Cody A. Siciliano, PhD

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EDUCATION

Graduate	*Undergraduate*	*Undergraduate*
2012 - 2015	2009 - 2011	2005 - 2009
Ph.D. in Neuroscience	B.A. in Psychology	AA in Liberal Arts with honors
Wake Forest School of Medicine	State University of New York at Binghamton	Sullivan County Community College
Winston-Salem, NC	Binghamton, NY	Loch Sheldrake, NY
Advisor, Sara R. Jones, Ph.D.	Graduated Cum Laude	Graduated Magna Cum Laude

RESEARCH EXPERIENCE

Faculty	*Postdoctoral Training*	*Graduate Training*	*Laboratory Technician*
Sept. 1st, 2019 - Present	2015 - 2019	2012 - 2015	2011 - 2012
Assistant Professor	Postdoctoral Fellow	Student	Research Assistant
Vanderbilt Center for Addiction Research	Picower Institute for Learning and Memory	Department of Physiology and Pharmacology	Department of Psychology
Department of Pharmacology	Brain and Cognitive Sciences	Program in Neuroscience	Binghamton University
Vanderbilt University	Massachusetts Institute of Technology	Wake Forest School of Medicine	Laboratory of Dr. Jilla Sabeti
	Laboratory of Dr. Kay M. Tye	Laboratory of Dr. Sara R. Jones	

RESEARCH SUPPORT

Current

06/20/22 – 06/20/27 **R01 AA030115** (Role: PI)
Mesocortical neuromodulation in punishment-resistant alcohol drinking

02/10/22 – 01/01/27 **U01 AA029971** (Role: PI)
Cross-species plasticity signatures of alcohol and stress

08/01/21 – 08/01/24 **Whitehall Foundation Grant** (Role: PI)
Neurobiology of trigeminal sensation in detection of chemical danger

09/22/21 – 07/31/26 **R01 DA052317** (Role: co-I)
Mechanisms of dopaminergic dysfunction in substance use disorder

Pending

09/30/23 – 09/30/28 **Vanderbilt AUD Research and Education Center, P60 Center.** NIH/NIAAA
Roles: PI of Research Project 4 and co-PI of Research Core. Impact score: 15.

Completed

06/01/22 – 05/31/23 **P51 Pilot Grant** (Role: PI)
Transgene-free assessment of cell-type specific neuronal activity in non-human primate brain

03/01/20 – 03/01/23 **R00 DA045103** (Role: PI)
Defining the role of cortical circuit dynamics in learning and addiction

12/01/20 – 12/01/22 **Stanley Cohen Innovation Award** (Siciliano, PI)
Neural substrates of memory

06/15/20 – 05/13/22 **Brain Research Foundation Fay/Frank Seed Grant** (Siciliano, PI)
Neural mechanisms of inferential learning

01/01/20 – 12/31/21 **Alkermes Pathways Research Award** (Siciliano, PI)
Neural mechanisms of cognitive dysfunction and alcohol abuse vulnerability

01/01/18 – 07/01/20 **Brain and Behavior Research Foundation / NARSAD Young Investigator Award** (Siciliano, PI)
Integrative circuits controlling homeostatic learning mechanisms

05/15/18 – 08/31/19 **K99 DA045103 Pathway to Independence Award** (Siciliano, PI), NIDA
Defining the role of cortical circuit dynamics in learning and addiction

07/01/16 – 05/15/18 **F32 MH111216 Ruth L. Kirschstein National Research Service Award** (Siciliano, PI), NIMH

Elucidating the role of basolateral amygdala projections to the lateral hypothalamus in associative learning

02/01/15 – 11/16/15 **F31 DA037710 Ruth L. Kirschstein National Research Service Award** (Siciliano, PI), NIDA
Amphetamine administration during a rodent model of cocaine abuse

08/01/2013 – 01/31/15 **T32AA007565-20 NIAA Ruth L. Kirschstein National Research Service Award** (Brian McCool, PI)
Wake Forest Alcohol Training Grant

INVITED TALKS

2023

1. **Siciliano CA** (June) Interlaminar network excitability of primate dorsolateral prefrontal cortex tracks cognitive flexibility. *INIA Consortium Meeting.* Seattle, WA.
2. **Siciliano CA** (June) High-throughput, Minimally Invasive Intranasal Cocaine Self-Administration in Head-Restrained Mice. *Research Society on Alcoholism Annual Meeting*. Seattle, WA.
3. **Siciliano CA** (May) Anatomical, Functional, and Transcriptional Organization of Cortical Circuits Mediating Compulsive Drinking. *Alcoholism and Stress: A Framework for Future Treatment Strategies*. Volterra, Italy.

2022

4. **Siciliano CA** (November) Neurobiology of individual differences in alcohol reinforcement. *Medical University of South Carolina.* Charleston, SC.
5. **Siciliano CA** (June) Neurobiology of individual differences in alcohol reinforcement. *Florida State University College of Medicine Grand Rounds.* Tallahassee, FL.
6. **Siciliano CA** (March) Circuit-based Activity Signatures of Maladaptive Decision-Making. *University of Iowa. Cedar Rapids*, IA.
7. **Siciliano CA** (February) Projection-target defined roles of dopamine in motivated behaviors. *Brigham Young University*. Provo, UT.
8. **Siciliano CA** (January) Circuit-based activity signatures of maladaptive decision making. *Oregon Health and Science University.* Beaverton, OR.

2021

9. **Siciliano CA** (February) Circuit-based activity signatures of alcohol abuse vulnerability in rodent models. *Binghamton University Department of Psychology Science Day, Keynote Address.* Virtual.

2020

10. **Siciliano CA** (November) Projection-target defined roles of dopamine in motivated behaviors. *Wake Forest Distinguished Alumni Seminar Series.* Virtual.
11. **Siciliano CA** (November) Neural mechanisms of cognitive dysfunction and alcohol abuse vulnerability. *Alkermes Pathways Symposium*. Virtual.
12. **Siciliano CA** (cancelled due to COVID) Anatomical, functional, and transcriptional organization of cortical circuits mediating compulsive drinking. *Research Society on Alcoholism*. New Orleans, LA.
13. **Siciliano CA** (cancelled due to COVID) Anatomical, functional, and transcriptional organization of cortical circuits mediating compulsive drinking. *Alcoholism and Stress*. Volterra, Italy.
14. **Siciliano CA** (April) Leveraging optical tools to illuminate circuit dysfunction in addiction. *Inscopix webinar series.*
15. **Siciliano CA** (March) Anatomical, functional, and transcriptional organization of cortical circuits mediating compulsive drinking. *Gordon Research Conference on Alcohol*. Galveston, TX.
16. **Siciliano CA** (January) Anatomical, functional, and transcriptional organization of cortical circuits mediating compulsive drinking. *Winter Conference on Brain Research*. Big Sky, MT.

2019

17. **Siciliano CA** (October) Circuit-based activity signatures of maladaptive decision making. *NIDA/NIAAA Webinar.*
18. **Siciliano CA** (June) Anatomical, functional, and transcriptional organization of cortical circuits mediating compulsive drinking. *Research Society on Alcoholism*. Minneapolis, MN.
19. **Siciliano CA** (June) Cortical-brainstem projections gate compulsive alcohol drinking. *Inscopix East Coast Meeting*. Boston, MA.
20. **Siciliano CA** (June) A novel model for longitudinal tracking of addiction vulnerability in rodents. *College on Problems of Drug Dependence*. San Antonio, TX.
21. **Siciliano CA** (April) A novel model for longitudinal tracking of addiction vulnerability in rodents. *Behavioral Pharmacology Society*. Orlando, FL.
22. **Siciliano CA** (February) Circuit-based activity signatures of maladaptive decision making. *Mount Sinai Seminar Series*. New York, NY.
23. **Siciliano CA** (January) Cross-species effects of alcohol exposure on kappa-opioid receptor regulation of dopamine signaling. *Winter Conference on Brain Research*. Aspen, CO.

24. **Siciliano CA** (January) Cortical-brainstem projections gate compulsive alcohol drinking. *Winter Conference on Brain Research*. Aspen, CO.

2018

25. **Siciliano CA** (December) Cortical-brainstem projections gate compulsive alcohol drinking. *American College of Neuropsychopharmacology*. Hollywood, FL.
26. **Siciliano CA** (October) Acquisition and analysis pipelines for *in vivo* calcium imaging. *Wake Forest University*. Winston-Salem, NC.
27. **Siciliano CA** (October) Circuit-based activity signatures of maladaptive decision making. *Vanderbilt University*. Nashville, TN.
28. **Siciliano CA** (September) Cortical-brainstem projections gate compulsive alcohol drinking. *Genetic manipulation of neuronal activity V*. Janella Research Campus, DC.
29. **Siciliano CA** (July) Cortical-brainstem projections gate compulsive alcohol drinking. *Gordon Research Conference on Optogenetic Approaches to Understanding Neural Circuits and Behavior.* Newry, MA.
30. **Siciliano CA** (June) Cortical-brainstem projections gate compulsive alcohol drinking. *Research Society on Alcoholism*. San Diego, CA.
31. **Siciliano CA** (March) Cortical-brainstem projections gate compulsive alcohol drinking. *Alcohol and the Nervous System GRS*. Galveston, TX.

2017

32. **Siciliano CA** (June) Cortical circuit dynamics during punishment-resistant alcohol drinking. *Research Society on Alcoholism.* Denver, CO.
33. **Siciliano CA** (April) Projection-target defined roles of dopamine in motivated behaviors. *Wake Forest School of Medicine.* Winston-Salem, NC.
34. **Siciliano CA** (April) Projection-target defined roles of dopamine in motivated behaviors. *Rutgers University.* Piscataway, NJ.

2016

35. **Siciliano CA (**December) Translating Mesocortical Dopamine into an Aversive Signal via Specific Downstream Projections. *American College of Neuropsychopharmacology*. Hollywood, FL.
36. **Siciliano CA** (June) Impact of chronic ethanol self-administration on kappa opioid receptor regulation of dopamine signaling in nonhuman primates. *Research Society on Alcoholism*. New Orleans, LA.
37. **Siciliano CA** (April) Cocaine potency at the dopamine transporter controls discrete motivational states during cocaine self-administration. *Behavioral Pharmacology Society Annual Meeting*. San Diego, CA.
38. **Siciliano CA** (April) Impact of Chronic Ethanol Self-Administration on Kappa Opioid Receptor Regulation of Dopamine Signaling in Nonhuman Primates. *American Society for Pharmacology and Experimental Therapeutics*. San Diego, CA.

2015

39. **Siciliano CA** (December) Impact of chronic ethanol self-administration on kappa opioid receptor regulation of dopamine signaling in nonhuman primates. *American College of Neuropsychopharmacology*. Hollywood, FL.
40. **Siciliano CA** (August) More than a replacement therapy: amphetamine treatment reverses the behavioral and neurochemical consequences of long-access cocaine self-administration. *Gordon Research Conference on Catecholamines*. Newry, ME.
41. **Siciliano CA** (April) Voluntary ethanol intake predicts kappa opioid receptor supersensitivity and regionally distinct dopaminergic adaptations in macaques. *Conference on the Therapeutic Potential of Kappa Opioids in Pain and Addiction.* Chapel Hill, NC.
42. **Siciliano CA** (March) More than replacement therapy: amphetamine treatment rescues the behavioral and neurochemical consequences of cocaine self-administration. *Behavioral Pharmacology Society Annual Meeting*. Boston, MA.

2014

43. **Siciliano CA** (August) Ethanol intake predicts alterations in striatal kappa opioid receptor sensitivity and dopamine terminal function in nonhuman primates. *Monitoring Molecules in Neuroscience 15th International Meeting.* Los Angeles, CA.

Local

44. **Siciliano CA** (2019, October) Cortical-brainstem projections gate compulsive alcohol drinking. *Vanderbilt Department of Pharmacology Retreat.* Nashville, TN.
45. **Siciliano CA** (2020, January) Leveraging optical tools to illuminate circuit dysfunction in addiction. *Vanderbilt Biophotonics Center Seminar Series*. Nashville, TN.
46. **Siciliano CA** (2020, October) Circuit-based activity signatures of maladaptive decision making. *Vanderbilt Brain Institute Retreat.* Virtual.

47. **Siciliano CA** (2020, October) Neural activity signatures of compulsive substance use. *Vanderbilt Department of Psychiatry Grand Rounds*. Virtual.
48. **Siciliano CA** (2021, October) Circuit-based activity signatures of maladaptive decision making. *Vanderbilt Department of Psychology*.

HONORS AND AWARDS

2023 **Dean's Faculty Fellows Program,** *Vanderbilt University School of Medicine*

2021 **Whitehall Foundation Grant,** *Whitehall Foundation*

2020 **Forbes 30 Under 30,** *Forbes*
Stanly Cohen Innovation Award, *Vanderbilt University*
Daniel X. Freedman Prize, *Brain and Behavior Research Foundation*
Fay/Frank Seed Grant, *Brain Research Foundation*

2019 **Alkermes Pathways Research Award,** *Alkermes Pharmaceuticals*
RSA Memorial Award, *Research Society on Alcoholism*
CPDD Early Career Investigator Travel Award, *College on Problems of Drug Dependence*
SOBP Travel Award, *Society for Biological Psychiatry*

2018 **Enoch Gordis Award,** *Research Society on Alcoholism*
RSA Junior Investigator Award, *Research Society on Alcoholism*
K99-R00 Pathway to Independence Award, *National Institute of Drug Abuse*

2017 **Infinite Kilometer Award for Outstanding Research,** *MIT*
ACNP Best Poster Award, *American College of Neuropsychopharmacology*
NARSAD Young Investigator Award, *Brain and Behavior Research Foundation*
Postdoctoral Travel Award, *American Society for Pharmacology and Experimental Therapeutics*
WCBR Travel Fellowship, *Winter Conference on Brain Research*

2016 **ACNP Travel Award**, *American College of Neuropsychopharmacology*
Individual Ruth L. Kirschstein National Research Service Award (Postdoctoral NRSA; F32 MH111216)
Travel Fellowship Award, *Sixth Annual Aspen Brain Forum*
Neuroscience Prize for Outstanding Thesis, *Wake Forest Neuroscience Program*
David K. Sundberg Memorial Award, *Wake Forest Physiology and Pharmacology Department*
RSA Junior Investigator Award, *Research Society on Alcoholism*
Gordon A. Melson Outstanding Doctoral Student Award, *Wake Forest Graduate School*
Postdoctoral Scientist Award Finalist, *American Society for Pharmacology and Experimental Therapeutics*
Daniel T. O'Connor Young Investigator Award, *Catecholamine Society*
Neuropharmacology Postdoctoral Travel Award, *American Society for Pharmacology and Experimental Therapeutics*

2015 **Trainee Professional Development Award**, *Society for Neuroscience*
Wake Forest Alumni Travel Award, *to attend Gordon Conference on Catecholamines*
Student Merit Award, *Research Society on Alcoholism*
International Society for Neurochemistry Travel Grant, *International Society for Neurochemistry*, Cairns, Australia
Behavioral Pharmacology Society Predoctoral Award; *Behavioral Pharmacology Society*
Individual Ruth L. Kirschstein National Research Service Award (Predoctoral NRSA; F31 DA037710)
Graduate Student Travel Award, *American Society for Pharmacology and Experimental Therapeutics*

2014 **Best Poster Award**, *Monitoring Molecules in Neuroscience*
Best Abstract Award, *American Society for Pharmacology and Experimental Therapeutics*
Mary A. Bell Award, *Western North Carolina Society for Neuroscience*
Japan Neuroscience Society Travel Award; *Society for Neuroscience and Japan Neuroscience Society*
Wake Forest Alumni Travel Award, *to attend American College of Neuropsychopharmacology*
Graduate Student Travel Award, *American Society for Pharmacology and Experimental Therapeutics*

2013 **Institutional Ruth L. Kirschstein National Research Service Award** (Predoctoral NRSA; T32 AA007565-20)

SERVICE AND OUTREACH

Grant Review/Study Sections

2023 NIAAA Fellowship Review Panel (ZAA1 GG (32)), Ad Hoc Member

2022 NIAAA Motivated Behavior, Alcohol and Neurotoxicology (ZRG1 ICN-T (02) M), Ad Hoc Member
2022 NIDA Centers Review (ZDA1 TXT-V (02) S), Ad Hoc Member
2021 Neurobiology of Motivated Behavior (NMB) Study Section, Ad Hoc Member
2021 NIH Fellowships: Behavioral Neuroscience (ZRG1 F02A-K (20) L), Ad Hoc Member
2020 BRAIN Biology and Biophysics of Neural Stimulation (ZNS1 SRB-X (10)), Ad Hoc Member
2020 NIDA Cutting-Edge Basic Research Awards (CEBRA, ZDA1 SXM-M (01) S), Ad Hoc Member
2020 BRAIN Circuit Programs Review (ZNS1 SRB-N (21)), Ad Hoc Member
2020 BRAIN K99 to Promote Diversity (ZNS1 SRB-X (06) S), Ad Hoc Member

Teaching/Guest Lectures

2022-2023 Co-Director and Lecturer, PHAR-GS-8338; NURO 8338, Principles of Pharmacology in Neurobiological Research
2021 Lecturer, Neurobiology of Addiction (NSC3240)
2020 Lecturer, Fundamentals of the Excitable Membrane for Biologists, Vanderbilt Neuroscience Program
2020 Lecturer, Systems Neuroscience, Vanderbilt Neuroscience Program

Conferences and Organizations

2022 Discussion Leader, Gordon Research Conference on Alcohol
2020 Symposium Chair, Winter Conference on Brain Research
2019 Calcium Imaging Data Analysis Panelist, Inscopix User Group Meeting
2019-Present Catecholamine Society Executive Council Member
2019 Symposium Chair, Research Society on Alcoholism
2019 Symposium Chair, College on Problems of Drug Dependence
2019 Symposium Chair, Winter Conference on Brain Research
2016 Symposium Chair, Research Society on Alcoholism
2015 Lecturer for SciTech Outreach Events, Wake Forest School of Medicine
2014-2015 Neuroscience Graduate Program Admissions Committee Student Representative
2013-2015 Lecturer for Kernersville Cares for Kids Scientific Outreach Events, Wake Forest School of Medicine
2013-2015 Brain Awareness Outreach Presenter, visits to local K-12 schools

Internal

2023 Stanley Cohen Innovation Grant, Reviewer
2020-present GPCR Postdoctoral Invited Seminar Series, Faculty Advisor
2020-present VCAR Career Development Course, Director and Organizer
2019-present Department of Pharmacology Seminar Series, Organizer
2019 Faculty Search Committee

Mentorship / Training

2021-Present Kirsty Erickson, Graduate Student, Vanderbilt University
2021-2023 Michelle Kwon, Undergraduate Student, Vanderbilt University
2020-2023 Keaton Song, Undergraduate Student, Vanderbilt University
2020-Present Jacob Hilton, Undergraduate Student, Vanderbilt University
2020 Uzma Mohommed, Visiting Student, Rutgers University
2019-Present Vikrant Mahajan, Undergraduate Student, Vanderbilt University
2019-Present Evelyn Kandov, MD/PhD Student, Vanderbilt University
2019-2023 Hannah Branthwaite, Visiting Student, Vanderbilt University
2019-Present Zahra Farahbakhsh, Graduate Student, Vanderbilt University
2019-Present Suzanne Nolan, Postdoctoral Fellow, Vanderbilt University
2019-Present Snigdha Mukerjee, Postdoctoral Fellow, Vanderbilt University
2019-2022 David Cohen, Undergraduate Student, Vanderbilt University
2019-Present Patrick Melugin, Graduate Student, Vanderbilt University
2018-2023 Alex Brown, Research Technician, Vanderbilt University
2018-2019 Daniel Leible, MD/PhD Student, Massachusetts Institute of Technology
2017-2019 Habiba Noamany, Undergraduate Student, Massachusetts Institute of Technology
2017-2019 Joyce Wang, Graduate Student, Massachusetts Institute of Technology
2016-2017 Xinhong Chen, Undergraduate, Massachusetts Institute of Technology
2016-2017 Derek Xu, Undergraduate, Massachusetts Institute of Technology
2016-2017 Ning Leow, Graduate Student, Massachusetts Institute of Technology
2016 Steve Colvin, Graduate Student, Massachusetts Institute of Technology
2014-2015 Molly McGinnis, Graduate Student, Wake Forest School of Medicine
2014-2015 Joshua Seideman, Graduate Student, Wake Forest School of Medicine

Thesis Committee Member

Kim Thibeault, Vanderbilt University, Neuroscience Graduate Student
Liorimar Ramos-Medina, Vanderbilt University, Neuroscience Graduate Student
Jennifer Zachary, Vanderbilt University, Pharmacology Graduate Student

Undergraduate Honors Thesis Committees

Michelle Kwon, Vanderbilt University
Jennifer Tat, Vanderbilt University
Arthur Yu, Vanderbilt University

Reviewer

Neuropsychopharmacology
Science
Current Opinion in Neurobiology
Nature Communications
Biological Psychiatry
Journal of Clinical Investigation
eLife
Brain Stimulation
Neurobiology of Disease
eNeuro
Science Advances
Alcohol
Neuropharmacology
Drug and Alcohol Dependence
Scientific Reports
Pharmacology, Biochemistry and Behavior

PUBLICATIONS

Primary Research Articles

1. Brown AR, Branthwaite HE, Mukerjee S, Melugin PR, Farahbakhsh ZZ, Noamany H, **Siciliano CA (2023)**. Structured tracking of alcohol reinforcement (STAR) for basic and translational alcohol research. ***Molecular Psychiatry.*** doi: 10.1038/s41380-023-01994-4
2. Farahbakhsh ZZ, Song K, Branthwaite HE, Erickson KR, Mukerjee S, Nolan SO, **Siciliano CA (2023)**. Systemic kappa opioid receptor antagonism accelerates reinforcement learning via augmentation of novelty processing in male mice. ***Neuropsychopharmacology***. doi: 10.1038/s41386-023-01547-x
3. Kutlu MG*, Zachry JE*, Melugin PR*, Cajigas S, Isiktas A, **Siciliano CA**, Schoenbaum G, Sharpe MJ, Calipari ES **(2022)**. Dopamine signaling in the nucleus accumbens core mediates latent inhibition. ***Nature Neuroscience***, 25, 1071-1081. doi: 10.1038/s41593-022-01126-1
4. Li H, Namburi P, Olson JM, Borio M, Lemieux ME, Beyeler A, Calhoon GG, Hitora-Imamura N, Coley AA, Libster A, Bal A, Jin X, Wang H, Jia C, Choudhury SR, Shi X, Felix-Ortiz AC, de la Fuente V, Barth VP, King HO, Izadmehr EM, Revanna JS, Batra K, Fischer KB, Keyes LR, Padilla-Coreano N, **Siciliano CA**, McCullough KM, Wichmann R, Ressler KJ, Fiete IR, Zhang F, Li Y, Tye KM **(2022)** Neurotensin orchestrates valence assignment in the amygdala. ***Nature.*** 608(7923):586-592. doi: 10.1038/s41586-022-04964-y.
5. Everett AC, Graul BE, Ronström JW, Robinson JK, Watts DB, España RA, **Siciliano CA**, Yorgason JT **(2022)** Effectiveness and Relationship between Biased and Unbiased Measures of Dopamine Release and Clearance. ***ACS Chemical Neuroscience.*** 13(10):1534-1548. doi: 10.1021/acschemneuro.2c00033.
6. Leach AC, Pitts EG, **Siciliano CA**, Ferris MJ (**2022**) α7 nicotinic acetylcholine receptor modulation of accumbal dopamine release covaries with novelty seeking. ***European Journal of Neuroscience***. 55(5):1162-1173. doi: 10.1111/ejn.15620.
7. Joffe ME, Maksymetz J, Luschinger JR, Dogra S, Ferranti AS, Luessen DJ, Gallinger IM, Xiang Z, Branthwaite H, Melugin PR, Williford KM, Centanni SW, Shields BC, Lindsley CW, Calipari ES, **Siciliano CA**, Niswender CM, Tadross MR, Winder DG, Conn PJ (**2022**) Acute restraint stress redirects prefrontal cortex circuit function through mGlu 5 receptor plasticity on somatostatin-expressing interneurons. ***Neuron.*** 110(6):1068-1083.e5. doi: 10.1016/j.neuron.2021.12.027
8. Kutlu MG, Zachry JE, Melugin PR, Cajigas SA, Chevee MF, Kelly SJ, Kutlu B, Tian L, **Siciliano CA**, Calipari ES **(2021)** Dopamine release in the nucleus accumbens core signals perceived saliency. ***Current Biology***. doi: 10.1016/j.cub.2021.08.052.
9. Winters ND, Bedse G, Astafyev AA, Patrick TA, Altemus M, Morgan AJ, Mukerjee S, Johnson KD, Mahajan VR, Uddin MJ, Kingsley PJ, Centanni SW, **Siciliano CA**, Samuels DC, Marnett LJ, Winder DG, Patel S. **(2021)** Targeting diacylglycerol lipase reduces alcohol consumption in preclinical models. ***The Journal of Clinical Investigation***. 131(17):e146861. doi: 10.1172/JCI146861. 31(21):4748-4761.
10. Brundage JN, Mason CP, Wadsworth HA, Finuf CS, Nelson JJ, Ronström PJW, Jones SR, **Siciliano CA**, Steffensen SC, Yorgason JT **(2021)** Regional and Sex Differences in Spontaneous Striatal Dopamine Transmission. ***Journal of Neurochemistry***. 160(6):598-610. doi: https://doi.org/10.1111/jnc.15473.
11. Friedman A, Hueske E, Drammis SM, Toro Arana SE, Nelson ED, Carter CW, Delcasso S, Lutwak H, Hu D, Rodriguez RX, DiMarco KS, Zhang Q, Rakocevic LI, Xiong JK, Gibb LG, Yoshida T, **Siciliano CA**, Diefenbach TJ, Ramakrishnan C, Deisseroth K, Graybiel AM **(2020)** Striosomes Mediate Valence-Based Learning Vulnerable in Aging and Huntington's Model. ***Cell***. 183(4), 918–934.e49. doi: https://doi.org/10.1016/j.cell.2020.09.060.

12. Shemesh OR, Linghu C, Piatkevich KD, Goodwin D, Celiker OT, Gritton HJ, Romano MF, Gao R, Yu CJ, Tseng H, Bensussen S, Narayan S, Yang CT, Freifeld L, **Siciliano CA**, Gupta I, Wang J, Pak N, Yoon YG, Ullmann J, Guner-Ataman B, Noamany H, Sheinkopf Z, Park WM, Asano S, Keating AE, Timmer JS, Reimer J, Tolias A, Bear MF, Tye KM, Han X, Ahrens MB, Boyden ES **(2020)** Precision calcium imaging of dense neural populations via a cell body-targeted calcium indicator. ***Neuron.*** 107(3):470-486.e11. doi: https://doi.org/10.1016/j.neuron.2020.05.029

13. Kutlu MG, Zachary JE, Brady LJ, Melugin PR, Sanders C, Tat J, Johnson AR, Thibeault KC, Lopez AJ, **Siciliano CA**, Calipari ES **(2020)** A novel multidimensional reinforcement task in mice elucidates sex-specific behavioral strategies. ***Neuropsychopharmacology***. 45(9):1463-1472. doi: 10.1038/s41386-020-0692-1

14. Lopez AJ, Johnson AR, Kunnath AJ, Zachary JE, Thibeault KC, Kutlu MG, **Siciliano CA**, Calipari ES **(2020)** An optimized procedure for robust volitional drug intake in mice. ***Experimental and Clinical Psychopharmacology.*** doi: 10.1037/pha0000399.

15. **Siciliano CA**†, Noamany H, Chang C, Brown AR, Chen X, Leible D, Lee JJ, Wang J, Vernon AM, Vander Weele CM, Kimchi EY, Heiman M, Tye KM† **(2019)** A Cortical-Brainstem Circuit Predicts and Governs Compulsive Alcohol Drinking. ***Science.*** 366(6468):1008–1012. doi: 10.1126/science.aay1186
    † co-corresponding author
    - Featured in: Nixon & Mangieri (2019) Compelled to drink: Why some cannot stop. *Science* 366 (6468):947
    - Featured in: Bray (2020) Foreseeing compulsion. *Nature Reviews Neuroscience* 21:58–59
    - Covered in media by National Public Radio, Scientific American, Newsweek, and several others

16. **Siciliano CA,** Mauterer MI**,** Fordahl SC, Jones SR **(2019)** Modulation of striatal dopamine dynamics by cocaine self-administration and amphetamine treatment in female rats. ***European Journal of Neuroscience.*** 50(4):2740-2749. doi: 10.1111/ejn.14437

17. Kutlu MG, Peck EG, Hofford RS, **Siciliano CA**, Kiraly DD, Calipari ES **(2018)** Granulocyte colony stimulating factor enhances reward learning through potentiation of mesolimbic dopamine system function. ***Journal of Neuroscience***. 38(41):8845-8859. doi: 10.1523/JNEUROSCI.1116-18.2018

18. Vander Weele CM*, Siciliano CA*, Matthews GA*, Namburi P, Izadmehr EM, Espinel IC, Nieh EH, Schut EHS, Padilla-Coreano N, Burgos-Robles A, Chang CJ, Kimchi EY, Beyeler A, Wichmann R, Wildes CP, Tye KM **(2018)** Dopamine enhances signal-to-noise ratio in cortical-brainstem encoding of aversive stimuli. ***Nature***. 563(7731):397-401. doi: 10.1038/s41586-018-0682-1
    ***denotes equal contribution**
    - Featured in: Bray (2019) Boosting a bad signal. *Nature Reviews Neuroscience* 20:4

19. **Siciliano CA,** Kustuv S, Calipari ES, Fordahl SC, Khoshbouei H, Chen R, Jones SR **(2018)** Amphetamine reverses escalated cocaine intake via restoration of dopamine transporter conformation. ***Journal of Neuroscience.*** 10;38(2):484-497. doi: 10.1523/JNEUROSCI.2604-17.2017

20. **Siciliano CA,** McIntosh JM**,** Jones SR, Ferris MJ **(2017)** α6β2 subunit containing nicotinic acetylcholine receptors exert opposing actions on rapid dopamine signaling in the nucleus accumbens of rats with high- versus low-response to novelty. ***Neuropharmacology.*** 126:281-291. doi: 10.1016/j.neuropharm.2017.06.028

21. **Siciliano CA**, Jones SR **(2017)** Cocaine potency at the dopamine transporter tracks discrete motivational states during cocaine self-administration. ***Neuropsychopharmacology.*** 42(9):1893-1904. doi: 10.1038/npp.2017.24

22. McGinnis MM, **Siciliano CA**, Jones SR **(2016)** Dopamine D3 autoreceptor inhibition enhances cocaine potency at the dopamine transporter. ***Journal of Neurochemistry.*** 138(6):821-9. doi: 10.1111/jnc.13732

23. **Siciliano CA**, Locke JL, Mathews TA, Lopez MF, Becker HC, Jones SR **(2016)** Dopamine synthesis in alcohol drinking-prone and -resistant mouse strains. ***Alcohol***. S0741-8329(16)30027-1. doi: 10.1016/j.alcohol.2016.05.005

24. **Siciliano CA,** Fordahl SC, Jones SR **(2016)** Cocaine self-administration produces long-lasting alterations in dopamine transporter responses to cocaine. ***Journal of Neuroscience.*** 36(30):7807-16. doi: 10.1523/JNEUROSCI.4652-15.2016

25. **Siciliano CA**, Calipari ES, Yorgason JT, Mateo Y, Lovinger DM, Jimenez VA, Helms CM, Grant KA, Jones SR **(2016)** Increased presynaptic regulation of dopamine neurotransmission in the nucleus accumbens core following chronic ethanol self-administration in female macaques. ***Psychopharmacology.*** 233(8):1435-43. doi: 10.1007/s00213-016-4239-4

26. **Siciliano CA**, Calipari ES, Yorgason JT, Mateo Y, Helms CM, Lovinger DM, Grant KA, Jones SR **(2015)** Chronic ethanol self-administration in macaques shifts dopamine feedback inhibition to predominantly D2 receptors in nucleus accumbens core. ***Drug and Alcohol Dependence.*** 158:159-63. doi: 10.1016/j.drugalcdep.2015.10.031

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PROFESSIONAL MEMBERSHIPS

2016 – Present	Behavioral Pharmacology Society
2015 – Present	Catecholamine Society
2015 – Present	International Society for Neurochemistry
2014 – Present	Research Society on Alcoholism
2014 – Present	Japan Neuroscience Society
2014 – Present	International Behavioral Neuroscience Society
2013 – Present	American Society for Pharmacology and Experimental Therapeutics
2013 – Present	Monitoring Molecules in Neuroscience
2013 – Present	Society for Neuroscience
2013 – 2016	Western North Carolina Society for Neuroscience
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