

Curriculum Vitae
Félix E. Rivera-Mariani, PhD

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I. Personal Info:

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a. Home:

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b. Work:

College of Arts and Sciences
Lynn University
ASAF 107
3601 N Military Trail
Boca Raton, FL 33431

I. Education

A. Institutional

- 2004 – 2010 **Doctor of Philosophy**, Microbiology and Medical Zoology
Dissertation: *Sensitization to Basidiomycetes and Airborne Fungal Particulate by Asthmatic and Allergic Rhinitis Subjects*
Department of Microbiology, School of Medicine, University of Puerto Rico –
Medical Sciences Campus, San Juan, PR
- 1996 – 2001 **Bachelor of Science**, Biology with Minor in Chemistry
(Attended via Baseball Scholarship)
Southeastern Louisiana University, Hammond, LA

B. Non-Institutional

- 2020 – 2021 **Scholar**, Leading Emerging and Diverse Scientists to Success (LEADS)
Institute for Clinical Research Education, University of Pittsburgh, Pittsburgh, PA.
NIGMS-funded (R25GM116740)
- 2019 – 2020 **Scholar**, Advanced Respiratory Research for Equity (AIRE) of the Programs to
Increase Diversity Among Individuals Engaged in Health-Related Research
(PRIDE), University of Arizona, Tucson, AZ. NHLBI-funded (R25HL126140)
- 2013 – 2014 **Fellowship**, Science Teaching
American Society of Microbiology, Washington, DC
- 2010 – 2013 **Postdoctoral Fellowship**, Environmental Health Sciences
Department of Environmental Health and Engineering, School of Public Health,
Johns Hopkins University, Baltimore, MD

C. Additional Training

- 2019 **Health Disparities: A Translational Research Approach** (Online)
University of Puerto Rico – Medical Sciences Campus
- 2016 – 2017 **Mastering Software Development in R** (5-courses series)
Johns Hopkins University (on www.coursera.org)
- Bioinformatics Specialization** (7-courses series)
University of California – San Diego (on www.coursera.org)
- Genomics Data Science Specialization** (8-courses series)
Johns Hopkins University (on www.coursera.org)
- Executive Data Science Specialization** (5-courses series)
Johns Hopkins University (on www.coursera.org)
- Systems Biology and Biotechnology Specialization** (6-courses series)
Icahn School of Medicine at Mount Sinai (on www.coursera.org)
- Data Science Specialization** (10-courses series)
Johns Hopkins University (on www.coursera.org)
- 2015 **Statistical Reasoning for Public Health I: Estimation, Inference, Interpretation**
Statistical Reasoning for Public Health II: Regression Models
Johns Hopkins University (on www.coursera.org)

II. Work Experience

A. Academic

- 2024 – Present **Associate Professor**, College of Arts and Sciences, Lynn University,
Boca Raton, FL
- 2022 – 2023 **Assistant Scientist**, Division of Environmental and Public Health,
Department of Public Health Sciences, University of Miami, Miller School
of Medicine, Miami, FL
- 2018 – 2022 **Assistant Professor**, College of Biomedical Sciences, Larkin University,
Miami, FL
- 2017 (Aug – Dec) **Adjunct Professor**, College of Biomedical Sciences, Larkin University,
Miami, FL
- 2015 (Jan – May) **Visiting Professor**, Department of Microbiology, School of Medicine,
University of Puerto Rico – Medical Sciences Campus, San Juan, PR
- 2014 **Adjunct Professor**, Keiser University, Pembroke Pines Campus,
Pembroke Pines, FL
- 2014 – 2017 **Adjunct Professor**, College of Natural Sciences, Health and Wellness,
Miami Dade College, Miami, FL

B. Non-Academic

- 2013 – Present **Consultant** in Immunology, Environmental Health, Exposure Science,
Computational Biology, and Data Science
Felix E. Rivera-Mariani PhD LLC (FL #L21000280781, PR #467494)
Fort Lauderdale, FL
website: <https://www.friveram.com>
- 2012 – 2015 **Developmental Editor**, American Journal Experts (subsidiary of
Research Square LLC), Durham, NC
- 2001 – 2004 **Microbiology Analyst**, Environmental Quality Laboratories, Bayamon,
PR

Lynn University

- 2017 – 2018
- Fall Term
- General Education Biology (BSC1005)**
Miami Dade College North Campus
 - Microbiology (MCB2010)**
Miami Dade College Wolfson Campus
 - Microbiology Laboratory (MCB2010L)**
Miami Dade College Wolfson Campus
- 2016 – 2017
- Summer Term
- General Education Biology (BSC1005)**
Miami Dade College North Campus
 - Microbiology (MCB2010)**
Miami Dade College Wolfson Campus
 - Microbiology Laboratory (MSB2010L)**
Miami Dade College Wolfson Campus
- Spring Term
- General Education Biology (BSC1005)**
Miami Dade College North Campus
- Fall Term
- Principles of Microbiology (MCB3023)**
Miami Dade College North Campus
 - Microbiology Laboratory Upper Division (MCB3023L)**
Miami Dade College North Campus
- 2015 – 2016
- Summer Term
- Principles of Biology (BSC2011)**
Miami Dade College Wolfson and North Campuses
 - Microbiology Laboratory (MSB2010L)**
Miami Dade College Wolfson Campus
- Spring Term
- General Education Biology (BSC1005)**
Miami Dade College Wolfson Campus
 - Microbiology Laboratory (MSB2010L, 2 sections)**
Miami Dade College Wolfson Campus
- Fall Term
- Intro to Biochemistry (BCH3023)**
Miami Dade College North Campus
 - General Education Biology (BSC1005)**
Miami Dade College Wolfson Campus
 - Microbiology Laboratory (MSB2010L, 2 sections)**
Miami Dade College Wolfson Campus
- 2014 – 2015
- Summer Term
- Microbiology Laboratory (MSB2010L, 3 sections)**
Miami Dade College Wolfson Campus

Spring Term

General Education Biology (BSC1005)

Miami Dade College North Campus

Microbiology Laboratory MSB2010L (2 sections)

Miami Dade College Wolfson Campus

Fall Term

Intro to Biochemistry (BCH3023)

Miami Dade College North Campus

Intro to Biochemistry Laboratory (BCH3023L)

Miami Dade College North Campus

Microbiology Laboratory MSB2010L (2 sections)

Miami Dade College Wolfson Campus

Microbiology and Forensic Biology

Keiser University, Pembroke Pines Campus

2014

Summer Term

Microbiology and Forensic Biology

Keiser University, Pembroke Pines Campus

Microbiology Laboratory MSB2010L (3 sections)

Miami Dade College Wolfson Campus

IV. Publications, Posters/Oral Presentations, Data Sciences Reports, and Invited Talks

*Mentored trainee (student, postdoctoral fellow, early-career scientist); #Corresponding author

A. Peer-Reviewed

1. Hernández-González X*, **Rivera-Mariani FE**, Méndez L, and Bolaños-Rosero B. Increase in the Susceptibility to Covid-19 During the Fungal Spore Season Among Residents of San Juan and Caguas, Puerto Rico. *Puerto Rico Health Sciences Journal*. 2023. 42(Suppl): 19.
2. Levetin E, Pityn PJ, Ramon GD, Pityn E, Anderson J, Bielory L, Dalan D, Codina R, **Rivera-Mariani FE**, Bolaños-Rosero B. Aeroallergen Monitoring by the NAB: A Review of the Past and a Look into the Future. *J Allergy Clin Immunol In Practice*. 2022. 11(5): 1394-1400.
3. Vélez-Torres L*, Bolaños-Rosero B, Godoy-Vitorino F, **Rivera-Mariani FE**, Maestre J, Kinney KA, Cavallin H. Culture-Based Characterization of Fungal Communities in Homes in San Juan, Puerto Rico following Hurricane Maria. *Peer J*. 2022. 10:e12370.
4. **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*. 2020. 39(3): 235-242.
5. Suárez-Martínez EB, **Rivera-Mariani FE**, Ocasio M, Arroyo G. Microbiome and Respiratory Diseases: A Study Using a Novel Non-invasive Saliva Sample Collection Method. *The FASEB Journal*. 2020. 34 (S1): 1-1.
6. Nawaz J, Pullen F, **Rivera-Mariani FE**, Rizvi SAA, Sánchez-González MA, Grogan T. Spring is Here, Now What? Know the Differences between a Cold, Flu, Coronavirus, and Allergy. *Emerging Infect Dis Diag J*. 2020. EIDDJ-10010.
7. **Rivera-Mariani FE**#, Srour H*, Romenko F*, Bellinger S*, and Stateman A*. Profile of Dendritic Cells Surface Biomarkers In Nasal And Oral Mucosa Of Human Subjects Reactive to grass Pollen and House Dust Mites. *J Immunol*. 2019. 202 (1 Suppl) 55.18.

8. 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.
9. Stateman AJ*, Srour HH*, Baguley JK*, Bellinger SV*, **Rivera-Mariani FE#**. Comparison Between PM2.5 Mevels on East Coast and State of California in Relationship to Asthma. *J Allergy Clin Immunol*. 2019. 143(S2). AB24.
10. 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.
11. 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.
12. **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
13. Gaspar PM, Schreb CA, **Rivera-Mariani FE**. Hydration Status of Assisted Living Memory Care Residents. *J Gerontological Nursing*. 2019. 45(4): 21-29.
14. 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
15. 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*. 2018. 7:1209.
16. **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 Immunol*. 2018 (1 Supp, 44.2).
17. 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.
18. 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.
19. Bose S, **Rivera-Mariani FE**, Chen R, Williams D, Aloe, Belli D, Breyse, PN, Diette G, Hansel N. Domestic Exposure to Endotoxin and Respiratory Morbidity in Former Smokers with COPD. *Indoor Air*. 2016. 26(5): 734-42.
20. 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.
21. 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.

22. 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.
23. 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.
24. **Rivera-Mariani FE**#, Vysyaraju K*, Negherbon J*, Levetin E, Horner WE, Hartung T, Breysse PN. Comparison of the Interleukin-1 β -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.
25. **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.
26. 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.
27. **Rivera-Mariani FE**#, Mihalic JN, Rule AM, Breysse PN. Immunodetection of Airborne (1-3)- β -D-glucan-carrying Particles with the Halogen immunoassay in Occupational Setting. *J Immunol Methods*. 2013. 388: 86-89.
28. **Rivera-Mariani FE**#. Rethinking our Postdoctoral Training. *Postdoctoral Journal*. 2012; 2 (2): 27-29.
29. **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.
30. **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.
31. **Rivera-Mariani FE**# and Bolaños-Rosero B. Allergenicity of Airborne Basidiospores And Ascospores: Need for Further Studies. *Aerobiologia* 2012: 28(2): 83-97.
32. **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.
33. **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.
34. **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.

35. **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.
36. 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.

B. In-Preparation

*Mentored trainee (student, postdoctoral fellow, early-career scientist); #Corresponding author

1. **Rivera-Mariani FE[#]**, Armina-Rodríguez A*, Hernández-Fernández X*, Valdés-Fernández B*, and Vélez-Torres LN*. Debunking the Mentoring Myths: the Good, the Bad, and Myths about Mentoring.
2. Vélez-Torres LN*, Godoy-Vitorino F, Maestre JP, Kinney K, **Rivera-Mariani FE**, Cavallin-Calanche H, and Bolaños-Rosero B. Culture and molecular methods to identify to species-level *Aspergillus* isolates sampled from homes affected in the aftermath of Hurricane Maria in Puerto Rico.
3. Vélez-Torres LN*, **Rivera-Mariani FE**, Godoy-Vitorino F, Maestre JP, Kinney K, Cavallin-Calanche H, and Bolaños-Rosero B. Cytokine profiles in human whole blood exposed to spores from *Aspergillus* isolated from homes affected during Hurricane Maria in Puerto Rico.
4. **Rivera-Mariani FE[#]**, Srour H*, Vélez-Torres LN*, Bolaños-Rosero B, Godoy-Vitorino F, Maestre JP, Kinney K, and Cavallin-Calanche H. Pro-Inflammatory Potential of Household Dust Affected by the Magnitude of Water after Hurricane María in Puerto Rico.
5. **Rivera-Mariani FE[#]**, Srour H*, Vélez-Torres LN*, Bolaños-Rosero B, Godoy-Vitorino F, Maestre JP, Kinney K, and Cavallin-Calanche H. Pro-inflammatory profiles of Puerto Rican and South Florida residents to settled dust from water-damaged households in the aftermath of Hurricane Maria in San Juan, Puerto Rico.
6. Hernández-González X, **Rivera-Mariani FE**, Méndez L, and Bolaños-Rosero B. Peripheral Blood Levels of ACE2 and TMPRSS2 and Susceptibility to COVID-19 among Residents of Caguas and San Juan during the High Fungal Spore Season in Puerto Rico.

C. Posters and Oral Presentations

1. **Rivera-Mariani FE[#]**, Hasan N, Zhao X, Ilarraza G, Noriera S, Balda A, Gallimore-Wilson G, Cruz A, Reyes A, Noriega R, Gomez EV, Samir Desai M, Steinberg T, Lee IA, Awojobi T, Pandey S, Reimon R, Lasday M, Rose B, Beaver C, Carrera O, Suarez del Rosario N, Garibaldi J, Gree AJ, Shaefer-Solle N, Cabán-Martínez A. Risk factors for COVID-19 vaccine side effects among a cohort of Florida essential workers. Poster Presentation. 2023 APHA annual meeting. November, 2023. Atlanta, GA.
2. Gallimore-Wilson G, Hasan N, Zhao X, **Rivera-Mariani FE**, Ilarraza G, Noriera S, Balda A, Gallimore-Wilson G, Cruz A, Reyes A, Noriega R, Gomez EV, Samir Desai M, Steinberg T, Lee IA, Awojobi T, Pandey S, Reimon R, Lasday M, Rose B, Beaver C, Carrera O, Suarez del Rosario N, Garibaldi J, Gree AJ, Shaefer-Solle N, Cabán-Martínez A. Prevalence of long COVID among participants of the Research on the Epidemiology of COVID-19 in Emergency Response and Healthcare Personnel (RECOVER) study, Jun 2022-March 2023. Oral Presentation. 2023 APHA annual meeting. November, 2023. Atlanta, GA.
3. Hernández-González X*, **Rivera-Mariani FE**, and Bolaños-Rosero B,. Outdoor Fungal Spores and the Susceptibility to COVID-19 in Two Municipalities of Puerto Rico. Poster Presentation. American Society for Microbiology, Microbe 2022, Washington, DC.

4. Vélez-Torrez LN*, **Rivera-Mariani FE**, Bolaños-Rosero B. Pro-Inflammatory potential of spores of aspergillus species recovered from water-damaged and flooded homes after Hurricane Maria (2017). Poster Presentation. American Society for Microbiology, Microbe 2022, Washington, DC.
5. **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. Poster Presentation. Society of Toxicology Annual Meeting & ToxExpo 2019. Baltimore, MD.
6. **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. Poster Presentation. *Gordon Research Seminar/Conference Immunology to Fungal Infections*. January 2013. Galveston, TX.
7. **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. Poster Presentation. *International Society for Exposure Science Annual Meeting*, October, 2012. Seattle, WA.
8. **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**.
9. **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.
10. **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.
11. **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.
12. **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.
13. **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.

D. Data Science Reports

1. Applying Data Science Approaches in Biological Sciences Classrooms. Project at Researchgate.com <https://www.researchgate.net/project/Applying-Data-Science-Approaches-in-Biological-Sciences-Classrooms>
2. 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>

3. 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>
4. Shiny Web Application for Word Predictions. <https://rpubs.com/friveramariani/jhdscapstone>

E. Conferences and Invited Talks

1. **STEM Seminar Series, College of Arts and Sciences, Lynn University.** Boca Raton, FL. Faculty Speaker: Breath of Change: Unveiling the Intersection of Blood, the Environment, and Respiratory Health. **January 2023.**
2. **Summer Research Program, Fundación Garcia Rinaldi,** San Juan, PR. Guest Lecture: What to expect in a mentor-mentee relationship. **May 2023.**
3. **Department of Public Health Sciences, Miller School of Medicine, University of Miami. Miami, FL.** Dr. Cabán-Martínez's Lab presentation series: Biological Data Approaches in Environmental Health Studies. **May 2023.**
4. **Department of Microbiology, School of Medicine, University of Puerto Rico – Medical Sciences Campus.** San Juan, PR. Guest Lecture: Microbiology at a glance: from inside and moving beyond the lab to impact communities. **April 2023.**
5. **Ronneberg Lecture Series, Dennison University,** Granville, OH. Guest Lecture: Refining our brand through the sciences: from the bench to “Making the Data Confess.” **March, 2023.**
6. **64th Annual Conference of the Microbiology Society of Puerto Rico,** San Juan, PR. Guest Speaker: From Hurricane Maria to social outreach: when our microbiology goes beyond the bench. **June, 2022.**
7. **Community Health Coalition of Puerto Rico (COSACOPR), San Juan, PR.** Guest Lecture: When our immune system is ready for battle. **August, 2020.**
8. **2019 Annual Biomedical Research Conference for Minority Students,** Anaheim, CA. Workshop session: Deconvoluting disease biomarkers with computational tools. Workshop Title: Computational and system biology to identify biomarkers in environmental health studies: from indoor pollution to the aftermath of Hurricane Maria. **November, 2019.**
9. **School of Civil, Architectural, and Environmental Engineering, University of Texas at Austin,** Austin, TX. Exposure science through human blood: understanding pro-inflammatory exposures through human blood. **October, 2019.**
10. **2019 Annual Conference of the American Academy of Allergy, Asthma, and Immunology.** San Francisco, CA. Oral Presenter: 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. **February, 2019.**
11. **University of Puerto Rico - Ponce Campus.** Ponce, PR. Guest Lecture. “The Interphase of biomedical sciences and data analytics: which one goes first?”. Sponsored by the University of Puerto Rico - Ponce Campus Research Initiative for Scientific Enhancement. **January, 2019.**
12. **AAAS Florida Biomedical Career Symposium.** Jupiter, FL (Scripps Institute). Panelist. Science Education Careers. **January, 2018.**
13. **University of Puerto Rico – Carolina Campus.** Online Workshop: Image analysis in biological sciences (from western blot to data-driven decisions). **June 2017.**

14. **Math and Sciences Specialized High School Thomas Armstrong Toro. Ponce, PR. 2016 and 2017.** Ponce, PR. Workshop. "Doing Science: From Start to Finish". **January 2016 and 2017.**
15. **9th Annual NIH Career Symposium**, Bethesda, Maryland. Panelist. Teaching-intensive careers. **May 2016.**
16. **Department of Microbiology, School of Medicine, University of Puerto Rico – Medical Sciences Campus.** San Juan, PR. Guest Lecture. Immunological intervention to evaluate the human health effects of indoor and outdoor biological and non-biological airborne contaminants. **February 2015.**
17. **Department of Biology, University of Puerto Rico – Bayamon Campus.** Bayamon, PR. Guest Lecture. Immunological intervention to evaluate the human health effects of indoor and outdoor biological and non-biological airborne contaminants. **March 2015.**
18. **Department of Microbiology, College of Medical Sciences, Nova Southeastern University, Davie, FL.** Guest Lecture. A Review of fungi relevant to dentistry. **August 2013.**
19. **National Postdoctoral Association 11th Annual Meeting.** Charleston, SC. Guest Lecture. Postdoc diversity: solution for faculty diversity. Co-presenter with Dr. Jennifer Cohen and Dr. Cara Altimus. Charleston, SC. **March 2013.**
20. **Department of Biology of the College of Sciences and Technology, Southeastern Louisiana University.** Hammond, LA. Guest Lecture. Allergenicity and proinflammatory potential of uncharacterized airborne fungi. **October 2012.**

V. Professional

A. Ongoing Funded Research

Title: Endemic Outdoor Aeroallergens and the Incidence of COVID-19 in Puerto Rico

Funding Agency: Puerto Rico Public Health Trust

PI: Benjamín Bolaños-Rosero

Amount: \$10,000

Role: Collaborator and graduate student mentor

Summary: The objective of this study is to determine the role of outdoor fungal spores, which aeroallergens endemic in the atmosphere of Puerto Rico, in the incidence and immunological susceptibility to COVID-19 in Puerto Rico. Also, this project seeks to demonstrate the utility of an innovative blood microsample approach to determine immunological risks to emerging respiratory health pathogens, such as the SARS-CoV-2 virus. The expected impact of this project is that it will provide data on immunological risks to emerging respiratory health hazards from exposures to endemic biological aerosol.

B. Completed Funded Research

Title: Research on the Epidemiology of SARS-CoV-2 among Essential Response Personnel (RECOVER)

Funding Agency: Center for Disease Control and Prevention

PI: Alberto Cabán-Martínez

Amount: \$3,950,000 (three-year funding)

Role: Lead-Scientist, Co-Investigator

Summary: The objectives of the RECOVER study are to 1) determine the frequency of SARS-CoV-2 virus infection and re-infection and COVID-19 illness among healthcare, first responders, and essential or frontline workers; and 2) estimate the effectiveness of COVID-19 vaccines and interventions. The anticipated impact of this project is that it will help measure the COVID-19 incidence, identify risk factors for infection and manifestation as symptomatic and asymptomatic, describe symptomatology and outcomes of infection and re-infection,

medical-attendance, immune response, examine antibody correlates of protection against SARS-CoV-2 re-infection, duration of viral shedding, and assess knowledge, attitude and practices related to SARS-CoV-2 and COVID-19.

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

Funding Agency: US Department of Housing and Urban Development

Project Number (and PI): HUD126513356

PI: Kerry Kinney

Amount Awarded: \$700,000

Role: Collaborator, *Sub-Award Principal Investigator (\$76,931)*

Summary: The purpose of this study was to evaluate the merits of using a Community Filter Forensics approach for assessing levels of indoor contaminants and pro-inflammatory potential in homes. In the original Filter Forensics HUD study, it was determined that heating, ventilation, and air conditioning (HVAC) filters can serve as integrated, long-term samples of particle-bound contaminants in a cohort of rural homes. Novel relationships were identified between the microbiome and 1) asthma triggers in home HVAC filter dust, and 2) the severity of asthma for children in these homes, including potentially protective exposures. In this follow-up study, the Filter Forensics approach was extended assess housing-related health hazards in a urban cohorts of households across three climate zones in Texas. The impact of this project and the Community Filter Forensic approach was that it allowed efficient collection of data to identify both potentially detrimental and protective home environmental exposures.

Title of Pilot Study: Immune and Epigenetic Signatures Related to Post-Hurricane Maria Indoor Contamination in Puerto Rico

Funding Agency: National Heart, Lung, and Blood Institute

Project Number: R25HL126140

PIs: Joe Garcia, Francisco Moreno, Sairam Parthasarathy

Amount Awarded: \$14688 (Pilot Study under a training within project R25HL126140)

Role: PI of Pilot Study as part of the Advanced Respiratory Research for Equity (AIRE) training program

Summary: The purpose of this study was to determine the immunological and epigenetic signatures that settle dust from homes with different magnitude of water damage from Hurricane Maria in Puerto Rico induced in peripheral blood leukocytes. The impact of this project was it will highlighted the immune and genetic modulating-potential from exposures to increased microbial contamination among Puerto Ricans expose the environmental hazards from Hurricane Maria, and preliminary data to design further studies on how increase indoor multi-pollutant foci affect the immune system of individuals living in areas susceptible to extreme atmospheric events.

Title: Taking a Breath after the Disaster: Homes, Molds, and Health in Puerto Rico after Hurricane Maria

Funding Agency: National Institute of Environmental Health Sciences

Project Number: R21ES029762

PI: Humberto Cavallin-Calanche

Amount Awarded: \$408, 316

Role: Collaborator, *Sub-Award Principal Investigator (\$15,500)*

Summary: The purpose of this study was to immunological and respiratory health risks that long-term water damage to houses in Puerto Rico in the aftermath of Hurricane Maria. The objectives of the study were to 1) characterize the fungal communities present inside and outside water damage and non-flooded (control) homes in Puerto Rico following hurricane Maria and determine the change in these communities during the first two years following the Hurricane; 2) evaluate the pro-inflammatory potential of indoor air samples collected from the

water-damage homes and compare these levels to those in non-flooded (control) study homes and outdoor air; 3) determine the relationship between occupant respiratory health and home characteristics including flood damage as well as the indoor fungal community and pro-inflammatory potential of dust in the homes.

Title: Genetic Susceptibility to Asthma and Indoor Air Pollution in Peru

Funding Agency: National Institute of Environmental Health Sciences

Project Number: 3R01ES018845-04S1

PI: Nadia Hansel

Amount Awarded: \$410, 571

Role: Postdoctoral Collaborator (under Drs. Patrick Breyse and Thomas Hartung)

Summary: The purpose of this was to identify genetic variants associated with asthma and its associated traits (i.e, asthma severity, pulmonary function, airway inflammation) in relation to indoor air pollutant exposures in two Peruvian cities, Lima and Tumbes. The impact of this study was identifying candidate genes for asthma and associated traits relevant to both the general population as well as those contributing to disparities in asthma morbidity among individuals in Peru. Also, by identifying subgroups of the population who are particularly vulnerable to air pollution is an important objective, as the results can be used to identify people most likely to benefit from exposure avoidance.

C. Honors and Travel Awards

- **Minority Scientist Travel Award**, 2019, American Association of Immunologists, Immunology 2019 Annual, San Diego, CA
- **Early Career Faculty Travel Award**, 2018, American Association of Immunologists, Immunology 2018 Annual, Austin, TX
- **Carl Storm Underrepresented Minority Fellowship Travel Award**, 2013, Immunology of Fungal Infections, Gordon Conference, Galveston, TX
- **Lush Prize Young Researcher Award** (\$20,000), 2012, Ethical Consumer Association
- **New Researcher Travel Award**, 2012, International Society for Exposure Science, 22nd Annual Conference, Seattle, WA
- **Domestic Fellows-in-Training Travel Award**, 2012, American Academy of Allergy, Asthma and Immunology, 2012 Annual Meeting, Orlando, FL
- **David Leslie Swift Fund in Environmental Health Engineering** (\$2,000), 2011, Johns Hopkins University Bloomberg School of Public Health
- **Minority Access to Research Careers Travel Award**, 2011, Federation of American Societies for Experimental Biology, Virginia Beach, VA.
- **Young Aerobiologist Award** (\$1,000), 2010, International Association for Aerobiology
- **Fellows-in-Training Travel Award**, 2010, American Academy of Allergy, Asthma and Immunology, 2010 Annual Meeting 2010, New Orleans, LA
- **Latin American Travel Award**, 2010, International Association for Aerobiology, 2010 Annual Meeting, Buenos Aires, Argentina
- **Latin American Travel Award**, 2010, Pan American Aerobiology Association, 2010 Annual Meeting, Kansas City, MO
- **Lanzoni's Student Award**, 2007, Pan American Aerobiology Association, 2007 Annual Conference, State College, PA

D. Editorial and Peer-Review Responsibilities

- Aerobiologia:
 - *Ad Hoc Manuscript Reviewer, 2011 – Present*
- American Association for the Advancement of Science
 - *Session Proposal Reviewer, 2018 – Present*
- American Academy of Allergy, Asthma, and Immunology
 - *Abstract Reviewer, 2020 – Present*
- Annals of Agriculture and Environmental Medicine
 - *Peer-Reviewer, 2017*
- Annual Biomedical Research Conferenced for Minoritized Students
 - *Abstract Reviewer, 2017 – Present*
 - *Posters/Oral Presentations Judge (Computational Biology section), 2017 – Present*
- Conrad Spirit Innovation Challenge
 - *Proposal Reviewer, 2015 – 2021*
- Journal of Postdoctoral Research
 - *Peer-Reviewer and Editor, 2013*
- Johns Hopkins Postdoctoral Association
 - *Quarterly Newsletter Co-Editor, 2012 – 2013*
- SACNAS National Conferences
 - *Abstract Reviewer, 2011 - 2021*
- Sigma Xi Student Research Showcase
 - *Abstract Reviewer, 2013 – Present*
- Society of Toxicology
 - *Ad Hoc Reviewer, Occupational and Public Health Section, 2011 – 2012*

E. Panel Study Sections

- Mentored-to-Independence Study Section, National Blood, Heart, and Lung Institute, **2021 – Present** (Standing Member).
- Developing Hispanic-Serving Institution Program, Department of Education, **2022**.

F. Professional and Honorary Organizations

- American Academy of Allergy, Asthma, and Immunology
 - *Active Member #103773, 2009 – Present*
 - *Aerobiology Committee, 2011 – Present*
 - *Environmental Exposures and Respiratory Health Committee, 2011 – Present*
 - *Microbial Triggers of Diseases Committee, 2019 – Present*
- American Association of Immunologists
 - *Associate Member #00223623, 2011 – Present*
 - *Minority Affairs Committee, 2011 – Present*
- American Association for the Advancement of Science
 - *Member, 2010 – 2021*
- American Society for Microbiology
 - *Active Member #2433006, 2002 – Present*
 - *Mentor, Future Leaders Mentoring Fellowship Program, 2022 - 2023*
- American Society for Biochemistry and Molecular Biology
 - *Active Member #109040, 2024 – Present*
- American Thoracic Society
 - *Full Member #172864, 2018 – Present*

- *Allergy, Immunology, and Inflammation Assembly, 2018 – Present*
- *Environmental, Occupational, and Population Health Assembly, 2018 – Present*
- *Respiratory Cell and Molecular Biology Assembly, 2018 – Present*
- International Society for Exposure Science
 - Full Member #2389, **2021 – Present**
- Society of Toxicology
 - *Active Member, 2011 – Present*
 - *Hispanic Organization of Toxicologists, 2011 – Present*
 - *Immunotoxicology Section, 2011 – Present*

G. University Committees

- Larkin University
 - University Committees
 - *Capital Allocation Planning Committee, 2018 – 2020*
 - *Faculty Affairs Committee, 2018 – 2022*
 - *Inaugural Scientific Forum Organization Committee (Chair, 2018)*
 - *Research Advisory Committee (Chair, 2018 – 2020), (Member, 2018 – 2022)*
 - *Scholarships Committee, 2018 – 2022*
 - Ad-Hoc Committee
 - *Dean Search Committee - College of Biomedical Sciences (Chair, 2020)*
 - College of Biomedical Sciences Committees
 - *Pre-Professional Recommendations Committee (Chair, 2018 – 2022)*

G. Leadership (as graduate student and Postdoc)

- Johns Hopkins Postdoctoral Association
 - *Member, 2011 – 2013*
 - *Professional Development Committee, 2011 – 2013*
- National Postdoctoral Association
 - *Member, 2011 – 2014*
 - *Resources Development Committee, 2011 – 2014*
- Puerto Rico Legislature
 - *Ad Hoc Committee, Law 136 of July 27th, 2006: Regional Medical Academic Centers*
- General Student Council, University of Puerto Rico – Medical Sciences Campus
 - *President, 2005 – 2009*
 - *Academic Senate (ex-officio), 2005-2009*

V. Mentoring

A. Mentees

Career Mentoring		
Names	Years and Mentoring	Stage and Institution (while in career mentoring)
Pamela Thomas	2023 – Present (Financial/Operational Planning for the Center of Biostatistics)	Administrator Ohio State University Center for Biostatistics
Sukeina Nasser, PharmD	2023 – Present (Career Mentor)	Clinical Pharmacist
Bianca Valdés-Fernández, PhD	2020 – Present (Career Mentor)	Faculty Sacred Heart University San Juan, PR

Alexandra Colón-Rodríguez, PhD	2020 – Present (Career Mentor)	Postdoctoral Program Manager Genentech San Francisco, CA
Lorraine N. Vélez-Torres	2023 – Present (Career Mentor)	Postdoctoral Fellow Virginia Commonwealth University UPR Comprehensive Cancer Center
Ian Caraballo-Rivera	2023 – Present (Career Mentor)	Barber Hill High School, Mont Belvieu, TX
Adriana Caraballo-Rivera	2023 – Present (Career Mentor)	Transition from Community College to University

Graduate and Undergraduate Students			
Name	Degree Sought	Project Mentored	Institution
Albersy Armina-Rodríguez	PhD	2020 – Present (Science Communication)	Vistazo A La Ciencia LLC
Andrea Semidei-Rodríguez	BS	2021 – Present (Science Communication)	Vistazo A La Ciencia LLC
Lorraine N. Vélez-Torres	PhD	2018 – 2023 (Thesis Committee)	Dept. of Microbiology, University of Puerto Rico Medical Sciences Campus
Xaymara Hernández-González	MS	2020 – 2023 (Thesis Committee)	Dept. of Microbiology, University of Puerto Rico Medical Sciences Campus
Ana Pérez	MS	2021 (Lab Mentoring)	College of Biomedical Sciences, Larkin University
Brie Perdue	MS	2021 (Lab Mentoring)	College of Biomedical Sciences, Larkin University
Chevine Johnson	MS	2021 (Lab Mentoring)	College of Biomedical Sciences, Larkin University
Christian Ramos	MS	2021 (Lab Mentoring)	College of Biomedical Sciences, Larkin University
Henna Patel	MS	2021 (Lab Mentoring)	College of Biomedical Sciences, Larkin University
Karoline Alves	MS	2021 (Lab Mentoring)	College of Biomedical Sciences, Larkin University
Krystal Ramsaran	MS	2021 (Lab Mentoring)	College of Biomedical Sciences, Larkin University
Stevanie Robinson	MS	2021 (Lab Mentoring)	College of Biomedical Sciences, Larkin University
Summer Paris Vanitvelt	MS	2021 (Lab Mentoring)	College of Biomedical Sciences, Larkin University

<i>Donna Oh</i>	<i>MS</i>	<i>2019 – 2020 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Nicole Benavides</i>	<i>MS</i>	<i>2019 – 2020 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Shana Zadron</i>	<i>MS</i>	<i>2019 – 2020 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Kylie Dagio</i>	<i>MS</i>	<i>2019 – 2020 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Adria Guajardo</i>	<i>MS</i>	<i>2019 – 2020 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Bhavik Patel</i>	<i>MS</i>	<i>2019 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Tanha Rahman</i>	<i>BS</i>	<i>2019 (Summer Internship)</i>	Nova Southeastern University
<i>Naziba Nuha</i>	<i>BS</i>	<i>2019 (Summer Internship)</i>	Nova Southeastern University
<i>Summer Pellechio</i>	<i>MS</i>	<i>2019 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Hyatt Srour</i>	<i>MS</i>	<i>2018 – 2020 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Ruslan Fomenko</i>	<i>MS</i>	<i>2018 – 2019 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Shandra Bellinger</i>	<i>MS</i>	<i>2018 – 2019 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Ariel Stateman</i>	<i>MS</i>	<i>2018 – 2019 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Josh Baguley</i>	<i>MS</i>	<i>2018 – 2019 (Lab Mentoring)</i>	College of Biomedical Sciences, Larkin University
<i>Isabelita Martínez</i>	<i>MS</i>	<i>2015 – 2018 (Thesis Committee)</i>	Dept. of Microbiology, University of Puerto Rico Medical Sciences Campus
<i>Frances Vilá-González</i>	<i>MS</i>	<i>2014 – 2017 (Thesis Committee)</i>	Dept. of Microbiology, University of Puerto Rico Medical Sciences Campus
<i>Angélica M. Rivera</i>	<i>BS</i>	<i>2014-2015 (RISE Awardee)</i>	Ana G. Méndez Universidad del Este
<i>Jesse Negherbon</i>	<i>PhD</i>	<i>2011 – 2013 (Lab Mentoring)</i>	Johns Hopkins University Bloomberg School of Public Health
<i>Kranthi Vysyaraju</i>	<i>MS</i>	<i>2011 – 2013 (Lab Mentoring)</i>	Johns Hopkins University Bloomberg School of Public Health