

James R. Munoz, Ph.D.
College of Psychology
Department of Psychology and Neuroscience
Nova Southeastern University
3300 South University Drive
Fort Lauderdale, FL 33314-7796
Phone: 954-262-8070
Email: james.munoz@nova.edu

Education

Anatomy Masters Surgical Anatomy Cadaver Workshop, Larkin Health Sciences Institute, 2014
Postdoctoral Fellow, Neuroscience, University of Pennsylvania, 2006-2010
Ph.D., Neuroscience, Tulane University, 2006
B.A., Psychology, University of Maryland Baltimore County, 1997

Faculty Positions Held

2021-current	Associate Professor and Neuroscience Program Director College of Psychology, Department of Psychology and Neuroscience, Nova Southeastern University, Ft. Lauderdale, FL.
2016 – 2021	Assistant Professor College of Psychology, Department of Psychology and Neuroscience, Nova Southeastern University, Ft. Lauderdale, FL.
2010 – 2016	Assistant Professor Halmos College of Natural Sciences and Oceanography, Department of Biology, Nova Southeastern University, Ft. Lauderdale, FL.

Research Experience

08/10-present	Associate Professor: Nova Southeastern University. Research: (1) Examining altered levels of TPP-1 expression in human neural progenitor cells and (2) Examining the effects of psychedelic substituted phenethylamines on human neural progenitor cells.
05/08-07/10	Postdoctoral Fellow: Department of Neuroscience. University of Pennsylvania. Advisor: Dr. Matthew B. Dalva. Research: Investigated the role of the tyrosine kinase receptor, EphB2, on proliferation and migration in endogenous neural progenitor cells.
04/06-04/08	Postdoctoral Fellow: Department of Neuroscience. University of Pennsylvania. Advisor: Dr. Philip G. Haydon. Research: Investigated the role of IP ₃ signaling on the proliferation and differentiation of neural progenitor cells <i>in vitro</i> and <i>in vivo</i> .
08/00-04/06	Graduate Student: Neuroscience Program, Center for Gene Therapy. Tulane University. Advisor: Dr. Darwin J. Prockop.

Research: (1) Examined neurotrophic factor secretion from mesenchymal stem cells *in vitro* and following implantation into the hippocampus of mice, (2) Examined the interaction between implanted mesenchymal stem cells and endogenous neural stem cells in the hippocampus of mice, and (3) Isolated and characterized a novel p75NTR expressing stem cell *in vitro* and following implantation into the hippocampus of mice. (4) Examined erythropoietin expression during hypoxia in hippocampal slices.

08/98-06/00 Graduate Student: Department of Psychology.
Florida Atlantic University. Advisor: Dr. David L. Wolgin.
Research: Examined the role of instrumental learning in tolerance to cathinone hypophagia.

03/97-08/98 Research Assistant: Gerontology Research Center, Lab of Cellular and Molecular Biology, Molecular Physiology and Genetics Section.
N.I.A., N.I.H. Advisor: Dr. Donald K. Ingram.
Research: (1) Examined dopamine-induced DNA damage and apoptosis on striatal neurons, (2) Examined the involvement of dopamine D2 receptor in complex maze learning and acetylcholine release in ventral hippocampus, and (3) Examined age related sensitivity to increased brain and plasma TNF-alpha levels.

Teaching Experience

08/10-present Associate Professor: Nova Southeastern University.
Introduction to Neuroscience/Lab (NEUR 2500)
Neuroanatomy (NEUR 2600)
Methods in Neuroscience/Lab (NEUR 2700)
Developmental Neuroscience (NEUR 3100)
Neurobiology of Disease (NEUR 4100)
Senior Seminar in Neuroscience (NEUR 4880)
Behavioral Neuroscience (NEUR 5100)
Neurobiology (BIOL 4200)
Systems Neuroscience (BMHS 5250)
Anatomy and Physiology I/Lab (BIOL 3320)
Anatomy and Physiology II/Lab (BIOL 3330)
Cell and Molecular Biology (BIOL 4340)
Directed Independent Study (BIOL 4990 and NEUR 4990)
Honors Reading Seminar: Kurt Vonnegut Jr. (HONR 1510L)

01/09-04/09 Visiting Scholar: Department of Biology, Lincoln University.
Molecular Basis of Human Disease (Bio 495). Course Description: The course was designed to (1) highlight the impact of basic science on medicine, and (2) introduce students to several biomedical disciplines as they relate to the origin, pathology, and treatment of human disease.

- 09/08-05/09 Visiting Scholar: Department of Biology, Rutgers-Camden, The State University of New Jersey.
 (1) General Biology (BIO 101). Course Description: The course was designed to introduce students to biological topics in: The cell, animal diversity, and animal form and function.
 (2) Molecular Basis of Human Disease (BIO 496/596). Course Description: The course was designed to (1) highlight the impact of basic science on medicine, and (2) introduce students to several biomedical disciplines as they relate to the origin, pathology, and treatment of human disease.
- 01/08-04/08 Visiting Assistant Professor: Department of Biology, Haverford College. Laboratory in Biochemistry and Molecular Biology (BIOLH300/CHEMH300). Course Description: The course introduced students to the application of modern experimental approaches in the study of biological questions. Detailed instruction was accomplished through the use of various techniques to address student-derived hypotheses based on the co-culturing of astrocytes with neural progenitor cells, such as cell culture, RNA and protein isolation, RT-PCR, Western blot, cell labeling, immunofluorescence, and ELISA.
- 02/07-05/08 Scienteer: iPRAXIS (NSF funded organization to foster and develop interest in science. Developed curricula, trained students and scienteers, and mentored middle and high school students).
- 09/07-12/07 Course Instructor: Department of Neuroscience. University of Pennsylvania. Neuroscience in Practice (INSC 572). Imaging section. Detailed instruction in confocal microscopy was accomplished through the use of specimens, microscopy, and audio/visual aides.
- 01/01-05/01 Graduate Student: Neuroscience Program. Advanced Neuroanatomy (ANAT 719). Course Description: The course was designed to teach students anatomical structures as applied to function and the deficits resulting from neurological disorders. Detailed instruction in human and rodent neuroanatomy was accomplished through the use of specimens, microscopy, and audio/visual aids.
- 08/98-12/98 Teaching Assistant: Department of Psychology. Research Methods in Psychology (PSY 3213). Course Description: The course was designed to teach students the basic principles of scientific psychology and how to write research papers according to the current guidelines of the American Psychological Association.

Funded Grants and Fellowships

Department of Education Subcontract \$40,000, P031c160143 (P.I. Belmont: NSU P.I. Tartar) STEM EngInE (Educate, Intern and Employ) Research mentor.	05/2017-05/2020
N.S.U.'s President's Faculty and Research Development Grant	07/01/17-06/30/18

\$10,000.

PFRDG: The goal of this proposal is to examine the effects of angiotensin II and dopamine 4 receptor interaction in neurons from ADHD rats.

N.S.U.'s President's Faculty and Research Development Grant 07/01/17-06/30/18
\$10,000.

PFRDG: The goal of this proposal is to examine how redox-based epigenetic changes contribute to defining neuronal stem cell fate

President's ExEL Fund 07/01/17-06/30/18
\$2,547.00 (Co-PI)
Genetic Investigations for Undergraduate Studies

Department of Defense Equipment Grant 2014-2015
\$489,902., W911NF-14-1-0070 (Contributor, PI: Dr. Robert Smith)
The goal this proposal was to acquire equipment to be used to advance research, teaching, and outreach.

N.S.U.'s President's Faculty and Research Development Grant 07/01/14-06/30/15
\$10,000.
PFRDG: The goal of this proposal is to examine the effects of selective agonism of angiotensin II AT1 and AT2 receptors on neuronal differentiation and proliferation in human derived neural stem cells.

Farquhar College of Arts and Sciences Dean's Mini-Grant 10/10/13-10/09/14
\$1,500.
Dean's Mini-Grant: The goal of this proposal is to examine the effects of learning and memory and neurogenesis in the common octopus (*Octopus Vulgaris*). Several strategies are being used to examine the proliferation, migration, integration, and cell death of neural stem/progenitor cells including EdU incorporation assays, immunofluorescence, TUNEL assays, Western blotting, and microscopy to examine concomitant changes in neurogenesis and learning and memory. Preliminary data demonstrate the first evidence of neurogenesis in the octopus.

N.S.U.'s President's Faculty and Research Development Grant 07/01/13-06/30/14
\$10,000.
PFRDG: The goal of this proposal was to examine factors that regulate neurogenesis in the adult Mayan Cichlid brain. Several strategies were used to examine the proliferation, migration, integration and cell death of neural stem/progenitor cells including EdU incorporation assays, immunofluorescence, TUNEL assays, Western blotting, and microscopy to identify the vascular niche and migratory routes of neural stem/progenitor cells. Preliminary data demonstrate neural progenitor cells migrate along blood vessels prior to undergoing maturation.

Beta Beta Beta Research Foundation Award 10/20/12-10/20/13
\$750.
Beta Beta Beta Biological Society Research Foundation Award: The goal of this proposal was to establish a model of neurogenesis using the adult Mayan Cichlid fish brain. Several strategies were used to examine the birth, migration, maturation, and cell death of new brain cells

including EdU incorporation assays, immunofluorescence, and microscopy. Results demonstrated neurogenesis occurs in multiple brain regions. Ongoing studies are quantifying the cell-cycle kinetics and rates of migration, integration, cell-type specific maturation, and cell death across the various neurogenic regions.

Farquhar College of Arts and Sciences Dean's Mini-Grant
\$1,500.

10/10/12-10/09/13

Dean's Mini-Grant: The goal of this proposal was to examine neurogenesis in the adult Mayan Cichlid brain. Several strategies were used to examine the proliferation, migration, integration and cell death of neural stem/progenitor cells including EdU incorporation assays, immunofluorescence, TUNEL assays, Western blotting, and microscopy to identify the vascular niche and migratory routes of neural stem/progenitor cells. Preliminary data demonstrate multiple neurogenic nuclei in the adult brain.

Alavi-Dabiri Postdoctoral Fellowship Award
\$6,500.

07/01/09-06/30/10

Abass Alavi Endowed Postdoctoral Fellowship: The goal of this proposal was to test the hypothesis that disrupting EphB2/ephrin-B signaling alters migration of adult neural progenitor cells. Several strategies were used to examine the role of EphB2/ephrin-B signaling on the migration of neural progenitor cells including shRNA-mediated knockdown of EphB2, EphB2 knockout mice, Cre/lox-mediated knockout of ephrin-B1, and shRNA-mediated knockdown of ephrin-B2. Immunofluorescence, Western blotting, and BrdU incorporation assays were used to assess the effects of disrupted EphB2/ephrin-B expression *in vitro* and *in vivo*. Preliminary data demonstrate a role for EphB/ephrin-B interactions in the directed migration of progenitors and suggest that cell-to-cell interactions between progenitors and ensheathing astrocytes are critical for proper migration.

T-32 NIH/NINDS Postdoctoral Award

05/01/07-04/31/10

Training Program in Neurodevelopmental Disabilities: The goal of this proposal was to test the hypothesis that IP₃, a critical second messenger, regulates neural progenitor cell (NPC) proliferation, differentiation, and survival *in vitro* and *in vivo*, as well as following transplantation into the nervous system. Several strategies were used to examine IP₃-mediated regulation of NPC fate including membrane-permeant IP₃ analogs, pharmacological inhibition of the IP₃ receptor, and overexpression of IP₃ 5-phosphatase. Immunofluorescence, calcium imaging, and 2-photon *in vivo* imaging were used to assess functional changes *in vitro* and integration *in vivo* following transplantation into the central nervous system. Results demonstrated that (1) attenuation of IP₃ signaling inhibited cell proliferation without inducing cell death, (2) overexpression of IP₃ 5-phosphatase promoted differentiation of NPCs into astrocytes *in vitro* and *in vivo*, (3) NPCs functionally engrafted and expressed neural markers following implantation into the central nervous system of mice.

HMI Postdoctoral Teaching Fellowship

01/20/08-03/02/08

Haverford College Teaching Fellowship Award. The goal of this fellowship was to develop and implement a laboratory course in biochemistry and molecular biology using modern experimental approaches in the study of interesting biological questions. To advance the clinical utility of stem cells and our understanding of how immature transplanted cells would develop in the mature brain, I developed a module that focused on examining the ability of mouse post-natal cortical astrocytes to influence the development of cortical neural progenitor cells.

Louisiana Board of Regents Fellowship
Regents predoctoral scholarship.

08/00-06/04

Unfunded Grant Applications

- 10/24: NIH-NIDA, R21, NIDA: Determining the effect of synthetic psychedelic phenethylamine drugs on the cytoskeleton, neuroplasticity, and neurogenesis.
10/23: NIH-NIDA, R21, NOSI: Synthetic Psychoactive Drugs and Strategic Approaches to Counteract Their Deleterious Effects.
10/21: NIH-NINDS, Competition#: PA-20-272, Brain Pathophysiology and COVID-19 (Co-I)
6/21: National Science Foundation Racial Equity Grant Program (P.I.: Dr. Meline Kevorkian)
8/21: National Science Foundation IUSE: HSI Program (P.I.: Dr. Meline Kevorkian)

Awards and Honors

Travel Award, American Junior Academy of Science and AAAS meeting, 2015.
Beta Beta Beta Biological Society Research Foundation Award, 2012.
Interviewed by *Science* magazine for being the first postdoctoral fellow to complete the N.I.H. IRACDA program at the University of Pennsylvania, 2012
Recognized as a Faculty Mentor at the Leadership Roundtable Scholars Reception, N.S.U., 2011.
Alavi-Dabiri Postdoctoral Fellowship Award, 2009
Selected for Building Future Faculty Program at North Carolina State University, 2009.
Penn-PORT Teaching and Research Fellowship, Univ. of Pennsylvania Institutional Research and Academic Career Development Award, 2008.
HHMI Postdoctoral Teaching Fellowship, Haverford College, 2008.
Training Program in Neurodevelopmental Disabilities Award, 2007.
Feature Article for Neuroscience, PNAS, 102(50), 18171-6.
Travel Award, International Society for Cellular Therapy, 2005.
Gene Therapy Research Award, 2005.
Louisiana Board of Regents Fellowship, 2000-2004.
Travel Award, American Society for Neural Transplantation and Repair, 2003.
Honorary Membership, American Society for Neural Transplantation and Repair, 2003.
Predoctoral N.I.H. Intramural Research Award, 1997-98.

Peer Reviewer

Biochimie
Frontiers in Neuroscience
Neurochemistry International
American STEM Institute, Technical Review Board Member 2018-current

Memberships

International Behavioral Neuroscience Society 2020-current
Human Anatomy and Physiology Society 2017-2021
Psi Chi National Honor Society 1998-current
Society for Neuroscience 1999-current

Beta Beta Beta Biological Honors Society	2012-current
American Society for Neural Transplantation and Repair	2003-2010
Society for Developmental Biology	2008-2010

Service

Committee Service:

College of Psychology Promotion Committee	2023-current
Chair, Neuroscience Faculty Search Committee x 2	2023-2024
Neuroscience Faculty Search Committee	2022-2023
Chair, Neuroscience Faculty Search Committee	2021-2022
Student Support Committee	2021-2022
Thesis committee member, Mickey Marang	2021-2022
Neuroscience Faculty Search Committee	2020-2021
Graduate Curriculum Committee	2019-current
Research Misconduct Committee	2021-2022
Continuing Contract Committee	2020-2021
Thesis advisor, Alana Williams	2019-2021
Thesis committee member, Dominick Cabrera	2019
Thesis committee member, Ritishka Kapoor	2018
Psychology Research Space Committee	2018
Behavioral Neuroscience Major Internal Review Committee	2018
Department of Psychology and Neuroscience Graduate Student Committee	2017-current
Behavioral Neuroscience Faculty Search Committee	2017
Behavioral Neuroscience Training Program Committee	2015-current
Human Anatomy and Physiology Society Southern Regional Conference Committee, 2016	2016
Thesis committee member, Sarah Marie Lyle	2016
TEDxNSU Organizing Committee	2012-2019
Biology Faculty Search Committee	2012-13, 2015
Biology Curriculum Committee	2010-2016
Brain Awareness Committee	2010-current

Society/Club Advisor:

Mindful Club Advisor	2021-2022
National Alzheimer's Buddies Advisor	2021-2024
Neuroscience Club Faculty Advisor	2018-current
Pre-Physician Assistant Faculty Advisor	2013-current
Delta Epsilon Mu, Inc. – Alpha Xi Chapter	2017-current
Beta Beta Beta Biological Society Research Foundation Faculty Advisor	2012-2015

Internal Development:

Created the Neuroscience Escape Room	2024
Created the monthly Neuroscience Lecture Series	2023-current
Developed the Neuroscience – Pluripotent Stem Cells Case Competition for the Office of Pre-Health & Pre-Professional Advising	2023-current
Max Planck Florida Institute for Neuroscience Florida Fellows Liaison	2015-current

Outreach:

ExEL Immersion: Brain Dissection Workshop (9/27 & 10/11)	2024
Aim High II Summer Camp Brain and Eye Dissection	2024
Aim High I Summer Camp Brain and Eye Dissection	2024
Brain Awareness Outreach, Horizon Learning Home School Cooperative	2024
Outreach with St. Andrew's School	2024
pGLO Bacterial Transformation Workshop, USchool	2024
NSU Brain Bee: Judge and Brain Dissection Workshop	2024
Interview a Scientist. Interviewed by Rutgers University Students	2023
Brain Dissection Workshop at University School High School	2023
NSU Brain Bee: Judge and Brain Dissection Workshop	2022
PA Diversity Recruitment Fair, represented NSU as the Pre-PA advisor	2022
Society for Sports Neuroscience Poster Judge	2019-current
ExEL Early Immersion Brain: various neuroscience workshops	2017-current
NSU Aim-High Summer Camp Instructor	2016-current
Neuroscience demonstrations at Miami Dade College	2015
I Love the Brain: Presentation for elementary school students	2013
College of Psychology Behavioral Neuroscience Camp	2013, 2016-current
NSU Undergraduate Student Symposium Judge	2018-current
Science Alive Volunteer, various workshops for elementary and middle school students	2011-2016

Teaching

Innovation:

Developed the Neuroscience Escape Room for the College of Psychology and Office of Pre-Health & Pre-Professional Advising as a retention event. 2024

Developed the Neuroscience – Pluripotent Stem Cells Case Competition for the Office of Pre-Health & Pre-Professional Advising, Razor's Edge Research, & the Center for Academic & Professional Success 2024

Created the monthly Neuroscience Lecture Series. Organized monthly student speakers to present on their summer internships. 2024

Supervision:

NSU Student Success Team Faculty Mentor for At-Risk Students 2024-current

NSU Undergraduate Student Symposium Research Advisor 2012-current

Honors-in-Major: Marla Fortoul, Examining cell cycle kinetics and cell death in cultured human neural progenitor cells 2020

NSU Research Students (Undergraduate):

2024: Nitisha Gajavalli, Chase Gonzalez, Julia Langman, Peter Stringer, Grace Wong, Amelia Zannoni

2023: Roberto Fileni, Nitisha Gajavalli, Chase Gonzalez, Julia Langman, Peter Stinger, Grace Wong, Amelia Zannoni,
 2022: Nitisha Gajavalli, Julia Langman
 2021: Aisha Abdool, Karla Espinoza
 2020: Aisha Abdool, Haydn Claro, Makenzie Conley, Leonardo Cragnotti, Miranda Fertitta, Marla Fortoul, Samantha Malagon, Michael Olcha, Erika Cabrera Ranaldi, Johleen Seedansingh, Lauren Swaim
 2019: Makenzie Conley, Marla Fortoul, Bailey Hummel, Victoria Lamport, Michael Olcha, Melissa Perez
 2018: Makenzie Conley and Kendall Jordan
 2017: Kendall Jordan
 2016: Nadia Siddiqi
 2015: Pujia Patel, Sujay Kamisetty
 2014: Zara Khan and Crystal LaBozzetta
 2013: Jelileh Whitmore, Kelsey Bragg
 2012: William Kotkin, Catalina Breton, Kelsey Bragg, Jonathan Romanes
 2011: Ahmed Ali, William Kotkin, Catalina Breton
 2010: Ahmed Ali

NSU Research Students (Graduate):

2020-2021: Alana Williams

Miami Dade College Research Students:

2024: Indira Sanchez
 2021: Maria Alonso, Brayan Betancourt, Joanna Rivas
 2020: Diane Marie Brache Smith, Samantha Malagon
 2019: Samantha Malagon, Daniel Silva
 2017: Yerandi Alonso

Faculty Mentor:

Mohammed Sabbir, Ph.D.	2023-current
William Kochen, Ph.D.	2020-2022

Continuing Education:

Neuroplasticity in the Classroom, Laboratory, and Life, 1 h, O.U. Press	2024
How the Microbiome Influences Neural Degeneration and Injury, 1 h, The Scientist	2024
Winning Westerns: Tips and Tricks for Protein Electrophoresis and Western Blotting, 1h, The Scientist	2024
How do you feel? Molecules that Sense Touch and Other Pressures, 1 h, Scripps	2024
Update and Review of Current Psychotropic Medications, 3 hours	2024
Using Culture Knowledge to Increase the Relevance of Curriculum and Instruction Session 2: Assessing Student Identities and Needs – Data Analysis and Action Planning, 1 h	2024
Using Culture Knowledge to Increase the Relevance of Curriculum and Instruction Session 1: Assessing Student Identities and Needs – Identify Assessment Tools, 1 h	2024
NSF grant funded mentor training: Coaching Powered Relationships to Support Academically Challenged Diverse Undergraduate STEM majors,	

8 hours	2023
Expanding the Frontiers of Gene Editing: The Role of Genotypic Confirmation, 3 hours	2023
Update and Review of Current Psychotropic Medications, 3 hours	2023
Gene Editing in Stem Cells – Methods and Considerations, CRISPR Gene Editing Series, Thermofisher Scientific, 3 hours	2023
Society for Neurosports, 12 hours	2023
Society for Neurosports, 12 hours	2022
HHMI Biointeractive: Cell Cycle, Cancer, and Guardian Genes, 1.5 hours	2022
Developmental Disabilities workshop, Instructor: Dr. Tyler Reimschisel	2016
Narcolepsy workshop, Instructors: Dr. Julie Flygare and Jose Ray	2015

Skills and Techniques

Laboratory: Isolation and purification of mesenchymal stem cells, neural stem cells, astrocytes, and neurons, cell culture, calcium imaging, siRNA/shRNA transfection/transduction, EdU and BrdU incorporation assays, stereotaxic surgery, cannulation techniques (intracranial, intraoral), perfusions, cryostat and microtome sectioning, histology, confocal microscopy, 2-photon microscopy, RNA/DNA/Protein isolation, PCR, RT-PCR, real-time RT-PCR, Western blotting, ELISAs, TUNEL, and CRISPR assays.

Computer: Microsoft Word, Excel, Powerpoint, Adobe Photoshop, ImageJ and MetaMorph.

Languages: English and moderate Spanish (spoken fair, comprehension excellent).

Presentations

12/22	“Examining enzyme replacement therapy for CLN2 disease using human neural progenitor cells”, NSU’s Scientific Literature Society Lecture
11/20	“Examining enzyme replacement therapy using a human neural progenitor cell model of CLN2 disease,” Department of Psychology and Psi Chi Society, Florida Atlantic University, Boca Raton, Florida.
11/20	“Examining enzyme replacement therapy using a human neural progenitor cell model of CLN2 disease.” Student Research Society, NSU Florida.
6/20	Webinar: Psychology and Counseling Careers. NSU College of Psychology, Webinar: Psychology and Counseling Careers – YouTube.
5/19	Panelist for Diversity in Science, Hosted by the Children’s Hospital of Philadelphia and the University of Pennsylvania CHOP Postdocs for Diversity in Science and Penn PORT program, Philadelphia, Pennsylvania.
5/19	“Teaching neuroanatomy through clinical cases.” Human Anatomy and Physiology National Conference, Portland, Oregon.
6/17	“The history and promise of neuroscience.” Human Anatomy and Physiology National Conference, Salt Lake City, Utah.

- 10/16 Keynote speaker: "The history and promise of neuroscience." Human Anatomy and Physiology Society Regional Meeting.
- 2/15 "Current topics in neural stem cell research." Miami Dade College STEMversations Series.
- 2/14 "The effects of selective agonism of angiotensin II AT1 and AT2 receptors on neuronal differentiation and proliferation in human derived neural stem cells." Florida International University.
- 10/13 "Neurogenesis in the adult brain of the Mayan Cichlid and Octopus Vulgaris," Chemistry Club Science Week, Nova Southeastern University, Ft. Lauderdale, FL.
- 6/12 Speaker/Panelist, 2012 National Institutional Research and Academic Career Development Award Conference, University of Pennsylvania.
- 5/12 "Neurogenesis in adult fish brain as an early indicator of pollution-induced neurotoxicity," Enterprise Development Corporation BioTech: 11th Annual Life Science Conference.
- 4/12 "Establishing a model of neurogenesis in the Mayan Cichlid," 11th Annual Undergraduate Student Symposium, Nova Southeastern University, Ft. Lauderdale, FL.
- 3/12 "Brains on my mind," TEDxNSU: The Inspiring Brain, Nova Southeastern University, Ft. Lauderdale, FL. <http://www.youtube.com/watch?v=8FXWuvZ49p4>
- 10/11 "Creating a Model of Neurogenesis in Fish as an Early Indicator of Neurotoxicity," Chemistry Club, Nova Southeastern University, Ft. Lauderdale, FL.
- 10/11 "Understanding the Admissions Process for Post-Baccalaureate Programs, Medical School, and Graduate School," MAPS Club, Nova Southeastern University, Ft. Lauderdale, FL.
- 9/11 "Understanding the Admissions Process for Post-Baccalaureate Programs, Medical School, and Graduate School," Neuroscience Club, Nova Southeastern University, Ft. Lauderdale, FL.
- 11/10 "The Effects of Sleep Deprivation on Learning and Memory," Neuroscience Club, Nova Southeastern University, Ft. Lauderdale, FL.
- 03/10 "Harnessing the Power of Stem Cells to Treat Diseases of the Brain," Brain Awareness Week Lecture Series, Nova Southeastern University, Ft. Lauderdale, FL.
- 07/09 "Disruption of EphB2/ephrin-B signaling alters migration of neural progenitor cells." Department of Biology, Haverford College, Haverford, PA.

- 04/08 "IP₃ signaling regulates the proliferation and differentiation of cortical neural progenitor cells." Department of Biology, Rutgers-Camden, Camden, NJ.
- 04/08 "Cortical astrocytes regulate the differentiation of cortical neural progenitor cells." Department of Biology, Rutgers-Camden, Camden, NJ.
- 02/08 "IP₃ signaling regulates the proliferation and differentiation of cortical neural progenitor cells." Department of Biology, Haverford College, Haverford, PA.

Poster Presentations

Indira J. Sanchez*, Chase A. Gonzales*, Amelia Zannoni*, Peter Stringer*, Grace K. Wong*, Travis J.A. Craddock, Robert Smith, James R. Munoz (2024). Synthetic psychedelic phenethylamine drugs alter microtubule formation and neurogenesis in human neural progenitor cells, STEM Interdisciplinary Undergraduate Research Symposium, November 2, 2024 (1st Place Best Behavioral Sciences Research Poster).
(* denotes undergraduate student)

Nitisha S. Gajavalli*, Julia Langman*, Amelia E. Zannoni*, Grace K. Wong*, Chase A. Gonzales*, Roberto G. Fileni*, Peter Stringer*, Alana M. Williams, James R. Munoz (2024). Enzyme replacement therapy with TPP-1 induces cell death in a human neural progenitor cell model of CLN2 disease, Nova Southeastern University Undergraduate Research Symposium, April 2024
(* denotes undergraduate student)

Amelia E. Zannoni*, Chase A. Gonzales*, Peter Stringer*, Roberto G. Fileni*, Nitisha S. Gajavalli*, Julia Langman*, Grace K. Wong*, Robert R. Smith, Travis J.A. Craddock, James R. Munoz (2024). Synthetic Psychedelic Phenethylamine Drugs Alter Microtubule Formation and Neurogenesis in Human Neural Progenitor Cells, Nova Southeastern University Undergraduate Research Symposium, April 2024
(* denotes undergraduate student)

Julia Langman*, Nitisha S. Gajavalli*, Alana Williams, James R. Munoz (2023). Enzyme replacement therapy with TPP-1 induces cell death in a human neural progenitor cell model of CLN2 disease, Max Planck Florida Institute for Neuroscience Sunposium, April 2023
(* denotes undergraduate student)

Alana M. Williams, Aisha Y. Abdool*, Diane-Marie Brache-Smith* Johleen Seedansingh*, James R. Munoz (2020). Examining enzyme replacement therapy for CLN2 disease using human neural progenitor cells, International Behavioral Neuroscience Society, Online Poster Session due to COVID-19, August 2020
(* denotes undergraduate student)

Diane-Marie Brache-Smith*, Alana M. Williams, Aisha Y. Abdool*, James R. Munoz (2020). Examining enzyme replacement therapy using a human neural progenitor cell model of CLN2 Disease, FIU McNair Research Conference, Miami, Florida, November 2020
(* denotes undergraduate student)

Diane-Marie Brache-Smith*, Alana M. Williams, Aisha Y. Abdool*, James R. Munoz (2020). Examining enzyme replacement therapy using a human neural progenitor cell model of CLN2 Disease, School of Science Research Symposium, Miami, Florida, October 2020
(* denotes undergraduate student)

Malagon, S*., Speth, R.C., Munoz, J.R. (2019). Selective stimulation of angiotensin II receptor subtype AT1 and AT2 alters neural progenitor cell morphology and reduces neuroblast differentiation, 8th Annual School of Science STEM Research Symposium, Miami, Florida, September 2019

(* denotes undergraduate student)

Jessica Garcia*, Weston He*, James R. Munoz. (2017). Examining the role of blood vessels in neural progenitor cell migration, Association of Southeastern Biologists Conference, Montgomery, Alabama.

(* denotes undergraduate student)

Jessica Garcia*, Weston He*, James R. Munoz. (2016). Examining the role of blood vessels in neural progenitor cell migration, STEM Research Symposium, MDC School of Science, Miami, FL.

(* denotes undergraduate student)

Leena Couling, Nadia Siddiqi*, James R. Munoz, and Robert C. Speth. (2016). Alterations in doublecortin expression in human neural stem cells in response to angiotensinergic stimulation in proliferation and differentiation conditions, Experimental Biology, April 2-6, San Diego.

(* denotes undergraduate student)

Nadia Siddiqi*, Leena Couling, James R. Munoz, and Robert C. Speth. (2016). Increased proliferation of human neural stem cells following selective agonism of angiotensin II AT1 receptor. Life Sciences South Florida STEM Undergraduate Research Symposium.

(* denotes undergraduate student)

Leena Couling, Nadia Siddiqi*, James R. Munoz, and Robert C. Speth. (2016). Alterations in doublecortin expression in human neural stem cells in response to angiotensinergic stimulation in proliferation and differentiation conditions, HPD Research Day.

(* denotes undergraduate student)

Brigitte Blanco*, Puja Patel*, Sujay Kamisetty*, Nadia Siddiqi*, Malav Trivedi, James R. Munoz, and Robert C. Speth. (2015). Stimulation of AT2 angiotensin II receptor subtype increases neural stem cell proliferation, Society for Neuroscience, October 17-21, Chicago.

(* denotes undergraduate student)

Brigitte Blanco*, Puja Patel*, Sujay Kamisetty*, Nadia Siddiqi*, Malav Trivedi, James R. Munoz, and Robert C. Speth. (2015). Neural stem cell proliferation, differentiation, and survival in response to AT1 and AT2 angiotensin II receptor-specific agonism, American Junior Academy of Science and AAAS meeting.

(* denotes undergraduate student)

Zara Khan* and James R. Munoz. (2015). Examining migration of neural stem cells in the adult Mayan Cichlid brain, FIU McNair Scholars Research Conference.

(* denotes undergraduate student)

Brigitte Blanco*, Puja Patel*, Sujay Kamisetty*, Nadia Siddiqi*, Malav Trivedi, James R. Munoz, and Robert C. Speth. (2015). Neural stem cell proliferation, differentiation, and survival in response to AT1 and AT2 angiotensin II receptor-specific agonism, SYNAPSE Meeting of the Palm Beach Chapter of Society for Neuroscience, Max Plank Institute.

(* denotes undergraduate student)

Zara Khan*, Ahmed Ali*, Jonathan P. Romanes*, Sameed Ashfaq*, and James R. Munoz. (2014). Examining migration of neural stem cells in the adult Mayan Cichlid brain, SYNAPSE Meeting of the Palm Beach Chapter of Society for Neuroscience, Florida Atlantic University.

(* denotes undergraduate student)

Zara Khan*, Ahmed Ali*, Jonathan P. Romanes*, Sameed Ashfaq*, and James R. Munoz. (2014). Examining migration of neural stem cells in the adult Mayan Cichlid brain, Life Sciences South Florida STEM Undergraduate Research Symposium, Miami Dade College.

(* denotes undergraduate student)

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Research References

Thesis Advisor, Deceased. Darwin J. Prockop, MD., Ph.D., Former Director, Center for Gene Therapy, Tulane University Health Sciences Center, Director, Institute of Regenerative Medicine, Texas A&M Health Sciences Center College of Medicine, 5701 Airport Road, Module C, Temple, TX 76502

Phone: 254-771-6810

E-mail: prockop@medicine.tamhsc.edu

Bruce A. Bunnell, Ph.D., Professor, Former Director, Center for Gene Therapy, Tulane University Health Sciences Center, Current Charman and Professor, Microbiology, Immunology, & Genetics, School of Biomedical Sciences, The University of North Texas Health Science Center at Fort Worth

Phone: 985-966-2696

E-mail: Bruce.Bunnell@unthsc.edu

Julie Semon, Ph.D., Associate Professor, Department of Biological Sciences, Missouri University of Science and Technology, 143 Schrenk Hall, 400 W. 11th St., Rolla, MO 65409-1120.

Phone: 573-341-6606

E-mail: semonja@mst.edu

Kevin W. Williams, Ph.D., Associate Professor, Center for Hypothalamic Research, Department of Internal Medicine, The University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, MC 9077, Dallas, TX, 75390-9077

Phone: 214-648-3771

E-mail: kevin.williams@utsouthwestern.edu

Matthew B. Dalva, Ph.D., Former Assistant Professor, Department of Neuroscience, University of Pennsylvania, Current Presidential Chair, Director of the Tulane Brain Institute, and Professor of Cell and Molecular Biology, Tulane University, 202 Flower Hall, 6823 St. Charles Avenue, New Orleans, LA 70118

Phone: 215-503-0997

E-mail: matthew.dalva@jefferson.edu

Teaching References

Emily Schmitt, Ph.D., Professor and Chair, Department of Biology, Nova Southeastern University, 3301 College Avenue, Ft. Lauderdale, FL 33314

Phone: 954-262-8349

E-mail: eschmitt@nova.edu

Andrea R. Morris, Ph.D., Former Associate Professor, Department of Biology, Haverford College, 370 Lancaster Avenue, Haverford, PA 19041

Currently the Assistant Dean Graduate and Post-Graduate Studies, The Rockefeller University, 1230 York Avenue, New York, NY 10065

Phone: 212-327-8903

E-mail: andrea.morris@rockefeller.edu

Yvonne Paterson, Ph.D., Emeritus Professor, Department of Microbiology, University of Pennsylvania, 323A Johnson Pavilion, 3610 Hamilton Walk, Philadelphia, PA 19104

Phone: 215-898-3461

E-mail: yvonne@mail.med.upenn.edu

Jaime L. Tartar, Ph.D., Chair and Professor, Department of Psychology and Neuroscience, Nova Southeastern University, 3301 College Ave, Fort Lauderdale, FL 33314

Phone: 954-262-8192

E-mail: tartar@nova.edu