Félix E. Rivera-Mariani, PhD

, Miami, FL 33169

Direct: ; email: friveramariani@gmail.com websites: www.friveram.com; https://github.com/friveramariani lab website: https://www.riplrt.com

		_		
M	ork	Expe	rian	\sim
	UIR			CC

2017 - Present College of Biomedical Sciences, Larkin University, Miami, FL

Assistant Professor and Academic Director

2014 - 2017Miami-Dade College, Miami, FL

Adjunct Professor (Biology, Microbiology, Biochemistry)

2013 – Present Consultant

Aerobiology, Immunology, Computational Biological/Non-Biological Data Analysis

2012 - 2015**American Journal Experts**

Developmental Editor

2010 - 2013Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

Postdoctoral Fellow (NIH T32 Training Program)

Education

2010 - 2013Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

Postdoctoral Fellow in Environmental Health Sciences

(mentors: Patrick Breysse, PhD, Thomas Hartung, PhD, MD)

2004 - 2010School of Medicine, University of Puerto Rico, San Juan, PR

PhD in Microbiology (mentor: Benjamín Bolaños, PhD)

2001 Southeastern Louisiana University, Hammond, La

BS in Biology, minor in Chemistry; Baseball Athletic Scholarship

Additional Training

2016 – 2017

Johns Hopkins University (on www.coursera.org)

Mastering Software Development in R (5-courses series)

University of California at San Diego (on www.coursera.org)

Bioinformatics Specialization (7-courses series)

2016 **Johns Hopkins University** (on www.coursera.org)

- Data Science Specialization (10-courses series)
- Genomic Data Science Specialization (8-courses series)
- Executive Data Science Specialization (5-courses series)

Icahn School of Medicine at Mount Sinai (on www.coursera.org)

• System Biology and Biotechnology Specialization (6-courses series)

2015 - 2016Johns Hopkins School of Public Health (on www.coursera.org)

• Statistical Reasoning for Public Health I: Estimation, Interference, Interpretation

• Statistical Reasoning for Public Health II: Regression Models

2013 - 2014

American Society for Microbiology, Washington, DC

• Science Teaching Fellowship

Publications

- Rivera-Mariani FE, Almaguer M, Jesus Aira M, Bolaños-Rosero B. Comparison of atmospheric fungal spore concentrations between two main cities in the Caribbean basin. *Puerto Rico Health Sciences Journal*. **Submitted**.
- Srour HH, Baguley JK, Bellinger SV, Stateman AJ, Rivera-Mariani FE. Comparing the magnitude of meteorological variables and air pollutants as contributing factors of atopic dermatitis symptoms. J Allergy Clin Immunol. 2019. 143(S2). AB235.
- Stateman AJ, Srour HH, Baguley JK, Bellinger SV, Rivera-Mariani FE. Comparison between PM2.5 levels on east coast and state of California in relationship to asthma. *J Allergy Clin Immunol*. 2019. 143(S2). AB24.
- Bellinger SV, Stateman AJ, Srour HH, Baguley JK, RIvera-Mariani FE. Evaluating differences in prevalence of food allergies between two geographic regions: Australia and US. J Allergy Clin Immunol. 2019. 143(S2). AB268.
- Baguley JK, Bellinger SV, Srour HH, Stateman AJ, Rivera-Mariani FE. Gender difference in dendritic cell population in nasal and oral cavity between allergen and non-allergic subjects. *J Allergy Clin Immunol*. 2019. 143(S2). AB228.
- Rivera-Mariani FE, Srour HH, Baguley JK, Bellinger SV, Stateman AJ, Bolaños-Rosero B. Relationship of serological reactivity to cytoplasmic extracts from spores of *Ganoderma applanatum* and commercial extracts of indoor, mitosporic fungi, and farm animal allergens among Puerto Rican subjects. *J Allergy Clin Immunol*. 2019. 143(S2). AB301
- Gaspar PM, Schreb CA, **Rivera-Mariani FE**. Hydration Status of Assisted Living Memory Care Residents. *J Gerontogical Nursing*. 2019. 45(4): 21-29.
- Srour H, Fomenko R, Baguley J, Bellinger S, Jordan A, Sutton J, Santana M, Marull A, Abdalhuk M, Rivera-Mariani FE. Pilot study of publicly available data to evaluate the relationship between forest fires and emergency department visits due to asthma in the state of California [version 2; peer review: 1 approved]. F1000Research 2019, 7:1232
- Abdalhuk M, Jordan A, Wagimin R, Stamitoles C, Bellinger S, Baguley J, Srour H, Fomenko R, Sutton J, Santana M, Marull A, Rivera-Mariani FE. Evaluating the Association of Race, Ethnicity, and Food Allergens in the Development of Childhood Asthma: Re-Analysis of Publicly-Available Retrospective Cross-Sectional Cohort Data. F1000Research. 10.12688/f1000research.15831.1.
- Rivera-Mariani FE and Bolaños-Rosero B. Principal Component Analysis to Evaluate Relationships in Reactivity to Commercial Extracts and Uncharacterized Fungi among Asthmatic and Allergic Rhinitis Subjects. *J Immuno*. 200 (1 Supp, 44.2).

- González de Leon J, Gonález Méndez R., Cadilla Vázquez CL, Rivera-Mariani FE, Bolaños-Rosero,
 B. Serological Reactivity and Identification of Immunoglobulin E Binding Proteins of Xerophilic Fungus Aspergillus penicilloides Crude Mycelial Mat Extract in Puerto Rican Atopic Subjects. Int Arch Allergy Immunol. 2018. 175: 147-159.
- Vila-Herester F, Rivera-Mariani FE, Bolanos-Rosero B. Serological reactivity and IgE-binding polypeptides to Ganoderma applanatum Cruse Spore Cytoplasmic Extract in Puerto Rico Subjects. Int Arch Allergy Immunol. 2017; 172:139–149.
- Bose S, **Rivera-Mariani FE**, Chen R, Williams D, Aloe, Belli D, Breysse, PN, Diette G, Hansel N. Domestic exposure to endotoxin and respiratory morbidity in former smokers with COPD. *Indoor Air*. 2016. 26(5): 734-42.
- Vesper S, Choi H, Perzanowski P, Acosta LM, Divjan A, Bolaños-Rosero B, Rivera-Mariani FE, Chew GL. Comparison of mold populations in settled dust and dust mite allergens in mattress dust samples in the Puerto Rico Health Regions. Int J Environ Health Research. 2016. 26(2): 198-207.
- Hasiwa N, Daneshian M, Bruegger P, Fennrich S, Fleck S, Hochadel A, Hoffman S, Rivera-Mariani FE, Rockel C, Schindler S, Spreitzer I, Stoppelkamp S, Vysyaraju K, Hartung T. Addendum to Evidence for the Detection of non-Endotoxin Pyrogens by the Whole Blood Monocyte Activation Test. Altex. 2014. 31 (4): 499.
- Hasiwa N, Daneshian M, Bruegger P, Fennrich S, Fleck S, Hochadel A, Hoffman S, Rivera-Mariani FE, Rockel C, Schindler S, Spreitzer I, Stoppelkamp S, Vysyaraju K, Hartung T. Addendum to Evidence for the Detection of non-Endotoxin Pyrogens by the Whole Blood Monocyte Activation Test. Altex. 2014. 31 (2): 226.
- Hasiwa N, Daneshian M, Bruegger P, Fennrich S, Fleck S, Hochadel A, Hoffman S, Rivera-Mariani FE, Rockel C, Schindler S, Spreitzer I, Stoppelkamp S, Vysyaraju K, Hartung T. Erratum to: Evidence for the Detection of non-Endotoxin pyrogens by the Whole Blood Monocyte activation test. *Altex*. 2013. 30 (3): 352.
- Rivera-Mariani FE, Vysyaraju K, Negherbon J, Levetin E, Horner WE, Hartung T, Breysse PN.
 Comparison of the interleukin-1β-inducing potency of allergenic spores from higher fungi
 (Basidiomycetes) in a cryopreserved human whole blood system. *International Archives of Allergy and Immunology*. 2013. 163 (2): 154-62.
- Rivera-Mariani FE. Cryopreserved human whole blood: a human-based in-vitro immunotoxicological system expanded into environmental health and medical mycology studies. Invited Special issue of ATLA. 2013. 41(6): 483-90.
- Hasiwa N, Daneshian M, Bruegger P, Fennrich S, Fleck S, Hochadel A, Hoffman S, Rivera-Mariani FE, Rockel C, Schindler S, Spreitzer I, Stoppelkamp S, Vysyaraju K, Hartung T. Evidence for the detection of non-endotoxin pyrogens (NEPS) by the whole blood monocyte activation test. *ALTEX*, 2013. 30(2): 169-208.

- **Rivera-Mariani FE**, Mihalic JN, Rule AM, Breysse PN. Immunodetection of airborne (1-3)-β-Dglucan-carrying particles with the Halogen immunoassay in occupational setting. *J Immunol Methods*. 2013. 388: 86-89.
- Rivera-Mariani FE, Matsui E, Breysse PN. Performance of the Halogen Immunoassay to Assess Airborne Mouse Allergen-Containing Particles in a Laboratory Animal Facility. *Journal of Exposure Science and Environmental Epidemiology*. 2012. 24 (1): 3-8.
- Rivera-Mariani FE, Vysyaraju K, Levetin E, Hartung T, Breysse PN. Determination of the Proinflammatory Potential of Spores from Different Basidiomycetes Species with a Human Whole Blood Assay. *J Immunol.* 2012; 188: AB55.13.
- **Rivera-Mariani FE** and Bolaños-Rosero B. Allergenicity of airborne basidiospores and ascospores: need for further studies. *Aerobiologia* 2012: 28(2): 83-97.
- Rivera-Mariani FE, Hartung T, Breysse PN. Evaluation of the Pro-inflammatory Activity of Basidiospores and Spore-bearing Tissue from the Mushroom *Chlorophyllum molybdites* using Human Whole Blood. *J Allergy Clin Immunol*. 2012; 129(2): AB18.
- Rivera-Mariani FE, Nazario-Jiménez S, López-Malpica F, and Bolaños-Rosero B. Skin Test Reactivity
 of Allergic Subjects to Basidiomycetes' Crude Extracts in a Tropical Environment. *Medical Mycology*.
 2011. 49(8): 887-91.
- Rivera-Mariani FE, Nazario-Jiménez S, López-Malpica F, and Bolaños-Rosero B. Sensitization to Airborne Ascospores, Basidiospores, and Fungal Fragments by Allergic Rhinitis and Asthmatic Subjects in San Juan, Puerto Rico. *International Archives of Allergy and Immunology*. 2011; 155(4): 322-34.
- Rivera-Mariani FE, Nazario-Jiménez S, López-Malpica F, and Bolaños-Rosero B. Prevalence of IgE Reactivities by Rhinitis and Asthmatic Patients to Airborne Particulate. *J Allergy Clin Immunol*. 2010; 125(2): AB80.
- Quintero E, **Rivera-Mariani FE**, and Bolaños-Rosero B. Analysis of Environmental Factors and Their Effects on Fungal Spores and Pollen in the Atmosphere of a Tropical Urban Area (San Juan, Puerto Rico). *Aerobiologia*. 2010; 26(2): 113-124.

Science Teaching and Mentoring Publications

- Rivera-Mariani, FE. RNA-seq Data Analysis Workflow to Evaluate Differential Gene Expression between Fetus and Adult Brains from Publicly-Available Data as a Genomic Data Science Demonstration in an Upper Microbiology Course. Technical Report at Researchgate.com http://dx.doi.org/10.13140/RG.2.2.14868.09604
- Rivera-Mariani, FE. Peer-Evaluations as an Intervention Tool to Identify Students' Misconceptions
 and Interpretation Errors in the Streak-Plate Method in an Introductory Microbiology Lab Course. 2016.
 Technical-Report at Researchgate.com. http://dx.doi.org/10.13140/RG.2.1.2693.5921
- Rivera-Mariani FE. Rethinking our Postdoctoral Training. Postdoctoral Journal. 2012; 2 (2): 27-29.

Presented Abstracts

- Rivera-Mariani FE, Srour HH, Fomenko R, Maestre JP, Kinney K, Godoy-Vitorini F, Bolaños-Rosero B, Cavallin H. Pro-inflammatory potential of indoor dust collected from households in San Juan, PR in the aftermath of Hurricane Maria. Society of Toxicology Annual Meeting & ToxExpo 2019. Baltimore, MD.
- Rivera-Mariani FE, Levetin E, Hartung T, Breysse PN. Role of spores' surface area and endotoxin contamination in the proinflammatory potential of spores from allergenic basidiomycete fungi in a cryopreserved human whole blood system. *Gordon Research Seminar/Conference Immunology to Fungal Infections*. January 2013. Galveston, TX.
- Rivera-Mariani FE, Vysyaraju K, Negherbon J, Hartung T, Breysse PN, Hansel N. Assessment of the proinflammatory potential of indoor air particulate matter based on the cytokine release in a cryopreserved human whole blood system. *International Society for Exposure Science* Annual Meeting, October, 2012. Seattle, WA.
- Rivera-Mariani FE, Mihalic JN, Rule AM, Breysse PN. Immunodetection of (1-3)-β-D-glucan with the Halogen Immunoassay. Poster Presentation. *American Industrial Hygiene Association* Annual Meeting, June, 2012. Indianapolis, IN. Best Poster in the Sampling and Laboratory Analysis Session.
- **Rivera-Mariani FE**, Hartung T, Breysse PN. Evaluation of the Cooperative Proinflammatory Effect between Endotoxin and (1-3)-β-D-glucan with the *in-vitro* Pyrogen Test. Poster Presentation. *Society of Toxicology* Annual Meeting March, 2012, San Francisco, CA.
- Rivera-Mariani FE, Matsui E, Breysse PN. Immunodetection of Airborne Particulate Carrying Mouse Allergen. Poster Presentation. *International Society for Exposure Science* Annual Meeting, October, 2011. Baltimore, MD.
- **Rivera-Mariani FE**, Nazario-Jiménez S, López-Malpica F, and Bolaños-Rosero B. Airborne Ascospores and Basidiospores as Potential Allergens for Allergic Respiratory Diseases. Oral Presentation. International Association for Aerobiology 9th *International Congress on Aerobiology*, August, 2010. Buenos Aires, Argentina.
- **Rivera-Mariani FE**, Nazario-Jiménez S, and Bolaños-Rosero B. Prevalence of IgE Reactivities to Airborne Particulate by Asthmatic Subjects. Oral Presentation. *Pan-American Aerobiology Association* Annual Meeting, July, 2009. Kansas City, MO.
- Rivera-Mariani FE, Quintero E, and Bolaños-Rosero B. Fungal Spore in the Atmosphere of San Juan and Caguas: A Comparative Study. Oral presentation. *Pan-American Aerobiology Association* Annual meeting, June, 2007. Penn State University, Stage College, PA.
- Quintero E, Rivera-Mariani FE, and Bolaños-Rosero B. Fungal Spore and Pollen in the Atmosphere of San Juan. Poster presentation. *Pan-American Aerobiology Association* Annual Meeting, June 2007. Penn State University, Stage College, PA.

Research Awards

2019 **Collaborator** - HUD 126513356 (PI Kerry Kinney)

Linking Microbial, SVOC and Pro-Inflammatory Exposures in Homes to Childhood Asthma Severity: A Community Filter Forensics Approach \$700.000

Sub-Award Principal Investigator (\$76,931)

2018 **Collaborator** – 1R21ES029761-01 (Pl. Humberto Cavallin)

Taking a Breath after the Disaster: Homes, Molds and Health in Puerto Rico after Hurricane Maria \$189,480

Sub-Award Principal Investigator (\$10,500)

2016 Teachers in Space, Inc.: Principal Investigator

Design of a CubeSat with a Removable Specimen Collector to Investigate the Potential of Allergenic Fungal Spores to Reach into the Stratosphere. (http://www.friveram.com/PRCUbeStars)

2013 **Postdoctoral Collaboration** - 3R01ES018845-04S1 (PI: Nadia Hansel)

Genetic Susceptibility to Asthma and Indoor Air Pollution in Peru \$410,571

2012 Ethical Consumer Association, London, UK

Lush Prize Young Researcher Award \$20.000

2011 Johns Hopkins University, Bloomberg School of Public Health

David Leslie Swift Fund in Environmental Health Engineering \$2,000

2010 International Association for Aerobiology

Young Aerobiologist Award \$1000

Travel Awards

2018 Early Career Faculty Travel Award, Austin, TX

American Association of Immunologists

2013 Immunology of Fungal Infections, Gordon Conference, Galveston, TX

Carl Storm Underrepresented Minority Fellowship Travel Award

2012 International Society for Exposure Science, Seattle, WA

New Researcher Travel Award

2012 American Academy of Allergy, Asthma and Immunology, Orlando, FL

Domestic Fellows-in-Training Travel Award

2011 Federation of American Societies for Experimental Biology, Virginia Beach, VA.

Minority Access to Research Careers Travel Award

2010 American Academy of Allergy, Asthma and Immunology, New Orleans, LA

Fellow-in-Training Travel Award

2010 International Association for Aerobiology Meeting, Buenos Aires, Argentina

Latin American Travel Award

- 2009 Pan American Aerobiology Association, Kansas City, MO
 Latin American Travel Award
- 2007 Pan American Aerobiology Association, State College, PA Lanzoni's Student Award

Conferences and Invited Talks

•

- AAAS Florida Biomedical Career Symposium. Jupiter, FL (Scripps Institute). Science Education Careers. January 2018.
- University of Puerto Rico Carolina Campus. <u>Workshop</u>. Image Analysis in Biological Sciences (from Western blot to Data-Driven Decisions). *June 2017.*
- Math and Sciences Specialized High School Thomas Armstrong Toro. Ponce, PR. 2016 and 2017. Workshop. Doing Science: From Start to Finish. January 2016 and 2017.
- 9th Annual NIH Career Symposium, Bethesda, Maryland. Teaching-Intensive Careers. May 2016.
- Department of Microbiology, School of Medicine, University of Puerto Rico Medical Sciences Campus. San Juan. Immunological intervention to evaluate the human health effects of indoor and outdoor biological and non-biological airborne contaminants. February 2015.
- Department of Biology, University of Puerto Rico Bayamon Campus. Bayamon, PR. Immunological intervention to evaluate the human health effects of indoor and outdoor biological and non-biological airborne contaminants. *March 2015*.
- Department of Microbiology, College of Medical Sciences, Nova Southeastern University,
 Davie, FL. A Review of Fungi Relevant to Dentistry. August 2013.
- National Postdoctoral Association 11th Annual Meeting. Postdoc Diversity: Solution for Faculty Diversity. Co-Presenter with Dr. Jennifer Cohen and Dr. Cara Altimus. Charleston, SC. *March 2013.*
- Department of Biology of the College of Sciences and Technology, Southeastern Louisiana University, Hammond, LA. Allergenicity and proinflammatory potential of uncharacterized airborne fungi. October 2012.

Professional Memberships

2017 – Present	American Association of University Professors
2012 – Present	Sigma Xi, The Scientific Research Society
2011 - Present	American Association of Immunologists
2011 – Present	Society of Toxicology

2010 – P	resent	American Association for the Advancement of Science
2009 – P	resent	American Academy of Allergy, Asthma and Immunology
2002 – P	resent	American Society for Microbiology
	hip and Co	mmittee Work
2018		American Association for the Advancement of Science Session Proposal Reviewer
2018 - Pi	resent	Larkin University Scientific Research Advisory Committee (<i>Chair</i>) Pre-Professional Recommendations Committee, College of Biomed. Sci. (<i>Chair</i>) Faculty Affairs Committee (Member) Capital Allocation Planning Committee (Member)
2018		Scientific Forum Organizing Committee (<i>Chair</i>)
2010 – 2	014	National Postdoctoral Association Resources Development Committee
2011 – 2	013	Johns Hopkins Postdoctoral Association Professional Development Committee
2006		Puerto Rico Legislature (Ad Hoc Committee, Law 136 of July 27 th , 2006 – Regional Medical Academic Centers)
2005 – 2	009	University of Puerto Rico – Medical Sciences Campus Academic Senate (<i>Ex-Officio</i>)
2005 – 2	009	University of Puerto Rico – Medical Sciences Campus Student Disciplinary Board
2005 – 2	009	University of Puerto Rico – Medical Sciences Campus President, General Student Council
Editorial 2017 – P	Activities resent	Annals of Agricultural and Environmental Medicine Ad-hoc reviewer
2017		Annual Biomedical Research Conference for Minority Students 2017 Judge of Posters and Presentations
2017 – P	resent	Annual Biomedical Research Conference for Minority Students

Abstract Reviewer

2015 – Present	Conrad Spirit Innovation Challenge Proposal Reviewer
2013 – Present	Sigma Xi Student Research Showcase Abstract Reviewer
2011 – Present	Aerobiologia Ad Hoc Reviewer
2011 – Present	SACNAS National Conference Abstract reviewer
2013	Journal of Postdoctoral Research Editor
2012 – 2013	Johns Hopkins Postdoctoral Association Co-Editor Quarterly Newsletter
2011 – 2012	Society of Toxicology Ad Hoc Reviewer, Occupational, Public Health section
Mentoring Experie	<u>ence</u>
2017 – Present	College of Biomedical Sciences, Larkin University Respiratory and Immunology Project at Larkin (RIPL_Effect Research Team) Mentor 6 research assistant and graduate students https://www.riplrt.com https://wiki.riplrt.com
	Department of Microbiology, School of Medicine, University of Puerto Rico
2018 – Present	Lorrain Vélez (PhD Thesis Committee)
2015 – 2018 2014 – 2017	Isabelita Martínez (MS Thesis Committee) Frances Vila (MS Thesis Committee)
2014 – 2015	Angélica M. Rivera (Research Initiative for Scientific Enhancement awardee)
2011 – 2013	Johns Hopkins Bloomberg School of Public Health, Baltimore, MD Dr. Jesse Negherbon (Dr. Breysse graduate student; NIOSH grant awardee) Kranthi Vysyaraju (Dr. Hartung's graduate student; earned MS degree)
Courses Taught	
2017 – 2018	College of Biomedical Sciences, Larkin University, Miami, FL <u>Summer Term</u> <i>Molecular Genetics</i> (MSB520)
2017 – 2018	College of Biomedical Sciences, Larkin University, Miami, FL Spring Term Medical Biochemistry 2 (MSB502) Immunology (MSB 511)

College of Biomedical Sciences, Larkin University, Miami, FL

Fall Term

Medical Biochemistry 1 (MSB501)

2017 – 2018 Miami Dade College, Miami, FL

Fall Term

General Education Biology (BSC1005, section 1812) Microbiology (MCB2010, section 2001) Microbiology Lab (MCB2010L, sections 1737, 1749)

2016 – 2017 Miami Dade College, Miami, FL Summer Term

General Education Biology (BSC1005, section 1501)
Microbiology Lab (MCB2010L, section 1419)
Microbiology Lab (MCB2010L, section 1441)

Spring Term

General Education Biology (BSC1005, section 1852)

Fall Term

Principles of Microbiology (MCB3023, section 13352) Microbiology Lab (MCB3023L, section 13354)

2015 – 2016 University of Puerto Rico - School of Medicine, San Juan, PR

Principles of Immunology (invited professor)

Miami Dade College, Miami, FL

Summer Term

Principles of Biology 2 (BSC2011, section 1247) Microbiology Lab (MCB2010L, section 1732)

Spring Term

General Education Biology (BSC1005, section 6941) Microbiology Lab (MCB2010L, section 8955)

Fall Term

Intro Biochemistry (BCH3023, section 1988)
General Education Biology (BSC1005, section 2514)
Microbiology Lab (MCB2010L, section 1774)
Microbiology Lab (MCB2010L, section 1777)

2014 – 2015 Miami Dade College, Miami, FL

Summer Term

Microbiology Lab (MCB2010L, section 1773) Microbiology Lab (MCB2010L, section 1774) Microbiology Lab (MCB2010L, section 1775)

Spring Term

General Education Biology (BSC1005, section 3369) Microbiology Lab (MCB2010L, section 2230)

Microbiology Lab (MCB2010L, section 2231)

Fall Term

Intro Biochemistry (BCH3023, section 2546)
Intro Biochemistry Lab (BCB3023L, section 6164)
Microbiology Lab (MCB2010L, section 2226)
Microbiology Lab (MCB2010L, section 2230)

2013 – 2014 Miami Dade College, Miami, FL Summer Term

Microbiology Lab (MCB2010L, section 1732) Microbiology Lab (MCB2010L, section 1764) Microbiology Lab (MCB2010L, section 1766)