Marvin R. Diaz, PhD

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EDUCATIONAL HISTORY

Ph.D. Wake Forest University Health Sciences, Winston-Salem, NC, USA (5/09)
Neuroscience
Dissertation: A Study on the Effects of Chronic Alcohol and Withdrawal on the Glutamate, GABA, and Dopamine Systems in the Basolateral Amygdala of Sprague-Dawley Rats. Advisor: Brian A. McCool, PhD.

B.S. University at North Carolina at Wilmington, NC (12/03)

ACADEMIC POSITIONS/EMPLOYMENT HISTORY

2020 – present Associate Professor (Psychology Department)
Binghamton University

2014 – 2020 Assistant Professor (Psychology Department)
Binghamton University

2011 – 2014 Postdoctoral Fellow (under C. Fernando Valenzuela, MD, PhD)
University of New Mexico HSC

2010 – 2011 Postdoctoral Fellow (under Brian A. McCool, PhD)
Wake Forest University Health Sciences

2009 – 2010 Postdoctoral Research Fellow (under Brian A. McCool, PhD).
Wake Forest University Health Sciences

2002 – 2004 Assistant Extractionist
Paradigm Analytical Laboratory
Wilmington, NC

STUDENT COMMITTEES

Master Thesis Committee Member (Andrew Vore) – 2015
Master Thesis Committee Member (Dominika Hosova) – 2015
Master Thesis Committee Member (Robin Zimmer) – 2017
Master Thesis Committee Member (Thaddeus Barney) – 2018
Master Thesis Committee Member (Joceyln Solis-Moreria) – 2018
Master Thesis Committee Member (Joshua Madera) – 2019
Master Thesis Committee Member (Paige Marsland) – 2019
Master Thesis Committee Member (Ashley Bui) – 2019
Master Thesis Committee Member (Steven Pilato) – 2019
Master Thesis Committee Member (Mary Spodnick) – 2020
Master Thesis Committee Member (Harper Coleman) – 2022
Master Thesis Committee Member (Alexandra Athanason) – 2022

Peer Reviewed Publications

Budygin EA, Oleson EB, Mathews TA, Lack AK, Diaz MR, McCool BA, and Jones SR. (2007) Effects of chronic alcohol exposure on dopamine uptake in rat nucleus accumbens and caudate putamen. *Psychopharmacology*. 193(4):495-501

- Managed chronic alcohol exposure and prepared tissue for experiments

Läck A.K.*

Bestrophin1 channels are insensitive to ethanol and do not mediate tonic GABAergic currents in cerebellar granule cells. *Front. Neurosci. Jan 11;5:148. doi: 10.3389/fnins.2011.00148.*

- Primary contributor to experimental design, data collection, analysis, and writing

Christian, D.T., Anderson, N.A., Diaz, M.R., Robinson, S., McCool, B.A. (2012) Chronic Intermittent Ethanol and Withdrawal Differentially Modulate Basolateral Amygdala AMPA-type Glutamate Receptor Function and Trafficking. *Neuropharmacology;* Jun;62(7):2429-38.

- Involved in data collection and analysis

Valenzuela, C.F., Morton, R.A., Diaz, M.R., Topper, L. (2012) Does moderate drinking harm the fetal brain? Insights from animal models. *TINS Review.*

- Involved in writing

Christian, D.T., Alexander, N.A., Diaz, M.R., McCool, B.A. (2012) Thalamic Glutamatergic Afferents into the Rat Basolateral Amygdala Exhibit Increased Presynaptic Glutamate Function Following Withdrawal from Chronic Intermittent Ethanol. *Neuropharmacology*; Sep 13. pii: S0028-3908(12)00476-5. [Epub ahead of print]

- Involved in data collection and analysis

Brady, M.L., Diaz, M.R., Iuso, A., Everett, J.C., Valenzuela, C.F., Caldwell, K.K. (2013) Moderate prenatal alcohol exposure reducesd plasticity and alters NMDA receptor subunit composition in the dentate gyrus. *J Neurosci. Jan 16;33(3):1062-7.*

- Involved in data collection, analysis, and writing

Diaz M.R., Wadleigh, A., Kumar, S., Schutter E.D., Valenzuela, C.F. Na^+/K^+-ATPase Inhibition Partially Mimics the Ethanol-induced Increase of the Golgi Cell-dependent Component of the Tonic GABAergic Current in Rat Cerebellar Granule Cell (2013) *PloS One; 2013;8(1):e55673. doi: 10.1371/journal.pone.0055673. Epub 2013 Jan 31*

- Primary contributor to experimental design, data collection, analysis, and writing

Diaz, M.R. and Morton, R.A. Ethanol Untangles the Amygdala-Anxiety Circuit through Tonic GABA Inhibition (2013) *Alcoholism: Clinical and Experimental Research; DOI: 10.1111/acer.12298*

- Primary contributor to writing

Diaz, M.R., Vollmer C., Zamudio-Bulcock, P.A., Vollmer, W., Blomquist, S., Morton, R.A., Everett, J.C., Zurek, A.A., Yu, J., Orser, B.A., Valenzuela, C.F. Repeated intermittent alcohol exposure during the third trimester-equivalent increases expression of the GABAA receptor δ subunit in cerebellar granule neurons and delays motor development in rats (2014) *Neuropharmacology,* 274 Apr;79:262-74

- Primary contributor to experimental design, data collection, analysis, and

writing

Diaz, M.R., Jotty, K., Locke, J.L., Jones, S.A., Valenzuela, C.F. Moderate alcohol exposure during the rat equivalent to the third trimester of human pregnancy triggers homeostatic changes in the dopaminergic system of the basolateral amygdala (2014) *Front. Pediatr.*, doi: 10.3389/fped.2014.00046

- Primary contributor to experimental design, data collection, analysis, and writing

Morton, R.A., Diaz, M.R., Topper, L., Valenzuela, C.F. Construction of vapor chambers to expose mice to alcohol during the equivalent of all three trimesters of human development (2014) *JoVE Jul 13;(89). doi: 10.3791/51839*

- Contributed in experimental design, data collection, analysis, and writing

Baculis, B., Diaz, M.R., Valenzuela, C.F. Exposure of Rats to Ethanol during the Equivalent to the Last Trimester of human Pregnancy Increases Anxiety-like Behavior and Glutamatergic Transmission in the Basolateral Amygdala (2015) *Pharmacology, Biochemistry and Behavior*, pii: S0091-3057(15)30046-0. doi: 10.1016/j.pbb.2015.08.009

- Primary contributor to experimental design, data collection, analysis, and writing

Diaz, M.R. and Valenzuela, C.F. Sensitivity of GABAergic tonic currents to acute ethanol in cerebellar granule neurons is not age- or δ subunit-dependent in developing rats (2016) *Alcoholism: Clinical and Experimental Research*; Jan;40(1):83-92. doi: 10.1111/acer.12940.

- Primary contributor to experimental design, data collection, analysis, and writing

Carter, J.M., Landin, J.D., Gigante, E.D., Rieger, S.P., Diaz, M.R., Werner, D.F. Inhibitors of calcium activated anion channels modulate sedative-hynoptic ethanol responses in adult Sprague-Dawley rats (2016) – *Alcoholism: Clinical and Experimental Research*; Feb;40(2):301-8. doi: 10.1111/acer.12957.

Under Review

PRESENTATIONS

Non-Refereed Addresses, Symposia, and Contributed Oral Presentations at Professional Meetings

Diaz, M.R. (2012, June). Impact of 3rd-Trimester-Equivalent Alcohol Exposure on Tonic and Phasic GABAergic Neurotransmission in the Developing Cerebellum. Symposium presented at the annual meeting of the Research Society on Alcoholism, San Francisco, CA.

Diaz, M.R. (Co-Organizer) (2014, June). Alcohol Exposure During the 3rd Trimester-Equivalent Disrupts Dopamine Modulation of GABA Transmission in the Basolateral Amygdala. Symposium presented at the annual meeting of the Research Society on Alcoholism, Bellevue, WA.

Diaz, M.R. (Co-Organizer) (2018, June). Adolescent stress-induced anxiety and ethanol consumption: alterations in basolateral amygdala kappa opioid receptor function. Symposium presented at the annual meeting of the Research Society on Alcoholism, San Diego, CA.

Diaz, M.R. (Co-Organizer) (2019, June). Prenatal alcohol exposure induces alterations in CRF systems in the adolescent central amygdala. Symposium presented at the annual meeting of the Research Society on Alcoholism, Minneapolis, MN.

Diaz, M.R. (2021, June). Sex-dependent effects of prenatal alcohol exposure on CRF1 receptor function in the adolescent central amygdala. Symposium presented at the annual meeting of the Research Society on Alcoholism (virtual)

Diaz, M.R. (2022, June). Prenatal Methadone Exposure Produces Age- and Sex-Dependent Changes in Alcohol Intake and Underlying Neural Substrates. Symposium presented at the annual meeting of the Research Society on Alcoholism, Orlando, FL.

Invited Oral Presentations

Diaz, M.R. (2014, September). “Long-term functional alterations following G12 ethanol exposure”. Presentation for Developmental Exposure Alcohol Research Center (DEARC) meeting, Binghamton University, NY.

Diaz, M.R. (2017, May). “Adolescent Stress-Induced Anxiety: A Role for Basolateral Amygdala Kappa Opioid Receptors”. Young Investigator Award Symposium at Volterra: Stress and Alcoholism conference, Volterra, Italy

Diaz, M.R. (2021, September). “Transitioning from a postdoc to faculty: Grant writing & setting yourself up for success”. National Hispanic Science Network, Virtual Conference.

Diaz, M.R. (2022, June). A Spectrum of Sex-Dependent Prenatal Alcohol Effects in Emotion Circuits: Insights into Fetal Alcohol Spectrum Disorder. Enhanced Interdisciplinary Research Training Institute on Hispanic Substance Abuse meeting, Pasadena, CA.

Project Title:	Prenatal Alcohol and Anxiety: An Ontogenetic Role for CRF
Principal Investigator:	Marvin R. Diaz, PhD
Role on Project:	Principal Investigator
Project Period:	08/2022 – 03/2025
Funding Source:	National Institute of Alcohol Abuse and Alcoholism
Grant Number:	R01 AA028566-S1
Total Award:	$177,068

Project Title:	Prenatal Alcohol and Anxiety: An Ontogenetic Role for CRF
Principal Investigator:	Marvin R. Diaz, PhD and Kelcie Schatz, PhD
Role on Project:	Sponsor
Project Period:	05/2023 – 04/2025
Funding Source:	National Institute of Alcohol Abuse and Alcoholism
Grant Number:	**F**32 AA031185
Total Award:	$138,580

Pending

Project Title:

Principal Investigator: Marvin R. Diaz, PhD and Siara Rouzer, MS
Role on Project: Sponsor
Funding Source: National Institute of Alcohol Abuse and Alcoholism
Grant Number: 1F31AA028166-01
Total Award: $59,484

Project Title: Long-term effects of adolescent ethanol exposure on BLA kappa opioid receptor function
Principal Investigator: Marvin R. Diaz, PhD
Role on Project: Principal Investigator
Funding Source: Binghamton University Presidential Diversity Research Grant
Grant Type:

Funding Source:	National Institute of Alcohol Abuse and Alcoholism
Total Award:	$60,000
Project Title:	The Effects of Prenatal Alcohol Exposure on Glutamate and GABA transmission in the Basolateral Amygdala

SERVICE

NIAAA ZAA1 study section CC ad hoc member – 2023
Educational Policy and Priorities Committee – 2021-present
Associate Director for DNA2 T32 – 2020-present
NIAAA AA4 study section standing member – 2020-present
Speaker for BU Alumni Donor Association - 2020
Alumni speaker at Wake Forest University School of Medicine – 2019, 2023
B-SMART Panelist – 2019-present
IACUC Member – 2019-present
Speaker for Campus Neuroscience Society - 2018
Panelist for Freshman Lunch - 2017
Faculty Senate – 2016-2018
Psychology Dept Colloquium Committee – 2016-2017
Harpur College Council – 2015-2016
Psychology Dept Awards Committee – 2015-2016, 2019-2020
Panel Member for Faculty Orientations – 2015
Psychology Department Faculty Search Committee – 2014, 2017, 2019