

SECTION 4: CURRICULUM VITAE
ULISES M. RICOY, PHD

CHRONOLOGY OF EDUCATION

- 1998 The University of Texas at San Antonio, B.S. *cum laude*
Major: Neurobiology
Advisor: Edwin J. Barea-Rodriguez, Ph.D.
- 1998-2000 San Francisco State University
Field: Marine Biology master's candidate (*abandoned due to health reasons*)
Advisor: Neo D. Martinez, Jr, Ph.D.
- 2003 Universidad Ibero Americana, Department of Psychology, Mexico City, Mexico
Diplomado: Addiction Studies
- 2007 The University of Texas at San Antonio, Ph.D.
Major: Neurobiology
Doctoral Dissertation: "Hippocampal Substrates of Methamphetamine Reinforcement."
Advisor: Joe L. Martinez, Jr., Ph.D.

CHRONOLOGY OF EMPLOYMENT

- 1995 Undergraduate Researcher, Minority Access to Research Careers (NIH), Department of
Biology, The University of Texas at San Antonio, Texas
Research Area: neurobiology of learning and memory
Advisor: Edwin J. Barea-Rodriguez, Ph.D.
- 1996 Research Assistant, (NSF) REU, The University of Texas at Austin Marine Science
Institute, Fisheries, Aquaculture and Mariculture Labs, Port Aransas, Texas
Research Area: aquaculture and larval fish ecology
Advisor: Joan Holt, Ph.D.
- 1997 Research Assistant, (NSF) REU, The University of California at San Diego, Scripps
Institution of Oceanography, Marine Life Research Unit, La Jolla, California
Research Area: biological oceanography
Advisor: David Checkley, Ph.D.,
- 1998 Medical Research Assistant, (NIH) "Minority International Research Training," Jos
University Teaching Hospital (JUTH), Nigeria, West Africa
Research Area: rickets and thyroid disease / ethnobotany and biochemistry
Advisor: Robert Glew, Ph.D. and Obadofin, M.D.
- 1998-2000 San Francisco State University, Romberg Tiburon Station, Department of Biology,
(became a master's candidate; *abandoned due to health reasons*), San Francisco,
California, and Tiburon, California
Research Area: biological oceanography and food web ecology
Advisor: Neo D. Martinez, Jr, Ph.D.

- 2001-2003 Drug Abuse Counselor, Specialized Center in Solutions for Alcoholism and Drug Dependence, Mexico City, Mexico
Under the supervision of: Dr. Jose Montalvo
- 2001-2003 High School Teacher, Instituto de Monterrey, Campus México City
Subjects taught: Neuroscience, Biology, Ecology
Under the supervision of: M. Sc. Jessica Vicencio
- 2003-2007 Research Assistant, University of Texas at San Antonio, Department of Biology, San Antonio, Texas
Research Area: neurobiology of drug reward
Advisor: Joe L., Martinez, Jr, Ph.D.
- Summer 2004 Course Coordinator, Marine Biological Laboratory, SPINES 2004 Summer Course
Woods Hole, MA
Under the supervision of: Dr. Joe L. Martinez, Jr. Ph.D.
- 2008-2010 Post-Doctoral Trainee, Oregon Health Sciences University, Department of Behavioral Neuroscience, Portland, Oregon
Research Area: neuroscience, synaptic biophysics
Advisor: Matthew Frerking, Ph.D.
- Summer 2011 Faculty and Student Teams (FaST) Fellow, Argonne National Laboratory, Center for Nanoscale Materials, Argonne, Illinois
Research area: Nanoscience, nature-inspired chemistry, self-assembly amphiphiles
Advisor: H. Christopher Fry, Ph.D.
- 2010-2014 Assistant Professor of Biology, Northern New Mexico College, Department of Biology, Española, New Mexico
- 2011-2012 Director of Biology and Chemistry Program, Northern New Mexico College, Española, New Mexico
- Summer 2012 Visiting Faculty Program (VFP) / DOE, Argonne National Laboratory, Center for Nanoscale Materials, Argonne, Illinois
Research area: nanoscience, nature-inspired chemistry, physical characterization amphiphiles
Advisor: H. Christopher Fry, Ph.D.
- 2012- 2016 Founder and Chair of Department of Biology, Chemistry and Environmental Science, Northern New Mexico College, Española, New Mexico
- Summer 2013 NSF ROA (Research Opportunity Award) Faculty Research, University of Pittsburgh, Department of Neuroscience, Pittsburgh, Pennsylvania
Research area: presynaptic mechanisms in the frog neuromuscular junction
Advisor: Stephen Meriney, Ph.D.
- 2014-2019 Associate Professor of Biology (**earned Tenure**), Northern New Mexico College, Department of Biology and Chemistry and Environmental Science, Española, New Mexico

- Summer 2014 Faculty Fellow / DOE, Los Alamos National Laboratory, Center for Integrated Nanotechnologies, Albuquerque, New Mexico
Research area: amphiphilic pH modulated photonic micelle nanocomposites for brain delivery
Advisor: Gabriel Montaña, Ph.D.
- Summer 2015 NIH IMSD (Initiative for Maximizing Student Development), Visiting Faculty, University of Massachusetts at Amherst, Department of Neuroscience and Behavior, Amherst, MA
Research area: synaptic transmission; neural signal encoding and decoding
Advisor: Genglin Li, Ph.D.
- 2016-2017 Interim Dean of Arts and Sciences, Northern New Mexico College, Española, New Mexico
- Summer 2016 Visiting Faculty, Los Alamos National Laboratory, Center for Integrated Nanotechnologies, Albuquerque, New Mexico
Research area: polymer nanocomposites for non-targeted brain drug delivery
Advisor: Gabriel Montaña, Ph.D.
- 2017-2019 Dean of Arts and Sciences, Northern New Mexico College, Española, New Mexico
- 2019-present Research Professor, Northern New Mexico College, Department of Biology and Chemistry and Environmental Science, Española, New Mexico
- 2019-present Associate Research Scientist, Faculty Director Neuroscience & Cognitive Science (NSCS), Associate Department Head, The University of Arizona, Department of Neuroscience, Tucson, Arizona
- 2019-present Neural Systems and Behavior Course Faculty, Marine Biological Laboratory, Woods Hole, MA, Course Directors: Alberto Pereda, and Stephanie White
- 2020-present Director of Outreach Initiatives, The Grass Foundation, Woods Hole, Massachusetts

SPECIAL COURSES

- 2001 Curso de Neurociencia, Universidad Autónoma México, (Campus Iztapalapa)
- 2002 United Nations Addictive Drugs Course, Mexico City, Mexico
- 2005 Specialized Program in Neuroscience, Ethics and Survival (SPINES), Marine Biological Laboratory, Woods Hole, MA
- 2006 Neurobiology, Marine Biological Laboratory, Woods Hole, Massachusetts
- 2015 Crawdad Invertebrate Neurophysiology Course, Cornell University Department of Neurobiology and Behavior.
- 2016 Crawfly Invertebrate Neurophysiology Course, Cornell University Department of Neurobiology and Behavior.

2017 Neuro Workshop: Hardware and Software Experiments to teach Neuroscience,
University of Missouri Department of Electrical and Computer Engineering

HONORS AND AWARDS

Undergraduate, Graduate School, Postdoc

1996-1998 Minority Access to Research Careers (MARC, NIH)
1996 Research Experiences for Undergraduates (REU, NSF)
1997 Scripps Undergraduate Research Fellowship (SURF, NSF)
1998 Minority International Research Training (MIRT, NIH)
1998 UTSA *Cum Laude* Graduate B.S. Neurobiology
1998-2000 Research Initiatives for Student Enhancement (RISE, NIH)
2002 ITESM Best Teacher in 2002 (based on student's evaluations)
2004 Vanderbilt Travel Award "*Frontiers in Addiction Biology*"
2004 NIDA Travel Award 2004 (NIDA Mini convention – San Diego)
2004 Minority Biomedical Research Support (MBRS PhD, NIH)
2005-2007 APA Diversity Program in Neuroscience Predoctoral Fellowship NIH-T32
2005 APA Travel Award (SFN)
2005 NIDA Travel Award (NIDA Mini convention - Washington)
2005 NHSN Travel Award (Miami)
2006 Alfred Sloan Foundation Scholar
2006 NIDA Travel Award (NIDA Mini convention - Atlanta)
2006 HHMI scholarship (Neurobiology course MBL 2006)
2006 American Cell Biology Society scholarship (Neurobiology course MBL 2006)
2006 William Townsend Porter scholarship (Neurobiology Course MBL 2006)
2006 NHSN Travel Award (Arizona)
2007 Minority Biomedical Research Support (MBRS PhD, NIH)
2010 NRSA Post-doctoral Training grant (T32-NS045553)

Faculty, Director, Chair, Interim Dean, Dean while at Northern New Mexico College

2010 SACNAS Travel Award (Anaheim, CA)
2011 DOE Faculty and Student Teams Award (Argonne National Laboratory)
2011 NHSN Travel Award (Miami)
2012 DOE Visiting Faculty Program Award (Argonne National Laboratory)
2010-2014 NSF S-STEM (P.I. Ulises Ricoy) NSF-DUE Award Number 0806469 2010-2014
2013 NSF-ROA (Parent Grant: P.I. Stephen Meriney Award Number EAGER IOS 1249546)
2014 DOE Visiting Faculty Program Award (Los Alamos National Laboratory)
2014 Early Career Neuroscience Institute (Faculty Training Grant, University of Pittsburgh)
2015 Crawdad Invertebrate Neurophysiology Course Scholarship Cornell University
Department of Neurobiology and Behavior, Cornell University, Ithaca, NY 14853, USA.
Instructors: Ron Hoy, Bruce Johnson, Wes Colgan (AD Instruments)
2015 Grass Foundation Neuroscience Education Award
2015 DOE-VFP LANL (P.I. Ulises Ricoy and Gabriel Montaña; accepted but declined)
2015 NSF ROA Vanderbilt University (accepted but declined)
2015 MBL Neural Systems & Behavior (accepted but declined)
2015 NIH IMSD VFP U Massachusetts Neuroscience (P.I. Ulises Ricoy)
2016 NIH BUILD UNM Neurosciences (accepted but declined)
2016 DOE-VFP LANL (P.I. Ulises Ricoy and Gabriel Montaña; accepted)

2016 Linton-Poodry SACNAS / HHMI Leadership
2017 NIH BUILD Mentoring Award
2016-pres Alfred Sloan National Mentoring Board of Directors
2018-2020 New Mexico Citizen Advisory Board (DOE)

Faculty Director, NSCS UA Department of Neuroscience

2019 Nominated to PULSE HHMI Fellow
2020 Named Director of Outreach for the Grass Foundation,
<https://grassfoundation.org/outreach-initiatives/>
2020 Named in 100 Inspiring Hispanic/Latinx Scientist in Cell Press,
<https://twitter.com/CellMentor/status/1305827471628152832>
2020 NHSN Travel Award (Detroit, MI; Cancelled due to COVID)
2020 NHSN National Public Service Award
2021 NHSN Travel Award (Grand Rapids, MI)
2021 UA Provost – Arizona Champion Award
2022 Affiliate faculty, Center for Latin American Studies (CLAS), a recognized National Resource Center (NRC) by the US Department of Education. The University of Arizona, Tucson, AZ

OUTREACH (*activities since arrival UA related to my position*)

Local/State/National Outreach

2019 Grass foundation Outreach Workshop, institutions with limited resources. Host: Ulises M. Ricoy, The University of Arizona, Department of Neuroscience
2019 UA Hispanic Service Institution, panelist for 2019 fellows. Host: Marla Franco, Ph. D, Assistant Vice Provost for Hispanic Serving Institution (HSI) Initiatives at the University of Arizona (UA)
2019 Bisbee elementary school, Neuroscience Outreach Workshop. Host: Ulises M. Ricoy, The University of Arizona, Department of Neuroscience
2020 South Tucson, Neurociencia para la comunidad. Host: Ulises M. Ricoy, The University of Arizona, Department of Neuroscience
2021 Brain Edu: A Window to the Brain, Una Ventana al Cerebro, Summer Camp, Host: Girls Scouts of Southern Arizona
2021 Grass Foundation Workshop; NEURON: Neuroscience Education in Undergraduate Research, Outreach, and Networking: Linking high school and undergraduate students through low-cost approaches to teaching neuroscience. Host: Ulises M. Ricoy, The University of Arizona, Tucson, Arizona
2021 Dana Foundation Workshop; Peer mentoring of URM students. Host: Ulises M. Ricoy, The University of Arizona, Tucson, Arizona
2020-present South Tucson, Tattoos, Cockroaches and Spikes (Street Science Series). Host: Ulises M. Ricoy, The University of Arizona, Department of Neuroscience

- 2021-present The Brain, Health, and Disease. Host: Amphitheatre Public School System, Tucson, Arizona. Implementation of Neuroscience K1-12 Neuroscience curriculum expanding our peer mentor program: NEURON (Neuroscience Education in Undergraduate Research, Outreach, and Networking)
- 2021-present Ricoy Lab Neuroscience. Host: STAR Lab, Tucson, Arizona. Implementation of Neuroscience for High School curriculum expanding our peer mentor program: NEURON (Neuroscience Education in Undergraduate Research, Outreach, and Networking)
- 2022 Why It's Important to Bring Neuroscience to Underrepresented Communities Dana Foundation Partner. Ulises M. Ricoy, The University of Arizona, Tucson, Arizona <https://www.youtube.com/watch?v=U8EgIHdYNs0>
- 2022-present STAR Lab Sunnyside group is continuing their project expanding it to publish the outreach work: "The effect of caffeine in the intact nervous system of the Hissing cockroach *Gromphadorhina Portentosa*. John E. Moore, Molly Matty, and **Ulises M. Ricoy. Micropublication.** The University of Arizona. Department of Neuroscience. Tucson, AZ 85721

International Outreach

- 2016 Grass foundation outreach. Host: Steve J. Zottoli and Ulises M. Ricoy. Marine Biological Laboratory, Woods Hole, MA
- 2019 Low-Cost Approaches in Neuroscience workshop. Host: Xicano Institute of Teaching and Organizing (XITO)
- 2021 Puerto Penasco, Sonora, Mexico, Neurociencia y Biología Marina para la comunidad. Host: Ulises M. Ricoy, The University of Arizona, Department of Neuroscience
- 2021 Xicano Institute of Teaching and Organizing (XITO), Decolonizing Neuroscience workshop. Host Ulises M. Ricoy, The University of Arizona, Department of Neuroscience

SERVICE

Departmental Committees

- 2019-present Faculty Director, Undergraduate Program in Neuroscience & Cognitive Science (NSCS)
- 2019-present Member and Chair, NSCS Curriculum Committee
- 2019-Present Member and Chair, NSCS Steering Committee
- 2019-2021 Member and Chair, NSCS Admissions Committee
- 2020 Member and Chair, Lecturer Search Committee, Department of Neuroscience
- 2020 Member and Chair, UA NSCS Advisor Search
- 2021 Member and Chair, UA NSCS Coordinator Search
- 2021 Member and Chair, UA NSCS Senior Advisor Search
- 2022 Member and Chair, UA Department of Neuroscience Education Committee
- 2021 Member and Chair, UA NSCS Advisor Search
- 2021 Member and Chair, UA NSCS Student Worker
- 2022 Member and Chair, UA NSCS Advisor Search

2022 Member and Chair, UA NSCS Lecturer AZ Online

College of Science Committee

2019-present Associate Department Head, Department of Neuroscience
2019-present UA COS Diversity, Equity, and Inclusion (DEI) Committee
2019-present UA COS DEI Student Success Subcommittee
2019-present UA COS Student Awards Committee
2020 Member, Five Year Review of Neuroscience Department Head Committee
2022 Member, Associate Dean of Student Success Committee Search

University Service

2020-2022 University of Arizona-Pima Community College STEM Mentor
2020-2021 Reviewer, UA HSI Faculty Seed Grants
2022 College of Science Hiring Committee; Associate Dean of Student Success

National / Extramural Committees

2015 NSF IOS Reviewer
2015 NIH BUILD Reviewer
2016 NIH NM INBRE Reviewer
2016 SACNAS Committee Member (Student Posters)
2016-present SACNAS Mentor
2016-present Alfred Sloan Foundation Mentoring Network Board member
2016-present NSF DUE Reviewer
2018-present Alfred Sloan Mentoring Network Reviewer
2018 NIH BUILD Reviewer
2019-present PULSE HHMI Fellow
2019-present Grass Foundation Director of Outreach
2021 Chan Zuckerberg Initiative (Mentor)
2012-present Grass Foundation Advisory Board committee (Member and Chair)

Journal Reviewer

2016-present Peer Reviewer for Journal of Neuroscience
2016-present Peer Reviewer for Journal of Neurophysiology
2016-present Peer Reviewer for Behavioral Neuroscience
2016-present Peer Reviewer for PLOS
2019-present Peer Reviewer for Experimental Brain Research
2019-present Peer Reviewer for Hardware X
2019-present Peer Reviewer for Scientific Reports
2019-present Peer Reviewer for Frontiers in Behavioral Neuroscience
2019-present Peer Reviewer for Frontiers in Physiology
2019-present Peer Reviewer for Invertebrate Physiology

PROFESSIONAL AFFILIATIONS

1996-present Life Member, Society for the Advancement of Chicano and Native American Scientists (SACNAS)
2004-present Member, Society for Neuroscience (SFN)

2004-present Member, National Hispanic Science Network on Drug Abuse (NHSN)
2016-present Member, American Physiological Society

PUBLICATIONS/CREATIVE ACTIVITY

KEY: *student mentee

1. Ricoy UM, Martinez JL Jr. Local hippocampal methamphetamine-induced reinforcement. *Front Behav Neurosci.* 2009; 3:47. doi: 10.3389/neuro.08.047.2009. ecollection 2009. PubMed PMID: 19949457; PubMed Central PMCID: PMC2783399.
2. Ricoy UM, Mao P, Manczak M, Reddy PH, Frerking ME. A transgenic mouse model for Alzheimer' disease has impaired synaptic gain but normal synaptic dynamics. *Neurosci Lett.* 2011 Aug 18;500(3):212-5. doi: 10.1016/j.neulet.2011.06.043. Epub 2011 Jun 29. PubMed PMID: 21741442; PubMed Central PMCID: PMC3252233.
3. Fry HC, *Garcia JM, *Medina MJ, Ricoy UM, Gosztola DJ, Nikiforov MP, Palmer LC, Stupp SI. Self-assembly of highly ordered peptide amphiphile metalloporphyrin arrays. *J Am Chem Soc.* 2012 Sep 12;134(36):14646-9. doi: 10.1021/ja304674d. Epub 2012 Aug 28. PubMed PMID: 22916716.
4. Ricoy UM, Frerking ME. Distinct roles for Cav2.1-2.3 in activity-dependent synaptic dynamics. *J Neurophysiol.* 2014 Jun 15;111(12):2404-13. doi: 10.1152/jn.00335.2013. Epub 2014 Feb 12. PubMed PMID: 24523520; PubMed Central PMCID: PMC4044429.
5. Torres DJ, Ricoy UM, Roybal S. Modeling Honeybee Populations. *PLoS One.* 2015;10(7): e0130966. doi: 10.1371/journal.pone.0130966. eCollection 2015. PubMed PMID: 26148010; PubMed Central PMCID: PMC4493160.
6. Torres DJ, Cannon JL, Ricoy UM, Johnson C. Self-Contained Statistical Analysis of Gene Sets. *PLoS One.* 2016;11(10): e0163918. doi: 10.1371/journal.pone.0163918. eCollection 2016. PubMed PMID: 27711232; PubMed Central PMCID: PMC5053608.
7. Franco D, Zamudio J, Blevins KM, Núñez-Larios EA, Ricoy UM, Iñiguez SD, Zavala AR. Early-life ketamine exposure attenuates the preference for ethanol in adolescent Sprague-Dawley rats. *Behav Brain Res.* 2020 Jul 1; 389:112626. doi: 10.1016/j.bbr.2020.112626. Epub 2020 Apr 30. PubMed PMID: 32361040; PubMed Central PMCID: PMC7521832.
8. Torres DJ, *Romero A, Colgan W 3rd, Ricoy UM. A low-cost computational approach to analyze spiking activity in cockroach sensory neurons. *Adv Physiol Educ.* 2021 Mar 1;45(1):145-153. doi: 10.1152/advan.00034.2020. PubMed PMID: 33661048; PubMed Central PMCID: PMC8091935.

OTHER SCHOLARSHIP

Conference Proceedings: Gomez-Molina J.F., Corredor M., Restrepo-Velasquez A.A., **Ricoy U.M.** (2017) Computer models for ions under electric and magnetic fields: random walks and relocation of calcium in dendrites depends on timing and population type. In: Torres I., Bustamante J., Sierra D. (eds) VII Latin American Congress on Biomedical Engineering CLAIB 2016, Bucaramanga, Santander, Colombia, October 26th -28th, 2016. IFMBE Proceedings, vol 60. Springer, Singapore.
https://doi.org/10.1007/978-981-10-4086-3_175

WORKS IN PROGRESS

KEY: *student mentee

Research in Progress

Ricoy, U.M., D.J. Torres, Iniguez, S.D., and Zavala A.R. Natural and Drug Reward in Cockroaches: Conditioned Place Preference in Invertebrates. In preparation. Experimental design, experiments and initial data analyses were performed in New Mexico (2013-2019) by Ricoy U.M. This manuscript examines conditioned place preference in four different species of cockroaches. Preliminary data was obtained by undergraduates as part of my CURE course in New Mexico (funded by a grant from NSF S-STEM #1562008 to U.M. Ricoy). Further, data analyses will be completed in fall of 2021 with assistance from collaborators. Manuscript was written by Ricoy U.M. and anticipate submission in Winter of 2022. Work was funded in part by a Grass Foundation Grant to U. M. Ricoy.

*Ramadan, B., and **Ricoy U.M.** The NEURON Program: Utilizing Low-Cost Neuroscience for Remote Education Outreach. This manuscript is the result of a month-long workshop utilizing low-cost approaches in neuroscience for educational outreach. Experimental design, idea, plan, experiments, and initial data analyses were performed in Tucson, Arizona (Spring 2021) by Ricoy U.M. The logistical coordination of the workshop was done by B. Ramadan as part of his NSCS Honors Thesis. Previous work and preliminary data were obtained by undergraduates as part of my CURE course in New Mexico (funded by a grant from to U.M. Ricoy). Data analyses will be completed in fall of 2021. Manuscript was written by Ricoy U.M. and submitted and accepted to JUNE for Spring 2022. Work was funded in part by a Grass and Dana Foundation Grants to U. M. Ricoy in 2021.

*Romero, A., and **Ricoy U.M.** The importance of personal experience to mentoring at-risk undergraduates and improving the probability of completion of a college degree. This manuscript examines strategies in URM STEM mentoring in the southwest by Ricoy U.M. in the fields of neuroscience and neurophysiology. Previous work and preliminary data were obtained by undergraduates as part of my CURE course in New Mexico (funded by a grant from to U.M. Ricoy). Data analyses will be completed in fall / winter of 2022. Manuscript was written by Ricoy U.M. and anticipate submission in Spring of 2022. Invited to submit to the Journal of Neuroscience Education. Work was funded in part by a Grass, NIH seed award and NSF Grants to U. M. Ricoy.

Nelson, T.M., Gonzalez, T.A., Garcia, A.K., Pham, D.Q., Franco, D., Bates E.A., **Ricoy, U.M.,** Iniguez, S.D. and Zavala A.R. Sex and dose dependent differences in preference for ethanol in preadolescent and adolescent rats. This is a collaboration with A.R. Zavala and is a follow up of Franco et al., 2020. Data analyses will be completed in fall of 2021 with assistance from all collaborators. Group anticipates submission in Winter of 2022. Work was funded in part by a Grass Foundation Grant to U. M. Ricoy.

Zottoli, S.J. and **Ricoy U.M.** On the Origin of Diversity at the MBL. This is historical recollection including interviews to map the origin of diversity initiatives at the Marine Biological Laboratory that led to courses such as SPINES. Group anticipates submission in Winter of 2022. Work was funded in part by a Grass Foundation Grant to U. M. Ricoy. Manuscript design, idea, plan, experiments, and data collection analyses were performed by Ricoy U.M.

MEDIA

Featured in: Virtual Conference Lightning Talks. Neuroethology: From Behavior to Brain Lightning Talks: Characterizing Vibration Frequency Sensitivity and Neural Activity in Escaping Earthworms In this video, Ulises Ricoy and Andres Romero discuss how the earthworm can be used as a low-cost animal model to study escape behaviors at an undergraduate serving institution.
<https://neuronline.sfn.org/scientific-research/neuroethology-from-behavior-to-brain-lightning-talks>

Featured in: Why It's Important to Bring Neuroscience to Underrepresented Communities Dana Foundation Partner. Ulises M. Ricoy, The University of Arizona, Tucson, Arizona
<https://www.youtube.com/watch?v=U8EgIHdYNs0>

CONFERENCES/SCHOLARLY PRESENTATIONS

Invited Colloquia, Seminars, Symposia, and Conferences

Invited Colloquia

The Role of GABA B mediated presynaptic inhibition on CA 1 synaptic dynamics. The University of Texas at San Antonio. Center for Research and Training in Sciences. MBRS RISE/MARC Programs. Fall 2010 Seminar Series. Host: Dr. Barea-Rodriguez.

The role of presynaptic voltage gated calcium channels on Hippocampal CA1 synaptic transmission during realistic firing patterns. The University of New Mexico. School of Medicine. Department of Neurosciences. Spring 2011 Seminar Series. Host: Dr. Fernando Valenzuela.

Contribution of N, P/Q, and R type calcium channel mediated presynaptic inhibition on CA 1 synaptic dynamics. The University of North Texas Health Science Center, Department of Pharmacology and Neuroscience. Spring 2011 Seminar Series. Host: Dr. Eric Gonzales

Hippocampal Synaptic Plasticity: Behavioral Relevance and Implications for Addiction. National Hispanic Science Network on Drug Abuse. Miami, Florida. Fall 2011

Utilizing the Cockroach and Grasshopper as model systems in Neurobiology as tools to recruit and retain STEM students in Northern New Mexico. Highlands University, Las Vegas, New Mexico. Spring 2012.

The effects of presynaptic inhibition on synaptic dynamics. SACNAS 2012 National Convention. Seattle, Washington. Oct 12, 2012.

Hippocampal Synaptic Plasticity: Behavioral Relevance and Implications for Addiction. UTEP VIDA Colloquium. El Paso, Texas. Fall 2013

“The effects of environmental insult on homeostatic adaptations of synaptic transmission.” Early Career Neuroscience Institute. University of Pittsburgh. Department of Neurobiology. Grant writing workshop. February 2015.

Hippocampal Synaptic Plasticity: Behavioral Relevance and Implications for Addiction. California State University, Long Beach, CA Spring 2015.

A Comparison of Locomotor Behavior between North American (*Periplaneta americana*) and South American (*Blattella germanica*) Cockroaches. The University of New Mexico, Department of Neuroscience. Spring 2016. Host: Dr. Don Partridge.

Locomotor Behavior in an Invertebrate Biomedical Model. San Juan College. Department of Biology. Spring 2016. Host: Dr. Veronica Evans.

Keynote Seminar for RISE and MARC (NIH) students. The University of Texas at San Antonio, Department of Biology. Fall 2016. Host: Dr. Edwin Barea-Rodriguez.

Running Behavior of North American (*Periplaneta americana*) and South American (*Blattella germanica*) Cockroaches. Ponce Health Science University. Spring 2017. Host: Dr. Kenira Thompson.

Locomotor Behavior in an Invertebrate Biomedical Model. University of Puerto Rico Ponce. Department of Biology. Spring 2017. Host: Dr. Edu Suarez.

Low-Cost Approaches in Teaching/Research an Invertebrate Biomedical Model. Marine Biological Laboratory. Woods Hole, MA. Summer 2017. Host: Dr. Gina Poe (UCLA).

Behavior and Physiology using cockroaches in a rural small College. Southern Oregon College. Coos Bay, OR. 2018.

Accessible Active Learning in Neuroscience. The University of Arizona. Tucson, AZ. Spring 2019. Host: Dr. Lynne Oland.

Low-Cost Approaches in Neuroscience (Computation, Physiology and Behavior). Grinnell College. Grinnell, IA. Spring 2019. Host: Dr. Clark Lindgren.

Modeling Natural and Drug Reward in Cockroaches. Texas A&M, College Station Texas. Spring 2020. Host: Dr. Carlos Bolanos.

Conditioned Drug Reward in Cockroaches. New Jersey Institute of Technology, NJ. Spring 2020. Host: Dr. Eric Fortune.

Life Journey - Drug Reward in Cockroaches. UTEP. Summer 2020. Host: Dr. Laura O'Dell.

Modeling Natural and Drug Reward in Cockroaches. CSULB. Summer 2020. Host: Dr. Arturo Zavala.

Low-Cost Approaches in Neuroscience (Computation, Physiology and Behavior). Claremont Colleges. Spring 2021. Host: Dr. Tom Borowski

Natural and Drug Reward in Cockroaches: Conditioned Place Preference in Invertebrates. The University of New Mexico. Spring 2021. Host: Dr. Benjamin Clark

Approaches to establishing science identity in underserved students in the Southwest. Prescott College. Spring 2021. Host: Dr. Zoe Hammer

Low-Cost Approaches to doing Good Science. Marine Biological Laboratory. Woods Hole, MA. Summer 2021. Host: Dr. Steph White (UCLA)

Low-Cost Approaches to doing Good Science. Universidad Nacional de Cordoba. Cordoba, Argentina. Fall 2021. Host: Dr. Victor Ramirez-Amaya

Low-Cost Approaches to doing Good Science. Prescott College; Dopoi Center, Kenya. Summer 2022. Host: Dr. Mary Poole

Low-Cost Neuroethology. Marine Biological Laboratory. Woods Hole, MA. Summer 2022. Host: Dr. Steph White (UCLA)

Natural Reward in Cockroaches. Universidad Nacional Autónoma de Mexico, Colegio de Medicina. Laboratorio de Endocannabinoides. Spring 2022. Host: Dr. Oscar Prospero

State-wide, NNMC and University of Arizona:

3rd Annual New Mexico Experimental Program to Stimulate Competitive Research (EPSCoR) Junior Faculty Leadership Workshop. January 4-7, 2011. Jemez Springs, New Mexico.

Methamphetamine Induced Behavioral Sensitization via Hippocampal Dialysis. Joshua De Aguero* and Ulises M. Ricoy. Northern New Mexico College, Department of Biology and The University of Texas at San Antonio, Department of Biology. (Presented at Northern New Mexico College Spring 2011 Poster Session).

The Cockroach Genome Project: de novo mapping of the *Periplaneta Americana* and *Blattella germanica* genomes. Justin Salazar*, Shanae Roybal*, Richard Plunkett, Ulises M. Ricoy, and Seth Frieze. Northern New Mexico College, Department of Biology and Highlands University. (Alliance for Minority Participation, 2012).

Nature Inspired Light-Charge Transfer Molecules. Ulises M. Ricoy. Northern New Mexico College, Department of Math and Science, Program in Biology and Chemistry. Spring 2012 Seminar Series. Host: Dr. Anthony Sena.

Utilizing the Cockroach and Grasshopper as model systems in Neurobiology as tools to recruit and retain STEM students in Northern New Mexico. Ulises M. Ricoy. Highlands University, Las Vegas, New Mexico. Spring 2012 Host: Dr. Richard Plunkett.

Qualia and the Cockroach. Ulises M. Ricoy. NNMC. Spring 2012.

Soxhlet extraction techniques. Theresa Garcia*, Viviana Balzaretto, Harrison Rommel PhD, and Ulises M. Ricoy PhD Northern New Mexico College Department of Math and Physical Sciences. Northern Creativity Symposia 2013. Espanola, NM.

The cockroach transcriptome project: Identification of a methyltransferase in *Periplaneta Americana*. Aspen Lowance*, Shanae Roybal*, Richard Plunkett, PhD, Ulises M. Ricoy PhD, Seth Frieze, PhD. Northern New Mexico College, Department of Biology, The National Center for Research Resources & The National Institute of General Medical Sciences. 2013.

Neuroscience teaching at a minority undergraduate institution. Ulises M. Ricoy. Northern New Mexico College. Department of Biology. (SACNAS 2012).

UTEP NIH BUILD workshop (Pipeline Partner). Dr. Ulises M. Ricoy and Dr. Anthony Sena. Northern New Mexico College. El Paso, Texas 2014.

Developmental gene expression patterns in the American cockroach. Oliver Oviedo*, Chien-Chi Lo, Seth Frieze Ph.D., Ulises M. Ricoy Ph.D. Department of Biology and Chemistry. Northern New Mexico College. Espanola, NM 87532 (INBRE 2015).

The role of Octopamine in Locomotor Behavior between North American (*Periplaneta americana*) and South American (*Blattella germanica*) Cockroaches. Alyssa Lucero*, Mario Izaguirre-Sierra Ph.D., Ulises M. Ricoy Ph.D. Department of Biology and Chemistry. Northern New Mexico College. Espanola, NM 87532 (INBRE 2015).

Shanae Roybal*³, Edgar Ronquillo², Ashis Nandy², Ulises M. Ricoy³, David Torres¹
Northern New Mexico College. Department of Math and Physical Sciences¹

College of Engineering² Department of Biology, Chemistry, Environmental Sciences³. Espanola, NM 87532. (Annual Research and Creativity Symposium 2015).

Modeling Honeybee Populations. David Torres, Ulises M. Ricoy, and Shanae Roybal*. Department of Mathematics and Physical Sciences and Department of Biology, Chemistry, Environmental Sciences. Northern New Mexico College. (Annual Research and Creativity Symposium 2015). Espanola, NM 87532.

Establishing New Colonies of *Periplaneta americana* and *Blaberus discoidalis* for use in Molecular Biology and Neuroscience Research. Aspen Lowance*, Sam Bennett, Mario Izaguirre-Sierra Ph. D. Ulises M. Ricoy Ph. D. Northern New Mexico College, Espanola, NM, 87532. (INBRE 2016).

Statistical Analysis of Gene Sets. David Torres, Judy Cannon, Ulises M. Ricoy, Christopher Johnson. Department of Mathematics and Physical Sciences and Department of Biology, Chemistry, Environmental Sciences. Northern New Mexico College. Espanola, NM 87532. (INBRE 2016).

Locomotor Behavior in an Invertebrate Biomedical Model. Lisa Y. Salazar*, Gabriella F. Trujillo, Bridget Ortiz, Mario Izaguirre-Sierra, and Ulises M. Ricoy. Department of Biology, Chemistry, Environmental Sciences. Northern New Mexico College. Espanola, NM 87532. (INBRE 2016).

The Effect of Novelty and Stress on Insect Grooming Behavior. Bridget D. Ortiz*, Gabriella F. Trujillo*, Mario Izaguirre-Sierra, and Ulises M. Ricoy. Department of Biology, Chemistry, Environmental Sciences. Northern New Mexico College. Espanola, NM 87532. (INBRE 2016).

A comparison of drug seeking behavior and preference in *Periplaneta americana* and *Blaberus discoidalis*. Bridget D. Ortiz*, Gabriella F. Trujillo*, and Ulises M. Ricoy; 1Biol., Northern New Mexico Col., Espanola, NM. (ARCSS 2016).

Octopamine Receptor Expression in *Periplaneta americana* and *Blaberus*. Sam Bennett*, Mario Izaguirre-Sierra Ph. D. Ulises M. Ricoy Ph. D. Northern New Mexico College, Espanola, NM, 87532. (INBRE 2017).

The effects of sugar on cockroach (*Blaberus discoidales*) locomotor behavior (speed and grooming). Desiree Griego, John Archuleta, and Ulises M. Ricoy. Department of Biology, Northern New Mexico College. 921 North Paseo de Oñate, Española, NM 87532. (ARCSS 2018).

Running behavior in *Blaberus discoidales*, *Blaptica dubia*, *Periplaneta americana*, and *Gromphadorhina portentosa*. Marissa Salazar, Desiree Griego, John Archuleta, and Ulises M. Ricoy. Department of Biology, Northern New Mexico College. 921 North Paseo de Oñate, Española, NM 87532. (ARCSS 2018).

Video Analyses of Running behavior in *Blaptica dubia*, *Periplaneta americana*, and *Gromphadorhina portentosa*. John Archuleta, Marissa Salazar, Desiree Griego, and Ulises M. Ricoy. Department of Biology, Northern New Mexico College. 921 North Paseo de Oñate, Española, NM 87532. (ARCSS 2018).

Locomotor Behavior in an Invertebrate Biomedical Model. Lisa Y. Salazar*, Gabriella F. Trujillo, Bridget Ortiz, Mario Izaguirre-Sierra, and Ulises M. Ricoy. Department of Biology, Chemistry, Environmental Sciences. Northern New Mexico College. Espanola, NM 87532. (INBRE 2018).

Imaging the *Caenorhabditis elegans* Germline. Shae Madrid, Patrick Sanchez, Phil Duran, Catherine Davis-Sparks, Ulises M. Ricoy, and Sushmita Nandy. Department of Biology, Northern New Mexico College. 921 North Paseo de Oñate, Española, NM 87532. (Annual Research and Creativity Symposium, NNMC 2019)

Impact of abnormal glycemic levels on feeding behavior of *Caenorhabditis elegans*. Phil Duran, Andres Romero, Patrick Sanchez, Catherine Davis-Sparks, Shae Madrid, Ulises M. Ricoy (Ph. D), and Sushmita Nandy (Ph. D). Department of Biology, Northern New Mexico College. 921 North Paseo de Oñate, Española, NM 87532. (Annual Research and Creativity Symposium, NNMC 2019).

Effects of Stimulated Drug Addiction on the Neural Spike Activity of *Gromphadorhina Portentosa* and their Applications in the Identification and Treatment of Addictions. Victor Vigbedorth, Joann Valenzuela, Cynthia Bujanda, John E Moore, and Ulises M. Ricoy (presented at SARSEF; 2nd place overall).

Effects of Caffeine and Nicotine on *Gromphadorhina Portentosa* on Neural Activity. Joseph Han Catalina Foothills, John E Moore, and Ulises M. Ricoy. (Presented at SARSEF).

Behavioral Analyses of the Madagascar Hissing Cockroach (*Gromphadorhina Portentosa*) after a long-term caffeine supplemented diet. Liam Superville and Adrian Miller (TMHS), John E Moore, and Ulises M. Ricoy. (Presented at SARSEF).

National/International Conferences / Workshops

Submitted Abstracts & Poster Presentations

KEY: *student mentee

Factors of Mortality among Larval Red Drum. U. M. Ricoy. The University of Texas at Austin. Marine Science Institute. Fisheries, Aquaculture, and Mariculture Laboratories, Port Aransas, TX. (Submitted and accepted at National Minority Research Symposium, NMRS, 1997).

Analysis of Optical Plankton Counter / Bongo Net Data during CalCOFI Cruise JD9707. U. M. Ricoy and David Checkley Jr. The University of California, San Diego. Scripps Institution of Oceanography. Marine Life Research Group, La Jolla CA. (Presented at NMRS, 1998).

HSC 70 mRNA expression during the acquisition of a hippocampus-dependent spatial memory in rats. U. M. Ricoy, J. M. Pizarro, J. Fey, J. Bowlin, J. L. Martinez Jr., and E. J. Barea Rodriguez. Division of Life Sciences. The University of Texas at San Antonio, TX. (Presented at Society for the Advancement of Chicano and Native American Scientists, SACNAS, 1998).

GAP 43 mRNA expression during the acquisition of a hippocampus-dependent spatial memory in rats. J. M. Pizarro, U. M. Ricoy, J. Fey, J. Bowlin, J. L. Martinez Jr., and E. J. Barea Rodriguez. Division of Life Sciences. The University of Texas at San Antonio, TX. (Presented at SACNAS, 1998).

Anatomical Distribution of GAP 43 and HSC 70 mRNA in the Rat Brain During Training in the Morris Water Maze Task. J. M. Pizarro, M. R. Gonzáles, H. Kim, U. M. Ricoy, J. Fey, D. Villareal, A. E. Martínez, J. L. Martínez Jr., and E. J. Barea Rodríguez. Division of Life Sciences. The University of Texas at San Antonio, TX. (Presented at Society for Neuroscience, 1999).

Microarray Analysis of Altered Gene Expression Associated with D-Amphetamine Self-Administered into the nucleus Accumbens in Fisher 344 Rats. J. S. Rodriguez, U. M. Ricoy, S. Y. Boctor, C. F. Phelix,

and J.L. Martinez Jr. Cajal Neuroscience Institute and Department of Biology. The University of Texas at San Antonio, TX. (Presented at Society for Neuroscience, 2004).

Methamphetamine or Morphine Induced Conditioned Place Preference: Possible Role of the Hippocampus. U. M. Ricoy and J. L. Martinez Jr. Cajal Neuroscience Institute and Department of Biology. The University of Texas at San Antonio, TX. (Presented at Society for Neuroscience, 2005).

Unilateral Intra-Hippocampal Methamphetamine Induced Place Conditioning via reverse Microdialysis. U. M. Ricoy, Cesar Bañuelos and J. L. Martínez Jr. Cajal Neuroscience Institute and Department of Biology. The University of Texas at San Antonio, TX. (Society for Neuroscience 2006).

Roundtable Breakout on Long-Term Recovery. Nelson J. Tiburcio, W, Azul La Luz B and Ulises M. Ricoy. National Development and Research Institutes, Inc. / MHRA
71 West 23rd Street, 8th Floor. New York, New York, The University of New Mexico, Department of Sociology, Albuquerque, NM and the Cajal Neuroscience Institute, San Antonio, TX "Research Teams of the Future: Drug Use and HIV/AIDS". National Hispanic Science Network on Drug Abuse 6th Annual Conference. September 13-16 in Scottsdale, Arizona 2006.

NHSN Conference Town Hall Meeting "Meet the NIDA Director: Dr. Nora Volkow". Graduate Student Leader: Ulises M. Ricoy. National Hispanic Science Network on Drug Abuse 6th Annual Conference. September 13-16 in Scottsdale, Arizona 2006.

Hippocampal Dopamine Receptor involvement in Intra-Hippocampal Methamphetamine Induced Place Conditioning and Self Administration via reverse Microdialysis. U. M. Ricoy and J. L. Martinez Jr. Department of Biology. The University of Texas at San Antonio, TX. (Presented at Society for Neuroscience 2007).

D1/D5 Receptor Involvement in Intra-Hippocampal Methamphetamine Place Conditioning and Self-Administration. U. M. Ricoy¹ and J. L. Martinez Jr.². ¹Oregon Health Science University and ²The Cajal Neuroscience Institute and Department of Biology. The University of Texas at San Antonio. (Presented at SACNAS 2008).

Stages of Graduate School: Survival Kit for your Success. Session Speakers: Greg Villareal, PhD (Galanea Corporation) and Ulises M. Ricoy, Ph.D. (OHSU Postdoc). SACNAS National Conference 2008 at Salt Lake City, Utah.

A transgenic mouse model for Alzheimer's disease has impaired synaptic gain but normal synaptic dynamics. Ulises M Ricoy, Peizhong Mao, Maria Manczak, P Hemachandra Reddy, and Matthew E Frerking. Oregon Health Science University. Department of Behavioral Neuroscience. (Presented at SACNAS 2010).

Distinct Roles for Cav2.1-2.3 in activity-dependent synaptic dynamics. Ulises M Ricoy and Matthew Frerking. Oregon Health Science University. Department of Behavioral Neuroscience. (Presented at SFN 2010).

Advancing Biomedical Research Workforce Diversity: NIGMS Workshop for Post-docs Transitioning to Independent Positions. Bethesda, Maryland (March 11-12, 2010).

Self-Assembly of Highly Ordered Peptide Amphiphile Porphyrin Arrays. Jamie M. Garcia*, Matthew J. Medina*, Ulises M. Ricoy Ph.D. (Northern New Mexico College. Española, New Mexico 87532) and H. Chris Fry Ph.D. (Argonne National Laboratory, Argonne, IL 60439) Faculty and Student Teams 2011.

Hippocampal Synaptic Plasticity: Behavioral Relevance and Implications for Addiction. Ulises M. Ricoy. Northern New Mexico College, Department of Biology. Presented at National Hispanic Science Network “New Investigators in Drug Abuse Research” Friday August 26, 2011, Miami.

Antimicrobial Properties of Medicinal Plants of the Southwest. Theresa Garcia*, BS in progress¹, Harrison Rommel, PhD², Viviana Balzaretto, MA¹, Cathy Pacheco, BS¹ and Ulises M. Ricoy, PhD³, (1) Biology, Northern New Mexico College, Espanola, NM, (2) Math and Science, Northern New Mexico College, Espanola, NM, (3) Biology, Northern New Mexico College, Española, NM (SACNAS 2014).

The role of Octopamine in cockroach Locomotor behavior. Lorina Gallegos*, Yvonne Vigil*, and Ulises M Ricoy. Department of Biology and Chemistry. Northern New Mexico College. Espanola, NM 87532 (SACNAS 2014).

A Comparison of South American and North American cockroach Locomotor behavior. Yvonne Vigil*, Lorina Gallegos*, and Ulises M Ricoy. Department of Biology and Chemistry. Northern New Mexico College. Espanola, NM 87532 (SACNAS 2014).

Crawdad Invertebrate Neurophysiology Course. Cornell University / Department of Neurobiology and Behavior. Instructors: Ron Hoy, Bruce Johnson, Wes Colgan (AD Instruments). January 2015.

CrawFly Invertebrate Neurophysiology Course. Cornell University / Department of Neurobiology and Behavior. Instructors: Ron Hoy, Bruce Johnson, Wes Colgan (AD Instruments). August 2015.

Early Career Neuroscience Institute. University of Pittsburgh. Department of Neurobiology. Grant writing workshop. February 2015.

A comparison of speed, grooming and seeking behavior in North and South American cockroaches. Bridget D. Ortiz*, Gabriella F. Trujillo*, Juan F. Gomez-Molina², Mauricio Corredor³, and Ulises M, Ricoy¹; ¹Biol., Northern New Mexico Col., Espanola, NM; ²Intl. Group of Neurosci. IGN · Intl. Group of Neurosci., Medellin, Colombia; ³Inst. de Biología, Univ. of Antioquia, Medellin, Colombia. (Submitted to Society for Neuroscience 2016).

Teaching about probability in simple ways: location probabilities, Bayesian methods and exotic probabilities in the context of conditioned place preference with cockroaches. Juan F. Gomez-Molina², Mauricio Corredor³, and Ulises M, Ricoy¹; ¹Biol., Northern New Mexico Col., Espanola, NM; ²Intl. Group of Neurosci. IGN · Intl. Group of Neurosci., Medellin, Colombia; ³Inst. de Biología, Univ. of Antioquia, Medellin, Colombia. (Submitted to Society for Neuroscience 2016).

Analogy between bacteria's quorum sensing with nervous system. Mauricio Corredor³, Juan F. Gomez-Molina², Ulises M, Ricoy³; ³Biol., Northern New Mexico Col., Espanola, NM; ²Intl. Group of Neurosci. IGN · Intl. Group of Neurosci., Medellin, Colombia; ³Inst. de Biología, Univ. of Antioquia, Medellin, Colombia. (Submitted to Society for Neuroscience 2016).

Left-Right preference and its orthogonal processes in insect navigation: teaching algorithms for recursive programs of general neural principles. *Juan. F. Gomez-Molina¹, Ulises. M. Ricoy², Mauricio Corredor³, A. Restrepo-Velazquez⁴, Fabiola Lopera¹; ¹Intl. Group of Neurosci. (IGN), Medellin, Colombia; ²Biology, Chem. and Envrn. Sci., Northern New Mexico Col., Española, NM; ³Biol. (GEBIOMIC and GRC research groups), Univ. of Antioquia, Medellin, Colombia; ⁴Informatica y Sistemas, EAFIT Univ., Medellin, Colombia. (Submitted to Society for Neuroscience 2016).

Non-invasive brain stimulation for addiction: can we boost a hypothetical frontal ephaptic signaling of theta/gamma waves? Juan F. Gomez-Molina¹, Ulises M. Ricoy³, Mauricio Corredor⁴, L. F. Botero-Posada⁵, J. Velez²; ¹Intl. Group of Neurosci. (IGN), Medellin, Colombia; ²USA-member, Intl. Group of Neurosci. (IGN), New York, NY; ³Biology, Chem. and Envrn. Sci., Northern New Mexico Col., Española, NM; ⁴Biol. (GEBIOMICS, GRC research groups), Univ. of Antioquia, Medellin, Colombia; ⁵Med. Sch., CES Univ., Medellin, Colombia. (Submitted to Society for Neuroscience 2016).

Linton-Poodry SACNAS Summer Leadership Institute at the American Academy for the Advancement of Science in Washington D.C. (July 18-22, 2016). Ulises M. Ricoy.

Can diffuse and small molecular electric signaling due to oxidative stress cause neurodegenerative diseases? Computer tools, neuromodulation (TMS, TES) and diagnosis (EEG, new MRIs). U. M. Ricoy, J. F. Gomez-Molina, C. Velez-Pardo, M. Jimenez Del Rio, M. Corredor, G. Perry; Intl. Group of Neurosci. (IGN), Medellin, Colombia; ²Inst. de Investigaciones Médicas, Biol. Inst., Univ. of Antioquia, Medellin, Colombia; Grupo de Neurociencias de Antioquia, University of Antioquia, Medellin, Colombia; Col. of Sci., Univ. of Texas at San Antonio, San Antonio, TX. (Submitted to Society for Neuroscience 2017).

Locomotion in insects (cockroaches and ants): waves and discrete states of neural activity in modules for central pattern generation. J. F. Gomez-Molina, A. L. Gomez-Molina, *U. M. Ricoy; Intl. Group of Neurosci. (IGN), Medellin, Colombia; Biol., Northern New Mexico Col., Espanola, NM. (Submitted to Society for Neuroscience 2017).

Teaching Python and MATLAB for insect behavior: a minimalist neural model with biologically realistic characteristics. U. M. Ricoy, J. F. Gomez-Molina, M. Corredor; Biol., Northern New Mexico Col., Espanola, NM; Intl. Group of Neurosci. (IGN), Medellin, Colombia; Biol. Inst., Univ. of Antioquia, Medellin, Colombia. (Submitted to Society for Neuroscience 2017).

Characterizing vibration frequency sensitivity and neural activity in escaping earthworms. A. Romero, W. Colgan and U. M. Ricoy, Northern New Mexico Col., Espanola, NM 87532 (Society for Neuroscience 2019).

Modeling Drug Reward with Invertebrates. Y. Vigil and U. M. Ricoy, Department of Biology, Northern New Mexico College. 921 North Paseo de Oñate, Española, NM 87532. (Society for Neuroscience 2019).

Invertebrate Model of Drug Seeking with Cockroaches. U. M. Ricoy, Department of Biology, Northern New Mexico College. 921 North Paseo de Oñate, Española, NM 87532. (NHSN 2019).

Biological Models of Chronic Diseases. W. Atchison¹, Alexandra Colon¹, Ulises M. Ricoy², and Perez-Bonilla¹, P. ¹Michigan State University, Department of Neuroscience and ²Northern New Mexico College. 921 North Paseo de Oñate, Española, NM 87532. (SACNAS 2019).

A simple oculomotor psychophysical experiment to teach interpretation of variance, p-values, and non-parametric statistics. J. F. Gomez-Molina, A. L. Gomez-Molina, *U. M. Ricoy; Intl. Group of Neurosci. (IGN), Medellin, Colombia; Biol., Northern New Mexico Col., Espanola, NM. (Society for Neuroscience 2019).

Cockroach Conditioned Place Preference. U. M. Ricoy^{1,2}, ¹Department of Biology, Northern New Mexico College. 921 North Paseo de Oñate, Española, NM 87532. ²Department of Neuroscience, The University of Arizona. Tucson, AZ 85721. (NHSN 2020).

Cockroach Conditioned Place Preference. U. M. Ricoy^{1,2}, ¹Department of Biology, Northern New Mexico College. 921 North Paseo de Oñate, Española, NM 87532. ²Department of Neuroscience, The University of Arizona. Tucson, AZ 85721. (Presented Society for Neuroscience 2020).

Teaching the strange and unsolved mathematical issues of electromagnetism and quantum fields in the brain with mechanics, toy models, history, and a humble philosophical perspective. J. F. Gomez-Molina¹, U. M. Ricoy², A. L. Gomez-Molina³. ¹Intl. Group of Neuroscience, IGN: N (S, E, P), Medellin, Colombia; ²Dept Neurosci., Univ. of Arizona, Tucson, AZ; ³Neuro-Philosophy subgroup NP, Intl. Group of Neuroscience, IGN:N(S,E,P), NP subgroup, Medellin, Colombia. (Presented Society for Neuroscience 2020).

Sex and dose dependent differences in preference for ethanol in preadolescent and adolescent rats. T.M. Nelson, T. A. Gonzalez, A. K. Garcia, D. Q. Pham, D. Franco, E. A. Bates, U. M. Ricoy, S. D. Iniguez, A. R. Zavala. California State University, Long Beach, CA, The University of Arizona, Tucson, AZ, The University of Texas at El Paso. (Submitted to Society for Neuroscience 2021).

A spreadsheet structure for an EEG/neurofeedback-based re-classification of Alzheimer-disease trajectories with a novel philosophical approach. *J. F. Gomez-Molina¹, U. M. Ricoy², Á. L. Gomez-Molina¹; ¹Intl. Group of Neuroscience, IGN: N (S, E, P), Medellin, Colombia; ²Dept. of Neurosci., Univ. of Arizona, Tucson, AZ. (Presented Society for Neuroscience 2021).

AWARDED GRANTS AND CONTRACTS

Federal

DOE-FaST LANL 2012 (P.I. H. Ulises Ricoy) **\$25,000**

NSF-ROA 2013 (Parent Grant: P.I. Stephen Meriney Award Number EAGER IOS 1249546) 2014
\$ 25,000

NSF S-STEM (P.I. Ulises Ricoy) NSF-DUE Award Number 0806469 (*ended on December 31, 2013*)
\$600,000

NSF-STeP (Parent Grant: Highlands University; 2013-2017) **\$ 60,000 / year**

NSF-ROA 2014 (Parent Grant: P.I. Stephen Meriney Award Number EAGER IOS 1249546) Summer
2013 **\$ 25,000**

DOE-VFP LANL 2014 (P.I. Ulises Ricoy) **\$25,000**

DOE; LANL-Chemistry **\$200,000**

UTEP-BUILD \$ 22.6 million → 1 % approximately to Northern **\$ 226,000**NIH BUILD SEED (P.I.
Ulises Ricoy) Collaboration with Dr. David Torres for Computational Biology course 2015. **\$**
20,000

NIH INBRE Pilot Award (P.I. Ulises Ricoy) Sensory Processing in a Model System. 2015. **\$20,000**

NIH BUILD SEED (P.I. Ulises Ricoy) Collaboration with Dr. David Torres for Low-Cost Approaches in
Neuroscience 2017. **\$ 20,000**

NSF INCLUDES (former Co-P.I. Ulises Ricoy) NSF-ICER Award Number 1649296 September 12,
2016. **\$ 299,776**

NIH INBRE Pilot Award (Co-P.I. Ulises Ricoy) Analyzing Gene Sets in Cancer 2016. **\$20,000**

NIH AREA R15 SEED (P.I. Ulises Ricoy) Computational approaches in Neuroscience in rural Northern
New Mexico course 2019. **\$20,000**

NSF EPSCoR IWG (P.I. Ulises Ricoy) Indigenous approaches in Science April 1, 2017, **\$ 7,500**

NSF S-STEM (P.I. Ulises Ricoy) NSF-DUE Award Number 1562008 August 31, 2016 – August 31,
2022. **\$ 999,999** (Co-PI at no cost since joining UA)

Private Foundation

Grass Foundation (P.I. Ulises Ricoy) Neuroscience Outreach in New Mexico 2015, **\$10,000**
Grass Foundation (P.I. Ulises Ricoy) Neuroscience Educator Award 2016, **\$10,000**
Grass Foundation (P.I. Ulises Ricoy) Neuroscience Institutions with Limited Resources 2019 **\$30,000**
Grass Foundation (P.I. Ulises Ricoy) Neuroscience Peer-mentoring 2020 **\$ 30,000**
Grass Foundation (P.I. Ulises Ricoy) Director of Outreach 2020 **\$ 10,000**
Grass Foundation (P.I. Ulises Ricoy) Low-Cost Approaches in Neuroscience; (a research initiative in peer mentor outreach in education: determining the maximization of retention). 2021 **\$36,000**
Dana Foundation (P.I. Ulises Ricoy) NEURON: Neuroscience Education in Undergraduate Research, Outreach, and Networking. **\$1,500**
Grass Foundation (P.I. Ulises Ricoy) Director of Outreach 2021 **\$20,000**
Grass Foundation (P.I. Ulises Ricoy) Neuroscience Ricoy Vision 2022 **\$ 200,000**

University of Arizona

CURE Institute (P.I. Martha Bhattacharya and Co-P.I. Ulises Ricoy) 2021-2022 **\$7500**
Undergraduate Research Expansion Faculty Challenge Grant 2021-2022 **\$2500**

SUBMITTED GRANTS/CONTRACTS (not awarded)

Federal

NSF MRI (P.I. Ulises Ricoy) January 13, 2017, **\$ 650,000** (ranked highly, not recommended)
NSF REU (Co P.I. Ulises Ricoy with UMass Amherst) August 27, 2018, **\$ 600,000** (ranked highly, not recommended)

University of Arizona

Provost Investment Fund 2019 (P.I. Ulises Ricoy) **\$200,000** STEM Mobile – Southwest mobile outreach vehicle (ranked highly, not recommended)
Provost Investment Fund 2022 (P.I. Ulises Ricoy) **\$200,000** NEURON: Neuroscience Education in Undergraduate Research, Outreach, and Networking (ranked highly, not recommended)