

Curriculum Vitae

Marek Schwendt, Ph.D.



Assistant Professor

Department of Psychology, University of Florida

UF Center for Addiction Research and Education (CARE)

UF Center for OCD, Anxiety, & Related Disorders (COARD)

945 Center Dr, Rm 114
University of Florida
Gainesville, FL 32611-2250

Website: people.clas.ufl.edu/schwendt

Phone: +1-352-294-3658

Fax: +1-352-392-7985

E-mail: schwendt@ufl.edu

A. Positions:

Department of Psychology University of Florida Gainesville, FL	Assistant Professor	present	Psychology – Behavioral & Cognitive Neuroscience
Department of Psychology University of Florida Gainesville, FL	Research Assistant Professor	2012-2014	
Department of Neuroscience Medical University of South Carolina, Charleston, SC	Research Assistant Professor	2008-2012	

B. Education & Training:

Department of Neuroscience Medical University of South Carolina, Charleston, SC	Postdoctoral Fellow	2003-2008	Neuroscience <i>Mentor: Dr. Jacqueline F. McGinty</i>
Joint doctoral program of the Inst. of Experimental Endocrinology at the Slovak Academy of Sciences & University of P.J. Safarik, Bratislava & Kosice, Slovakia	Ph.D.	1998-2002	Animal Physiology <i>Mentor: Dr. Daniela Ježová</i>
Comenius University Bratislava, Slovakia	M.Sc.	1994-1998	Biochemistry

C. Research Funding:

Pending:

R01 DA052430, NIH/NIDA

Schwendt (PI)

"Where, when and how dysregulation of mGlu5 receptors controls cocaine-seeking."

R33 DA045140, NIH/NIDA

PIs: Knackstedt (MPI) and Cottler (MPI), Schwendt (co-I)

"Identifying patterns of human polysubstance use to guide development of rodent models"

Active:

R03 DA050118, NIH/NIDA ([link to Abstract](#)) 07/01/20 - 06/30/22
Schwendt (PI)
"A novel model of oxycodone seeking that considers sex and stress susceptibility"

R03 DA049212, NIH/NIDA ([link to Abstract](#)) 07/01/19 - 06/30/21
Schwendt (PI)
"Developing novel tools for targeting mGlu2(3) receptors in methamphetamine addiction."

UF McKnight Brain Institute, pilot grant 07/01/18 - 06/30/20NCE
Schwendt (PI)
"Targeting mGlu5 receptor-protein interactions in the ventral striatum to reduce cocaine relapse."

UF Center for OCD, Anxiety and Related Disorders (COARD), pilot grant 01/01/20 - 12/31/20
Schwendt (PI)
"Dissecting glutamatergic circuits responsible for stress resilience"

Completed:

DoD/Institute for Translational Neuroscience, Subcontract 804-244
(competitive renewal) 02/01/16 - 07/30/18
Knackstedt (PI), Schwendt (co-I) 09/01/13 - 08/31/15
"Development of an animal model and novel treatments for comorbid PTSD and cocaine addiction"

R21 DA025846, NIH/NIDA 02/01/11 - 01/31/13
Schwendt (PI)
"Striatal RGS4 interacts with mGluR5 signaling relapse to cocaine-seeking"

UL1 RR029882/TR000062 01/01/12 - 12/31/12
South Carolina Clinical and Translational Research Institute - Research Voucher
Schwendt (PI)
"Dysregulated mGluR2/3 membrane trafficking and motivational and cognitive deficits resulting from chronic methamphetamine self-administration"

NARSAD - Young Investigator Award 01/01/10 - 12/31/12
Schwendt (PI)
"The role of PICK1 in altered protein trafficking and behavioral plasticity resulting from chronic methamphetamine self-administration"

P50 DA015369, NIH/NIDA 07/01/08 - 06/30/10
Neurobiology of Addiction Research Center - Pilot Project Award
Schwendt (PI)
"The role of striatal RGS4 in the cellular mechanisms of cocaine-seeking after abstinence"

D. Publication activity:

Preprints/Under review:

Gobin C, Wu L, **Schwendt M**. Using rat operant delayed match-to-sample task to identify neural substrates recruited with increased working memory load. bioRxiv 2020.06.18.160028; doi: <https://doi.org/10.1101/2020.06.18.160028> (*Learning and Memory*, under review)

Hadad NA, **Schwendt M**, Knackstedt LA. Hypothalamic-Pituitary-Adrenal Axis Activity in Post-traumatic Stress Disorder and Cocaine Use Disorder. (*Stress*, accepted)

Peer-reviewed publications (conference abstracts not included):

- 38 publications, 2 book chapters (as of 7/15/20)
 - h-index = 19
 - Citations = 1236
 - *) Graduate student in the Schwendt lab, #) undergraduate student in the Schwendt lab
1. Hámor PU*, Edelmann MJ, Gobin C*, **Schwendt M.** Long-term changes in the central amygdala proteome in rats with a history of chronic cocaine self-administration. *Neuroscience*. Online ahead of print. 2020. PMID: [32540363](#)
 2. Hámor PU*, Gobin C*, **Schwendt M.** The role of glutamate mGlu5 and adenosine A2a receptor interactions in regulating working memory performance and persistent cocaine seeking in rats. *Prog Neuropsychopharmacol Biol Psychiatry*. Online ahead of print. 2020. PMID: [32470496](#)
 3. Logan CN, Bechard AR, Hamor PU*, Wu L, **Schwendt M**, Knackstedt LA. Ceftriaxone and mGlu2/3 interactions in the nucleus accumbens core affect the reinstatement of cocaine-seeking in male and female rats. *Psychopharmacology (Berl)*. Online ahead of print. 2020. PMID: [32382781](#)
 4. Gobin C*, **Schwendt M.** The cognitive cost of reducing relapse to cocaine-seeking with mGlu5 allosteric modulators. *Psychopharmacology (Berl)*. 237:115-125, 2020. PMID: [31446451](#)
 5. Shallcross J*, Hámor PU*, Bechard AR, Romano M#, Knackstedt L, **Schwendt M.** The Divergent Effects of CDPPB and Cannabidiol on Fear Extinction and Anxiety in a Predator Scent Stress Model of PTSD in Rats. *Front Behav Neurosci*. 13:91, 2019. PMID: [31133832](#)
 6. Gobin C*, Shallcross J*, **Schwendt M.** Neurobiological substrates of persistent working memory deficits and cocaine-seeking in the prelimbic cortex of rats with a history of extended access to cocaine self-administration. *Neurobiol Learn Mem*. 161:92-105, 2019. PMID: [30946882](#)
 7. Bechard AR, Hamor PU*, Wu L, **Schwendt M**, Knackstedt LA. The effects of clavulanic acid and amoxicillin on cue-primed reinstatement of cocaine seeking. *Behav Neurosci*. 133:247-254, 2019. PMID: [30714803](#)
 8. **Schwendt M**, Shallcross J*, Hadad NA, Namba MD#, Hiller H, Wu L, Krause EG, Knackstedt LA. A novel rat model of comorbid PTSD and addiction reveals intersections between stress susceptibility and enhanced cocaine seeking with a role for mGlu5 receptors. *Transl Psychiatry*. 8:209-214, 2018. PMID: [30291225](#)
 9. Hámor PU*, Šírová J, Páleníček T, Zaniwska M, Bubeníková-Valešová V, **Schwendt M.** Chronic methamphetamine self-administration dysregulates 5-HT2A and mGlu2 receptor expression in the rat prefrontal and perirhinal cortex: Comparison to chronic phencyclidine and MK-801. *Pharmacol Biochem Behav*. 175:89-100. 2018. PMID: [30240581](#)
 10. Bechard AR, Hamor PU*, **Schwendt M**, Knackstedt LA. The effects of ceftriaxone on cue-primed reinstatement of cocaine-seeking in male and female rats: estrous cycle effects on behavior and protein expression in the nucleus accumbens. *Psychopharmacology (Berl)*. 235:837-848, 2018. PMID: [29197981](#)
 11. Gobin C*, **Schwendt M.** The Effects of Extended-Access Cocaine Self-Administration on Working Memory Performance, Reversal Learning and Incubation of Cocaine-Seeking in Adult Male Rats. *J Addict Prev*. 5: 1-16, 2017. PMID: [28856175](#)
 12. **Schwendt M**, Olive MF. Protein kinase C ϵ activity regulates mGluR5 surface expression in the rat nucleus accumbens. *J Neurosci Res.*, 95:1079-1090, 2017. PMID: [27546836](#)
 13. LaCrosse AL, O'Donovan SM, Sepulveda-Orengo MT, McCullumsmith RE, Reissner KJ, **Schwendt M**, Knackstedt LA. Contrasting the Role of xCT and GLT-1 Upregulation in the Ability of Ceftriaxone to Attenuate the Cue-Induced Reinstatement of Cocaine Seeking and Normalize AMPA Receptor Subunit Expression. *J Neurosci*. 37: 5809-5821, 2017. PMID: [28495973](#)
 14. Bilodeau J#, **Schwendt M.** Post-cocaine changes in regulator of G-protein signaling (RGS) proteins in the dorsal striatum: Relevance for cocaine-seeking and protein kinase C-mediated phosphorylation. *Synapse*, 70:432-40, 2016. PMID: [27261631](#)

15. Hadad NA, Wu L, Hiller H, Krause EG, **Schwendt M**, Knackstedt LA. Conditioned stress prevents cue-primed cocaine reinstatement only in stress-responsive rats. *Stress*. Jun 3:1-13, 2016. PMID: [27181613](#)
16. Knackstedt LA, **Schwendt M**. mGlu5 Receptors and Relapse to Cocaine-Seeking: The Role of Receptor Trafficking in Post-relapse Extinction Learning Deficits. *Neural Plast*. 9312508, 2016. PMID: [26881139](#)
17. Scofield MD, Trantham-Davidson H, **Schwendt M**, Leong KC, Peters J, See RE, Reichel CM. Failure to Recognize Novelty After Extended Methamphetamine Self-Administration Results from Loss of Long-Term Depression in the Perirhinal Cortex. *Neuropsychopharmacology*, 40:2526-3, 2015. PMID: [25865928](#)
18. Knackstedt L.A., Trantham-Davidson H.L., **Schwendt M.**: The role of ventral and dorsal striatum mGluR5 in relapse to cocaine-seeking and extinction learning. *Addiction Biology* 19:87-101, 2014. PMID: 23710649
19. **Schwendt M.**, Reichel C.M., See R.E.: Extinction-dependent alterations in corticostriatal mGluR2/3 and mGluR7 receptors following chronic methamphetamine self-administration in rats. *PLoS One*, 7: e34299, 2012. PMID: 22479593
20. **Schwendt M.**, McGinty J.F.: RGS4 overexpression in the rat dorsal striatum modulates mGluR5- and amphetamine-mediated behavior and signaling. *Psychopharmacology*, 221:621-35, 2012. PMID: 22193724
21. Reichel C.M., Ramsey L.A., **Schwendt M.**, McGinty J.F., See R.E.: Methamphetamine-induced changes in the object recognition memory circuit. *Neuropharmacology*, 62:1119-26, 2012. PMID: 22115899
22. Reichel C.M., **Schwendt M.**, McGinty J.F., Olive M.F., See R.E. Loss of object recognition memory produced by extended access to methamphetamine self-administration is reversed by positive allosteric modulation of metabotropic glutamate receptor 5. *Neuropsychopharmacology* 36:782-92, 2011. PMID: 21150906
23. Hearing M.C., **Schwendt M.**, McGinty J.F. Suppression of Activity-Regulated Cytoskeleton-Associated Gene Expression in the Dorsal Striatum Attenuates Extinction of Cocaine-Seeking. *Int J Neuropsychopharmacol* 14:784-95, 2011. PMID: 20942997
24. Knackstedt L.A., Moussawi K., Lalumiere R., **Schwendt M.**, Matthias K., Kalivas P.W.: Extinction training after cocaine self-administration induces glutamatergic plasticity to inhibit cocaine-seeking. *J Neurosci*, 30:7984-7992 2010. PMID: 20534846
25. **Schwendt M.**, McGinty J.F. Amphetamine up-regulates AGS1 mRNA and protein levels in rat prefrontal cortex: the role dopamine and glucocorticoid receptors. *Neuroscience*, 168:96-107, 2010. PMID:
26. **Schwendt M.**, Rocha A., See R.E., Pacchioni A.M., McGinty J.F., Kalivas P.W. Extended methamphetamine self-administration in rats results in a selective reduction of dopamine transporter levels in the prefrontal cortex and dorsal striatum not accompanied by marked monoaminergic depletion. *J Pharmacol Exp Ther*, 331:555-62, 2009. PMID: 19648469
27. McGinty J.F., Shi X., **Schwendt M.**, Saylor A., Toda S.: Regulation of psychostimulant-induced signaling and gene expression in the striatum. *J Neurochem*, 104:1440-1449, 2008. PMID: 18221378
28. **Schwendt M.**, McGinty J.F.: Regulator of G-protein signaling 4 interacts with mGluR5 receptors in rat striatum: Relevance to amphetamine behavioral sensitization. *J Pharm Exp Ther*, 323: 650-57, 2007. PMID: 17693584
29. **Schwendt M.**, Hearing C.M., See R.E., McGinty J.F.: Chronic cocaine reduces RGS4 mRNA in rat prefrontal cortex and dorsal striatum. *Neuroreport*, 18:1261-1265, 2007. PMID: 17632279

30. **Schwendt M.**, Gold, S.J., McGinty J.F.: Acute amphetamine downregulates RGS4 expression in rat forebrain: distinct roles for D1 and D2 dopamine receptors. *J Neurochem.* 96:1606-15, 2006. PMID: 16539683
31. Duncko R., **Schwendt M.**, Jezova D.: Altered glutamate receptor and corticoliberin gene expression in brain regions related to hedonic behavior in rats. *Pharmacol Biochem Behav.* 76:9-16, 2003. PMID: 13679212
32. Makatsori A., Duncko R., **Schwendt M.**, Moncek F., Johansson B.B., Jezova D.: Voluntary wheel running modulates glutamate receptor subunit gene expression and in stress hormone release in Lewis rats. *Psychoneuroendocrinol.* 28: 702-14, 2003. PMID: 12727136
33. **Schwendt M.**, Duncko R., Makatsori A., Johansson B.B., Jezova D.: Involvement of glutamate neurotransmission in the development of excessive wheel running in Lewis rats. *Neurochem Res.* 28:653-657, 2003. PMID: 12675157
34. Stastny F., **Schwendt M.**, Lisy V., Jezova D.: Main subunits of ionotropic glutamate receptors are expressed in isolated rat brain microvessels. *Neurol Res.* 24:93-96, 2002. PMID: 11783759
35. Pirnik Z., **Schwendt M.**, Jezova D.: Single dose of morphine influences plasma corticosterone and gene expression of the main NMDA receptor subunit in the adrenal gland but not in the hippocampus. *Endocr Reg.* 35: 187-193, 2001. PMID: 11858765
36. **Schwendt M.**, Jezova D.: Glutamate receptors and transporters in central and peripheral tissues. *Cesk Fyziol.* 50:43-56, 2001. PMID: 11409349
37. **Schwendt M.**, Jezova D.: Gene expression of NMDA receptor subunits in rat adrenals under basal and stress conditions *J Physiol Pharmacol.* 52:719-727, 2001. PMID: 11785768
38. **Schwendt M.**, Jezova D.: Gene expression of two glutamate receptor subunits in response to repeated stress exposure in rat hippocampus. *Cell Mol Neurobiol.* 20:319 -329, 2000. PMID: 10789831

Book Chapters:

1. **Schwendt M.** Investigation of mGlu Receptor Cell Surface Availability in Acute Brain Slices Using Biotinylation. In: *Metabotropic glutamate receptor technologies*. Olive MF, Leyer-Jackson JM. (Eds.), Springer Protocols - Neuromethods, Humana Press, Totowa, New Jersey (in press), 2020.
2. Jezova D, **Schwendt M.** Adrenal glutamate receptors: A role in stress and drug addiction? In: *Glutamate Receptors in Peripheral Tissue: Excitatory Transmission Outside the CNS*. Gill S, Pulido O. (Eds.), Kluwer Academic Plenum Press, New York, 169-176, 2005.

E. Professional Accomplishments and Scientific Societies:

Awards:

- 2019 UF Term Professor (2019-2022)
- 2017 UF Global Fellows Award
- 2016 Best Abstract Award, Intl. Society for Behavioral Neuroscience meeting, Budapest, Hungary
- 2011 Visiting Scholar Fellowship, Prague Psychiatric Center, Charles Univ., Prague, Czech Republic
- 2007 Travel Award, International Society for Neurochemistry meeting, Cancun, Mexico
- 2007 Travel Award, Motivational Neuronal Networks conference, Porquerolles, France
- 2002 Travel Award, Forum of European Neuroscience Societies meeting, Paris, France
- 2001 Kuffner Award, Society for Biological Psychiatry, Czech Republic
- 2000 Visiting Fellowship, The Royal Swedish Academy of Sciences, University of Gothenburg, Sweden

Invited Presentations and Conference Panels:

- 2020 ZOOM INTO UF Neuroscience & Neuromedicine Research, University of Florida
(*invited speaker*)
- 2020 53st Winter Conference on Brain Research, Big Sky, MT (*panel organizer and presenter*)
- 2019 Institute of Pharmacology, Polish Academy of Sciences, Krakow, Poland (*invited speaker*)
- 2019 12th Symposium Catecholamines and other neurotransmitters in stress, Smolenice, Slovakia
(*invited speaker*)
- 2019 National Institute of Mental Health, Prague, Czech Republic (*invited speaker*)
- 2019 52st Winter Conference on Brain Research, Snowmass, CO (*panel organizer and presenter*)
- 2018 UF McKnight Brain Institute (*invited speaker*)
- 2018 Dept. of Pharmacology and Toxicology, Augusta University, Augusta, GA (*invited speaker*)
- 2018 51st Winter Conference on Brain Research, Whistler, B.C., Canada
(*panel organizer and presenter*)
- 2017 9th International Meeting on Metabotropic Glutamate Receptors, Taormina, Italy
(*invited speaker*)
- 2017 Dept. of Psychology, NOVA Southeastern University, Fort Lauderdale, FL (*invited speaker*)
- 2016 Dept. of Psychological & Brain Sciences, University of California Santa Barbara, CA
(*invited speaker*)
- 2016 49th Winter Conference on Brain Research, Breckenridge, CO (*panel organizer and presenter*)
- 2015 Scripps Institute of Florida, Jupiter, FL (*invited speaker*)
- 2015 11th Symposium on Catecholamines and other Neurotransmitters in Stress, Smolenice, Slovakia
(*invited speaker*)
- 2013 UF Center for Addiction Research and Education (CARE) (*invited speaker*)
- 2012 Dept. of Psychology, University of Florida, Gainesville, FL (*invited speaker*)
- 2012 45th Winter Conference on Brain Research, Snowbird, UT (*panel organizer and presenter*)
- 2011 SiNAPSA Neuroscience Conference, Ljubljana, Slovenia (*invited speaker*)
- 2011 Dept. of Neural and Behavioral Sciences, Penn State College of Medicine, Hershey, PA
(*invited speaker*)
- 2010 Translation Research in Methamphetamine Conference, Pray, MT (*invited speaker*)
- 2008 GC/SC Neuroscience Consortium, Columbia, SC (*invited speaker*)
- 2002 Physiological Institute of the Czech Academy of Sciences, Prague, Czech Republic
(*invited speaker*)
- 2001 Dept. of Neurosciences, University of Gothenburg, Sweden (*invited speaker*)

Professional Societies:

Member, Society for Neuroscience	2003 - present
Member, Slovak Society for Neuroscience	2007 - present
Member, Molecular and Cellular Cognition Society	2009 - present

F. Teaching and Mentoring:

Teaching:

University of Florida	2013 - present	Neurochemistry, Pharmacology and Behavior, PSB4434 Neurobiology of Drug Addiction, PSB4934 Psychopharmacology, PSY6930
University of Florida	2013 - present	Behavioral Neuroscience, PSB3340 Physiological Psychology, PSB3002
Medical University of South Carolina, Charleston, SC	2009 - 2011 Guest Lecturer	Neurobiology of Drug Addiction, SURP101 Techniques in Neuroscience Research, SURP101
College of Charleston, Charleston, SC	2009 - 2010 Guest Lecturer	Seminars in Neuroscience, BIOL447/PSYC447

Mentoring:

Undergraduate students in the lab:

At UF, I have mentored 20+ undergraduate students, some of which received competitive scholarships and continued into graduate programs, including:

Jan Frankowski *B.Sc. 2015, Current: PhD student in Neuroscience at UC Irvine.*

Mark Namba *University Scholars Program 2015-2016, B.Sc. 2016, Current: PhD student in Psychology at ASU (under-represented minority).*

Jason Dee *College of Liberal Arts and Sciences Scholars Program 2019-2020, B.Sc. 2020, Currently applying to MD/PhD programs*

Graduate students in the lab:

At UF, I have mentored 4 Ph.D. students and served on another 5 M.Sc. or Ph.D. committees.

Christina Gobin, Ph.D. (*completed*)

postdoctoral fellow with Dr. Brandon Warren, UF Department of Pharmacodynamics

John Shallcross (*5th year, expected to graduate in 2020*)

Peter Hámor (*4th year, expected to graduate in 2021*)

Cassandra Modrak (*1st year*)

G. Service:

Grant review panels & grant advisory boards:

NIH

05/2020

Pathophysiological Basis of Mental Disorders and Addictions
(PMDA) Study Section

Reviewer, Early Career Reviewer program

European Commission/PharmaBrain

2018 – present

EC-funded center grant at the National Institute of Mental
Health, Prague, CZ

Member of the external advisory board

Journal Editorial Boards:

Journal of Addiction & Prevention
Associate Editor

2017 – present

Frontiers in Psychiatry
Review editor

2018 – present

Biomedicine & Pharmacotherapy
Review editor

2018 – present

University and Department Service:

Interdisciplinary Studies in Neurobiological Sciences Major
Director

2015 – 2018

Max Planck Florida Inst. for Neuroscience 'Florida fellows'
program - UF representative

2015 – present

UF Undergraduate Neuroscience club
Faculty advisor

2016 – present

Department of Psychology
Goldman Awards committee member

2016 – 2017

Department of Psychology
Lecturer search committee member

2017 – 2018

UF Center for Addiction Research and Education (CARE)
Seminar Committee member

2019 – present