

Curriculum Vitae

Robert Allen Wheeler, Jr

Assistant Professor
Department of Biomedical Sciences
Marquette University
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Citizenship: USA
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EDUCATION:

University of Scranton, 1995 B.S. Neuroscience
Pennsylvania State University, 2003 Ph.D. Neuroscience

PROFESSIONAL HISTORY:

1996 – 2003 Research Assistant - Penn State University
2007 Adjunct Faculty - Psychology Department, Elon University
2003 – 2008 Postdoctoral Fellow - University of North Carolina
2008 – 2010 Research Assistant Professor – University of North Carolina
2010 – present Assistant Professor - Marquette University

PROFESSIONAL SOCIETIES:

Society for Neuroscience
Society for the Study of Ingestive Behavior

PROFESSIONAL AWARDS:

Young Investigator Award, 2002 – Society for the Study of Ingestive Behavior
Early Career Travel Award, 2007 – National Institute on Drug Abuse

RESEARCH SUPPORT:

R.A. Wheeler: Principal Investigator

Ongoing

K99/R00, DA025679 03/23/09 – 12/23/14

NIDA Pathway to Independence Award

The Neural Regulation of Negative Affect in a New Model of Cocaine Seeking

This study is determining the influence that conditioned changes in negative mood have on cocaine-seeking and nucleus accumbens function.

Completed

PHS, NRSA DA05932 1/03/99-10/31/02

NIDA

Total Cost: \$76,738 Active 01/03/99 – 10/31/02.

Drugs of Abuse, Reward Comparison, and Selected Strains

This study investigated strain differences in reward processing.

PHS, NRSA DA021055 03/23/06 – 03/23/09

NIDA

The Nucleus Accumbens and Relative Reward

Total Cost: \$151,272 Active 03/23/06 – 03/23/09

This study is investigating alterations in nucleus accumbens neurophysiology and rapid dopamine signaling for a natural reward that predicts cocaine.

INVITED ADDRESSES:

National Institute on Drug Abuse, NIH - Baltimore, MD

University of North Carolina, Chapel Hill - Chapel Hill, NC

Duke University - Durham, NC

Medical University of South Carolina – Charleston, SC

ASPET Neuroplasticity in Addiction Symposium - San Diego, CA

University of Illinois, Chicago – Chicago, IL

PROFESSIONAL SERVICES:

Journal Review (ad hoc):

Pharmacology, Biochemistry & Behavior, Neuron, Brain Research, and Journal of Neuroscience

TEACHING EXPERIENCE:

University of Scranton

1995 - Teaching Assistant - Research Methods for the Behavioral Sciences

Responsible for designing course instructional materials, grading written exams and homework, and administering oral exams.

Pennsylvania State University College of Medicine

1999 - Teaching Assistant - *Gross Anatomy*

Responsible for guiding medical students in daily laboratory dissection of human cadaver and assisting in laboratory exam setup and grading.

2000 - *Anatomy and Neuroanatomy* - Instructor for the Pennsylvania Governor's Institutes and Academies for Life Science Educators

Responsible for designing and presenting instruction to high school science educators in the fields of anatomy and neuroscience.

Elon University

2007 – Adjunct Faculty Instructor - *Biological Basis of Behavior* – 3 credits

SELECTED PUBLICATIONS:

Grigson, P.S., Lyuboslavsky, P., Tanase, D., & Wheeler, R.A. (1999). Water deprivation prevents morphine-, but not LiCl-induced, suppression of sucrose intake. Physiology and Behavior, 67, 277-286.

- Grigson, P.S., Wheeler, R.A., Wheeler, D.S., & Ballard, S.A. (2001). Chronic morphine treatment exaggerates the suppressive effects of sucrose and cocaine, but not LiCl, on saccharin intake in Sprague-Dawley rats. Behavioral Neuroscience, 115(2), 403-16.
- Roitman MF, Wheeler RA, Carelli RM. Nucleus accumbens neurons are innately tuned for rewarding and aversive taste stimuli, encode their predictors, and are linked to motor output. Neuron. 2005 Feb 17;45(4):587-97.
- Wheeler, RA, Roitman, MF, Grigson, PS, Carelli, RM. Single neurons in the nucleus accumbens track relative reward. International Journal of Comparative Psychology. 2005 18; 320-332.
- Wheeler, RA, Carelli RM. The neuroscience of pleasure: Focus on Ventral pallidum firing codes hedonic reward: when a bad taste turns good. J Neurophysiol. 2006 Aug 2.
- Jones, JL, Wheeler, RA, Carelli, RM. Behavioral and neural responding is unaltered following periods of abstinence from sucrose. Synapse. 2007 Mar;62(3):219-28.
- Wheeler, R.A., Twining, R.C., Jones, J.L., Slater, J.M., Grigson, P.S., Carelli, R.M. Behavioral and electrophysiological indices of negative affect predict cocaine self-administration. Neuron. 2008 57:774-785.
- Grigson, P.S., Twining, R.C., Freet, C.S., Wheeler, R.A., & Geddes, R.I. Drug-induced suppression of CS intake: Reward, aversion, and addiction. In: *Conditioned Taste Aversion: Behavioral and Neural Processes*, S. Reilly & T. Schachtman, Editors. Oxford University Press. NY, NY. In press.
- Wheeler, R.A., Carelli, R.M. Dissecting motivational circuitry to understand substance abuse. Neuropharmacology. 2009;56 Suppl 1:149-59. Epub 2008 Jun 25.
- Roitman, M.F., Wheeler R.A., Wightman R.M., Carelli R.M. Real-time chemical responses in the nucleus accumbens differentiate rewarding and aversive stimuli. Nat Neurosci. 2008 Dec;11(12):1376-7
- Jones, J.L., Day J.J., Aragona B.J., Wheeler R.A., Wightman R.M., Carelli R.M. Basolateral Amygdala Modulates Terminal Dopamine Release in the Nucleus Accumbens and Conditioned Responding. Biol Psychiatry. 2009 Dec 29.
- Wheeler, R.A., Aragona, B.J., Fuhrmann, K.A., Day, J.J, Jones, J.L., Wightman, R.M., Carelli, R.M. Cocaine cues drive opposing context-dependent shifts in reward processing and emotional state. Submitted.
- Park, J., Wheeler, R.A., Fontillas, K., Keithley, R.B., Carelli, R.M., Wightman, R.M. The bed nucleus of the stria terminalis as a reward-aversion integrator. Submitted.