

# Francheska López Rivera

francheskalopezrivera@gmail.com

## Education

### Harvard University

PhD Candidate, Biological and Biomedical Sciences  
Advisor: Dr. Fred Winston

Cambridge, MA

Expected date:  
May 2021

### University of Puerto Rico-Río Piedras

Bachelor of Environmental Design (Architecture)  
Second Concentration in Integrative Biology  
*magna cum laude*

San Juan, PR

June 2013

## Experience with Illustration/Animation Programs

2D: Adobe Illustrator, Adobe Photoshop, Autodesk AutoCAD

3D: Autodesk Maya, Autodesk 3DS Max, Adobe After Effects, Google SketchUp

## Honors and Scholarships

- Biomedical Science Careers Program Hope Scholarship 2018-present
- Ford Foundation Pre-Doctoral Fellowship 2017-present
- Harvard GSAS Professional Development Fund 2018
- Albert J. Ryan Fellowship 2018
- Harvard Biological and Biomedical Sciences PhD Program in Genetics and Genomics NIH Training Grant 2016-2017
- Member of the Golden Key International Honour Society 2012-present
- Scholarship for Children of Members of the Government of Puerto Rico Employees Association (AEELA) 2012
- Honor Enrollment at the University of Puerto Rico, Río Piedras 2007-2012
- The Puerto Rico Louis Stokes Alliance for Minority Participation (PR-LSAMP), Summer Undergraduate Research Opportunity 2011
- Honors at the School of Architecture at the University of Puerto Rico, Río Piedras, Dean's List 2006-2011
- The National Science and Mathematics Access to Retain Talent Grant (SMART) 2008-2009
- Academic Competitiveness Grant (ACG) 2006-2008

## Research Experience

### Harvard Medical School

PhD Candidate, Biological and Biomedical Sciences  
Advisor: Dr. Fred Winston

Boston, MA

Expected date:  
May 2021

- Study the function of the essential protein Spn1 in *Saccharomyces cerevisiae* using genetics, molecular biology, and genomics

### Harvard Medical School

Post-Baccalaureate Student, Harvard GSAS Research Scholar Initiative  
Advisor: Dr. Angela DePace

Boston, MA

2013-2015

- Studied the effect of binding site mutations in the *even-skipped* stripe 2 enhancer of the *Drosophila melanogaster* embryo

**University of Puerto Rico-Río Piedras**

Undergraduate Research Student

Advisor: Dr. Carlos I. González

- Used *Saccharomyces cerevisiae* to study the role of the phosphoprotein Upf2 in nonsense-mediated mRNA decay

San Juan, PR

Fall 2012

**Massachusetts Institute of Technology**

Summer Research Student, MIT Summer Research Program in Biology

Advisor: Dr. Wendy Gilbert

- Studied the possible autoregulatory function of the ribosomal protein Rack1 in *Saccharomyces cerevisiae*

Cambridge, MA

Summer 2012

**University of Puerto Rico-Río Piedras**

Undergraduate Research Student

Advisor: Dr. Carla Restrepo

- Elaborated a protocol to prepare increment core samples from tropical tree species
- Digitized landslides in high resolution images using GIS software tools

San Juan, PR

2011-2012

**Publications**

Vincent BJ, Staller MV, Lopez-Rivera F, Bragdon MDJ, Pym ECG, *et al.* (2018) Hunchback is counter-repressed to regulate *even-skipped* stripe 2 expression in *Drosophila* embryos. *PLOS Genetics* 14(9): e1007644. <https://doi.org/10.1371/journal.pgen.1007644>

Vincent BJ, Scholes C, Staller MV, Wunderlich Z, Estrada J, Park J, Bragdon MD, Lopez Rivera F, Biette KM, DePace AH. (2015). Yearly planning meetings: individualized development plans aren't just more paperwork. *Mol Cell*, 58(5), 718-721.

Vincent BJ, Lopez-Rivera F, Park J, Staller M, Bragdon M, Wunderlich Z. (2015). Protocol: Visualizing Gene Expression. *Method Quarterly*, <http://www.methodquarterly.com/2015/02/protocol-visualizing-gene-expression/>

**Presentations**

**López Rivera F, Spatt D, Winston F. Genetic Analysis of the Essential Transcription Factor Spn1 in *Saccharomyces cerevisiae* (poster)**

- Harvard Medical School Department of Genetics Retreat
- Harvard Medical School Department of Genetics Retreat (poster award)
- 18th New England Science Symposium

Feb. 2020, MA

Feb. 2019, MA

April 2019, MA

**López Rivera F, Spatt D, Winston F. Genetic Analysis of the Essential Transcription Factor Spn1 in *Saccharomyces cerevisiae***

Harvard Medical School Department of Genetics Data/Journal Club

Nov. 2018, MA

**López Rivera F, Spatt D, Winston F. Elucidating the Function of the Essential Protein Spn1 in Transcription and Chromatin Organization.**

Albert J. Ryan Fellows Retreat May 2018, NH

**López Rivera F, Spatt D, Winston F. Elucidating the Function of the Essential Protein Spn1 in Transcription and Chromatin Organization (poster)**

- 17th New England Science Symposium Apr. 2018, MA  
Ruth and William Silen M.D. Award in the category of “Microbiology, Immunology, Genetics, or Molecular Biology” (2nd place)
- Ford Foundation Fellowship Conference May 2018, DC
- Program in Genetics and Genomics G4+ Symposium May 2018, MA

**López Rivera F, Wunderlich Z, Bragdon M, DePace A. Flanking sequences compensate for mutations in *Drosophila melanogaster* minimal enhancers (poster)**

- 13th New England Science Symposium Apr. 2014, MA  
The Beth Israel Deaconess Medical Center Department of Neonatology Award (outstanding neonatology-related poster presentation)
- 2nd Ivy Plus Symposium Mar. 2014, MA

**López F, Restrepo C. The Application of Dendrochronological Techniques in Tropical Tree Species**

32nd Puerto Rico Interdisciplinary Scientific Meeting (PRISM) Mar. 2012, PR

## Teaching Experience

**Harvard Medical School**

Fall 2016, MA

Principles of Molecular Biology Teaching Assistant

- Led six discussion sections throughout the semester, which consisted of group discussions or students chalk talks that answered experimental design questions about topics in molecular biology
- Graded problem sets, worksheets, and student chalk talks
- Attended all BCMP 200 lectures during the semester
- Took a pedagogy course (BBS 301) as part of the teaching experience

**Centro de Acción Urbana, Comunitaria y Empresarial (CAUCE)**

Jan.-Jun. 2013, PR

Math tutor for high school students

- Assisted math and art teachers who tutored high school students after school hours
- Reviewed basic math, geometry, and statistics with students
- Assisted math, art, and physical education teachers in a summer camp

## Leadership and Volunteering

**Leadership positions**

- Vice President of the Harvard Puerto Rican Student Association (HPRSA) 2019-present  
Harvard-wide student group
- Co-President and co-Founder of the Harvard Puerto Rican Student Association 2018-2019  
(HPRSA) Harvard-wide student group
- Peer Mentor Coordinator of the Harvard Medical School Summer Honors Summer 2018  
Undergraduate Research Program

### **Talks and mentoring**

- Talk to seniors at Carvin High School in Carolina, PR Sept. 2019
- Volunteer at 2019 Ivy Plus Puerto Rico Graduate Student Fair Sept. 2019
- Talk to High School Students from the Acton-Boxborough High School, MA 2017-2019
- Volunteer at the Harvard Biological and Biomedical Sciences PhD Program Student Recruitment Diversity Breakfast Jan., Feb. 2019
- Student Panelist at the Biomedical Science Careers Conference Skills Workshops for College and High School Students Nov. 2018
- Student Panelist at Sociedad Latina Education Events Jul., Nov. 2018
- High school student's research mentor, Dr. Fred Winston's lab Aug. 2017
- Peer Mentor at the Harvard Medical School Summer Honors Undergraduate Research Program Summer 2017
- Volunteer at Harvard Medical School Explorations Program Oct. 2014

### **Additional volunteering**

- Volunteer at the *I love Science* Family Festival Feb. 2018
- Spanish-English translator and slideshow maker at International House of Glory, Framingham, MA 2017-present