**Nicole Colon Carrion**

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# **EDUCATION:** University of Arizona, Tucson, AZ

College of Agriculture and Life Sciences

School of Plant Sciences

Ph.D. in Plant Pathology

August 2017 – Current

## University of Puerto Rico, Cayey, PR

College of Natural Sciences

B.A. in Biology

*Graduated: June 2016*

**RESEARCH EXPERIENCE**

* **Graduate Research Assistant**. College of Agricultural and Life Sciences, Plant Pathology Program (August 2017- Actual). University of Arizona, Tucson AZ: “Mycorrhizal associations and reforestation after a catastrophic hurricane in Puerto Rico”. Mentor: A. Elizabeth Arnold PhD, Department of Plant Sciences.
* **Post-baccalaureate Research Assistant**. Bridge to the PhD in Neuroscience Program (BPNP), Lifelong student (August 2016 - May 2017). Michigan State University, East Lansing, MI: “Acute methylmercury exposure alters intracellular calcium concentrations in human induced pluripotent stem cell motor neurons through AMPA receptors”. Mentor: William D. Atchison PhD, Department of Pharmacology and Toxicology.
* **Undergraduate Researcher**. Building Research Infrastructure and Capacity (August 2014-June 2016). University of Puerto Rico, Cayey, PR: “*Analysis of Fungal Contamination Present on Commercially Sold Rice Grains in Puerto Rico*”. Mentor: Chad Lozada Troche PhD, Department of Natural Sciences.
* **Laboratory Technician**. “Programa: Primera Experiencia Laboral” (January 2016-May 2016). University of Puerto Rico, Cayey, PR. Supervisor: Chad Lozada Troche PhD, Department of Natural Sciences.
* **Internship**. Bridge to the PhD in Neuroscience Program (BPNP) (Summer 2015). Michigan State University, East Lansing, MI: “*Expression of Nerve Membrane Proteins in a Naturally Occurring Ca2+ Channelopathy”.* Mentor: William D. Atchison PhD, Department of Pharmacology and Toxicology.
* **Internship**. Summer Research Opportunity Program (SROP) (Summer 2014). University of Illinois at Chicago, IL: “*Identification of a cis-regulatory module that controls the expression of Ubx in the T3 leg of Drosophila melanogaster”.* Mentor: Teresa Orenic PhD, Department of Biological Sciences.
* **Internship**. Plant Genomics Program (Summer 2013). Michigan State University, East Lansing, MI: “Effects of the overexpression of human proapoptotic factors Bid and BAX in Arabidopsis thaliana”. Mentor: Jianpin Hu PhD, Department of Plant Biology.
* **Internship**. Integrative Molecular Plant Sciences Program (Summer 2012). North Carolina State University, Raleigh, NC: “*Characterizing Auxin Biosynthetic Mutants in Arabidopsis thaliana”.* Mentor: Jose Alonzo PhD, Department of Plant and Molecular Biology.
* **Undergraduate Researcher**. Research Initiative for Scientific Enchantment Program (RISE) (August 2012-May 2013). University of Puerto Rico, Cayey, PR: “*Annotation of the kif3c Gene of Drosophila biarmipes from Fosmid 66”.*Mentor: Michael Rubin PhD, Department of Natural Sciences.

**AWARDS**

* National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP) Fellowship, April 2018.
* NIH/Initiatives to Maximize Student Development Fellowship, August 2017-July 2018.
* ASPET Travel Award for the 2016 Experimental Biology Annual Meeting, San Diego, CA. April 2016.
* Second Place, Poster Presentation at the 2016 Experimental Biology Annual Meeting, San Diego, CA. April 2016.
* Puerto Rico Louis Stokes Alliance for Minority Participation Fellowship, August 2015-May 2016.
* ASM/Capston Travel Award, 2015 American Society for Microbiology Annual Meeting. New Orleans, LA. May 2015
* Second Place, Oral Presentation at the Puerto Rico Mycologist Society Meeting, Mayaguez, PR. May 2015.
* Puerto Rico Louis Stokes Alliance for Minority Participation Fellowship, October 2014-May 2015.
* Outstanding Oral Presentation at the University of Illinois Research Symposium, Champaign, IL. July 2015.
* Honor Student, University of Puerto Rico, Cayey, PR. March 2012.
* Academic Excellence of Caguas District, Caguas, PR. May 2011.

**SCIENTIFIC PUBLICATIONS**

* A. Colón-Rodriguez, **N. Colón-Carrión**, W.D. Atchison. **In progress**. *Acute methylmercury exposure alters intracellular calcium concentrations in human induced pluripotent stem cell motor neurons through AMPA receptors*.
* **N. Colón-Carrión**, C. Lozada-Troche. **Accepted: September edition**. *Analysis of Fungal Contamination Present on Commercially Sold Rice Grains in Puerto Rico.* American Journal of Undergraduate Students, 2018.

**PRESENTATIONS (\* = Oral presentations)**

* **N. Colón-Carrión**, A. Colón-Rodriguez, W.D. Atchison. *AMPA receptor mRna expression is altered in motor neurons after acute methylmercury exposure*. Michigan Society of Toxicology Symposium. East Lansing, MI. October 2016.
* **N. Colón-Carrión**, C. Lozada-Troche. *Analysis of Fungal Contamination Present on Commercially Sold Rice Grains in Puerto Rico*. University of Puerto Rico 3rth Undergraduate Research, Cayey, PR. May 2016. \*
* **N. Colón-Carrión**, A. Colón-Rodriguez, W.D. Atchison. *Expression of Nerve Membrane Proteins in a Naturally Occurring Ca2+ Channelopathy*. Experimental Biology Annual Meeting, ASPET Division, San Diego, CA. April 2016.
* **N. Colón-Carrión**, C. Lozada-Troche. *Analysis of Fungal Contamination Present on Commercially Sold Rice Grains in Puerto Rico*. XVII Puerto Rico Mycologist Society Annual Meeting, Ponce, PR. April 2016. \*
* **N. Colón-Carrión**, C. Lozada-Troche. *Analysis of Fungal Contamination Present on Commercially Sold Rice Grains in Puerto Rico*. Fourth Student Research Symposium: Passing the Torch of Research and Ethics to the Next Generation, Cayey, PR. October 2015.
* **N. Colón-Carrión**, A. Colón-Rodriguez, W.D. Atchison. *Expression of Nerve Membrane Proteins in a Naturally Occurring Ca2+ Channelopathy*. *Bridge to a PhD in Neuroscience Program Symposium*, East Lansing, MI. August 2015. \*
* **N. Colón-Carrión**, C. Lozada-Troche. *Analysis of Fungal Contamination Present on Commercially Sold Rice Grains in Puerto Rico*. American Society for Microbiology General Meeting, New Orleans, LA. June 2015.
* **N. Colón-Carrión**, C. Lozada-Troche. *Analysis of Fungal Contamination Present on Commercially Sold Rice Grains in Puerto Rico*. University of Puerto Rico 2nd Undergraduate Research, Cayey, PR. May 2015. \*
* **N. Colón-Carrión**, C. Lozada-Troche. *Analysis of Fungal Contamination Present on Commercially Sold Rice Grains in Puerto Rico*. XVI Puerto Rico Mycologist Society Annual Meeting, Mayaguez, PR. May 2015. \*
* **N. Colón-Carrión**, C. Lozada-Troche. *Analysis of Fungal Contamination Present on Commercially Sold Rice Grains in Puerto Rico*. Puerto Rico Louis Stoke Alliance for Minority Participation Symposium, Ponce, PR. March 2015. \*
* **N. Colón-Carrión**, C. Lozada-Troche. *Analysis of Fungal Contamination Present on Commercially Sold Rice Grains in Puerto Rico*. University of Puerto Rico 1st Undergraduate Research Symposium, Cayey, PR. December 2014. \*
* **N. Colón-Carrión**, E. Ecksi, T. Orenic. *Identification of cis-regulatory module that controls the expression of Ubx in the T3 leg of Drosophila melanogaster*. XXI Undergraduate Research Symposium, Cayey, PR. October 2014. \*
* **N. Colón-Carrión**, E. Ecksi, T. Orenic. *Identification of cis-regulatory module that controls the expression of Ubx in the T3 leg of Drosophila melanogaster*. SROP Research Symposium, Chicago, IL. August 2014. \*
* **N. Colón-Carrión**, R. Pan, J. Hu. *Effects of the Overexpression of Program Cell Death Related Genes MmBid, MmBac and Cyt c in Plants*. 34TH Annual Research and Education Forum MSC, Rio Piedras, PR. April 2014.
* **N. Colón-Carrión**, R. Pan, J. Hu. *Effects of the Overexpression of Program Cell Death Related Genes MmBid, MmBac and Cyt c in Plants*. Second Student Research Symposium: Passing the Torch of Research and Ethics to the Next Generation, Arecibo, PR. December 2013.
* **N. Colón-Carrión**, R. Pan, J. Hu. *Effects of the Overexpression of Program Cell Death Related Genes MmBid, MmBac and Cyt c in Plants*. ABRCMS Annual Meeting, Nashville, TN. November 2013.
* **N. Colón-Carrión**, L. Robles, J. Alonso. *Characterizing Auxin Biosynthetic Mutants in Arabidopsis Thaliana*. NCSU Summer Undergraduate Research Symposium, Raleigh, NC. August 2012.

**TEACHING EXPERIENCE**

* Lecture PLP 527 General Mycology Course on Systemic Mycoses, December 2017 at the University of Arizona.

**MENTORING EXPERIENCE**

* **Research Mentor**. (August 2017-October 2017). University of Arizona, Tucson, AZ. *Trained and supervised an undergraduate student on their research projects during my laboratory rotations.* Supervisor: Elizabeth Arnold.
* **Teacher’s Assistant**. (August 2014-May 2016). University of Puerto Rico at Cayey, Cayey, PR. *Trained, supervised, and assist new laboratory members on their research projects*. Supervisor: Chad Lozada.

**SELECTED OUTREACH ACTIVITIES AND LEADERSHIP ROLES**

* Mentor Pueblo High School Students on formatting and presenting their research projects as a member of the Society for the Advancement of Chicanos, Hispanics and Native American in Science (SACNAS), University of Arizona Chapter. April 2017.
* Volunteer at the 2018 Tucson Festival of Books – Science City Section in order to raise awareness of the importance of mushrooms to the general community.
* Organized and led – Drive for Puerto Rico which focused on coordinating Hurricane Maria Relief Efforts at the University of Arizona for Puerto Rico. September 2017-December 2017.
  + Led and organized relief drive with two graduate students at the Zuckerman College of Public Health.
  + Organized GoFundMe page to fundraise for Puerto Rico.
  + Partnered with Puerto Rico Latin Bar and Grill relief efforts.
  + <http://www.wildcat.arizona.edu/article/2017/10/ua-students-help-with-aid-for-harvey-irma-maria-victims>
  + <http://www.wsmv.com/story/36441304/puerto-rico-devastated-phoenix-restaurant-steps-up-to-help>
* Co-founder and Secretary of the Society for the Advancement of Chicanos, Hispanics and Native American in Science, University of Puerto Rico, Cayey Chapter. 2013-2016.
* Volunteer at the Charis Special Academy Summer Camp, Caguas, PR. This focused on performing motor enhancement and recreational activities for disable kids.
* Co-led as a SACNAS member– “Toritos por Ecuador” a fundraising event at the University of Puerto Rico, Cayey aimed at helping the communities of Ecuador affected by the earthquake. May 2016.
* Volunteer, as a SACNAS member, at the Relay for Life a fundraising event at the University of Puerto Rico, Cayey aimed at helping the cancer patients. March 2016.
* Organized, as a SACNAS member, a conference with the Puerto Rico Multiple Sclerosis Foundation at the University of Puerto Rico, Cayey in order to raise awareness of the incidence, cause and symptoms of multiple sclerosis in Puerto Rico. December 2015.
* Organized and Led, as a SACNAS member, collection drives at the University of Puerto Rico, Cayey with the sponsorship of The Empty Store Project for Puerto Rico nonprofit foundations “Caritas” and “Mano Amiga”. September 2015.
* Organized and Led, as a SACNAS member with the collaboration of the Soccer Team at the University of Puerto Rico, Cayey and Hogar C.A.S.A, soccer classes for abused children in Puerto Rico. September 2015.
* Volunteer at “Iniciativa Comunitaria: Abriga un Alma esta Navidad” which aimed at rasing money to buy sheets to shelter homless people, Cayey, PR. December 2014.
* Organized and Led SACNAS Science Week at the University of Puerto Rico, Cayey which aimed at raising awareness on the diversity of areas, research opportunities, and jobs in the science field. March 2014.

**PROFESSIONAL/STUDENT ASSOCIATIONS**

* Minorities in Agriculture, Natural Resources and Related Sciences (MARRS), University of Arizona Chapter, Member (March 2018-present).
* Society for the Advancement of Chicanos, Hispanics and Native American in Science, University of Arizona Chapter, Member (March 2018-present); Chapter President (2018-2019).
* **American Society for Pharmacology and Experimental Therapeutics** (**ASPET**), Member (2016-2017).
* American Society for Microbiologist (ASM), Member (2015)
* Puerto Rico Society for Microbiologist - “Profesionales del laboratorio Clínico- µx”, University of Puerto Rico Chapter, Member (2013-2014); Chapter Representative (2014-2015).
* Society for the Advancement of Chicanos, Hispanics and Native American in Science, University of Puerto Rico Chapter, Co-founder and Chapter Secretary (2013-2016).

**SKILLS**

Teamwork oriented and able to work under pressure. Highly organized and great leadership, problem solving, and time management skills, problem solving, writing and communication skills. Fluent in Excellent in English and Spanish. Knowledge on Microsoft Office, Logger Pro, Bioedit, MEGA6, Statdisk, SlideWrite, ClustalX2, BLAST, Mesquite. Basic Lab Techniques, Microscopy techniques, Gene annotation, Polymerase chain reaction (PCR), RT-PCR, Q-PCR, Nanodrop, Agarose Gel Electrophoresis, Gel Purification. DNA, RNA & protein extraction, isolation and purification. Bacterial, mold and yeast cultivation. Gram staining, Bacterial Transformation, Moist Chambers Technique, Fugene transfections. Cell culture (NSC34, hiPSC-MN), Trypan Blue Cell viability assessment, Cell viability assessment via calcein-AM/ethidium homodimer-1 cytotoxicity assay, Immunocytochemistry. Single-cell Ca2+ microfluorimetry.

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**REFERENCES**

* Dr. Elizabeth Arnold

PhD, Principal Investigator at UA

[barnoldaz@gmail.com](mailto:barnoldaz@gmail.com)

* Dr. Chad Lozada

PhD, Principal Investigator at UPR Cayey

787-464-7541, [chad.lozada@upr.edu](mailto:chad.lozada@upr.edu)

* Dr. Alexandra Colon

PhD, Mentor at MSU

517-980-0401, [acolonrodriguez@ucdavid.edu](mailto:acolonrodriguez@ucdavid.edu)

* Dr. William Atchison

PhD, Principal Investigator at MSU

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