

Francheska M. Merced-Nieves

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Education

Doctor of Philosophy in Neuroscience

December 2019

University of Illinois in Urbana-Champaign | Urbana, IL

Thesis Title: Impact of maternal prenatal stress on infant cognition and modification of effects by exposure to phthalates

Advisor: Susan L. Schantz, Ph.D.

Bachelor of Science in Biology

May 2014

Universidad del Turabo | Gurabo, PR

Research Experience

Icahn School of Medicine at Mount Sinai | New York, NY

Environmental Health | Department of Environmental Medicine and Public Health

January 2020 to present

- Studying the effects of prenatal exposure to metal mixtures on the neurodevelopment of children (Mentor: Robert L. Wright, MD)
- Manage all aspects of research project, including managing and analyzing data, and reviewing relevant literature
- Funding: NIH T32 Postdoctoral Fellowship- Research Training Program in Environmental Pediatrics

University of Illinois | Urbana-Champaign, IL

Neurotoxicology | Department of Neuroscience

2014 to 2019

- Studied the effect of prenatal exposure to non-chemical and chemical endocrine disruptors (i.e. maternal stress and phthalates) on cognitive development of infants (Mentor: Susan L. Schantz, Ph.D.)
- Managed all aspects of research project, including interacting with study participants by interviews and administering assessments, managing and analyzing data, and reviewing relevant literature
- Trained and supervised 1 graduate student and 5 undergraduates
- Presented research at local and international meetings
- Funding: NIH P01 Diversity supplement and NIEHS Predoctoral Fellowship

Universidad del Turabo | Gurabo, PR

Neurotoxicity | Department of Biology

2012 to 2014

- Studied the effect of lead exposure on behavior, including Autism Spectrum Disorder-like behaviors in an animal model (*D. melanogaster*) (Mentor: Adriel Vazquez, Ph.D.)

Metal Organic Framework | Department of Chemistry

2011 to 2012

- Designed and synthesized metal-organic compounds with high porosity, observed them in the Infrared Spectrometer with the purpose of utilization for adsorption of toxic gases (Mentor: Agustín Ríos, Ph.D.)
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Teaching and Mentoring Experience

University of Illinois | Urbana-Champaign, IL

Teaching Assistant

Applied Statistical Methods II and Experimental Design

Spring 2019

Regression Analysis

Fall 2018

- Explained complex technical concepts to diverse audiences in engaging way in a weekly 2-hour computer laboratory
- Trained and supervised students in data analysis using SAS
- Graded weekly quizzes and held office hours to ensure students understood materials

Summer Undergraduate Research Experience in Toxicology

2016 and 2018

Graduate Mentor

- Guided research fellows by designing experience-appropriate research
- Trained fellows in conduct of experiments and subsequent data analysis
- Supervised and edited fellow's writing of scientific paper and development of presentations
- 2016 fellow was awarded "Best Poster Presentation" out of 120 fellows
- 2018 fellow was awarded "Outstanding Oral Presentation" out of 120 fellows

Brain Awareness Day

2015 to 2018

Organized by the Neuroscience Program at the University of Illinois Urbana-Champaign

- Designed hands-on exhibit to teach different neuroscience concepts to children
- Coordinated teams of undergraduate student volunteers
- Piloted first bilingual advertisement and supported event programming

Cena y Ciencias Volunteer (Urbana, IL)

2014 to 2015

- Helped develop age-appropriate science lessons for elementary school children
- Led science activities in both Spanish and English

Honors and Awards

- NIH T32 Postdoctoral Fellowship 2020 to 2022
 - Kinesis Foundation Scholarship 2014 to 2019
 - Academic Pediatric Association Environmental Health Scholar 2018
 - Developmental Neurotoxicology Society Conference Travel Award 2018 and 2019
 - NIEHS Predoctoral Fellowship August 2017 to August 2019
 - NIH P01 Diversity Supplement June 2015 to May 2017
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Extracurricular Activities

- Earth Day/March for Science NYC volunteer 2020
- Translated Earth Day 50 videos to Spanish to make them more accessible to the community
- Nutrition and Health Policy Intern August 2017 to December 2018
Abbott at Research Park UIUC
- Working with staff members within Abbott Nutrition Health Policy and other groups such as health economics to conduct research using public health data bases and information
 - Help author/submit abstracts and publications
 - Using the research literature to draft reviews and/or comments on current policy issues
- Science Policy Group March 2017 to December 2019
Professional Development Committee Member & Resource Manager
- Organized, categorized and maintained the different resources available to the group
 - Organized and led a day-long Sustainability and Science Policy workshop
 - Developed and led a video series called: "What is Science Policy, Anyway?" (<https://youtu.be/nWc8qw7DGv0>)
- Yale Ciencia Academy 2017
- Selected as one of forty graduate students to take part in a yearlong program that provides opportunities for mentoring, peer support, and networking
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Additional Competences

LANGUAGES

- Spanish
- English

TECHNOLOGY

- SAS, STATA, and R studio
 - Microsoft Office
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Publications

Merced-Nieves, FM, Aguiar, A, Dzwilewski, KLC, Musaad, S, Korricks, SA, Schantz, SL. (2020). Association of prenatal maternal perceived stress with a sexually dimorphic measure of cognition in 4.5-month-old infants. *Neurotoxicol Teratol*. DOI: 10.1016/j.ntt.2019.106850.

Dzwilewski, KLC, **Merced-Nieves, FM**, Aguiar, A., Korricks, SA, Schantz, SL. (2020). Characterization of performance on an automated visual recognition memory task in 7.5-month-old infants. *Neurotoxicol Teratol*. DOI: 10.1016/j.ntt.2020.106904

Lanctin, DP, **Merced-Nieves, F**, Mallett, RM, Arensberg, MB, Guenter, P, Sulo, S, Platts-Mills, TF. (2019). Prevalence and Economic Burden of Malnutrition Diagnosis among Patients Presenting to United States Emergency Departments. *Acad Emerg Med*. PMID:31724782 DOI:10.1111/acem.13887

Presentations

Association of prenatal maternal stress with visual recognition memory in 7.5-month-old infants. **Merced-Nieves, F.M.**, Dzwilewski, K.L.C., Aguiar, A., Schantz, S.L. Developmental Neurotoxicology Society Conference, San Diego, CA, June 2019. Oral Presentation.

Association of prenatal maternal stress with measures of cognition in 4.5-month-old infants. Beckman Institute Graduate Student Seminar, Urbana, IL, April 2019. Oral Presentation.

Association of phthalates and phenols found in personal care products with cognitive function in 4.5-month-old infants. Toxicology Seminar, Champaign-Urbana, IL, January 2019. Oral Presentation.

Association of phthalates and phenols found in personal care products with cognitive function in 4.5-month-old infants. Academic Pediatric Association Environmental Scholars Retreat, Providence, RI, October 2018. Oral Presentation.

Association of prenatal exposure to benzophenone-3 with cognitive function in 4.5-month-old infants. **Merced-Nieves, F.M.**, Musaad, S., Aguiar, A., Calafat, A.M., Ye, X., Korrick, S.A., Schantz, S.L. International Society for Environmental Epidemiology, Ottawa, CA, August 2018. Poster Presentation.

Associations of phthalates found in personal care products with cognitive function in 4.5-month-old infants. **Merced-Nieves, F.M.**, Musaad, S., Aguiar, A., Korrick, S.A., Schantz, S.L. Developmental Neurotoxicology Society Conference, Clearwater, FL, June 2018. Oral Presentation.

Associations of maternal prenatal stress and phthalates with cognitive function in 4.5-month-old infants. Toxicology Seminar, Champaign-Urbana, IL, February 2018. Oral Presentation.

Association of maternal prenatal stress with measures of cognition in 4.5-month-old infants. **Merced-Nieves, F.M.**, Musaad, S.M., Aguiar, A., Dzwilewski, K.L., Korrick, S.A., Schantz, S.L. Developmental Neurotoxicology Society Conference, Denver, CO, June 2017. Poster Presentation.

Maternal stress as an endocrine disruptor in the mental rotation task. Presentation. Toxicology Seminar, Champaign-Urbana, IL, February 2017. Oral Presentation.

Maternal Stress as an Endocrine Disruptor in Infant Cognition. **Francheska M. Merced-Nieves**, Kelsey Dzwilewski, Andréa Aguiar, Susan L. Schantz, Research Day at Veterinary Medicine at University of Illinois Champaign-Urbana, IL, April 2016. Poster Presentation.

Maternal stress as an endocrine disruptor in infant cognition, Presentation. Toxicology Seminar, Champaign-Urbana, March 2016. Oral Presentation.

Maternal Stress and Sexually Dimorphic Aspects of Infant Cognition. **Merced-Nieves Francheska**, Dzwilewski Kelsey, Aguiar Andrea, Schantz Susan L. Midwest Children's Environmental Health Symposium, Champaign-Urbana, IL, September 2015. Poster Presentation.

Stress as an endocrine disruptor in infant cognition, Presentation. Toxicology Seminar, Champaign-Urbana, March 2015. Oral Presentation.
