



Gerardo Rojas

Elliot Hall S257 | rojas174@umn.edu | (224) 419-1611

EDUCATION

College of Lake County (2012-2013) | **A.A.**, Psychology

Carthage College (2013-2017) | **B.A.**, Neuroscience & Psychology (*cum laude*)

University of Minnesota (2018-) | **Ph.D.**, Psychology

RESEARCH EXPERIENCE

LeDoux Lab SURP Fellowship (May 2015 – August 2015)

- We ran behavioral experiments of Pavlovian-to-instrumental transfer which included sessions of Pavlovian threat conditioning, active avoidance training, extinction, and PIT testing. I assisted in various experiments including: escape from fear, using DREADDs in a PIT paradigm using klaxons, and sessions of Pavlovian threat conditioning using peppermint and printed paper to mask context.
- I participated in the Summer Research for Undergraduates symposium held at New York University. Also, I presented a poster at the Diversity Summer Student Research Conference.
- Submitted a paper manuscript as a final assignment.

Bouton Lab SNURF Fellowship (May 2016 – August 2016)

- We ran behavioral experiments studying action sequence formation in an appetitive lever-press task. I learned taste devaluation techniques, extinguished lever pressing, and tested reacquisition to confirm findings of the breakdown of habit sequences.
- I participated in the Summer Neuroscience Undergraduate Research Fellowship poster presentation at the University of Vermont.
- Submitted a paper manuscript as a final assignment.

Mahler Lab NIDA/NIH Fellowship (May 2017 – August 2017)

- I assisted in experiments involving cocaine/food self-administration. We explored how the VP contributes toward punished behavior using DREADD inhibition during extinction and reinstatement.
- We exposed another group of rats to WIN55,212-2 to see how treatment during adolescence modulates future acquisition, extinction, and reinstatement of food-seeking in conjunction with DREADD excitation/inhibition of the VTA.

Grissom Lab Ph.D. (2018 –)

- We are focused on mouse models of autism and the sex-specific differences observed during decision-making. My projects have included: delay discounting, probability discounting, and drug sensitization/locomotion.

THESES

- Rojas, G. (2015). Aversive motivation understood through Pavlovian-to-instrumental transfer. *Undergraduate thesis*, Department of Neuroscience, Carthage College.
 - Rojas, G. (2017). The infralimbic prefrontal cortex is necessary for gambling habits. *Undergraduate thesis*, Department of Psychology, Carthage College.
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POSTERS

- **Rojas, G.**, Campese, V. D., and LeDoux, J. E. (2015). Reducing threat signal status with extinction temporarily eliminates aversive pavlovian to instrumental transfer. *Diversity Summer Student Research Conference*, New York University, New York, NY.
 - * **Rojas, G.**, Thrailkill, E., and Bouton, M. (2016). Breaking habits. *Summer Research Symposium*, University of Vermont, Burlington, VT.
* **Later presented at the 2016 Pavlovian Society.**
 - **Rojas, G.** (2017). Breaking gambling habits. *Thesis Poster Presentation*, Carthage College, Kenosha, WI.
 - Farrell, M. R., Ruiz, C. M., Schoch, H., Huang, J., Cevallos, J., Castillo, E., Manoogian, A., **Rojas, G.**, Jung, K. M., Moreno-Sanz, G., Piomelli, D., and Mahler, S. V. (2017). The DREADDED Weed: Chemogenetic Dissection of Dopamine Function After Adolescent Cannabinoid Receptor Stimulation. *Gordon Research Conference: Cannabinoid Function in the CNS*, Waterville Valley, NH.
 - **Rojas, G. R.**, Heller, A., Leschisin, J., and Grissom, N. M. (2018). Decision Making in Mice: Individual Differences in impulsive Choice and Sex Differences in Risk Assessment. *Society for Neuroscience*, San Diego, CA.
 - Collier, J., **Rojas, G. R.**, Duerr, A., Ritchie, M., and Grissom, N. M. (2019). A Mouse Model for Neurodevelopmental Disorders shows Increase in Amphetamine-Induced Stereotypical Behaviors. *LSSURP Annual Poster Symposium*, Minnesota, MN.
 - **Rojas, G. R.**, Collier, J., Duerr, A., Ritchie, M., Bastin, A., and Grissom, N. M. (2019). A Mouse Model for Neurodevelopmental Disorders shows Increase in Amphetamine-Induced Stereotypical Behaviors. *Minnesota Symposium on Addiction Neuroscience*, Minnesota, MN.
***Won third prize for poster competition.**
 - **Rojas, G. R.**, Heller, A., Collier, J., Bastin, A., Duerr, A., Ritchie, M., and Grissom, N. M. (2019). Stereotyped behavior in rewarding scenarios in a mouse model of 16p11.2 hemideletion. *Society for Neuroscience*, Chicago, IL.
 - Collier, J., **Rojas, G. R.**, Duerr, A., Ritchie, M., and Grissom, N. M. (2019). A Mouse Model for Neurodevelopmental Disorders shows Increase in Amphetamine-Induced Stereotypical Behaviors. *Annual Biomedical Research Conference for Minority Students*, Anaheim, CA.
 - **Rojas, G. R.**, Heller, A., Collier, J., Bastin, A., Duerr, A., Ritchie, M., and Grissom, N. M. (2020). Stereotyped behavior in rewarding scenarios in a mouse model of 16p11.2 hemideletion. *Dopamine 2020*, Montreal, Quebec, Canada.
***Cancelled due to COVID-19, but will be presented in 2021.**
 - **Rojas, G. R.**, Knep, E., and Grissom, N. M. (2019). Delay but not uncertainty produces inflexible choice in a mouse model of 16p11.2 hemideletion. *IBNS*, Glasgow, Scotland.
***Cancelled due to COVID-19.**
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PUBLICATIONS

Campese, V. D., Kim, I. T., **Rojas, G.**, & LeDoux, J. E. (2017). Pavlovian Extinction and Recovery Effects in Aversive Pavlovian to Instrumental Transfer. *Frontiers in Behavioral Neuroscience*, 11, 179. <http://doi.org/10.3389/fnbeh.2017.001>.

Farrell, M. R., Ruiz, C. M., Castillo, E., Faget, L., Khanbijian, C., Chiu, S., Schoch, H., Rojas, G. R., Hnasko, T. S., & Mahler, S. V. (2019). Ventral Pallidum is Essential for Cocaine Reinstatement After Voluntary Abstinence. *Neuropsychopharmacology* <https://doi.org/10.1038/s41386-019-0507-4>.

Rojas, G. R., Heller, A., & Grissom, N. M. (in progress). Sequential touchscreen assessment of delay and probability discounting in mice reveals sex differences in risk assessment, but not impulsive choice. *Genes, Brain and Behavior*.

GRANTS/FELLOWSHIPS

NYU SURP (2015). NSF Summer Fellowship.

UVM SNURF (2016). NSF Summer Fellowship.

NIDA (2017). NIH Summer Fellowship.

Pilot Training Program (2018). UMN Fellowship.

Beverly & Richard Fink Graduate Fellowship (2019). UMN Fellowship.

David Campbell Fellowship (2019). UMN Fellowship.

Summer Research Award FY20 (2019). UMN Grant.

NIMH T32 MH115886 (2019). NIMH Training Grant.

Summer Research Award FY20 (2020). UMN Grant.

STUDENT RESEARCH MENTORSHIPS

Life Sciences Summer Undergraduate Research Program, University of Minnesota: Jenelle Collier (2019).

CLUBS/SOCIETIES

Psychology Club, College of Lake County

Psi Chi, Carthage College

Pavlovian Society, UMN

Society for Neuroscience, UMN