7.05**
22. **Gipson, C.D.**, Kupchik, Y.M., & Kalivas, P.W. (2013). Rapid, transient synaptic plasticity in addiction. NIDA 40<sup>th</sup> anniversary edition of *Neuropharmacology 76 Pt B*, 276-86. PMID: 23639436. **Impact Factor: 5.11**
21. Stankeviciute, N., Scofield, M., Kalivas, P.W., & **Gipson, C.D.** (2014). Context-induced reinstatement elicits rapid, reversible increases in dendritic spine morphology in nucleus accumbens core. *Addiction Biology* 19(6), 972-4. PMID: 23648005. **Impact Factor: 5.93**
20. Yates, J.R., Perry, J.L., Meyer, A.C., **Gipson, C.D.**, Charnigo, R., & Bardo, M.T. (2014). Role of medial prefrontal and orbitofrontal monoamine transporters and receptors in performance in an adjusting delay discounting procedure. *Brain Research* 1574, 26-36. PMID: 24928616. **Impact Factor: 2.73**
19. **Gipson, C.D.**, Reissner, K.J., Kupchik, Y.M., Smith, A.W., Stankeviciute, N., Hensley-Simon, M.E., & Kalivas, P.W. (2013). Reinstatement of nicotine seeking is mediated by glutamatergic plasticity. *Proceedings of the National Academy of Sciences*, 110(22), 9124-9. PMID: 23671067. **Impact Factor: 9.42**
18. **Gipson, C.D.\***, Kupchik, Y.M.\*, Shen, H.\*, Reissner, K.J., Thomas, C.A., & Kalivas, P.W. (2013). Relapse induced by cues predicting cocaine depends on rapid, transient synaptic potentiation. *Neuron*, 77(5), 867-72. PMID: 23473317. **Impact Factor: 15.05**

17. Yates, J.R., Darna, M., **Gipson, C.D.**, Dwoskin, L.P., & Bardo, M.T. (2012). Isolation rearing as a preclinical model of attention/deficit-hyperactivity disorder. *Behavioral Brain Research*, 234(2), 292-8. PMID: 22580232. **Impact Factor: 3.00**
16. Yates, J., Beckmann, J.S., **Gipson, C.D.**, Marusich, J.A., & Bardo, M.T. (2012). High impulsivity in rats predicts amphetamine conditioned place preference in rats. *Pharmacology, Biochemistry, & Behavior*, 100(3), 370-6. PMID: 21807020. **Impact Factor: 2.78**
15. Alvers, K.A., Marusich, J.A., **Gipson, C.D.**, Beckmann, J.S., & Bardo, M.T. (2012). Environmental enrichment during development decreases intravenous self-administration of methylphenidate at low unit doses in rats. *Behavioural Pharmacology*, 23(7), 650-7. PMID: 22914073. **Impact Factor: 2.15**
14. Beckmann, J.S., **Gipson, C.D.**, Marusich, J.A., & Bardo, M.T. (2012). Escalation of cocaine intake with extended access in rats: dysregulated addiction or regulated acquisition? *Psychopharmacology*, 222(2), 257-67. PMID: 22249361. **Impact Factor: 3.86**
13. **Gipson, C.D.**, Beckmann, J.S., Adams, Z., Marusich, J.A., Nesland, T.O., Yates, J.R., Kelly, T.H., & Bardo, M.T. (2011). A translational behavioral model of mood-based impulsivity: Implications for drug self-administration. *Drug and Alcohol Dependence*, 122(1-2), 93-9. PMID: 21975194. **Impact Factor: 3.28**
12. Marusich, J.A., McCuddy, W.T., Beckmann, J.S., **Gipson, C.D.**, & Bardo, M.T. (2011). Strain differences in self-administration of methylphenidate and sucrose pellets in a rat model of attention-deficit hyperactivity disorder. *Behavioural Pharmacology*, 22(8), 794-804. PMID: 22015805. **Impact Factor: 2.15**
11. **Gipson, C.D.**, Yates, J., Beckmann, J.S., Marusich, J.A., Zentall, T.R., & Bardo, M.T. (2011). Social facilitation of d-amphetamine self-administration in the rat. *Experimental and Clinical Psychopharmacology*, 19(6), 409-19. PMID: 2176703. **Impact Factor: 2.71**
10. **Gipson, C.D.**, Beckmann, J.S., El-Maraghi, S., Marusich, J.A., & Bardo, M.T. (2011). Effect of environmental enrichment on escalation of cocaine self-administration in rats. *Psychopharmacology*, 214(2), 557-566. PMID: 21057774. **Impact Factor: 3.86**
9. Marusich, J.A., Beckmann, J.S., **Gipson, C.D.**, & Bardo, M.T. (2011). Cue effects on methylphenidate self-administration in rats. *Behavioural Pharmacology*, 22(7), 714-7. PMID: 21897204. **Impact Factor: 2.15**
8. Beckmann, J.S., Marusich, J.A., **Gipson, C.D.**, & Bardo, M.T. (2010). Novelty seeking, incentive salience and acquisition of cocaine self-administration in the rat. *Behavioral Brain Research*, 26(1), 159-165. PMID: 20655954. **Impact Factor: 3.00**
7. Marusich, J.A., Beckmann, J.S., **Gipson, C.D.**, & Bardo, M.T. (2010). Methylphenidate as a reinforcer for rats: contingent delivery and escalation. *Experimental and Clinical Psychopharmacology*, 18(3), 257-266. PMID: 20545390. **Impact Factor: 2.71**

6. **Gipson, C.D.**, & Bardo, M.T. (2009). Extended access to amphetamine self-administration increases impulsive choice in a delay discounting task in rats. *Psychopharmacology*, 207, 391-400. PMID: 19784636. **Impact Factor: 3.86**
5. **Gipson, C.D.**, Miller, H.C., Alessandri, J.J., & Zentall, T.R. (2009). Within-trial contrast: The effect of probability of reinforcement in training. *Behavioral Processes*, 82(2), 126-32.
4. **Gipson, C.D.**, Alessandri, J.J.D., Miller, H.C., & Zentall, T.R. (2009). Preference for 50% reinforcement over 75% reinforcement by pigeons. *Learning & Behavior*, 37(4), 289-98. PMID: 19815925. **Impact Factor: 1.48**
3. Miller, H.C., **Gipson, C.D.**, Vaughn, A., Rayburn-Reeves, R., & Zentall, T.R. (2009). Object permanence in dogs: Invisible displacement in a rotation task. *Psychonomic Bulletin & Review*, 16(1), 150-155. **Impact Factor: 3.08**
2. **Gipson, C.D.**, DiGian, K.A., Miller, H.C., & Zentall, T.R. (2008). Radial maze analog for pigeons: Evidence for flexible coding strategies may result from faulty assumptions. *Learning & Motivation*, 39, 285-295. PMID: 19884963. **Impact Factor: 2.96**
1. O'Daly, M., Angulo, S., **Gipson, C.**, & Fantino, E. (2006). Influence of temporal context on value in the multiple-chains and successive-encounters procedures. *Journal of the Experimental Analysis of Behavior*, 85(3), 309-328. PMID: 16776054. **Impact Factor: 2.17**

Manuscripts Submitted, in Revision, or in Preparation:

1. Leyrer-Jackson, J.M., Overby, P.F., Newbern, J., Holter, M., Olive, M.F., **Gipson, C.D.** (submitted). Accumbens cholinergic interneurons control cue-induced nicotine seeking and associated glutamatergic plasticity. *eNeuro*.
2. Leyrer-Jackson, J.M., Bimonte-Nelson, H.A., Overby, P., **Gipson, C.D.** (in preparation). Synaptic plasticity in accumbens medium spiny neurons is critically regulated by 17- $\beta$ -estradiol following nicotine self-administration.
3. **Gipson, C.D.**, Bull, A.H., Overby, P.F., Rawls, S. (in preparation). The novel glutamate compound, Trigriluzole, inhibits cue-induced nicotine seeking behavior.
4. **Gipson, C.D.**, Overby, P.F., Bull, A.H., Maher, E., Leyrer-Jackson, J.M., Beckmann, J.S., Koebele, S.V., Bimonte-Nelson, H.A. (in preparation). Ovarian Hormones and Contraceptive Estrogen Alter Nicotine Demand Intensity and Accumbens Estrogen and Dopamine Receptor Expression.
5. **Gipson, C.D.**, Rawls, S., Scofield, M.D., Siemsen, B., Aktipis, A. (under review). Interactions of Neuroimmune Signaling, Glutamate Plasticity, and the Gut Microbiome in Addiction. *Brain, Behavior, and Immunity*.

Book Chapters

1. **Gipson, C.D.**, & Kalivas, P.W. Pharmacotherapies in drug addiction. *In: Drug Discovery for Psychiatric Disorders*. Rankovic, Z., Bingham, M., Hargreaves, R., & Nestler, E. (Eds). Royal Society of Chemistry (2012).
2. **Gipson, C.D.** & Kalivas, P.W. Neural Basis of Drug Addiction. *In: Neurobiology of Drug Abuse in Adolescents*, São Paulo, Brazil (2011).

3. Olive, M.F., & **Gipson, C.D.** (book chapter). Conditioning of Addiction. 2nd edition of *Addiction Medicine* (2016).
4. Olive MF, Powell G, McClure EA, & **Gipson, C.D.** Neurotransmitter systems: glutamate. In: *The Therapeutic Use of NAC in Medicine* (RE Frye, M Berk, eds), Adis Publications, Springer Healthcare, Auckland, New Zealand (in press).
5. Powell G, McClure EA, Olive MF, & **Gipson, C.D.** Clinical treatment of addictive disorders with N-acetylcysteine. In: *The Therapeutic Use of NAC in Medicine* (RE Frye, M Berk, eds), Adis Publications, Springer Healthcare, Auckland, New Zealand (in press).
6. Olive, M.F., Del Franco, A.P., & **Gipson, C.D.** Diolistic labeling and analysis of dendritic spines. In: *Neurotrophic Factors: Methods and Protocols, 2<sup>nd</sup> Ed.* (SD Skaper, ed). Springer Protocols, Methods in Molecular Biology series (2018), 1727: 179-200. PMID: 29222782.
7. Namba, M., Powell, G., & **Gipson, C.D.** Brain gene expression in the context of nicotine rewards. In: *Neuroscience of Nicotine: Mechanisms and Treatments*. Academic Press (in press).
8. Piña, J., Leyrer-Jackson, J.M., Namba, M.D., Cabrera-Brown, G., & **Gipson, C.D.** Social influences on nicotine-related behaviors in rodents. Elsevier (in press).
9. Leyrer-Jackson, J.M., Olive, M.F., & **Gipson, C.D.** Whole-Cell Patch-Clamp Electrophysiology to Study Ionotropic Glutamatergic Receptors and Their Roles in Addiction. *Methods Mol Biol* 1941: 107-135 (2019).
10. **Gipson, C.D.**, & Fowler, C.D. Nicotinic receptors underlying nicotine dependence: Evidence from transgenic mouse models. In: *Cholinergic modulation of behavior. Current Trends in Behavioural Neurosciences*. Springer (in press).

#### Pharmaceutical Reports

1. Bardo, M.T., **Gipson, C.D.**, & Denehy, E.D. (2008). Effects of Targacept compounds TI-297455, TI-308691, and TI-314017 on intravenous nicotine self-administration in rats. Targacept, Inc.
2. Bardo, M.T., **Gipson, C.D.**, & Denehy, E.D. (Supplement, 2008). Effects of repeated TI-314017 on intravenous nicotine self-administration in rats. Targacept, Inc.

### **ABSTRACT PRESENTATIONS**

#### 2005

**Gipson, C.D.**, & Wixted, J. T. Retention-test ambiguity versus single sample detection as an explanation for retention biases. Poster for the Association for Behavioral Analysis Annual Convention. Poster Presentation, Chicago, IL.

#### 2007

**Gipson, C.D.**, DiGian, K.A., & Zentall, T.R. Evidence for coding strategies in pigeons may result from faulty assumptions. Oral Presentation, Conference of Comparative Cognition, Melbourne, FL.

**Gipson, C.D.**, & Zentall, T.R. Pigeons May Use Neither Retrospective Nor Prospective Spatial Coding When Performing on the Radial Maze with Delays. Oral Presentation, Tri-State Conference, Purdue University.

**Gipson, C.D.,** & Zentall, T.R. Pigeons' Coding Strategies in a Radial-Arm Maze. Oral Presentation, The University of Kentucky Center for Ecology, Evolution, and Behavior Spring Research Symposium, Lexington, KY.

**Gipson, C.D.,** & Zentall, T.R. Coding strategies in pigeons: Planning ahead or remembering the past? Poster Presentation for the Association of Behavioral Analysis Annual Convention, San Diego, CA.

**Gipson, C.D.,** & Zentall, T.R. Coding strategies in pigeons: Planning ahead or remembering the past? Poster for the Society for the Quantitative Analysis of Behavior Annual Convention, San Diego, CA.

## 2008

**Gipson, C.D.,** DiGian, K.A., & Zentall, T.R. Dual Coding in Pigeons. Oral Presentation, Cognitive Science Day, University of Kentucky, Lexington, KY.

**Gipson, C.D.,** Alessandri, J., & Zentall, T.R. Preference for Intermittent Reinforcement in Pigeons. Oral Presentation, Conference of Comparative Cognition, Melbourne, FL.

**Gipson, C.D.,** Alessandri, J., & Zentall, T.R. Preference for Intermittent Reinforcement in Pigeons. Oral Presentation, Tri-State Conference, University of Kentucky, Lexington, KY.

Stagner, J.P., **Gipson, C.D.,** Alessandri, J., Miller, H.C., & Zentall, T.R. Oral Presentation, Preference for 50% Reinforcement Over 75% Reinforcement by Pigeons. Comparative Cognition and Learning, Chicago, IL.

## 2009

Stagner, J.P., **Gipson, C.D.,** Miller, H., Alessandri, J., & Zentall, T.R. A gambling analogy: Pigeons prefer 50% reinforcement over 75% reinforcement. Midwestern Psychological Association, Chicago, IL.

**Gipson, C.D.,** & Bardo, M.T. The effect of short versus long access to d-amphetamine self-administration on a delay discounting task in rats. Oral Presentation, NIDA Training Grant Symposium, University of Kentucky, Lexington, KY.

**Gipson, C.D.,** & Bardo, M.T. Effects of varied access to d-amphetamine self-administration on a delay discounting task in rats. Poster Presentation, Bluegrass Society for Neuroscience Spring Neuroscience Day, University of Kentucky, Lexington, KY.

**Gipson, C.D.,** & Bardo, M.T. Effect of varied access to d-amphetamine self-administration on impulsive choice in a delay discounting task in rats. Poster for the Society for the Quantitative Analysis of Behavior, Phoenix, AZ.

**Gipson, C.D.,** & Bardo, M.T. The effect of long and short access to d-amphetamine self-administration on a delay discounting task in rats. Poster for the College on Problems of Drug Dependence, Reno, NV.



**Gipson, C.D.**, Beckmann, J., & Bardo, M.T. Effect of environmental enrichment on escalation of cocaine self-administration in rats. Poster Presentation, European Behavioural Pharmacology Society, Rome, Italy.

**Gipson, C.D.**, & Bardo, M.T. The role of dopamine and serotonin receptors in the orbitofrontal cortex on impulsive choice in rats. NIDA Oral Presentation, Training Grant Symposium, University of Kentucky.

## 2010

**Gipson, C.D.**, Beckmann, J.S. & Bardo, M.T. Environmental Enrichment Protects against Acquisition but not Escalation of Cocaine Self-Administration in Rats. Poster Presentation, Center for Clinical and Translational Science, University of Kentucky, Lexington, KY.

**Gipson, C.D.**, Beckmann, J.S., & Bardo, M.T. Social Facilitation as a Preclinical Model of Drug Abuse. Oral Presentation, Midwestern Psychological Association, Chicago, IL.

**Gipson, C.D.**, El-Maraghi, S., Beckmann, J.S., & Bardo, M.T. Environmental Enrichment Protects against Acquisition but not Escalation of Cocaine Self-Administration in Rats. Poster Presentation, Midwestern Psychological Association, Chicago, IL.

**Gipson, C.D.**, Kelly, T.H., & Bardo, M.T. The reinforcement omission effect as a translational model of negative urgency. Society for the Quantitative Analysis of Behavior, San Antonio, TX.

**Gipson, C.D.**, & Bardo, M.T. An animal model of negative urgency and the effect of reward omission on d-amphetamine self-administration. Oral Presentation, College on the Problems of Drug Dependence, Scottsdale, AZ.

**Gipson, C.D.**, Beckmann, J.S., & Bardo, M.T. Environmental enrichment and escalation of cocaine self-administration in rats. Poster Presentation, American Psychological Association, Division 28, San Diego, CA.

**Gipson, C.D.**, Perry, J.L., Yates, J., Meyer, A.C., Beckmann, J.S., & Bardo, M.T. (poster) Role of dopamine and serotonin receptors in medial prefrontal and orbitofrontal cortex on impulsive choice in rats. Society for Neuroscience, San Diego, CA.

## 2011

El-Maraghi, S., Beckmann, J.S., **Gipson, C.D.**, & Bardo, M.T. (poster) Stimulus control of escalated cocaine intake and short access sessions. Poster Presentation, Midwestern Psychological Association, Chicago, IL.

**Gipson, C.D.**, Shen, H., & Kalivas, P.W. (poster) The role of dendritic spine morphology in cue-induced reinstatement of cocaine-seeking behavior in rats. Frontiers in Neuroscience, Seabrook Island, SC.

**Gipson, C.D.**, Marusich, J.A., Alvers, K.A., & Bardo, M.T. (poster) Differences in environmental enrichment predict self-administration of a low unit dose of methylphenidate in rats. College on Problems of Drug Dependence, Hollywood, FL.

Beckmann, J.S., **Gipson, C.D.**, & Bardo, M.T. (poster) Stimulus control of cocaine escalation and short access sessions. College on Problems of Drug Dependence, Hollywood, FL.

**Gipson, C.D.** (invited talk) A translational model of mood-based drug abuse. American Psychological Association Division 28, Washington, DC.

**Gipson, C.D.**, Shen, H., & Kalivas, P.W. (poster) Opposite changes in spine morphology are produced by cue- and context-induced versus cocaine-induced drug seeking. Society for Neuroscience, Washington, D.C.

## 2012

**Gipson, C.D.**, Kupchik, Y., Shen, H., Reissner, K.J., Thomas, C.A., & Kalivas, P.W. (poster) Rapid synaptic and morphological changes in nucleus accumbens core during cocaine relapse. Frontiers in Neuroscience, Seabrook Island, SC.

**Gipson, C.D.**, & Kalivas, P.W. (invited talk). Preclinical approaches to preventing cigarette use: Understanding the neurobiology of addiction to discover new pharmacotherapeutic targets. Tobacco Research Interest Group, Medical University of South Carolina, Charleston, S.C.

**Gipson, C.D.**, & Kalivas, P.W. (talk). Individual differences in cue-induced cocaine relapse are associated with rapid synaptic potentiation. Society for Neuroscience nanosymposium: Vulnerability to Drug Self-Administration and Addiction. New Orleans, L.A.

**Gipson, C.D.**, Kupchik, Y.M., Reissner, K.J., Smith, A.W., & Kalivas, P.W. (invited poster through SRNT). Alterations in synaptic potentiation and glutamatergic signaling in nicotine abuse. NIDA presymposium, Society for Neuroscience. New Orleans, L.A.

**Gipson, C.D.**, Kupchik, Y.M., Reissner, K.J., Smith, A.C., & Kalivas, P.W. (invited poster through the 6<sup>th</sup> Annual Julius Axelrod Symposium). Rapid Synaptic Potentiation in Nicotine Relapse: Role of GluR1 and NMDA2b-Containing Receptors. 6<sup>th</sup> Annual Julius Axelrod Symposium (NIDA), Society for Neuroscience, New Orleans, L.A.

Shen, H., **Gipson, C.D.**, & Kalivas, P.W. (poster). Prelimbic prefrontal cortex and ventral tegmental area cooperatively modulate synaptic adaptation in nucleus accumbens during cocaine-reinstated drug seeking. Society for Neuroscience, New Orleans, LA.

Roberts-Wolfe, D.J., Kalivas, P.W., & **Gipson, C.D.** (poster) Differential rapid synaptic potentiation in nucleus accumbens core versus shell during cocaine cue-induced relapse and extinction. Neuropalooza, College of Charleston/Medical University of South Carolina, SC.

Stankeviciute, N., Kupchik, Y., Reissner, K., Kalivas, P.W., & **Gipson, C.D.** (poster) Rapid synaptic potentiation in nicotine relapse: Role of GluR1 and NR2B-containing NMDA receptors. Neuropalooza, College of Charleston/Medical University of South Carolina, SC.

Smith, A.W., **Gipson, C.D.**, & Kalivas, P.W. (poster) Gelatinase inhibition prevents cue-induced reinstatement of cocaine seeking and associated morphological changes in dendritic spines. Neuropalooza, College of Charleston/Medical University of South Carolina, SC.

Stankeviciute, N., Kalivas, P.W., & **Gipson, C.D.** (poster) Changes in spine morphology produced by context-induced cocaine seeking. MUSC Research Day, Charleston, SC.

Smith, A.W., **Gipson, C.D.**, & Kalivas, P.W. (poster) Inhibition of matrix metalloproteinases-2 and -9 attenuate cue-induced reinstatement of cocaine seeking and associated morphological plasticity. MUSC Research Day, Charleston, S.C.

Roberts-Wolfe, D.J., Kalivas, P.W., & **Gipson, C.D.** (poster) Differential rapid synaptic potentiation in nucleus accumbens core versus shell during cocaine cue-induced relapse and extinction. MUSC Research Day, Charleston, S.C.

**Gipson, C.D.**, & Kalivas, P.W. (invited poster/travel award). Alterations in synaptic plasticity and glutamatergic signaling in nicotine addiction. American College of Neuropsychopharmacology, Hollywood, FL.

## 2013

**Gipson, C.D.**, Shen, H., Kupchik, Y.M., & Kalivas, P.W. (invited oral presentation). Prelimbic cortex and ventral tegmental area modulate nucleus accumbens core synaptic plasticity during cue- and cocaine-reinstated drug seeking. Dopamine (May 2013), Alghero, Sardinia.

**Gipson, C.D.**, Kupchik, Y., Reissner, K.J., Smith, A.C., & Kalivas, P.W. (oral presentation). Nicotine relapse is associated with rapid synaptic potentiation: Role of GluR1 and NMDA2B-containing receptors. SRNT, Boston MA (March 2013)

Kupchik, Y.M., **Gipson, C.D.**, Kalivas, P.W. (poster). Rapid synaptic changes occur during cue-induced relapse to cocaine and nicotine. Abstract for the Israeli Society for Biological Psychiatry, Kibuts HaGoshrim, Israel.

**Gipson, C.D.** (Chair and oral presenter in a minisymposium). Rapid synaptic potentiation and alterations in glutamatergic signaling: New pharmacotherapeutic targets in reversing nicotine addiction. College on Problems of Drug Dependence, San Diego.

**Gipson, C.D.**, Kupchik, Y., Reissner, K.J., Stankeviciute, N., Smith, A.C.W., & Kalivas, P.W. (poster). Reinstatement of nicotine seeking is mediated by glutamatergic plasticity. Frontiers in Neuroscience, Charleston, S.C.

**Gipson, C.D.**, Kalivas, P.W. (poster). Contributions of Glial Glutamate Transport and NMDA Receptors in Nicotine Relapse. American College of Neuropsychopharmacology, Hollywood, FL.

## 2014

**Gipson, C.D.**, Stankeviciute, N., McClure, E.A., Gray, K., Froeliger, B., Kalivas, P.W. (oral presentation). Contributions of glial glutamate transport and NMDA receptors in nicotine relapse. College on Problems of Drug Dependence, San Juan, Puerto Rico.

**Gipson, C.D.** (invited oral presentation). Contributions of glial glutamate transport and NMDA receptors in nicotine relapse. American Psychological Association Division 28, Young Psychopharmacologist Award presentation, Washington DC.

**Gipson, C.D.**, Spencer, S., Stankeviciute, N., Allen, N., Smith, R.J., & Kalivas, P.W. (poster). Cue induced cocaine seeking involves nucleus accumbens core glutamate overflow mediated by mGluR2/3 and mGluR5. Society for Neuroscience, Washington DC.

Kupchik, Y., Brown, R., **Gipson, C.D.**, Stefanik, M.T., & Kalivas, P.W. (poster). When motivation becomes maladaptive – similarities between drug addiction and obesity. European Neuropsychopharmacology.

Heinsbroek, J., Kupchik, Y., Scofield, M.D., Kalivas, P.W., & **Gipson, C.D.** (poster). Rapid transient plasticity in dopamine D1 and D2 receptor expressing medium spiny neurons in the addiction circuitry mediate relapse to cocaine seeking. Society for Neuroscience, Washington DC.

## 2015

**Gipson, C.D.**, Kalivas, P.W. (oral presentation and session co-chair). N-Acetylcysteine inhibits nicotine relapse-associated synaptic plasticity in nicotine-withdrawn animals. College on Problems of Drug Dependence, Phoenix, AZ, June 2015.

## 2016

Powell, G., del Franco, A., Pagni, B., Goenaga, J., Scofield, M.D., **Gipson-Reichardt, C.D.** (poster). Role of accumbens nicotinic acetylcholine receptors in cue-induced nicotine seeking and synaptic plasticity. Barrow Neurological Institute Neuroscience Symposium, Jan 7 2016.

**Gipson, C.D.**, Powell, G., del Franco, A., Pagni, B., Goenaga, J., Scofield, M.D. (poster). Nicotinic acetylcholine receptors modulate cue-induced nicotine seeking and synaptic plasticity. Society for Research on Nicotine and Tobacco, March 5, 2016.

del Franco, A., Powell, G., Goenaga, J., Scofield, M.D., & **Gipson, C.D.** (poster). Nicotinic acetylcholine receptors regulate cue-induced nicotine seeking and accumbens synaptic plasticity. College on Problems of Drug Dependence, June 2016.

Roberts-Wolfe, D., Shields, C., **Gipson, C.D.**, Heinsbroek, J., Bobadilla, A.C., & Kalivas, P.W. (poster). Extinction training is required for transient synaptic potentiation in accumbens core and shell. Society for Neuroscience, November 2016.

Powell, G., del Franco, A., Garcia-Keller, C., Spencer, S., Stankeviciute, N., Schwartz, D., **Gipson, C.D.** (poster). N-Acetylcysteine inhibits cue-induced nicotine seeking and relapse-associated synaptic plasticity. Society for Neuroscience, November 2016.

Scofield, M.D., Heinsbroek, J.A, Garcia-Keller, C., Smith, A.W., **Gipson, C.D.**, & Kalivas, P.W. (poster). Evaluating of the Role of Nucleus Accumbens Nitric Oxide and Somatostatin Release in Cocaine Seeking. Society for Neuroscience, November 2016.

## 2017

Powell, G., Neisewander, J.L., Beckmann, J.S., Marusich, J.A., Del Franco, A., **Gipson, C.D.** (poster). Analysis of a new behavioral economics protocol for examination of consumption of drugs of abuse. Neuroscience 7<sup>th</sup> Research Symposium, Arizona State University, Phoenix Arizona.

Powell, G., del Franco, A., Garcia-Keller, C., Spencer, S., Stankeviciute, N., Schwartz, D., **Gipson, C.D.** (poster). N-Acetylcysteine inhibits cue-induced nicotine seeking and relapse-associated synaptic plasticity. Neuroscience 7<sup>th</sup> Research Symposium, Arizona State University, Phoenix Arizona.

Powell, G.L., Goenaga, J., Del Franco, A., Holter, M., Garcia, R., Vannan, A., Neisewander, J.L., & **Gipson, C.D.** (oral presentation). Developmental nicotine exposure induces persistent alterations in accumbens glutamatergic circuitry. *Society for Research on Nicotine & Tobacco*, Florence, Italy.

**Gipson, C.D.**, Powell, G.L., Del Franco, A., Holter, M., Garcia, R., Vannan, A., Goenaga, J., Neisewander, J.L. (oral presentation). Developmental nicotine exposure induces persistent alterations in accumbens glutamatergic circuitry. *Society of Biological Psychiatry*, San Diego, CA.

Overby, P.F., Daniels, C.W., **Gipson, C.D.**, & Sanabria, F. (poster). Self-administration of nicotine transiently enhances sign-tracking in rats. *Society for the Quantitative Analysis of Behavior*.

**Gipson, C.D.**, Namba, M., Goenaga, J., Powell, G., Del Franco, A.D., McCallum, J.J. (poster). N-acetylcysteine inhibits cue-induced nicotine seeking through a GLT-1-dependent mechanism and modulates neuroimmune signaling in the nucleus accumbens. *European Behavioural Pharmacology Society*, Crete.

Goenaga, J., McCallum, J.J., Del Franco, A., Powell, G., Namba, M., **Gipson, C.D.** Nicotine relapse-induced rapid potentiation of excitatory synapses is regulated by GluN2B-containing NMDA receptors in the nucleus accumbens core. *Society for Neuroscience*, Washington DC.

**Gipson, C.D.**, Powell, G.L., Del Franco, A., Holter, M., Garcia, R., Vannan, A., Goenaga, J., Neisewander, J.L. (poster). Developmental nicotine exposure induces persistent alterations in accumbens glutamatergic circuitry. *Society for Neuroscience*, Washington D.C.

Marusich, J.A., Powell, G., Beckmann, J.S., Neisewander, J.L., Del Franco, A., Goenaga, J., **Gipson, C.D.** Analysis of economic demand for nicotine using an abbreviated behavioral economics protocol in rats. *Society for Neuroscience*, Washington DC.

Zaczek, R., Myers, S.J., **Gipson, C.D.**, Wong, H., Lyuboslavsky, P., Kalivas, P.W., Laskowitz, D.T., Ruppia, K., Koszalka, G.W. (poster). NP10679: A pH-sensitive GluN2B inhibitor is effective in models of ischemia and nicotine relapse. *American College of Neuropsychopharmacology*, Palm Springs.

Gipson, C.D., Namba, M.N., Goenaga, J., Powell, G., McCallum, J.J. (poster). *N*-Acetylcysteine inhibits cue-induced nicotine seeking in a GLT-1-dependent manner and suppresses pro-inflammatory TNF- $\alpha$  expression in the nucleus accumbens core. *American College of Neuropsychopharmacology*, Palm Springs.

## 2018

**Gipson, C.D.**, Powell, G., Cabrera-Brown, G., Marusich, J.A., Beckmann J.S. Abrupt nicotine reduction increases essential value of nicotine and exacerbates reinstated nicotine seeking. Society for Research on Nicotine and Tobacco, Baltimore, MD.

**Gipson, C.D.**, Goenaga, J., Piña, J., Namba, M.D., Prakapenka, A., Koebele, S.V., Bimonte-Nelson, H. *N*-Acetylcysteine exacerbates cue-induced reinstatement of nicotine seeking in an estrous cycle phase-dependent manner. College on Problems of Drug Dependence, San Diego, CA.

Namba, M.D., Goenaga, J., **Gipson, C.D.** *N*-Acetylcysteine-mediated restoration of GLT-1 and inhibition of neuroinflammation in the nucleus accumbens core attenuates cue-induced nicotine seeking. College on Problems of Drug Dependence, San Diego, CA.

Namba, M.D., Goenaga, J., **Gipson, C.D.** *N*-Acetylcysteine-mediated restoration of GLT-1 and inhibition of neuroinflammation in the nucleus accumbens core attenuates cue-induced nicotine seeking. Society for Neuroscience, San Diego, CA.

Namba, M.D., **Gipson, C.D.** Glutamatergic and Neuroimmune Mechanisms of *N*-acetylcysteine-Mediated Inhibition of Cue-Induced Nicotine Seeking. *American College of Neuropsychopharmacology*, Hollywood, FL.

Leyrer-Jackson, J., McCallum, J.J., Namba, M.D., **Gipson, C.D.** Role of accumbens serotonin transport and NMDA receptors in nicotine relapse. *American College of Neuropsychopharmacology*, Hollywood, FL.

## 2019

**Gipson, C.D.**, Namba, M.D., Narayanan, S., Aktipis, A. Gut, Brain, and Nicotine Addiction: Nicotine Self-Administration is Associated with Changes in Gut Microbiota and Accumbens Pro-Inflammatory Cytokines. Society for Research on Nicotine and Tobacco, San Francisco, CA.

Jackson, J., Pina, J., Ulangkaya, H., Bimonte-Nelson, H.A., **Gipson, C.D.** Ovarian hormones mediate acquisition of nicotine self-administration and accumbens glutamatergic plasticity. College on Problems of Drug Dependence, San Antonio, TX.

Jackson, J., Pina, J., McCallum, J., Ulangkaya, H., **Gipson, C.D.** The role of accumbens serotonin transport and GluN2B-containing NMDA receptors in nicotine relapse. College on Problems of Drug Dependence, San Antonio, TX.

Jackson, J., Holter, M., Newbern, J., Brickner, M., Overby, P.F., **Gipson, C.D.** Chemogenetic inhibition of accumbens cholinergic interneurons inhibits nicotine seeking behavior. Society for Neuroscience, Chicago, IL.

**Gipson, C.D.**, Powell, G., Marusich, J.A., Beckmann, J.S. Abrupt nicotine reduction does not alter nicotine demand or reduce reinstated nicotine seeking. 2019 Tobacco Regulatory Science meeting, National Institutes of Health.

Jackson, J., Holter, M., Newbern, J., Brickner, M., Overby, P.F., **Gipson, C.D.** Chemogenetic inhibition of accumbens cholinergic interneurons inhibits nicotine seeking behavior. American College of Neuropsychopharmacology.

2020

**Gipson, C.D.** (Accepted Full Symposium). Aging and Addiction: Promoting Crosstalk Between Two Fields. Discussant, College on Problems of Drug Dependence, Virtual Conference.

Kaplan, B.A., **Gipson, C.D.**, Koffarnus, M.N. Bidirectional Increases in Valuation for Cigarettes and Opioids under Withdrawal of Either Substance in Co-Users. American Psychological Association, Division 28.

## **SPONSORED RESEARCH PROJECTS, GRANTS, & CONTRACT ACTIVITIES**

### **CURRENT:**

**R01 DA046526** (Gipson-Reichardt, PI) 09/30/2019-08/31/2024

“Neuroinflammatory and glutamatergic mechanisms of nicotine seeking”

The major goal is to reveal novel neurobiological mechanisms of neuroinflammation influencing glutamate plasticity, which could contribute to the development of novel therapeutic options aimed at promoting nicotine use cessation.

**R21 DA044479** (Gipson-Reichardt, PI) 07/15/2018-06/30/2021

“Cholinergic modulation of glutamatergic signaling in nicotine addiction and relapse”

The goal of this grant is to explore cholinergic interneuron-specific mechanisms modulating both cued nicotine reinstatement and associated changes in synaptic plasticity.

**R03 DA045881** (Gipson-Reichardt, PI) 09/30/2018-08/31/2021

“Glutamatergic mechanisms underlying nicotine addiction and relapse following nicotine reduction”

The goal of this grant is to examine the impact of abrupt reduction of nicotine dose on nicotine essential value, reinstatement, and associated synaptic plasticity.

**R01 DA043172** (Gipson-Reichardt, Co-I) 09/01/2017-08/31/2022

“Characterization and reversal of neurocognitive dysfunction produced by long-term synthetic cathinone use”

The goal of this grant is to assist in the development of therapeutic interventions to counteract the detrimental effects of synthetic cathinones on cognition and brain function.

### **PENDING:**

**R21 DA049130** (Gipson-Reichardt, MPI; Stoops, MPI) 08/01/2020-07/31/2025  
“Glutamatergic mechanisms in opioid and cocaine co-use”  
Pending Administrative Review

The major goal of this grant is to develop a valid model of opioid/cocaine co-use, and determine glutamatergic mechanisms that drive cocaine use during withdrawal from opioids in both animals and humans. Further, this grant will determine if *N*-Acetylcysteine can inhibit co-use.

**COMPLETED:**

**K99 DA036569-02** (Gipson, PI) 05/15/2014-06/30/2015  
“Contributions of Glial Glutamate Transport and NMDA Receptors in Nicotine Relapse”

**Institute for Social Science Research Seed Grant** (Gipson, PI) 05/08/2017-12/31/2017  
**Arizona State University**  
“Sex hormone matters: Do ovarian hormones impact treatment efficacy of *N*-Acetylcysteine for nicotine relapse?”

This goal of this grant is to examine if estrous cycle phase is correlated with nicotine relapse vulnerability, and if the efficacy of *N*-Acetylcysteine to reduce nicotine relapse in females is estrous phase-dependent.

Co-I: Heather A. Bimonte-Nelson

**Arizona Alzheimer’s Consortium** (Gipson-Reichardt, PI; Bimonte-Nelson, Co-I) 09/01/2018-06/30/2019

“An evaluation of age-related changes in the neurobehavioral underpinnings of nicotine addiction vulnerability in females”

The goal of this grant is to determine the impact of ovarian hormone cessation in young and aged rats on acquisition of nicotine self-administration and mesolimbic circuitry underlying nicotine addiction.

**R00 DA036569-03** (Gipson-Reichardt, PI) 01/15/2016-12/31/2019  
“Contributions of Glial Glutamate Transport and NMDA Receptors in Nicotine Relapse”

This goal of this 5 year transition to independence grant is to investigate nicotine-induced changes in synaptic strength, with a focus on alterations in the glial glutamate transporter and the GluN2B subunit of the glutamate NMDA receptor. This grant has the potential to reveal novel neurobiological mechanisms of nicotine addiction, and could contribute to the development of novel therapeutic options aimed at reversing nicotine-induced neurobiological alterations.

**R00 DA036569-03S1** (Gipson-Reichardt, PI) 06/23/2016-12/31/2019  
Diversity supplement to support Mark Namba (graduate student)

**Institute for Social Science Research Seed Grant** (Gipson, PI) 05/08/2019-12/31/2019  
**Arizona State University**  
“Prefrontal cortical mechanisms of compulsive cocaine seeking”



The goal of this grant is to dissect neurophysiological mechanisms that drive compulsive cocaine seeking using a preclinical model.

**R21 DA044479-S1** (Gipson-Reichardt, PI) 01/15/2019-06/30/2020  
Diversity supplement to support post-doctoral fellow

**R21 DA044479-S2** (Gipson-Reichardt, PI) 05/15/2019-09/01/2019  
Supplement to support Megan Brickner in the Summer Undergraduate Research Program.

**R41 DA046266** (Gipson-Reichardt, PI of subcontract) 07/15/2018-06/30/2020  
NeurOp., Inc.  
“Preclinical assessment of the GluN2B inhibitor clinical candidate NP10679 as a medication to prevent opiate abuse relapse”  
The goal of this proposal to use preclinical rodent models to assess the therapeutic potential of orally bioavailable GluN2B antagonists in the treatment of opiate addiction.

**Arizona Alzheimer’s Consortium** (Gipson-Reichardt, PI; Bimonte-Nelson, Co-I)  
07/01/2019-06/30/2020  
“An evaluation of neuroinflammatory processes in nicotine relapse during young adulthood and normal aging in females”  
The goal of this grant is to determine ovarian hormone-neuroinflammatory interactions in nicotine addiction in young adult and aging females