

## **CURRICULUM VITAE**

**Cassandra D. Gipson-Reichardt (formerly Gipson), Ph.D.**  
**Associate Professor, Regular Title Series**

**Primary Appointment: Department of Pharmacology and Nutritional Sciences**  
**Secondary Appointments: Department of Neuroscience, Department of Psychology**  
**University of Kentucky**

### **I. GENERAL INFORMATION**

Address:  
C.T. Wethington Bldg, Rm 535  
900 South Limestone  
University of Kentucky  
Lexington, KY 40536-0200  
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### **II. EDUCATION**

Undergraduate 2004	Bachelor of Science in Psychology, University of California, San Diego
Graduate 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
Post-Doctoral 2010-2015	Post-Doctoral Fellow, Department of Neuroscience, Medical University of South Carolina Mentor: Dr. Peter W. Kalivas

### **PROFESSIONAL EXPERIENCES**

2001-2002	Undergraduate Research Assistant: Department of Psychology (Drs. Victor Ferreira and Tamar Gollan), University of California, San Diego, La Jolla, CA
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
2005-2007	Teaching Assistant: Behavioral Neuroscience and Learning/Behavior, Department of Psychology, University of Kentucky, Lexington, KY
2005-2010	Graduate Research Assistant, University of Kentucky, Lexington, KY
2010-2015	Post-Doctoral Researcher, Medical University of South Carolina, Charleston, SC
2015-June 30, 2020	Assistant Professor, Department of Psychology, Arizona State University, Tempe, AZ
2020-2022	Associate Professor, Department of Family and Community Medicine, University of Kentucky, Lexington, KY

### **III. 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
2020-2022	Associate Professor Department of Family and Community Medicine University of Kentucky
2022-present	Associate Professor Department of Pharmacology and Nutritional Sciences University of Kentucky

### **IV. TEACHING ACTIVITIES**

#### Certification:

#### **Spring 2019**

Certificate in Effective College Instruction

The Association of College and University Educators and the American Council on Education

#### Courses Taught at University of Kentucky

**Fall 2020**

Grant Writing Seminar (Department of Family and Community Medicine)

Evaluation Score: Course rated as “Extremely valuable”; Gipson rated as “Extremely knowledgeable”

Number of learners: 15

**Spring 2021**

Grant Writing Seminar (Department of Family and Community Medicine)

Number of learners: 15

**Fall 2022**

Guest Lecture

“Pharmacology of Drugs of Abuse”

OBI836; Dental Pharmacology (Graduate Level)

Number of Learners: 60

**Spring 2023**

Professional Development for Scientists in Training (NS 623/PHA 623, UK)

Graduate Level Course

Number of Learners: 9

Courses Taught at Arizona State University**Spring 2016**

**Psychopharmacology** (PSY470, Arizona State University)

Upper level undergraduate course (enrollment = 50)

Evaluation score: 1.5 (scale 1-5, 1=outstanding, 5=unsatisfactory)

**Spring 2017**

**Neuropsychopharmacology** (PSY591, Arizona State University)

Graduate course (enrollment = 9)

Evaluation score: 2.1 (scale 1-5, 1=outstanding, 5=unsatisfactory)

**Spring 2018**

**Your Brain on Drugs** (PSY307, Arizona State University)

Lower level undergraduate course (enrollment = 100)

Evaluation Score: 1.6 (scale 1-5, 1=outstanding, 5=unsatisfactory)

**Spring 2019**

**Psychopharmacology** (PSY470, Arizona State University)

Upper level undergraduate course (enrollment = 40)

Evaluation score: 1.4 (scale 1-5, 1=outstanding, 5=unsatisfactory)

**Fall 2019**

**Psychopharmacology** (PSY470, Arizona State University)

Upper level undergraduate course (enrollment = 40)

Evaluation score: 1.3 (scale 1-5, 1=outstanding, 5=unsatisfactory)

## **V. ADVISING ACTIVITIES**

### Undergraduate Trainees at University of Kentucky

**01/2021-12/2021**

Madison Botkins  
BIO 394  
University of Kentucky  
College of Public Health

**03/2021-12/2021**

Austin Collins  
Psychology 394  
University of Kentucky

**03/2021-06/2022**

Nikhil Pallem  
BIO 394  
University of Kentucky

**03/2021-12/2021**

Satvi Limbasia  
University of Kentucky

**03/2021-12/2021**

Katelyn Lawson  
University of Kentucky

**03/2021-12/2021**

Hollie Clifton  
University of Kentucky

**03/2021-07/2022**

Grace Breakfield  
BIO 394  
University of Kentucky

**03/2021-05/2022**

Dharani Ramaiah  
University of Kentucky

**01/2022-present**

Olivia Swanbeck

Chellgren Fellows Program  
University of Kentucky

**01/2022-present**

Aarushi Kanukunta  
BIO 394  
University of Kentucky

**06/2022-present**

Payton Abney  
BIO 394  
University of Kentucky

**08/2022-present**

Safiyah Sadek  
BIO 394  
University of Kentucky

Undergraduate Trainees at Arizona State University

**09/2015-06/2018**

Armani del Franco  
Arizona State University

**09/2015-06/2017**

J. Joseph McCallum  
Arizona State University

**06/2016-01/2019**

Mikayla Isosaki  
PSY395  
Arizona State University

**10/2016-08/2019**

Jose Piña  
BIOCHEM395  
Arizona State University

**10/2016-12/2019**

Hanaa Ulangkaya  
Arizona State University

**06/2017-06/2018**

Gabrielle Cabrera-Brown  
Arizona State University

**08/2018-12/2019**

Vince Carfagno  
PSY395  
Arizona State University

**06/2018-12/2019**

Ngoc Von Do  
Arizona State University

**06/2018-06/2020**

Amanda Bull  
Arizona State University

**06/2018-06/2020**

Paula Overby  
Arizona State University

**04/2019-12/2019**

Justin Lemme  
Arizona State University

**06/2019-08/2019**

Megan Brickner  
NIDA Summer Undergraduate Internship Program  
Arizona State University

Graduate Trainees at University of Kentucky

**01/2022-05/01/2022**

Alex Pettey  
Rotating Graduate Student, IBS program  
University of Kentucky

**01/2022-present**

Percell (Tyrone) Kendrick, Jr.  
Graduate Student  
Pharmacology Ph.D. Program  
Department of Pharmacology and Nutritional Sciences  
University of Kentucky

**08/2022-10/2022**

Georgia Vonlehmden  
Rotating Graduate Student, IBS program  
University of Kentucky

**10/2022-12/2022**

Hady Sabra  
Rotating Graduate Student, IBS program  
University of Kentucky

**06/2023-08/2023**

Ashley White  
MD/PhD Summer Rotation Student  
University of Kentucky

Graduate Trainees at Arizona State University

**08/2016-06/2019**

Mark Namba: Masters defense completed Spring 2019, Arizona State University  
NRSA awarded: 2019-2021 (NIDA)  
Current position: Post-Doctoral Scholar in Dr. Jacqueline Becker's lab, Drexel University

Post-Doctoral Trainees at University of Kentucky

**07/2020-08/2022**

Dr. Erin Maher  
Department of Pharmacology and Nutritional Sciences  
University of Kentucky  
Current Position: Senior Medical Writer at Flywheel Partners

**11/2020-present**

Dr. Shailesh Khatri  
Department of Pharmacology and Nutritional Sciences  
University of Kentucky

Post-Doctoral Trainees at Arizona State University

**07/2015-02/2018**

Dr. Gregory Powell  
Current position: Senior Safety Partner, Animal Biosafety, Arizona State University

**01/2018-06/2020**

Dr. Jonna Leyrer-Jackson  
NRSA awarded: 2019-2022 (NIAAA)  
Current position: Assistant Professor, Department of Medical Education, Creighton University Health Sciences Campus, Phoenix AZ

**Thesis and Dissertation**

### **Graduate Student Committees:**

- 08/2016-04/2017** Tempe, AZ  
Chair, First Year Project  
Mark Namba  
Department of Psychology, Behavioral Neuroscience Ph.D. program  
Arizona State University  
“The Role of GLT-1 in Cue-Induced Nicotine Seeking”
- 05/2017-04/2019** Tempe, AZ  
Chair, Masters Thesis Committee  
Mark Namba  
Department of Psychology, Behavioral Neuroscience Ph.D. program  
Arizona State University  
“The Role of GLT-1 and NF-κB in Cue-Induced Nicotine Seeking”
- 09/2019** Tempe, AZ  
Member, Masters Thesis Committee  
Veronica Peña  
Department of Psychology, Behavioral Neuroscience Ph.D. program  
Arizona State University  
“Progesterone Impact Cognition During the Transition to Menopause in the Rat: Dissociation of Progesterone- and Memory- Type”
- 12/2022-present** Lexington, KY  
Member, Dissertation Thesis Committee  
Kimberly Bretland  
Department of Pharmacology and Nutritional Sciences, Pharmacology Ph.D. Program
- 08/2022-present** Lexington, KY  
Chair, Dissertation Thesis Committee  
Perrell Tyrone Kendrick, Jr.  
Department of Pharmacology and Nutritional Sciences, Pharmacology Ph.D. Program

### **Undergraduate Honors Thesis Committees:**

#### At Arizona State University

- 05/2017** Tempe, AZ  
Member, Undergraduate Honors Thesis Committee  
Korrina Romero  
Department of Psychology, Barrett Honors College  
Arizona State University



“Suppressive and Enhancing Effects of Nicotine on Food-Seeking Behavior”

- 05/2017** Tempe, AZ  
Member, Undergraduate Honors Thesis Committee  
Paula Overby  
Department of Psychology, Barrett Honors College  
Arizona State University  
“Nicotinic Enhancement of Incentive Saliency”
- 05/2017** Tempe, AZ  
Member, Undergraduate Honors Thesis Committee  
Shea Forcade  
Department of Psychology, Barrett Honors College  
Arizona State University  
“Peace, Love, Unity, Respect, and Responsibility: Attitudes on Psychedelic Harm Reduction in the EDM Community”
- 05/2017** Tempe, AZ  
Chair, Undergraduate Honors Thesis Committee  
J. Joseph McCallum  
Department of Psychology, Barrett Honors College  
Arizona State University  
“The Role of Accumbens GluN2B receptors in Cue-Induced Nicotine Seeking”
- 05/2018** Tempe, AZ  
Chair, Undergraduate Honors Thesis Committee  
Gabrielle Cabrera-Brown  
Department of Psychology, Barrett Honors College  
Arizona State University  
“Modeling Nicotine Essential Value Using a Behavioral Economics Paradigm in Rats”
- 05/2018** Tempe, AZ  
Member, Undergraduate Honors Thesis Committee  
Thai Nguyen  
School of Life Sciences, Barrett Honors College  
Arizona State University  
“The Effect of Ovarian Hormonal Status on 5HT1B Receptor Modulation of Cocaine Self-Administration”
- 05/2018** Tempe, AZ  
Member, Undergraduate Honors Thesis Committee  
Derek Tang  
Department of Psychology, Barrett Honors College

Arizona State University  
“The Role of Calcium Channel Genes in Childhood Psychiatric Symptoms”

**05/2018**  
Tempe, AZ  
Member, Undergraduate Honors Thesis Committee  
Andrew Carleson  
School of Life Sciences, Barrett Honors College  
Arizona State University  
“The Effects of a Novel Serotonin-7 Receptor (5-HT7R) Antagonist, MC-RG19, on Cocaine-Related Behaviors”

**05/2019**  
Tempe, AZ  
Member, Undergraduate Honors Thesis Committee  
Shiv Shah  
School of Life Sciences, Barrett Honors College  
Arizona State University  
“Hyperactive ERK/MAPK Regulates Cortical GABAergic Neuron Development”

**10/2019**  
Tempe, AZ  
Chair, Undergraduate Honors Thesis Committee  
Hanaa Ulangkaya  
Department of Psychology, Barrett Honors College  
Arizona State University  
“Establishing an Oxycodone/Cocaine Co-Use Model in Rats”

### Student and Post-Doctoral Fellow Awards and Recognition

#### At University of Kentucky:

**09/2020**  
Dr. Erin Maher  
2nd place in Society of Post-Doctoral Scholars (SOPS) Short Research Talk Competition, University of Kentucky

**06/2021**  
Dr. Erin Maher  
NIDA’s Women and Sex/Gender Differences Junior Investigator Travel Award Program (to attend the College on Problems of Drug Dependence)

**06/2021**  
Dr. Shailesh Khatri  
Early Career Travel Award (to attend the College on Problems of Drug Dependence)

**12/2021**

Dr. Erin Maher  
SUPRA Post-Doctoral Grant Award, 01/01/2022-12/31/2022  
“Factors Driving Nicotine Use in Females: Role of Estrogen Receptors in the Reward Pathway”

**12/2021**

Emma Bondy  
Scholarship to attend Society for Research on Nicotine and Tobacco (SRNT) for Top Abstract  
Submitted: “Activation of accumbens microglia and adenosine A2a receptors contributes to nicotine self-administration and cue-induced reinstatement”

**07/2022-06/2023**

Percell Tyrone Kendrick, Jr.  
Predoctoral Slot on the NIDA T32 (PI: Craig Rush)  
T32DA035200 – “Research Training in Drug Abuse Behavior”

**07/2023-08/2024**

Percell Tyrone Kendrick, Jr.  
Diversity supplement on R01 DA046526 (PI: Gipson-Reichardt, NOA arrival 1/27/2023)

**04/2023-08/2023**

Safiyah Sadek  
Commonwealth Undergraduate Research Experience (CURE) Fellowship  
Substance Use Research Priority Area  
University of Kentucky

**06/2023-08/2023**

Ashley Craig  
National Institute on Drug Abuse Summer Research Undergraduate Internship Program  
University of Kentucky

**06/2023-08/2023**

Ashley White  
Professional Student Mentored Research Fellowship Program  
UK CCTS  
University of Kentucky

At Arizona State University:

**03/2016**

Mark Namba  
ASU Department of Psychology Research Excellence Award

**05/2016**

Mark Namba  
NIDA Diversity Supplement Award (R00 DA036569-03S1)

**07/2016**

Armani del Franco  
School of Life Sciences Undergraduate Travel Grant to attend the College on Problems of Drug Dependence

**09/2016**

Armani del Franco  
School of Life Sciences Undergraduate Research (SOLUR) award  
10/2016  
Armani del Franco  
College of Liberal Arts and Sciences (CLAS) Undergraduate Summer Enrichment Award

**10/2016**  
Mark Namba  
Diversity Scholars Travel Award for the Society for Neuroscience annual meeting

**09/2017**  
Mark Namba  
ASU Graduate and Professional Student Association Travel Award

**10/2017**  
Mark Namba  
Diversity Scholars Travel Award or the Society for Neuroscience annual meeting

**10/2017**  
Mark Namba  
NIDA Travel Award for National Hispanic Science Network Conference

**03/2017**  
Mark Namba  
ASU College of Liberal Arts & Sciences Graduate Excellence Award

**02/2018**  
Gabriella Cabrera-Brown  
Award to present an E-poster at the undergraduate research poster session at the American Association for the Advancement of Science (AAAS) conference

**03/2018**  
Mark Namba  
ASU Graduate and Professional Student Association Outstanding Research Award

**04/2018**  
Mark Namba  
ASU College of Liberal Arts & Sciences Graduate Excellence Award

**06/2018**  
Mark Namba  
Cold Spring Harbor Laboratories Cellular Biology of Addiction course acceptance

**06/2018**  
Dr. Jonna Leyrer-Jackson  
Cold Spring Harbor Laboratories Cellular Biology of Addiction course acceptance

**09/2018**  
Mark Namba  
ASU Graduate and Professional Student Association Travel Award

**11/2018**  
Mark Namba  
Society for Neuroscience "Neuroscience Scholars Program" Associate membership

**06/2019**

Dr. Jonna Leyrer-Jackson

NIDA's Women and Sex/Gender Differences Junior Investigator Travel Award Program (to attend the College on Problems of Drug Dependence)

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

From University of Kentucky:

**11/2022**

Nikhil Pallem; Acceptance into medical school; University of Kentucky College of Medicine

From Arizona State University:

**03/2018**

Armani del Franco: accepted into the Ph.D. Neuroscience program, University of Minnesota  
Lab: Dr. Eric Newman

**03/2018**

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

**06/2018**

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

**05/2019**

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

**04/2020**

Megan Brickner: Ph.D. graduate student in the Neuroscience program, University of Minnesota  
Lab: Dr. Benjamin Saunders

**VI. ADMINISTRATIVE ACTIVITIES AND UNIVERSITY SERVICE**

University Service at University of Kentucky

**01/2021**

T32 (PI: Craig Rush) Post-Doctoral Virtual Seminar: "Transitioning to Faculty"  
University of Kentucky

**04/2021**

Graduate/Professional Student Pilot Grant Program Reviewer  
Substance Use Priority Research Area (SUPRA)  
University of Kentucky

**09/2021-present**

Internal Advisory Board member, Substance Use Priority Research Area (SUPRA)

**03/2022**

Co-lead of Complex Grant Networking Event for SUPRA

**07/2022-04/2023**

Co-Chair, Substance Use Research Event (SURE)  
University of Kentucky

**08/2022-07/2025**

Women in Medicine and Science (WIMS) Membership and Nominating Co-Chair  
College of Medicine, University of Kentucky

**09/2022-08/2023**

Elected Senator, University of Kentucky Senate  
Representative for the College of Medicine

**09/2022-08/2023**

Member, SACDAC (Senate Committee for Disability Accommodation and Compliance)

**09/2022-04/2023**

RCR In-Person Trainer  
University of Kentucky

**12/2022**

Pilot Grant Program Reviewer  
CCTS  
University of Kentucky

University Service at Arizona State University

**06/2016**

Responsible Conduct of Research Instructor, “Mentorship”  
Arizona State University

**06/2017**

Responsible Conduct of Research Instructor, “Peer Review and Authorship”  
Arizona State University

Department Service at University of Kentucky

**07/2020-12/2021**

Research Pillar Working Group  
Department of Family and Community Medicine  
University of Kentucky

**10/2022-04/2023**

In-person RCR Trainer for the Department of Pharmacology and Nutritional Sciences  
University of Kentucky

Department Service at Arizona State University

**06/2015**

Psychology Freshman Orientation Lunch  
Psychology Department  
Arizona State University

**09/2015**

PSY 394: Careers in Psychology presentation  
Psychology Department  
Arizona State University

**06/2017-06/2018**

Advisory Committee to the Chair, Elected Member  
Psychology Department  
Arizona State University

**04/2018**

“Work-Life Balance Panel” for Graduate Students (Dr. Nancy Eisenberg graduate course)  
Psychology Department  
Arizona State University

**04/2018**

K99 Grant Discussion for Graduate Students (Dr. Nancy Eisenberg graduate course)  
Psychology Department  
Arizona State University

**06/2018-06/2019**

Advisory Committee to the Chair, Elected Member  
Psychology Department  
Arizona State University

**07/2019-10/2019**

Search Committee: Behavioral Neuroscience Full Professor position for Dr. Jonathan Gewirtz  
Psychology Department  
Arizona State University

**VII. HONORS & AWARDS**

Graduate Student Level:

**06/2005**

Graduate School Research Fellowship, University of Kentucky.

**05/2007**

Society for the Advancement of Behavior Analysis Student Presenter Grant.

**06/2008**

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

**06/2009**

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

**06/2009**

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

**02/2010**

Center for Drug and Alcohol Research Petite Grant Award  
University of Kentucky

**02/2010**

Dissertation Year Fellowship. The Graduate School  
University of Kentucky.

**06/2010**

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

**08/2010**

National Research Service Award, National Institute of Drug Abuse (F31 DA028018).  
Title: A Translational Model of Mood-Based Drug Abuse

**08/2010**

American Psychological Association Dissertation Research Award  
APA Science Directorate

Post-Doctoral Level:

**11/2010**

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

**06/2011**

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

**08/2011**

American Psychological Association, Division 28 Outstanding Dissertation Award. Washington, D.C.

**11/2011**

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

**12/2011**



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

**05/2012**

National Research Service Award, National Institute on Drug Abuse (F32 DA033690).  
Title: Chronic Adaptations in Glutamatergic and Dopaminergic Signaling in Nicotine Abuse

**10/2012**

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.

**11/2012**

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

**12/2012**

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

**12/2012**

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

**11/2013**

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

**11/2013**

Society for Neuroscience Chapter Travel Award, San Diego, CA

**05/2014**

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

**08/2014**

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

**09/2014**

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>

Faculty Level at Arizona State University

**05/2017**

Society of Biological Psychiatry Early Career Investigator Travel Award  
San Diego, CA

**06/2017**

ASU nominee for the 2017 Takeda Innovator Early Career Scientist Award

**11/2017**

Early Career Investigator Showcase Travel Award, NIDA/NIAAA mini-convention at Society for Neuroscience, Washington, DC.

**12/2017**

Associate Member (nominated and elected), American College of Neuropsychopharmacology

**02/2018**

Society for Research on Nicotine and Tobacco Travel Award for Outstanding Abstract Submission

**03/2018**

Awarded front cover of journal issue for most frequently downloaded article since publication: Gipson & Olive (2017), *Genes, Brain, and Behavior*, issue 16(1).

**06/2018**

Research Highlight- College on Problems of Drug Dependence: <https://cpdd.org/highlighting-members-research-preclinical/>

**02/2019**

“Best Paper in 2018” in *Nicotine and Tobacco Research*, awarded at the 2019 Society for Research on Nicotine and Tobacco conference, San Francisco, CA.

**11/2019**

Society for Neuroscience – Abstract chosen as a “Dynamic Poster” and “Hot Topic” for the 2019 annual meeting: “Chemogenetic inhibition of accumbens cholinergic interneurons inhibits cue-induced nicotine seeking”.

Faculty Level at University of Kentucky

**2021-present**

Wethington Award

**06/2021**

Joseph Cochin Young Investigator Award  
College on Problems of Drug Dependence

**12/2021**

Nominated and accepted as Full Member of American College of Neuropsychopharmacology (ACNP)

**02/2022**

Elected Director-At-Large, Board of Directors  
College on Problems of Drug Dependence (2022-2025)

**03/2022**

Finalist for Editor of *Experimental and Clinical Psychopharmacology*

**09/2022-06/2023**

Elected University Senator, University of Kentucky

**11/2022**

Solicited and approved to be considered for Fellow Status at the American Psychological Association, Division 28 (Psychopharmacology and Substance Abuse)

**02/2023**

Wiley “Top Cited Article 2021-2022” in the *Journal of the Experimental Analysis of Behavior* (article: “Logical fallacies and misinterpretations that hinder progress in translational addiction neuroscience”).

**04/2023**

Winner of the Faculty Sarah Bennett Holmes Award  
Women’s Forum  
University of Kentucky

## **VIII. PROFESSIONAL ACTIVITIES, PUBLIC SERVICE & PROFESSIONAL DEVELOPMENT**

### Short Courses, Seminars, and Workshops

**06/2011**

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

### Current Professional Affiliations

American College of Neuropsychopharmacology, (Elected Member)

American Psychological Association (Member)

College on Problems of Drug Dependence (Member)

Society for Neuroscience (Member)

Society for Research on Nicotine and Tobacco (Member)

Association for Psychological Science (Member)

Society of Biological Psychiatry (Associate Member)

### Service Activities and Elected Offices

**01/2009-12/2009**

Board Member and Membership Coordinator. Society for the Quantitative Analysis of Behavior (SQAB)

**01/2010-12/2010**

Board Member and Membership Coordinator. Society for the Quantitative Analysis of Behavior (SQAB)

**09/2013**

Society for Research on Nicotine and Tobacco (SRNT) abstract reviewer

**11/2013**

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.

**09/2014**

Society for Research on Nicotine and Tobacco (SRNT) abstract reviewer

**11/2014**

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.

**09/2015**

Society for Research on Nicotine and Tobacco (SRNT) abstract reviewer

**06/2016**

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.](https://www.drugabuse.gov/news-events/news-releases/2016/05/link-between-stress-mindset-factors-influence-addiction-vulnerability-focus-top-nih-addiction)

**09/2016**

Society for Research on Nicotine and Tobacco (SRNT) abstract reviewer

**01/2017-12/2018**

Network Operations Coordinator: Basic Science Network Advisory Committee  
Society for Research on Nicotine and Tobacco

**06/2017-06/2021**

College on Problems of Drug Dependence Program Committee

**09/2017**

Society for Research on Nicotine and Tobacco (SRNT) abstract reviewer

**09/2018**

Society for Research on Nicotine and Tobacco (SRNT) Program Committee

**09/2019**

Society for Research on Nicotine and Tobacco (SRNT) Program Committee

**06/2019**

Intel ISEF Special Award Judge for the National Institute on Drug Abuse, Phoenix AZ

**09/2020**

Society for Research on Nicotine and Tobacco (SRNT) Program Committee

**12/2019-12/2022**

American College of Neuropsychopharmacology Education and Training Committee

**12/2020**

American College of Neuropsychopharmacology Round Table Discussion: Negotiations and Promotions

**05/2021-05/2024**

Elected Member

Member-at-Large

American Psychological Association, Division 28 (Psychopharmacology and Substance Abuse division)

**07/2021-06/2023**

Behavior, Biology, and Chemistry Translational Research in Addiction Travel Awards Committee Member

**04/2023**

Pilot proposal reviewer

Rural Drug Addiction Research (RDAR) COBRE

University of Nebraska-Lincoln

**06/2023-06/2026**

Travel Award Committee

College on Problems of Drug Dependence

Editorial Board Activities

**01/2017-present**

Board Member: *Experimental and Clinical Psychopharmacology*

**03/2020-present**

*Experimental and Clinical Psychopharmacology* Associate Editor

Special Issue: Harm Reduction

**03/2021-present**

*Journal of the Experimental Analysis of Behavior* Associate Editor

Special Issue: Individual differences in behavior and neurobiology

**09/2021-present**

*Pharmacology, Biochemistry, & Behavior* Associate Editor

Special Issue: Role of Social Variables in Drug Abuse and Addiction

**06/2022-present**

Board Member: *Journal of the Experimental Analysis of Behavior*

Ad Hoc Peer Reviewer

*Science, Nature Communications, Drug and Alcohol Dependence, Biological Psychiatry, Addiction*

*Biology, Neuropsychopharmacology, Journal of Neuroscience, Translational Psychiatry,*

*Psychopharmacology, Behavioural Pharmacology, PLoSONE, 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, Neuroscience & Biobehavioral Reviews, Neuroendocrinology*

### Grant Review Panels

#### While at Arizona State University

##### **02/2018-04/2020**

Tobacco-Related Disease Research Program (TRDRP) of California, Neuroscience Review Committee Panelist

##### **02/2019**

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

##### **12/2019**

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

##### **06/2020**

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

#### While at University of Kentucky

##### **11/2020**

Neurobiology of Motivated Behavior (NMB) Study Section Panelist

##### **12/2020**

2021/01 ZDA1 SKP-D (18) S; Cutting-Edge Basic Research Awards (CEBRA, R21) Panelist (NIDA)

##### **02/2021**

2021/05 ZDA1 IXR-Q (14) S; Exploiting Genome or Epigenome Editing to Functionally Validate Genes or Variants Involved in Substance Use Disorders (R21/R33; NIDA)

##### **06/2021**

Neurobiology of Motivated Behavior (NMB) Study Section Panelist

##### **09/2021**

2022/01 ZDA1 IXR-Q (14) S; Exploiting Genome or Epigenome Editing to Functionally Validate Genes or Variants Involved in Substance Use Disorders (R21/R33; NIDA) Panelist

##### **11/2021**

2022/01 Cutting-Edge Basic Research Awards (CEBRA, R21) **Chair** (NIDA)

**02/2022**

Exploiting Genome or Epigenome Editing to Functionally Validate Genes or Variants Involved in Substance Use Disorders (R21/R33; NIDA) Panelist

**02/2022**

Tobacco-Related Disease Research Program (TRDRP) of California, Neuroscience Review Committee Panelist

**02/2022**

National Institute of Child Health and Human Development (NICHD) Health, Behavior, and Context Study Section

**06/2022**

2022/10 ZDA1 SKM-D (01) S  
NIDA Training SEP Panelist

**07/2022**

2022/10 ZDA1 SKP-D (03) S  
Cutting-Edge Basic Research Awards (CEBRA)  
Panelist

**10/2022**

2023/01 NIDA-K S  
Career Development Education and Training Study Section

**03/2023**

Neuroscience Review Full Committee Panelist, TRDRP of California

### Community Service

#### At University of Kentucky

**01/2021**

Interviewer of Graduate School Candidates- “How to Shine in Interviews”  
Virtual Mentoring Event  
Black in Neuro  
Number of Learners: 35

#### At Arizona State University

**02/2016**

Brain Fair for Children  
Psychology Department  
Arizona State University

**02/2017**

Brain Fair for Children  
Psychology Department  
Arizona State University

**07/2018**

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

## **IX. SPEAKING ENGAGEMENTS**

### **Local Presentations**

1. **04/2012 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.
2. **10/2014 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”. Medical University of South Carolina, Charleston, S.C.
3. **11/2019** Leyrer-Jackson, J., **Gipson, C.D.** (invited talk). Using viral vectors to control neuronal activity and manipulate nicotine relapse in a rodent self-administration model”. Viroholics Seminar Series, Center for Immunotherapy, Vaccines, and Virotherapy, ASU.
4. **08/2020 Gipson, C.D.** (seminar presentation). Ovarian hormones and contraceptive estrogen specifically contribute to nicotine demand and the reward pathway. WHIPS seminar, University of Kentucky, Department of Family and Community Medicine.
5. **12/2020 Gipson, C.D.** (invited speaker). Natural and synthetic estrogens specifically alter nicotine demand and the reward pathway. Department of Neuroscience Seminar Series, University of Kentucky.

### **State Presentations**

6. **11/2015 Gipson, C.D.** (invited speaker). Synaptic plasticity in nicotine addiction. Barrow Neurological Institute, Phoenix, Arizona.
7. **01/2016 Gipson, C.D.** (invited speaker). 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.
8. **01/2017 Gipson, C.D.** (invited speaker). 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.
9. **05/2018 Gipson, C.D.** (invited speaker). Searching for New Pharmacotherapeutic Targets for Addiction in Glutamate Plasticity”. Barrow Neurological Institute, Phoenix, AZ.



10. **02/2019 Gipson, C.D.** (invited speaker). Neuroimmune Mechanisms of Nicotine Addiction. University of Arizona, Downtown Medical Campus.

### **National Presentations**

11. **08/2011 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.
12. **03/2013 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, Boston MA.
13. **06/2013 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, CA.
14. **08/2014 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.
15. **08/2014 Gipson, C.D.** (invited speaker). Rapid synaptic plasticity in nicotine and cocaine relapse. Yale, Department of Psychiatry.
16. **09/2014 Gipson, C.D.** (invited speaker). Rapid synaptic plasticity in nicotine and cocaine relapse. Rockefeller University.
17. **10/2014 Gipson, C.D.** (invited speaker). Rapid, transient plasticity in cocaine and nicotine relapse: new pharmacotherapeutic avenues. University of Mississippi Medical Center.
18. **11/2014 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.
19. **02/2015 Gipson, C.D.** The potentiated synapse in addiction: Identifying novel targets to inhibit relapse vulnerability. Arizona State University, Department of Psychology Colloquium Series.
20. **07/2017 Gipson, C.D.** (invited speaker). 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.
21. **02/2018 Gipson, C.D.** (invited speaker). Neuroinflammation, glutamate, and nicotine relapse. Temple University.
22. **08/2019 Gipson, C.D.** (invited speaker). Translating Addiction Neuroscience: Discovering New Therapeutic Targets and Treatment Strategies. University of Kentucky, Department of Family and Community Medicine.

23. **09/2019 Gipson, C.D.** (invited speaker). Translating Addiction Neuroscience: Discovering New Therapeutic Targets and Treatment Strategies. Virginia Commonwealth University, Department of Pharmacology and Toxicology.
24. **10/2020 Gipson, C.D.** (invited speaker). Ovarian and Contraceptive Hormones Modulate Nicotine Consumption and Neural Mechanisms Within the Reward Pathway. Department of Pharmacology and Toxicology Seminar Series, University of Texas Medical Branch.
25. **03/2021 Gipson, C.D.** (invited speaker). Natural and synthetic estrogens specifically alter nicotine demand and the reward pathway". Sensory Biology Center Seminar, Departments of Neuroscience, Molecular Biology, and Zoology & Physiology, University of Wyoming.
26. **02/2022 Gipson, C.D.** (invited speaker). Impacts of Ovarian and Contraceptive Hormones on Nicotine Neurobiology and Behavior. RDAR Seminar Series, University of Nebraska, Lincoln.
27. **06/2022 Gipson, C.D.** (invited speaker). Impacts of Ovarian and Contraceptive Hormones on Nicotine Neurobiology and Behavior. Medical University of South Carolina (MUSC) Tobacco Research Interest Group.
28. **02/2023 Gipson, C.D.** (invited speaker). Chronic nicotine use induces a unique sex-specific neuroimmune response in the accumbens which modulates glutamate plasticity. Anatomy & Neurobiology Department Seminar Series, Virginia Commonwealth University.
29. **05/2023 Gipson, C.D.** (invited speaker). Novel non-neuronal mechanisms of nicotine use and seeking: A role for accumbens microglia in the nicotine neuroimmune milieu. Utah Neuroimmunology Trainee Symposium, University of Utah.
30. **06/2023 Gipson, C.D.** (invited speaker, anticipated). Nicotine induces sex-specific neuroimmune signaling that regulates aberrant glutamate plasticity within the accumbens. University of California, Riverside, Neuroscience seminar series.

### **International Presentations**

31. **05/2013 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, Alghero, Sardinia.
32. **06/2021\* Gipson, C.D.** Neuroimmune Signaling, Glutamate Plasticity, in Addiction (invited speaker). World Wide Neurobiology of Addiction Seminar Series (<https://www.world-wide.org/Neuro/topic/addiction/>), invited speaker. Host: Dr. Meghan Creed.

*\*This presentation was part of an online series that was distributed worldwide, and featured leaders in the field of substance use research. Selection as a speaker in this series demonstrates international research recognition of my independent research program.*

## **X. RESEARCH & INTELLECTUAL CONTRIBUTIONS**

## Research Certifications

Responsible Conduct of Research

Record 37770771

CITI Module

### **02/2021-02/2024**

Group 1 Biomedical Investigators and Key Personnel

Record 6588013

CITI Module

### **09/2022**

“Train the Trainer” training completed for in-person RCR training to the university

Responsible Conduct of Research, University of Kentucky ORI

## A. PUBLICATIONS

Key:

**Bolded name** = personal contribution

Asterisk after name = equal first-authorship contribution

*Italicized name* = trainee

*Italicized Asterisk* = special contribution to the field

h-index: 30; i-10 index: 46 (according to Google Scholar, 1/30/2023)

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**
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**
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**
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**
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.
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**

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: 3.16**
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**
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**
10. **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**  
  
*\*This empirical paper was critical in moving the nicotine field forward, showing for the first time that nicotine use and seeking critically altered glutamate homeostasis within the brain reward pathway.*
11. **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**  
  
*\*This empirical paper was critical in moving the substance use field forward, showing for the first time that seeking nicotine-associated cues induce rapid, transient changes in glutamate signaling within the reward pathway.*
12. 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**
13. 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**
14. 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**
15. 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**

16. **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: 4.49.**
17. 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**
18. **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**  
  
*\*This was the first empirical paper to examine the influence of a social partner during self-administration of a drug of abuse. An entire area of research followed.*
19. **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**
20. 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. **Impact Factor: 7.05**
21. **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**
22. 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**
23. 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**
24. **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**
25. 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. 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**
27. 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**
28. 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**
29. 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**
30. 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**
31. 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**
32. 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**
33. 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**

Publications while at Arizona State University:

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**
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**

*\*This invited review paper focused on a question that spans across numerous fields in which dendritic spines are linked to behavior, but it is not known whether spine changes occur before or after complex behavior. This review has been cited 149 times since 2017 and earned the front cover of the published journal issue.*

36. 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. **Impact Factor: 3.17**
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**
38. 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**
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**
40. Piña, J., Leyrer-Jackson, J.M., Namba, M.D., Cabrera-Brown, G., & **Gipson, C.D.** (2018). Social influences on nicotine-related behaviors in rodents. *Int Rev Neurobiol* 140:1-32. PMID: 30193701. **Impact Factor: 3.23.**
41. 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**
42. 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**
43. 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**
44. Powell, G.L., Del Franco, A., Goenaga, J., Spencer, S., Schwartz, D., Stankeviciute, N., & **Gipson, C.D.** (2019). Chronic treatment with N-acetylcysteine decreases extinction responding and reduces cue-induced nicotine-seeking. *Physiological Reports*, 7(1), e13958. doi: 10.14814/phy2.13958. PMID: 30734439. **Impact Factor: 2.47**

45. 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**
46. Powell, G.L., Namba, M.D., Cabrera-Brown, G., Neisewander, J.L., Marusich, J.A., Beckmann, J.S., **Gipson, C.D.** (2019). Economic demand analysis of within-session dose-reduction during nicotine self-administration. *Drug and Alcohol Dependence*, 201, 188-196. PMID: 31238241. **Impact Factor: 4.49.**
47. 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. PMID: 31391211. **Impact Factor: 3.87**
- \*This in-depth review is the first to thoroughly evaluate opioid withdrawal evidence across human and non-human animal models, and determine if withdrawal syndromes can be accurately translated. This has critically informed the opioid field, and has been cited 23 times.*
48. Goenaga\*, J., Powell\*, G.L., Piña, J., Namba, M.D., Koebele, S., Prakapenka, A., McClure, E.A., Bimonte-Nelson, H.B., **Gipson, C.D.** (2020)\*. N-Acetylcysteine inhibits cue-induced reinstatement of nicotine seeking in a sex-specific manner. *Addiction Biology*, 25(1), e12711. doi: 10.1111/adb.12711. PMID: 30734439. **Impact Factor: 5.93**
- \*This was the first empirical paper to show that a commonly studied therapeutic for addiction, N-Acetylcysteine, may not show efficacy when sex as a biological variable is taken into account. This has led to a number of subsequent evaluations of this compound in female subjects across the field, and has been cited 24 times.*
49. Roberts-Wolfe, D.J., Heinsbroek, J.A., Spencer, S.M., Bobadilla, A.C., Smith, A.C.W., **Gipson, C.D.**, Kalivas, P.W. (2020). Transient synaptic potentiation in nucleus accumbens shell during refraining from cocaine seeking. *Addiction Biology*, 25(3), e12759. doi: 10.1111/adb.12759. PMID: 31062493. **Impact Factor: 5.93.**
50. 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.** (2020)\*. Accumbens Neuroimmune Signaling and Dysregulation of Astrocytic Glutamate Transport Underlie Conditioned Nicotine Seeking Behavior. *Addiction Biology*, 25(5), e12797. doi: 10.1111/adb.12797. PMID: 31330570. **Impact Factor: 5.93.**
- \*In this publication, my lab was the first to show that nicotine use and seeking elicits a robust neuroimmune response, and that treatment efficacy for pharmacotherapeutics requires inhibition of pro-inflammatory signaling in the reward pathway. This has been cited 28 times.*

Publications since joining University of Kentucky:



51. 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*. 212:108020. doi: 10.1016/j.drugalcdep.2020.108020. PMID: 32362438. **Impact Factor: 4.49.**

52. 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: 3.16.**

53. **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*, 2020 Apr 16. doi: 10.1037/pha0000375. Online ahead of print. PMID: 32297787. **Impact Factor: 3.16.**

*\*This empirical publication was the first to evaluate somatic signs of opioid withdrawal across both acute and protracted phases following volitional self-administration in rats as a function of biological sex.*

54. 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*, 86,103-112. doi: 10.1016/j.alcohol.2020.04.001. PMID: 32304714. **Impact Factor: 2.01.**

55. 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*, 225(7),1967-1978. doi: 10.1007/s00429-020-02103-9. PMID: 32591928. **Impact Factor: 3.62**

56. **Gipson, C.D.**, Bimonte-Nelson, H.A. (2020). Interactions between reproductive transitions during aging and addiction: Promoting translational crosstalk between different fields of research. *Behavioural Pharmacology*, 2020 Sep 21. doi: 10.1097/FBP.0000000000000591. PMID: 32960852. **Impact Factor: 2.2.**

57. Leyrer-Jackson, J.M., Overby, P.F., Newbern, J., Holter, M., Olive, M.F., **Gipson, C.D.** (2021). Accumbens cholinergic interneurons control cue-induced nicotine seeking and associated glutamatergic plasticity. *eNeuro*, 2020 Nov 23;ENEURO.0276-20.2020. doi: 10.1523/ENEURO.0276-20.2020. PMID: 33239269. **Impact Factor: 4.36.**

58. **Gipson, C.D.**, Rawls, S., Scofield, M.D., Siemsen, B., Bondy, E.O., Maher, E.E. (2021)\*. Interactions of Neuroimmune Signaling and Glutamate Plasticity in Addiction. *Journal of Neuroinflammation*, 18(1).doi: 10.1186/s12974-021-02072-8. **Impact Factor: 6.3.**

*\*This is the first extensive review to link a commonly known pathology in addiction, disrupted glutamate signaling in the brain reward pathway, with proinflammatory signaling following use of drugs of abuse.*

59. McClure, E.A., Wahlquist, A.E., Tomko, R.L., Baker, N.L., Carpenter, M.J., Bradley, E.D., Cato, P.A., **Gipson, C.D.**, & Gray, K.M. (2021). Evaluating N-acetylcysteine for early and end-of-treatment abstinence in adult cigarette smokers. *Drug and Alcohol Dependence*. 225:108815. doi: 10.1016/j.drugalcdep.2021.108815. Epub ahead of print. **Impact Factor: 4.49.**
60. Huhn, A.S., **Gipson, C.D.** (2021). Promoting harm reduction as a treatment outcome for substance use disorders. *Experimental and Clinical Psychopharmacology*, 29(3), 217–218. **Impact Factor: 3.16.**
61. Maher, E., Overby, P.F., Bull, A.H., Leyrer-Jackson, J.M., Beckmann, J.S., Koebele, S.V., Bimonte-Nelson, H.A., **Gipson, C.D.** (2021)\*. Natural and synthetic estrogens specifically alter nicotine demand and cue-induced nicotine seeking in female rats. *Neuropharmacology*, 10.1016/j.neuropharm.2021.108756. **Impact Factor: 5.25.**

*\*This empirical publication is the first to show that contraceptive and natural estrogens alter nicotine demand and estrogen receptor expression in the reward pathway. This is an entirely new area of research.*

62. Rzeszutek, M.J., Kaplan, B., **Gipson, C.D.**, Koffarnus, M.N. (2022). Using crowdsourcing to study the differential effects of cross-drug withdrawal for cigarettes and opioids in a behavioral economic demand framework. *Experimental and Clinical Psychopharmacology*. **Impact Factor: 3.16.**
63. Strickland, J., Stoops, W.W., Banks, M.L., **Gipson, C.D.** (2022)\*. Challenges Facing the Field of Translational Addiction Science: Reification and Circular Explanations that Hinder Progress. invited submission to a special issue of the *Journal of the Experimental Analysis of Behavior*. **Impact Factor: 2.48**

*\*This theoretical commentary and review turned the field on its head, bringing together both clinical and preclinical experts in substance use research and challenging interpretations of commonly utilized preclinical and clinical models of addiction.*

64. Strickland, J.C., **Gipson, C.D.**, Dunn, K.E. (2022). Dopamine Supersensitivity Develops Following Chronic Opioid Exposure: A Narrative Review with Implications for the Opioid-Stimulant Co-Use Epidemic and Opioid Relapse. *Frontiers in Psychiatry* special issue on stimulant-opioid co-use.
65. **Gipson, C.D.**, Soto, P.L., Calipari, E.S., Platt, D.M., Salamone, J.D., Bevins, R.A. (2022)\*. Using complex behavior to understand brain mechanisms in health and disease. Introduction to a special issue of the *Journal of the Experimental Analysis of Behavior*. **Impact Factor: 2.48**

*\*This is an introduction to a special issue on complex behavioral paradigms and their utility in understanding brain function in health and disease states for which I served as Guest Editor. This special issue in JEAB has had significant impact toward the mission of bridging neuroscience and behavior analysis, and attracted articles from leaders in the fields of neuroscience and behavior.*

66. Maher, E.E., Kipp, Z.A., Leyrer-Jackson, J.M., Khatri, S.N., Bondy, E.O., Martinez, G.J., Beckmann, J.S., Hinds Jr., T.D., Bimonte-Nelson, H.A., **Gipson, C.D.** (2022)\*. Ovarian hormones regulate

nicotine consumption and accumbens glutamatergic plasticity in female rats. *eNeuro*. PMID: 35697512 DOI: 10.1523/ENEURO.0286-21.2022. **Impact Factor: 4.36**

*\*This empirical publication is the first to show that nicotine suppresses the ability of estrogen to regulate estrogen receptor gene transcription in the brain reward pathway, opening up an entire line of research into the mechanisms by which nicotine may disrupt steroid hormone signaling cascades.*

67. **Gipson, C.D.**, Beckmann, J.S. (2022). Compulsion and Substance Use Disorder: Potential Importance of Boundary Conditions. *Neuropsychopharmacology*. PMID: 36175552. doi: 10.1038/s41386-022-01462-7. **Impact Factor: 8.29**.

68. *Maher, E.E., Strzelecki, A.M., Weafer, J.J., **Gipson, C.D.** (in press)\*. The Importance of Translationally Evaluating Steroid Hormone Contributions to Substance Use. Invited Review, *Frontiers in Neuroendocrinology* Special Issue: Addiction in Females. **Impact Factor: 8.33**.*

*\*This is an invited review to one of the top neuroendocrinology journals in the field. Our review focuses on the impacts of contraceptive and ovary-derived hormones on cocaine, opioid, and nicotine use at both the clinical and preclinical levels of analysis. The importance of this review is that it highlights gaps in the field regarding focus on vulnerable populations at risk for substance use disorders. We also place focus on female-specific health issues, and how steroid hormones may interact with and contribute to the neurobehavior of addiction from a translational perspective.*

### **Manuscripts Submitted, in Revision, or in Preparation:**

1. *Maher, E.E., Khatri, S., Bondy, E.O., Khatri, S. Sweatt, O., Kaplan, B., Pallem, N., Breakfield, G., Botkins, M., Kendrick Jr., P.T., Griffin, W.T., Beckmann, J.S., Weafer, J.J., **Gipson, C.D.** (under review). Synthetic contraceptive hormones occlude the ability of nicotine to reduce ethanol consumption in ovary-intact female rats. *Drug and Alcohol Dependence*.*
2. *Khatri, S., Sadek, S., Kendrick Jr., P.T., Bondy, E.O., Hong, M., Pauss, S., Luo, D., Prisinzano, T., Dunn, K.E., Marusich, J.A., Beckmann, J.S., Hinds Jr., T.D., **Gipson, C.D.** (resubmitted)\*. Xylazine co-use suppresses fentanyl consumption during self-administration and induces a unique sex-specific withdrawal syndrome that is naloxone-resistant in rats. *Experimental and Clinical Psychopharmacology*.*

*\*Xylazine is becoming increasingly prevalent in the fentanyl drug supply within the United States, and opioid overdoses are on the rise, which is being attributed to the adulteration of fentanyl with the veterinary anesthetic xylazine. This manuscript in revision is the first empirical manuscript demonstrating the impacts of intravenous xylazine on fentanyl self-administration and withdrawal as a function of xylazine dose and sex. This is also the first to quantitatively show that naloxone resistance occurs following xylazine/fentanyl co-use, and that these effects display a sex-specific trajectory whereby females are more susceptible to naloxone insensitivity and enhanced protracted withdrawal symptomatology following acute naloxone administration, which has enormous translational impact.*

3. *Khatri, S., Bondy, E.O., Maher, E., Stoops, W.W., Gipson, C.D.* (in preparation). Oxycodone withdrawal increases cocaine consumption and alters accumbens glutamate plasticity.
4. *Khatri, S., Maher, E., Bondy, E.O., Scofield, M.D., Gipson, C.D.* (in preparation). Nicotine induces sex-specific microglial activation which is dependent on adenosine signaling.
5. *Khatri, S., Kendrick, Jr., P.T., Mitra, S., Bondy, E.O., Gipson, C.D.* (review paper in preparation). The Pro- versus Anti-Inflammatory Effects of Nicotine.

### **Book Chapters**

1. **Gipson, C.D.** & Kalivas, P.W. Neural Basis of Drug Addiction. In: *Neurobiology of Drug Abuse in Adolescents*, São Paulo, Brazil (2011).
2. **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).
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 (2018).
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 (2018).
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, 1<sup>st</sup> Ed.* (V Preedy, ed). Academic Press, Elsevier, (2019)
8. *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).
9. **Gipson, C.D.**, & Fowler, C.D. (2020). Nicotinic receptors underlying nicotine dependence: Evidence from transgenic mouse models. In: *Cholinergic modulation of behavior. Current Trends in Behavioural Neurosciences*. Springer.

10. *Leyrer-Jackson, J.M., Spencer, S., Gipson, C.D.* (2020). Co-labeling of nervous cells using Dil neuronal filling and immunohistochemistry to explore metabotropic glutamate receptor expression. *Methods Mol Biol.*
11. *Khatri, S.N., Maher, E.E., Bondy, E.O., Gipson, C.D.* (2023). Neurobiology of Opioid Use. *The Oxford Handbook of Opioids and Opioid Use Disorder.*

### **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.

### **B. ABSTRACT PRESENTATIONS**

Key:

**Bolded name** = personal contribution

*Italicized name* = trainee

1. **05/2005 Gipson, C.D.**, & Wixted, J. T. (poster presentation). 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.
2. **03/2007 Gipson, C.D.**, DiGian, K.A., & Zentall, T.R. (oral presentation). Evidence for coding strategies in pigeons may result from faulty assumptions. Oral Presentation, Conference of Comparative Cognition, Melbourne, FL.
3. **04/2007 Gipson, C.D.**, & Zentall, T.R. (oral presentation). Pigeons May Use Neither Retrospective Nor Prospective Spatial Coding When Performing on the Radial Maze with Delays. Tri-State Conference, Purdue University.
4. **04/2007 Gipson, C.D.**, & Zentall, T.R. (oral presentation). Pigeons' Coding Strategies in a Radial-Arm Maze. The University of Kentucky Center for Ecology, Evolution, and Behavior Spring Research Symposium, Lexington, KY.
5. **05/2007 Gipson, C.D.**, & Zentall, T.R. (poster presentation). Coding strategies in pigeons: Planning ahead or remembering the past? Association of Behavioral Analysis Annual Convention, San Diego, CA.
6. **05/2007 Gipson, C.D.**, & Zentall, T.R. (poster presentation). Coding strategies in pigeons: Planning ahead or remembering the past? Society for the Quantitative Analysis of Behavior Annual Convention, San Diego, CA.

7. **03/2008 Gipson, C.D.**, DiGian, K.A., & Zentall, T.R. (oral presentation). Dual Coding in Pigeons. Cognitive Science Day, University of Kentucky, Lexington, KY.
8. **03/2008 Gipson, C.D.**, Alessandri, J., & Zentall, T.R. (oral presentation). Preference for Intermittent Reinforcement in Pigeons. Conference of Comparative Cognition, Melbourne, FL.
9. **04/2008 Gipson, C.D.**, Alessandri, J., & Zentall, T.R. (oral presentation). Preference for Intermittent Reinforcement in Pigeons. Tri-State Conference, University of Kentucky, Lexington, KY.
10. **05/2008 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.
11. **05/2009 Stagner, J.P.**, **Gipson, C.D.**, Miller, H., Alessandri, J., & Zentall, T.R. (oral presentation). A gambling analogy: Pigeons prefer 50% reinforcement over 75% reinforcement. Midwestern Psychological Association, Chicago, IL.
12. **02/2009 Gipson, C.D.**, & Bardo, M.T. (oral presentation). 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.
13. **03/2009 Gipson, C.D.**, & Bardo, M.T. (poster presentation). Effects of varied access to d-amphetamine self-administration on a delay discounting task in rats. Bluegrass Society for Neuroscience Spring Neuroscience Day, University of Kentucky, Lexington, KY.
14. **05/2009 Gipson, C.D.**, & Bardo, M.T. (poster presentation). Effect of varied access to d-amphetamine self-administration on impulsive choice in a delay discounting task in rats. Society for the Quantitative Analysis of Behavior, Phoenix, AZ.
15. **06/2009 Gipson, C.D.**, & Bardo, M.T. (poster presentation). The effect of long and short access to d-amphetamine self-administration on a delay discounting task in rats. College on Problems of Drug Dependence, Reno, NV.
16. **09/2009 Gipson, C.D.**, Beckmann, J., & Bardo, M.T. (poster presentation). Effect of environmental enrichment on escalation of cocaine self-administration in rats. European Behavioural Pharmacology Society, Rome, Italy.
17. **10/2009 Gipson, C.D.**, & Bardo, M.T. (oral presentation). The role of dopamine and serotonin receptors in the orbitofrontal cortex on impulsive choice in rats. NIDA Training Grant Symposium, University of Kentucky.
18. **02/2010 Gipson, C.D.**, Beckmann, J.S. & Bardo, M.T. (poster presentation). Environmental enrichment protects against acquisition but not escalation of cocaine self-administration in rats. Center for Clinical and Translational Science, University of Kentucky, Lexington, KY.

19. **05/2010 Gipson, C.D.**, Beckmann, J.S., & Bardo, M.T. (oral presentation). Social Facilitation as a Preclinical Model of Drug Abuse. Midwestern Psychological Association, Chicago, IL.
20. **05/2010 Gipson, C.D.**, *El-Maraghi, S.*, Beckmann, J.S., & Bardo, M.T. (poster presentation). Environmental enrichment protects against acquisition but not escalation of cocaine self-administration in rats. Midwestern Psychological Association, Chicago, IL.
21. **05/2010 Gipson, C.D.**, Kelly, T.H., & Bardo, M.T. (poster presentation). The reinforcement omission effect as a translational model of negative urgency. Society for the Quantitative Analysis of Behavior, San Antonio, TX.
22. **06/2010 Gipson, C.D.**, & Bardo, M.T. (oral presentation). An animal model of negative urgency and the effect of reward omission on d-amphetamine self-administration. College on the Problems of Drug Dependence, Scottsdale, AZ.
23. **08/2010 Gipson, C.D.**, Beckmann, J.S., & Bardo, M.T. (poster presentation). Environmental enrichment and escalation of cocaine self-administration in rats. American Psychological Association, Division 28, San Diego, CA.
24. **11/2010 Gipson, C.D.**, Perry, J.L., Yates, J., Meyer, A.C., Beckmann, J.S., & Bardo, M.T. (poster presentation). Role of dopamine and serotonin receptors in medial prefrontal and orbitofrontal cortex on impulsive choice in rats. Society for Neuroscience, San Diego, CA.
25. **03/2011 El-Maraghi, S.**, Beckmann, J.S., **Gipson, C.D.**, & Bardo, M.T. (poster presentation) Stimulus control of escalated cocaine intake and short access sessions. Midwestern Psychological Association, Chicago, IL.
26. **04/2011 Gipson, C.D.**, Shen, H., & Kalivas, P.W. (poster presentation). The role of dendritic spine morphology in cue-induced reinstatement of cocaine-seeking behavior in rats. Frontiers in Neuroscience, Seabrook Island, SC.
27. **06/2011 Gipson, C.D.**, Marusich, J.A., Alvers, K.A., & Bardo, M.T. (poster presentation). Differences in environmental enrichment predict self-administration of a low unit dose of methylphenidate in rats. College on Problems of Drug Dependence, Hollywood, FL.
28. **06/2011 Beckmann, J.S.**, **Gipson, C.D.**, & Bardo, M.T. (poster presentation). Stimulus control of cocaine escalation and short access sessions. College on Problems of Drug Dependence, Hollywood, FL.
29. **08/2011 Gipson, C.D.** (oral presentation) A translational model of mood-based drug abuse. American Psychological Association Division 28, Washington, DC.
30. **11/2011 Gipson, C.D.**, Shen, H., & Kalivas, P.W. (poster presentation). Opposite changes in spine morphology are produced by cue- and context-induced versus cocaine-induced drug seeking. Society for Neuroscience, Washington, D.C.

31. **03/2012 Gipson, C.D.**, Kupchik, Y., Shen, H., Reissner, K.J., Thomas, C.A., & Kalivas, P.W. (poster presentation). Rapid synaptic and morphological changes in nucleus accumbens core during cocaine relapse. *Frontiers in Neuroscience*, Seabrook Island, SC.
32. **04/2012 Gipson, C.D.**, & Kalivas, P.W. (oral presentation). 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.
33. **11/2012 Gipson, C.D.**, & Kalivas, P.W. (oral presentation). 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.
34. **11/2012 Gipson, C.D.**, Kupchik, Y.M., Reissner, K.J., Smith, A.W., & Kalivas, P.W. (invited poster presentation through SRNT). Alterations in synaptic potentiation and glutamatergic signaling in nicotine abuse. NIDA presymposium, Society for Neuroscience. New Orleans, L.A.
35. **11/2012 Gipson, C.D.**, Kupchik, Y.M., Reissner, K.J., Smith, A.C., & Kalivas, P.W. (invited poster presentation 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.
36. **11/2012 Shen, H., Gipson, C.D.**, & Kalivas, P.W. (poster presentation). 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.
37. **11/2012 Roberts-Wolfe, D.J., Kalivas, P.W., & Gipson, C.D.** (poster presentation) 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.
38. **11/2012 Stankeviciute, N., Kupchik, Y., Reissner, K., Kalivas, P.W., & Gipson, C.D.** (poster presentation). Rapid synaptic potentiation in nicotine relapse: Role of GluR1 and NR2B-containing NMDA receptors. Neuropalooza, College of Charleston/Medical University of South Carolina, SC.
39. **11/2012 Smith, A.C.W., Gipson, C.D., & Kalivas, P.W.** (poster presentation). 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.
40. **12/2012 Stankeviciute, N., Kalivas, P.W., & Gipson, C.D.** (poster presentation). Changes in spine morphology produced by context-induced cocaine seeking. MUSC Research Day, Charleston, SC.
41. **12/2012 Smith, A.W., Gipson, C.D., & Kalivas, P.W.** (poster presentation). Inhibition of matrix metalloproteinases-2 and -9 attenuate cue-induced reinstatement of cocaine seeking and associated morphological plasticity. MUSC Research Day, Charleston, S.C.



42. **12/2012** Roberts-Wolfe, D.J., Kalivas, P.W., & **Gipson, C.D.** (poster presentation). Differential rapid synaptic potentiation in nucleus accumbens core versus shell during cocaine cue-induced relapse and extinction. MUSC Research Day, Charleston, S.C.
43. **12/2012** **Gipson, C.D.**, & Kalivas, P.W. (invited poster presentation/travel award). Alterations in synaptic plasticity and glutamatergic signaling in nicotine addiction. American College of Neuropsychopharmacology, Hollywood, FL.
44. **03/2013** **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.
45. **04/2013** Kupchik, Y.M., **Gipson, C.D.**, Kalivas, P.W. (poster presentation). Rapid synaptic changes occur during cue-induced relapse to cocaine and nicotine. Abstract for the Israeli Society for Biological Psychiatry, Kibuts HaGoshrim, Israel.
46. **06/2013** **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.
47. **09/2013** **Gipson, C.D.**, Kupchik, Y., Reissner, K.J., *Stankeviciute, N.*, Smith, A.C.W., & Kalivas, P.W. (poster presentation). Reinstatement of nicotine seeking is mediated by glutamatergic plasticity. Frontiers in Neuroscience, Charleston, S.C.
48. **12/2013** **Gipson, C.D.**, Kalivas, P.W. (poster presentation). Contributions of Glial Glutamate Transport and NMDA Receptors in Nicotine Relapse. American College of Neuropsychopharmacology, Hollywood, FL.
49. **06/2014** **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.
50. **11/2014** **Gipson, C.D.**, Spencer, S., *Stankeviciute, N.*, *Allen, N.*, Smith, R.J., & Kalivas, P.W. (poster presentation). Cue induced cocaine seeking involves nucleus accumbens core glutamate overflow mediated by mGluR2/3 and mGluR5. Society for Neuroscience, Washington DC.
51. **11/2014** Kupchik, Y., Brown, R., **Gipson, C.D.**, Stefanik, M.T., & Kalivas, P.W. (poster presentation). When motivation becomes maladaptive – similarities between drug addiction and obesity. European Neuropsychopharmacology.
52. **11/2014** Heinsbroek, J., Kupchik, Y., Scofield, M.D., Kalivas, P.W., & **Gipson, C.D.** (poster presentation). 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.

53. **06/2015 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.
54. **01/2016 Powell, G., del Franco, A., Pagni, B., Goenaga, J., Scofield, M.D., Gipson-Reichardt, C.D.** (poster presentation). Role of accumbens nicotinic acetylcholine receptors in cue-induced nicotine seeking and synaptic plasticity. Barrow Neurological Institute Neuroscience Symposium.
55. **03/2016 Gipson, C.D., Powell, G., del Franco, A., Pagni, B., Goenaga, J., Scofield, M.D.** (poster presentation). Nicotinic acetylcholine receptors modulate cue-induced nicotine seeking and synaptic plasticity. Society for Research on Nicotine and Tobacco.
56. **06/2016 del Franco, A., Powell, G., Goenaga, J., Scofield, M.D., & Gipson, C.D.** (poster presentation). Nicotinic acetylcholine receptors regulate cue-induced nicotine seeking and accumbens synaptic plasticity. College on Problems of Drug Dependence, Palm Springs CA.
57. **11/2016 Roberts-Wolfe, D., Shields, C., Gipson, C.D., Heinsbroek, J., Bobadilla, A.C., & Kalivas, P.W.** (poster presentation). Extinction training is required for transient synaptic potentiation in accumbens core and shell. Society for Neuroscience, San Diego CA.
58. **11/2016 Powell, G., del Franco, A., Garcia-Keller, C., Spencer, S., Stankeviciute, N., Schwartz, D., Gipson, C.D.** (poster presentation). N-Acetylcysteine inhibits cue-induced nicotine seeking and relapse-associated synaptic plasticity. Society for Neuroscience, San Diego CA.
59. **11/2016 Scofield, M.D., Heinsbroek, J.A., Garcia-Keller, C., Smith, A.W., Gipson, C.D., & Kalivas, P.W.** (poster presentation). Evaluating of the Role of Nucleus Accumbens Nitric Oxide and Somatostatin Release in Cocaine Seeking. Society for Neuroscience, San Diego CA.
60. **01/2017 Powell, G., Neisewander, J.L., Beckmann, J.S., Marusich, J.A., Del Franco, A., Gipson, C.D.** (poster presentation). 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.
61. **01/2017 Powell, G., del Franco, A., Garcia-Keller, C., Spencer, S., Stankeviciute, N., Schwartz, D., Gipson, C.D.** (poster presentation). N-Acetylcysteine inhibits cue-induced nicotine seeking and relapse-associated synaptic plasticity. Neuroscience 7<sup>th</sup> Research Symposium, Arizona State University, Phoenix Arizona.
62. **02/2017 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.
63. **05/2017 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.

64. **05/2017** *Overby, P.F., Daniels, C.W., Gipson, C.D., & Sanabria, F.* (poster presentation). Self-administration of nicotine transiently enhances sign-tracking in rats. Society for the Quantitative Analysis of Behavior, Denver, CO.
65. **09/2017** **Gipson, C.D., Namba, M., Goenaga, J., Powell, G., Del Franco, A.D., McCallum, J.J.** (poster presentation). 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, Greece.
66. **11/2017** *Goenaga, J., McCallum, J.J., Del Franco, A., Powell, G., Namba, M., Gipson, C.D.* (poster presentation). 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.
67. **11/2017** **Gipson, C.D., Powell, G.L., Del Franco, A., Holter, M., Garcia, R., Vannan, A., Goenaga, J., Neisewander, J.L.** (poster presentation). Developmental nicotine exposure induces persistent alterations in accumbens glutamatergic circuitry. Society for Neuroscience, Washington D.C.
68. **11/2017** *Marusich, J.A., Powell, G., Beckmann, J.S., Neisewander, J.L., Del Franco, A., Goenaga, J., Gipson, C.D.* (poster presentation). Analysis of economic demand for nicotine using an abbreviated behavioral economics protocol in rats. Society for Neuroscience, Washington DC.
69. **12/2017** *Zaczek, R., Myers, S.J., Gipson, C.D., Wong, H., Lyuboslavsky, P., Kalivas, P.W., Laskowitz, D.T., Ruppia, K., Koszalka, G.W.* (poster presentation). NP10679: A pH-sensitive GluN2B inhibitor is effective in models of eschemia and nicotine relapse. American College of Neuropsychopharmacology, Palm Springs CA.
70. **12/2017** **Gipson, C.D., Namba, M.N., Goenaga, J., Powell, G., McCallum, J.J.** (poster presentation). 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 CA.
71. **02/2018** **Gipson, C.D., Powell, G., Cabrera-Brown, G., Marusich, J.A., Beckmann J.S.** (oral presentation). Abrupt nicotine reduction increases essential value of nicotine and exacerbates reinstated nicotine seeking. Society for Research on Nicotine and Tobacco, Baltimore, MD.
72. **06/2018** **Gipson, C.D., Goenaga, J., Piña, J., Namba, M.D., Prakapenka, A., Koebele, S.V., Bimonte-Nelson, H.** (poster presentation). 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.
73. **06/2018** *Namba, M.D., Goenaga, J., Gipson, C.D.* (oral presentation). 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.

74. **11/2018** *Namba, M.D., Goenaga, J., Gipson, C.D.* (poster presentation). *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.
75. **12/2018** *Namba, M.D., Gipson, C.D.* (poster presentation). Glutamatergic and Neuroimmune Mechanisms of N-acetylcysteine-Mediated Inhibition of Cue-Induced Nicotine Seeking. American College of Neuropsychopharmacology, Hollywood, FL.
76. **12/2018** *Leyrer-Jackson, J., McCallum, J.J., Namba, M.D., Gipson, C.D.* (poster presentation). Role of accumbens serotonin transport and NMDA receptors in nicotine relapse. American College of Neuropsychopharmacology, Hollywood, FL.
77. **02/2019** *Gipson, C.D., Namba, M.D., Narayanan, S., Aktipis, A.* (oral presentation). 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.
78. **06/2019** *Leyrer-Jackson, J., Pina, J., Ulangkaya, H., Bimonte-Nelson, H.A., Gipson, C.D.* (poster presentation). Ovarian hormones mediate acquisition of nicotine self-administration and accumbens glutamatergic plasticity. College on Problems of Drug Dependence, San Antonio, TX.
79. **06/2019** *Leyrer-Jackson, J., Pina, J., McCallum, J., Ulangkaya, H., Gipson, C.D.* (poster presentation). The role of accumbens serotonin transport and GluN2B-containing NMDA receptors in nicotine relapse. College on Problems of Drug Dependence, San Antonio, TX.
80. **10/2019** *Gipson, C.D., Powell, G., Marusich, J.A., Beckmann, J.S.* (oral presentation). Abrupt nicotine reduction does not alter nicotine demand or reduce reinstated nicotine seeking. Tobacco Regulatory Science meeting, National Institutes of Health.
81. **11/2019** *Leyrer-Jackson, J., Holter, M., Newbern, J., Brickner, M., Overby, P.F., Gipson, C.D.* (dynamic poster presentation and hot topic). Chemogenetic inhibition of accumbens cholinergic interneurons inhibits nicotine seeking behavior. Society for Neuroscience, Chicago, IL.
82. **12/2019** *Leyrer-Jackson, J., Holter, M., Newbern, J., Brickner, M., Overby, P.F., Gipson, C.D.* (poster presentation). Chemogenetic inhibition of accumbens cholinergic interneurons inhibits nicotine seeking behavior. American College of Neuropsychopharmacology.
83. **06/2020** *Gipson, C.D.* (Chair and Discussant, Accepted Full Symposium). Aging and Addiction: Promoting Crosstalk Between Two Fields. College on Problems of Drug Dependence, Virtual Conference.
84. **08/2020** *Kaplan, B.A., Gipson, C.D., Koffarnus, M.N.* (poster presentation). Bidirectional Increases in Valuation for Cigarettes and Opioids under Withdrawal of Either Substance in Co-Users. American Psychological Association, Division 28.

85. **12/2020 Gipson, C.D., Maher, E., Overby, P.F., Leyrer-Jackson, J., Koebele, S.V., Bimonte-Nelson, H.A.** (virtual poster presentation). Ovarian hormones and contraceptive estrogen specifically alter nicotine demand and the reward pathway. American College of Neuropsychopharmacology.
86. **02/2021 Gipson, C.D., Maher, E., Overby, P.F., Leyrer-Jackson, J., Koebele, S.V., Bimonte-Nelson, H.A.** (virtual oral presentation). Ovarian hormones and contraceptive estrogen specifically alter nicotine demand and the reward pathway. Society for Research on Nicotine and Tobacco (in the “On the Basis of Sex” panel).
87. **02/2021 Gipson, C.D.** (virtual symposium chair). Novel therapeutic targets for cessation. Society for Research on Nicotine and Tobacco.
88. **02/2021 Maher, E., Overby, P.F., Leyrer-Jackson, J., Koebele, S.V., Bimonte-Nelson, H.A., Gipson, C.D.** (virtual poster presentation). Natural and Synthetic Estrogen Specifically Alter Nicotine Demand and the Reward Pathway. Third annual Substance Use Research Event, University of Kentucky.
89. **06/2021 Gipson, C.D., Maher, E., Overby, P.F., Leyrer-Jackson, J., Koebele, S.V., Bimonte-Nelson, H.A.** (full symposium, virtual oral presentation, and co-chair). Ovarian hormones and contraceptive estrogen specifically alter nicotine demand and the reward pathway. College on Problems of Drug Dependence.
90. **06/2021 Maher, E.E., Bondy, E.O., Gipson, C.D.** (virtual oral presentation). Diestrus is Associated with Higher Nicotine Consumption and Estrogen Receptor Localization Varies with Region-Specificity within the Mesolimbic Reward Pathway of Freely Cycling Female Rats. College on Problems of Drug Dependence.
91. **06/2021 Bondy, E.O., Maher, E.E., Gipson, C.D.** (virtual oral presentation). Accumbens Microglial CX3CR1 is Increased following Chronic Nicotine Self-Administration in Adult Female Rats. College on Problems of Drug Dependence.
92. **06/2021 Khatri, S., Ulangkaya, H., Stoops, W.W., Gipson, C.D.** (virtual oral presentation). Withdrawal from Oxycodone Self-Administration Increases Cocaine Intake. College on Problems of Drug Dependence.
93. **11/2021 Khatri, S., Ulangkaya, H., Maher, E., Bondy, E.O., Stoops, W.W., Gipson, C.D.** (poster presentation). Oxycodone withdrawal increases consumption of cocaine and alters accumbens glutamate plasticity. Society for Neuroscience (switched to virtual).
94. **11/2021 Maher, E., Bondy, E.O., Khatri, S., Weafer, J., Gipson, C.D.** (poster presentation). Contraceptive hormones differentially alter ethanol and nicotine consumption in female rats. Society for Neuroscience (switched to virtual).
95. **11/2021 Bondy, E.O., Maher, E., Khatri, S., Gipson, C.D.** (poster presentation). Microglia are activated following nicotine self-administration with sex-specificity. Society for Neuroscience (switched to virtual).

96. **12/2021** *Bondy, E.O., Maher, E., Khatri, S., Gipson, C.D.* (poster presentation). Microglia are activated following nicotine self-administration with sex-specificity. American College of Neuropsychopharmacology. Virtual hybrid format.
97. **03/2022** *Khatri, S.N., Maher, E.E., Bondy, E.O., Stoops, W.W., Gipson, C.D.* (poster). Cocaine use during oxycodone withdrawal reduces somatic signs and is associated with aberrant accumbens glutamatergic plasticity. Substance Use Research Event (SURE), University of Kentucky.
98. **03/2022** *Bondy, E.O., Khatri, S.N., Maher, E.E., Gipson, C.D.* (poster). Chemogenetic inhibition of accumbens microglia reduces cue-induced nicotine seeking behavior. Substance Use Research Event (SURE), University of Kentucky.
99. **03/2022** *Maher, E.E., Bondy, E.O., Khatri, S.N., Gipson, C.D.* (poster). Estrogens critically regulate nicotine consumption and accumbens glutamatergic plasticity. Substance Use Research Event (SURE), University of Kentucky.
100. **03/2022** *Gipson, C.D., Bondy, E.O., Maher, E., Khatri, S.* (accepted symposium). ***On the basis of sex: Nicotine's differential actions in the male and female brain.*** Society for Research on Nicotine and Tobacco, Baltimore, MD.
101. **03/2022** *Maher, E., Strzelecki, A., Weafer, J., Gipson, C.D.* Contraceptive hormones differentially impact ethanol and nicotine consumption in a rat co-use model. In the symposium: ***Utilizing translational strategies to uncover neurobehavioral mechanisms of substance use disorders.*** Society for Research on Nicotine and Tobacco, Baltimore, MD.
102. **03/2022** *Maher, E., Weafer, J., Gipson, C.D.* Contraceptive hormones differentially impact ethanol and nicotine consumption in a rat co-use model. In the symposium: Utilizing translational strategies to uncover neurobehavioral mechanisms of substance use disorders. Substance Use Research Event (SURE), University of Kentucky.
103. **03/2022** *Bondy, E.O., Maher, E., Khatri, S., Gipson, C.D.* (accepted oral presentation). Activation of accumbens microglia and adenosine A2a receptors contributes to nicotine self-administration and cue-induced reinstatement. Society for Research on Nicotine and Tobacco, Baltimore, MD.
104. **04/2022** *Bondy, E.O., Maher, E., Khatri, S., Gipson, C.D.* (poster). Activation of accumbens microglia and adenosine A2a receptors contributes to nicotine self-administration and cue-induced reinstatement. Naff Symposium, University of Kentucky.
105. **04/2022** *Swanbeck, O., Khatri, S., Maher, E., Bondy, E.O., Pettey, A., Kendrick, P.T., Hong, M., Gipson, C.D.* (poster). Characterizing the role of suvorexant and orexinergic neurons of the lateral hypothalamus in fentanyl withdrawal and seeking behavior. Showcase of Undergraduate Scholars (Chellgren award winner), University of Kentucky.
106. **06/2022** *Maher, E., Strzelecki, A., Weafer, J., Gipson, C.D.* (oral presentation). Chronic Administration of Synthetic Contraceptive Hormones Alters Nicotine Consumption in an Ethanol

Co-Use Model in Ovary-Intact Female Rats. College on Problems of Drug Dependence, Minneapolis MN.

107. **06/2022** *Khatri, S.N., Bondy, E.O., Maher, E.E., Pettey, A., Kendrick Jr., P.T., Stoops, W.W., Gipson, C.D.* Cocaine Use during Oxycodone Withdrawal Reduces Somatic Signs of Withdrawal and is Associated with Aberrant Accumbens Glutamatergic Plasticity. College on Problems of Drug Dependence, Minneapolis MN.
108. **07/2022** *Sally N. Pauss, Zachary A. Kipp, Gipson, C.D., and Hinds, Jr., T.D.* (2022) Estrogen Induces Nicotine Use in Females, and OLFM1 and OLFM3 Expression. Summer Training in Environmental Health and Pharmacological Sciences (SUREs) Program, University of Kentucky College of Medicine.
109. **08/2022** **Gipson, C.D.** (invited talk, included in full symposium, "*Synaptic Mechanisms of Drug Addiction*"). Novel non-neuronal cell signaling mechanisms of synaptic plasticity during nicotine seeking. Gordon Research Conference on the Neurobiology of Drug Addiction: Addiction Research: From Molecules to Circuits to Treatment. Newry, ME.
110. **10/2022** *McNealy, K.R., Oevermann, M.W., Knabel, M.L., Gipson, C.D., Barrett S.T., and Bevins R.A.* Characterizing the effects of contraceptive hormones on responding maintained by a sensory reinforcer in ovary-intact female Sprague-Dawley rats. Poster session at 2022 Midwestern Association for Behavior Analysis Conference, St. Louis, MO.
111. **12/2022** *Khatri, S.N., Gipson, C.D.* Cocaine Use During Oxycodone Withdrawal Reduces Somatic Signs of Withdrawal and Exacerbates Oxycodone-Induced Glutamate Dyshomeostasis. American College of Neuropsychopharmacology, Phoenix, AZ.
112. **12/2022** *Kendrick Jr., P.T., Gipson, C.D.* Chronic Progesterone Treatment Reduces Nicotine Consumption and Accumbens Microglial Activation in a Sex-Specific Fashion. American College of Neuropsychopharmacology, Phoenix, AZ.
113. **12/2022** *Bondy, E.O., Gipson, C.D.* Adenosine 2a Receptor Agonism Decreases Nicotine Seeking and Associated Accumbens Microglial Activation. American College of Neuropsychopharmacology, Phoenix, AZ.
114. **01/2023** **Gipson, C.D.** Contributions of ovarian hormone loss and estrogen replacement to nicotine place preference during aging in estropausal female rats (accepted full symposium, "*Interactions between Substance Use and Aging in Animal Models*"). Winter Conference on Brain Research, Snowbird, Utah.
115. **06/2023** *Strzelecki, A., Childs, E., Gipson, C.D., Weafer, J.* (submitted abstract). Influence of oral contraceptive hormone dose and pill phase on alcohol use in young adult women. Research Society on Alcoholism, Bellevue, WA.
116. **06/2023** *Kendrick, Jr., P.T., Bondy, E.O., Maher, E.E., Khatri, S.N., Bimonte-Nelson, H.A., Gipson, C.D.* (accepted as an oral presentation). Chronic Progesterone Treatment Reduces Nicotine

Consumption and Alters Accumbens Microglial Morphometrics in a Sex-Specific Fashion. College on Problems of Drug Dependence, Denver, CO.

117. **06/2023** *Khatri, S.N., Bondy, E.O., Kendrick, Jr., P.T., Hong, M., Hinds Jr., T., Prisinzano, T., Dunn, K.E., Gipson, C.D.* (accepted as an oral presentation). Xylazine reduces intravenous fentanyl consumption but does not impair lever discrimination in male and female rats. College on Problems of Drug Dependence, Denver, CO.
118. **06/2023** **Gipson, C.D.,** *Khatri, S.N., Kendrick Jr., P.T., Bondy, E.O., Scofield, M.D.,* (accepted poster). Chronic nicotine use induces a unique neuroimmune landscape that critically impacts aberrant accumbens synaptic plasticity. College on Problems of Drug Dependence, Denver, CO.

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

#### **ACTIVE:**

**Project Title:** Neuroinflammatory and glutamatergic mechanisms of nicotine addiction and relapse

**Project Number:** R01 DA046526-S1

**Principal Investigator(s):** Cassandra Gipson-Reichardt, Ph.D.

**Role in Project:** PI

**Effort:** 0 calendar months

**Institution/University:** University of Kentucky

**Duration of Project:** 02/01/2023-08/30/2024

**Source of Funding:** NIDA

**Total Award:** \$75,948

\*Diversity supplement to support Percell Tyrone Kendrick, Jr.

**Project Title:** Contributions of Progestins Independently and Interactively with Contraceptive Estrogen to Nicotine Use

**Project Number:** R21 DA055879-01A1

**Principal Investigator(s):** Cassandra Gipson-Reichardt, Ph.D.

**Role in Project:** PI

**Effort:** 3.0 calendar months

**Institution/University:** University of Kentucky

**Duration of Project:** 09/27/2022-08/30/2024

**Source of Funding:** NIDA

**Total Award:** \$434,847

\*Received a score of 10 (1<sup>st</sup> percentile) on resubmission

**Project Title:** Neuroinflammatory and glutamatergic mechanisms of nicotine seeking

**Project Number:** R01 DA046526

**Principal Investigator(s):** Cassandra Gipson-Reichardt, Ph.D.

**Role in Project:** PI

**Effort:** 3.9 calendar months

**Institution/University:** University of Kentucky



**Duration of Project:** 09/30/2019-08/31/2024  
**Source of Funding:** NIH/NIDA  
**Total Award:** \$1,516,838.00

**Project Title:** Glutamatergic mechanisms in opioid and cocaine co-use  
**Project Number:** R21/R33 DA049130  
**Principal Investigator(s):** Cassandra Gipson-Reichardt, Ph.D. (Contact), William Stoops, Ph.D. (MPIs)  
**Role in Project:** MPI  
**Effort:** 2.0 calendar months in the R21 phase, 1.0 calendar months in the R33 phase  
**Institution/University:** University of Kentucky  
**Duration of Project:** 09/01/2020-08/30/2025  
**Source of Funding:** NIH/NIDA  
**Total Award:** \$2,278,716.00  
\*R33 awarded August 2022

**Project Title:** Evaluating the neurobiological mechanisms of suvorexant in reducing fentanyl withdrawal and relapse  
**Project Number:** N/A  
**Principal Investigator(s):** Cassandra Gipson-Reichardt, Ph.D.  
**Role in Project:** PI  
**Effort:** 0 calendar months  
**Institution/University:** University of Kentucky  
**Duration of Project:** 07/01/2021-12/30/2022  
**Source of Funding:** SUPRA Pilot Grant Award  
**Total Award:** \$50,000

**Project Title:** Neurobiological Impacts of Ovarian Hormones on Nicotine Use  
**Project Number:** N/A  
**Principal Investigator(s):** Erin Maher, Ph.D.  
**Role in Project:** Mentor  
**Effort:** 0 calendar months  
**Institution/University:** University of Kentucky  
**Duration of Project:** 04/01/2022-09/30/2023  
**Source of Funding:** SUPRA Post-Doctoral Pilot Grant Award  
**Total Award:** \$10,000

**Project Title:** Center for Research on Existing & Alternative Treatment Endpoints (CREATE)  
**Principal Investigator(s):** William Stoops, Ph.D.  
**Role in Project:** Co-I  
**Effort:** 0 calendar months  
**Institution/University:** University of Kentucky  
**Duration of Project:** 07/01/2022-12/30/2023  
**Source of Funding:** SUPRA Complex Grant Pilot Award  
**Total Award:** \$50,000  
\*Awarded to fund the submission of a P50 to NIDA in September 2023

**PENDING:**

**Project Title:** Neurobehavioral mechanisms of xylazine and fentanyl co-use and withdrawal

**Project Number:** R01 DA058933

**Principal Investigator(s):** Cassandra Gipson-Reichardt, Ph.D. (Contact), Terry Hinds, Jr. (MPIs)

**Role in Project:** PI

**Effort:** 3.6 calendar months

**Institution/University:** University of Kentucky

**Duration of Project:** 07/01/2023-06/30/2028

**Source of Funding:** NIDA

**Total Award:** \$2,656,540

\*Pending Administrative Review

**Project Title:** Advancing Troriluzole for the Treatment of Comorbid Alcohol and Tobacco Use Disorder

**Project Number:** 1 R01 DA059200-01

**Principal Investigator(s):** William Stoops, Ph.D.

**Role in Project:** Co-I

**Effort:** 0.6 calendar months

**Institution/University:** University of Kentucky

**Duration of Project:** 07/01/2023-06/30/2026

**Source of Funding:** NIDA

**Total Award:** \$2,197,409.00

\*Pending Council Review

**Project Title:** Operant boxes for behavioral studies on food selection to determine outcomes in obesity and diabetes research

**Project Number:** Confirmation # 2344

**Principal Investigator(s):** Cassandra Gipson-Reichardt, PhD; Terry Hinds, Jr., PhD (MPIs).

**Role in Project:** MPI

**Effort:** N/A

**Institution/University:** University of Kentucky

**Duration of Project:** 07/01/2023-06/30/2024

**Source of Funding:** VPR equipment competition

**Total Award:** \$95,392

**COMPLETED:**

**Project Title:** Glutamatergic mechanisms underlying nicotine addiction and relapse following nicotine reduction

**Project Number:** R03 DA045881

**Principal Investigator(s):** Cassandra Gipson-Reichardt, Ph.D.

**Role in Project:** PI  
**Effort:** 1.5 calendar months  
**Institution/University:** University of Kentucky  
**Duration of Project:** 09/30/2018-08/31/2022  
**Source of Funding:** NIH/NIDA  
**Total Award:** \$95,288

**Project Title:** Cholinergic modulation of glutamatergic signaling in nicotine addiction and relapse  
**Project Number:** R21 DA044479  
**Principal Investigator(s):** Cassandra Gipson-Reichardt, Ph.D., M. Foster Olive  
**Role in Project:** MPI  
**Effort:** 2.5 calendar months  
**Institution/University:** University of Kentucky  
**Duration of Project:** 07/15/2018-06/30/2022  
**Source of Funding:** NIH/NIDA  
**Total Award:** \$201,749

**Project Title:** Translational Studies Examining the Effects of Synthetic Estrogens and Progestins on Motivation for Alcohol and Nicotine Co-Use in Rats and Humans  
**Project Number:** N/A  
**Principal Investigator(s):** Jessica Weafer, Ph.D. (Contact), Cassandra Gipson-Reichardt, Ph.D. (MPIs)  
**Role in Project:** MPI  
**Effort:** 0 calendar months  
**Institution/University:** University of Kentucky  
**Duration of Project:** 01/01/2021-08/30/2021  
**Source of Funding:** Ignite Research Collaboration Pilot  
**Total Award:** \$42,000

**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

NIH/NIDA

“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

NIH/NIDA

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

NIH/NIDA

Diversity supplement to support post-doctoral fellow Dr. Robert Oliver

**R21 DA044479-S2** (Gipson-Reichardt, PI) 05/15/2019-09/01/2019

NIH/NIDA

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