

Efraín E. Rivera-Serrano, Ph.D.

Department of Microbiology & Immunology – University of North Carolina at Chapel Hill

Research Associate in Molecular Virology, Writer, and Science Communicator

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EMPLOYMENT

- 11/2019 – **Research Associate (Focus: Virology/Cell Biology), University of North Carolina at Chapel Hill**
current Advisor: Craig Cameron, Ph.D.
- 11/2018 – **Postdoctoral Scholar (Focus: Virology/Cell Biology), University of California, Davis**
8/2019 Research: *Development of a synthetic gRNA-based CRISPRi system for transcriptional inhibition*
Advisor: Priya Shah, Ph.D.
- 1/2017 – **Postdoctoral Fellow (Focus: Molecular Virology), University of North Carolina at Chapel Hill**
10/2018 Research: *Mechanisms of cellular entry and egress of quasi-enveloped hepatitis A virus.*
Advisor: Stanley Lemon, M.D.

EDUCATION

- 2012 – **Ph.D. in Biomedical Sciences (Focus: Cell Biology/Virology), North Carolina State University**
2016 Dissertation: *Cardiac cell type-specific antiviral responses and mechanisms of viral antagonism of cellular innate responses.*
Advisor: Barbara Sherry, Ph.D.
- 2009 – **M.Sc. in Plant Cell Biology and Biotechnology, North Carolina State University**
2012 Thesis: *Chemical genetic approaches for the study of tonoplast protein trafficking in Arabidopsis.*
Advisor: Marcela Rojas-Pierce, Ph.D.
- 2005 – **B.Sc. in Biology & Chemistry, Pontificia Universidad Católica de Puerto Rico, Ponce, PR**
2009 *Summa Cum Laude*

RESEARCH EXPERIENCE

- 11/2019 – **Research Associate, Department of Microbiology & Immunology, UNC-Chapel Hill**
current • Studying the molecular biology of respiratory RNA viruses.
- 11/2018 – **Postdoctoral Research Associate, Department of Microbiology & Molecular Genetics, UC-Davis**
8/2019 • Developed a synthetic gRNA-based platform for transient transcriptional inhibition of host genes to identify antiviral and/or proviral genes during flavivirus infection.
- 1/2017 – **Postdoctoral Research Fellow, Department of Microbiology & Immunology, UNC-Chapel Hill**
10/2018 • Characterized the cellular entry and uncoating pathways for naked and quasi-enveloped hepatitis A virions (*Rivera-Serrano et al, 2019, eLife*).
• Collaborated in the characterization of how hepatitis A virus acquires its quasi-envelope during viral egress, the proteomic composition of this envelope, and intrinsic immune responses against RNA viruses (multiple publications).
- 5/2012 – **Graduate Research Assistant, Department of Molecular Biomedical Sciences, NCSU**
12/2016 • Characterized the molecular mechanism that determines high basal expression of the antiviral cytokine interferon- β in cardiomyocytes (*Rivera-Serrano et al, 2017, J Mol Cell Cardiol*).
• Demonstrated that the magnitude of activation of the transcription factor NF- κ B in the heart is cardiac cell type-specific (*Rivera-Serrano and Sherry, 2017, Virol*).
• Identified and characterized a novel role for the mRNA splicing factor SRSF2 in antiviral responses and its antagonism by a viral protein (*Rivera-Serrano et al, 2017, J Virol*).

- Extensive experience in mammalian tissue culture, confocal microscopy, quantitative microscopy, generation of primary cultures, immunofluorescence, *in situ* proximity ligation assays, viral infections, viral replication assays, nucleic acid transfections, SDS-PAGE, co-immunoprecipitations (co-IPs), immunoblotting, qRT-PCR, siRNA-mediated gene knock-down, RNA FISH, bioinformatics.
- 5/2009 – **Graduate Research Assistant, Department of Plant Biology, NCSU**
- 4/2012
- Performed a confocal microscopy-based screen and identified and characterized the bioactivity of a small chemical inhibitor of protein trafficking, which provided the first *in planta* evidence for the existence of two distinct targeting routes for the intracellular targeting of vacuolar membrane proteins in Arabidopsis (Rivera-Serrano et al, 2012, PLoS ONE).
 - Experience in plant tissue culture, confocal microscopy, nucleic acid and protein extraction, microsome isolation, yeast-2-hybrid screens, plant transformation, cloning, PCR, RT-PCR, SDS-PAGE, bioinformatics, genome mapping, wet chemistry, UV-vis spectroscopy, HPLC, and high-throughput chemical genomics screens.
- 5/2008 – **Undergraduate Research Intern, Department of Microbiology, NCSU**
- 8/2008
- Involved in the cloning and expression of genes from the yeast *Sporobolomyces singularis* into *Escherichia coli* for large-scale production of β -galactosidase-like enzymes.
 - Experience in bacterial transformation, protein expression, and protein purification.
- 12/2007 – **Undergraduate Research Assistant, Department of Biology, PUCPR**
- 5/2009
- Studied the effects of natural plant products on glucose uptake in mammalian cells.
 - Experience in mammalian tissue culture, purification of plant extracts, and spectroscopy.

PUBLICATIONS (Click [here](#) for link to PubMed)

- [13] Li C, Shi J, Wang H, **Rivera-Serrano EE**, Yang D, Zhou G, Sun C, Cameron EE, Yu L. (**Submitted**) Polymerase fidelity contributes to foot-and-mouth disease virus pathogenicity and transmissibility in vivo.
- [12] **Rivera-Serrano EE**, Gizzi AS, Arnold JJ, Grove TL, Almo, SC, Cameron EE. (**2020**) Viperin reveals its true function. *Annu Rev Virol*. DOI: 10.1146/annurev-virology-011720-095930
- [11] Kong W, **Rivera-Serrano EE**, Neidleman JA, Zhu J. (**2019**) HIV-1 replication benefits from the RNA epitranscriptomic code. *J Mol Biol*. 431(24):5032-5038
- [10] Yamane D, Feng H, **Rivera-Serrano EE**, Selitsky SR, Hirai-Yuki A, Das A, McKnight KL, Misumi I, Hensley L, Lovell W, González-López O, Suzuki R, Matsuda M, Nakanishi H, Ohto-Nakanishi T, Hishiki T, Wauthier E, Oikawa T, Morita K, Reid LM, Sethupathy P, Kohara M, Whitmire JK, Lemon SM. (**2019**) Basal expression of interferon regulatory factor 1 drives intrinsic hepatocyte resistance to multiple RNA viruses. *Nat Microbiol*. 4(7): 1096–1104
- [9] Li Y, Wang L, **Rivera-Serrano EE**, Chen X, Lemon SM. (**2019**) TNRC6 proteins modulate hepatitis C virus replication by spatially regulating the binding of miR-122/Ago2 complexes to viral RNA. *Nucleic Acids Res*. 9;47(12):6411-6424
- [8] **Rivera-Serrano EE**, González-López O, Das A, Lemon SM (**2019**). Cellular entry and uncoating of naked and quasi-enveloped human hepatoviruses. *eLife*. 8:e43983
- [7] González-López O, **Rivera-Serrano EE**, Hu F, Hensley L, McKnight KL, Ren J, Stuart DI, Fry EF, Lemon SM. (**2018**) Redundant late domain functions of tandem VP2 YPX₃L motifs in cellular egress of quasi-enveloped hepatitis A virus. *J Virol*. 92(23): e01308-18
- [6] McKnight KL, Xie L, González-López O, **Rivera-Serrano EE**, Chen X, Lemon SM. (**2017**) Protein composition of the hepatitis A virus quasi-envelope. *Proc Natl Acad Sci USA*. 114(25): 6587-6592
- [5] **Rivera-Serrano EE**, DeAngelis N, Sherry B. (**2017**) Spontaneous activation of a MAVS-dependent antiviral signaling pathway determines high basal interferon- β expression in cardiac myocytes. *J Mol Cell Cardiol*. 111: 102-113

• **Selected for Journal Cover (Volume 111, October 2017)**

[4] **Rivera-Serrano EE**, Fritch EJ, Scholl EH, Sherry B. (2017) A cytoplasmic RNA virus alters the function of the cell splicing protein SRSF2. *J. Virol.* 91(7): e02488-16

• **Selected by the Editors as a 'JVI Spotlight' article; Selected for Journal Cover (Volume 91, Issue 9)**

[3] **Rivera-Serrano EE** and Sherry B. (2017) NF- κ B activation is cell type-specific in the heart. *Virology.* 502: 133-143

[2] Stebbing RE, Irvin SC, **Rivera-Serrano EE**, Boehme KW, Ikizler M, Yoder JA, Dermody TS, Sherry B. (2014). An ITAM in a nonenveloped virus regulates activation of NF- κ B, induction of beta interferon, and viral spread. *J Virol.* 88(5): 2572-2583

[1] **Rivera-Serrano EE**, Rodriguez-Welsh MF, Hicks GR, Rojas-Pierce M. (2012) A small molecule inhibitor partitions two distinct pathways for trafficking of tonoplast intrinsic proteins in Arabidopsis. *PLoS ONE.* 7(9): e44735

RESEARCH PRESENTATIONS (selected)

Rivera-Serrano EE (2019) Through the looking glass: Illuminating the Micro-World to Understand Viral Infections. University of Oregon. Eugene, OR (Invited Seminar)

Rivera-Serrano EE (2019) Through the looking glass: imaging virus-cell interactions. Pennsylvania State University. College Park, PA (Invited Seminar)

Rivera-Serrano EE (2018) From tries to touchdowns: imaging virus-cell interactions. University of California, Davis. Davis, CA (Invited Seminar)

Rivera-Serrano EE, González-López O, Lemon SM. (2018) Distinct cellular entry pathways for naked and quasi-enveloped hepatitis A virions. *37th Annual American Society for Virology Meeting.* College Park, MD (Oral)

Rivera-Serrano EE, González-López O, Staring J, Brummelkamp TR, and Lemon SM. (2018) Distinct cellular entry pathways for naked and quasi-enveloped hepatitis A virions. *European Congress on Picornavirus Research ('Europic') 2018.* Egmond aan Zee, the Netherlands (Oral and Poster)

Rivera-Serrano EE (2018) One hundred(ish) years of solitude – a molecular arms race between viruses and their host. *Science Week and XVI Scientific Research Symposium.* Pontifical Catholic University of Puerto Rico. Ponce, Puerto Rico (Invited Seminar)

Rivera-Serrano EE, Fritch EJ, and Sherry B. (2016) The mRNA splicing factor SRSF2 is involved in the host interferon antiviral response and it is antagonized by a viral protein. *NCSU College of Veterinary Medicine Annual Research Forum.* Raleigh, NC (Poster; received "**Award of Excellence – First Prize Poster Presentation**")

Rivera-Serrano EE, and Sherry B. (2015) MAVS abundance and subcellular localization is a determinant of high basal expression of interferon- β in cardiac myocytes. *NCSU College of Veterinary Medicine Annual Research Forum.* Raleigh, NC (Oral)

Rivera-Serrano EE, and Sherry B. (2015) Novel subcellular NF- κ B location is associated with basal expression of interferon- β in cardiac myocytes. *34th Annual American Society for Virology Meeting.* Ontario, Canada (Oral)

Rivera-Serrano EE, and Sherry B. (2015) MAVS abundance and subcellular localization is a determinant of basal expression of interferon- β in cardiac myocytes. *Duke Innate Immunity Group Symposium - Innate Immunity, Inflammation and Disease.* Durham, NC (Poster)

Rivera-Serrano EE, and Sherry B. (2015) MAVS abundance and subcellular localization is a determinant of basal expression of interferon- β in cardiac myocytes. *10th Annual NC State University Graduate Student Research Symposium.* Raleigh, NC (Poster)

Rivera-Serrano EE, and Sherry B. (2013) TRAF3, an adaptor required for induction of interferon, is spontaneously activated in cardiac myocytes and sequestered in viral factories during reovirus infection. *32nd Annual American Society for Virology Meeting.* University Park, PA (Oral)

Rivera-Serrano EE, and Sherry B. (2012) TRAF3, an adaptor required for induction of interferon, is sequestered in viral factories in reovirus-infected cells. *11th International Symposium on Double-Stranded RNA Viruses.* San Juan, Puerto Rico (Poster; received "**Outstanding Poster Award**")

Rivera-Serrano EE, and Sherry B. (2012) Reovirus represses the cell protective interferon response by sequestering cell factors in viral factories. *2012 Molecular Biotechnology Training Program Research Symposium*. Raleigh, NC (Oral and Poster)

Rivera-Serrano EE (2012) Chemical genetic approaches for the study of tonoplast protein trafficking in Arabidopsis. *NCSU Plant Biology Department Seminar*. Raleigh, NC (Seminar)

Rivera-Serrano EE, Rodriguez-Welsh MF, Hicks GR, Raikhel NV, Rojas-Pierce M. (2011) Chemical genomics identifies inhibitors of a Golgi-independent pathway for tonoplast proteins in Arabidopsis. *2011 Molecular Biotechnology Training Program Research Symposium*. Raleigh, NC (Poster; received “**Best Poster Presentation Award**”)

Rivera-Serrano EE, Rodriguez-Welsh MF, Hicks GR, Raikhel NV, Rojas-Pierce M. (2011) Chemical genomics identifies inhibitors of a Golgi-independent pathway for tonoplast proteins in Arabidopsis. *22nd International Conference on Arabidopsis Research*. Madison, WI (Poster)

Rivera-Serrano EE, Rodriguez-Welsh MF, Hicks GR, Raikhel NV, Rojas-Pierce M. (2011) Tonoplast proteins are targeted to the vacuole membrane via multiple pathways in Arabidopsis. *6th Annual NCSU Plant Biology Graduate Student Symposium*. Raleigh, NC (Oral)

Rivera-Serrano EE*, Ananthakrishnan S*, Bruno-Bárcena JM. (2008) Cloning of the β -galactosidase-like gene (*BglA*) from *Sporobolomyces singularis* into *Escherichia coli* and *Pichia pastoris*. *17th Annual NC State Undergraduate Research Symposium*. Raleigh, NC (Poster; *co-first authors)

SCIENCE COMMUNICATION AND OUTREACH

Published Blogs & Opinion articles

- 2020 ‘Debunking misinformation during a pandemic through storytelling’, BioTechniques (**Invited**) <https://www.biotechniques.com/general-interest/debunking-misinformation-during-a-pandemic-through-storytelling/>
- 2019 ‘Breaking the silence: talking about mental health in graduate education’, BioTechniques (**Invited**) <https://www.biotechniques.com/opinion/breaking-the-silence-talking-about-mental-health-in-graduate-education/>
- 2020 ‘Preguntas comunes sobre los virus’, Ciencia Puerto Rico (blog in Spanish [here](#))
- 2019 ‘Hashtag SciComm: How Social Media Platforms Are Shaping the Future of Science’, PLoS SciComm. (**Invited** Blog Post, article link [here](#))
- 2019 – current Twitter Fellow for the Molecular Biology of the Cell (MBoC) Journal (Tweets from @MBoCJournal)
- Responsible for managing the Twitter® social media page for MBoC
- 2016 ‘Photographing the Invisible’, *Verve: the NCSU Postdoc Magazine*. (**Invited** Article + Cover) <https://grad.ncsu.edu/research/opa/verve/fall2016/photographing-the-invisible/>

News Outlets (COVID-19 service)

- 2020 Quoted in ‘Is 6 feet far enough for social distancing? Here’s what science says’ by Isabella Isaac-Thomas for **PBS NewsHour** (04.28.2020, article link [here](#))
- 2020 Quoted in ‘What we know about the coronavirus model the White House unveiled’ by Denise Chow for **NBC News** (04.01.2020, article link [here](#))
- 2020 Quoted in ‘Everything you need to know about cleaning public surfaces in a pandemic’ by Dr. Katherine J. Wu for **PopSci** (03.16.20, article link [here](#))

Workshops & Presentations (Facilitated or Panelist)

- 2020 ‘Managing challenges, struggles & uncertainty in Academia,’ Memorial Sloan Kettering and the Postdoctoral Association (**Invited** Panelist, 5/27/20)
- 2020 ‘La Importancia de Mentores en Tiempos Dificiles’, SACNAS UPR-RP (**Invited** Panelist, 5/13/2020)
- 2020 NPR Joe’s Big Idea Community Outreach Mentor Chat (**Invited** Speaker [online webinar 03.18.20])

- 2020 ‘Exactly the same, but different – using our scientific interests to design science communication strategies’, Duke University SciComm Lunch & Learn Series (**Invited** Speaker)
- 2019 Inclusive SciComm Workshop Participant (**Invited**), SACNAS Annual Meeting, Honolulu, HI
- 2019 ‘A Logic of Diversity: Applying Virological Concepts to Solve Social Problems’, University of Oregon, USA (**Invited** Seminar Speaker)
- 2019 ‘Getting Published’ Virtual Panel, Yale Ciencia Academy (**Invited** Panelist, July 11th, 2019)
- 2019 ‘Hashtag SciComm: How Social Media Platforms Are Shaping the Future of Science’, University of California, Davis, USA. (**Invited** Speaker)
- 2016 ‘Exploring the Micro-World: Where Science Meets Art’, NC State University. (**Invited** Speaker)
- 2016 ‘Cultivating Cultures of Ethics in STEM: Comparing Meanings of Responsible Innovation across Bioengineering Communities’, The Genetic Engineering and Society (GES) Center at NC State University. (Focus Group Co-Moderator)

Podcasts & Videos

- 2020 ‘Skype A Scientist Live – *Viruses*’ (with Dr. Sarah McNulty, online 04.21.20 – recorded video [here](#))
- 2020 ‘All Things Microscopic: Scientists Tell Us About Their Research!’ (STEM Uncovered with Dr. Esther – YouTube video [here](#))
- 2020 The Science Pawdcast, Season 2, Episode 8 – *Viruses* (Apple Podcast March 2020 – recording [here](#))

FELLOWSHIPS, AWARDS, & RECOGNITIONS

- 2019 Kavli Foundation Scholarship – to attend SACNAS 2019 Annual Meeting, Honolulu, Hawai’i
- 2019 Chan Zuckerberg Foundation – to attend #InclusiveSciComm 2019 Symposium in Rhode Island
- 2019 Invited professional interview, Journal of Cell Biology, DOI: [10.1083/jcb.201907120](https://doi.org/10.1083/jcb.201907120)
- 2019 Invited professional interview, eLife Journal: <https://elifesciences.org/interviews/1d196599/efrain-rivera-serrano>
- 2019 Our article on entry and uncoating of hepatitis A virus was discussed on the science podcast “This Week in Virology (TWiV)”, Episode 541: <http://www.microbe.tv/twiv/twiv-541/>
- 2018 37th Annual American Society for Virology (ASV) Meeting Postdoctoral Travel Award (\$500)
- 2017 UNC-CH/NIH T32 Infectious Disease Pathogenesis Postdoctoral Institutional Training Grant, (NIH AI007151-39), “Cellular entry of naked and quasi-enveloped hepatitis A virus (HAV)”
- 2017 Our article on basal interferon production in cardiomyocytes showcased in the ‘NC State University News’: <https://news.ncsu.edu/2017/09/sherry-mavs/>
- 2016 Featured as an NCSU ‘Spotlight Story’ highlighting the use of fluorescence microscopy to address biological questions. <https://cvm.ncsu.edu/in-living-color/>
- 2016 First Prize Award of Excellence, Poster Presentation at the NC State University College of Veterinary Medicine Research Forum
- 2016 Student Fellow, *Cultivating Cultures of Ethics in STEM: Comparing Meanings of Responsible Innovation Across Bioengineering Communities*, The Genetic Engineering and Society (GES) Center at NCSU (\$3,000)
- 2016 Honorable Mention, *NC State University Research Image Contest* – Microscopy Category
- 2014 Featured as one of “30 Male Scientists of Color That You Should Know”; by Dr. Lewis and Dr. Fullilove, American Chemical Society Diversity eBrief
- 2013 Graduate Student of the Month (November), College of Veterinary Medicine; NCSU

2013	32 nd Annual American Society for Virology (ASV) Meeting Student Travel Award (\$500)
2013	Alliances for Graduate Education and the Professoriate (AGEP) Supplemental Fellowship (\$450)
2012	Outstanding Poster Award, 11 th International Symposium on dsRNA Viruses Meeting
2012	NCSU College of Veterinary Medicine Graduate Student Association Travel Award (\$500)
2012	11 th International Symposium on dsRNA Viruses Meeting Travel Award; NIH-NIAID (\$625)
2011	Best Poster Presentation Award, 2011 Molecular Biotechnology Training Program Research Symposium; NCSU
2011	NCSU Graduate School Diversity Enhancement Grant (\$800)
2010	Graduate Assistance in Areas of National Need (GAANN) Fellowship in Biotechnology; Department of Education (approx. \$60,000 + tuition)
2009	NCSU Graduate School Diversity Enhancement Grant (\$3,000)
2009	Initiative for Maximizing Student Diversity (IMSD) Scholarship; NIH (approx. \$19,000 + tuition)
2009	Alliances for Graduate Education and the Professoriate (AGEP) Initial Summer Research (ISR) Scholarship; NSF (\$6,000)
2009	Highest GPA in the Department of Biology Award – PUCPR Class of 2009
2009	Intramural NIAID Research Opportunities (INRO) Program – Participant; NIH
2009	Alliances for Graduate Education and the Professoriate (AGEP) Summer Research Experience (SRE) Scholarship; NSF (\$4,000)
2007	Puerto Rico - Louis Stokes Alliances for Minority Participation (LSAMP) Scholarship (\$1,580)

TEACHING AND MENTORING EXPERIENCE

I. Classroom Teaching Experience

Spring 2020	Discussion facilitator and laboratory coordinator – Nicaraguan Emerging and Endemic Diseases (NEED) Virology Module for Ph.D. students (NEED-D43, National Autonomous University of Nicaragua at León, 10 days, English & Spanish, evaluations available)
Winter 2020	Guest Lecturer – Communicating Science through Social Media (UC Davis, ANB290)
Fall 2019	Guest Lecturer – Principles of Light Microscopy (Meredith College, BIO251)
Fall 2018	Laboratory Instructor – Introduction to Biochemistry (UNC-Chapel Hill, BIOC107L)
Spring 2015	Guest Lecturer – Immunity and Disease (Clayton High School, NC)
Fall 2013 & Spring 2014	Guest Lecturer - Academic Writing and Research (NC State University, ENG101, evaluations available)
Spring 2012	Laboratory Instructor - Plant Life (NC State University, PB200)

II. Research Mentoring

- **Kayla Hiura**, Junior Specialist at University of California, Davis. November 2018 – August 2019
- **Ethan J. Fritch**, Microbiology Senior at NC State University. Summer 2015 – Spring 2016 (currently: Ph.D. candidate at the University of North Carolina at Chapel Hill)
- **Rachel Garris**, Biochemistry Junior at NC State University. Spring 2011 (currently: Clinical Research Associate at PAREXEL International, Durham, NC)
- **Wanda M. Figueroa-Cuilan**, Natural Sciences Junior at University of Puerto Rico at Cayey. Summer 2010 (currently: Postdoc at John Hopkins University, Baltimore, MD)

III. Participation in Teaching & Mentoring Workshops and Conferences ([†]attendance requires invitation)

- 11/2015 22nd Annual Compact for Faculty Diversity Institute on Teaching and Mentoring[†] (Arlington, VA)
- 2014 – 2015 NC State University College of Veterinary Medicine Teaching Workshops Series (Raleigh, NC)
Dynamic Lecturing: Facilitating Critical Thinking in the Classroom; Negotiating Authority in the Classroom; Strategies for Facilitating Effective Tutoring and Review Sessions.
- 11/2013 20th Annual Compact for Faculty Diversity Institute on Teaching and Mentoring[†] (Arlington, VA)
- 8/2012 19th Annual Compact for Faculty Diversity Institute on Teaching and Mentoring[†] (Tampa, FL)
- 8/2011 18th Annual Compact for Faculty Diversity Institute on Teaching and Mentoring[†] (Atlanta, GA)
- 2011 – 2013 NC State University Fundamentals in Teaching (FIT) Workshops (Raleigh, NC)
Introduction to Teaching; Learning Styles; Active Learning; Motivating Students: Creating a Healthy Learning Environment; Establishing Credibility and Authority in the Classroom; Evaluation and Grading; Effective Questioning Techniques; Responding to Student Writing; Designing an Effective Syllabus; and Intercultural Communication in the U.S. Classroom

LEADERSHIP & PROFESSIONAL DEVELOPMENT

- 2015 – 2016 *Student Representative*, Comparative Biomedical Sciences Governance Committee, NCSU
- 2014 – 2015 *President*, College of Veterinary Medicine Graduate Student Association (CVM-GSA), NCSU
- 2014 *Member*, College of Veterinary Medicine Diversity Strategic Planning Committee, NCSU
- 2013 – 2014 *Vice-President of Academic Affairs*, University Graduate Student Association (UGSA), NCSU
- 2013 – 2014 *Vice-President*, College of Veterinary Medicine Graduate Student Association, NCSU
- 2013 – 2014 *Executive Liaison*, UGSA Research Recognition Committee, NCSU
- 2013 *Participant*, NIH NIAID Bridging the Career Gap for Underrepresented Minority Scientists Workshop (three-day workshop on grant writing and professional development), NIH
- 2013 *Participant*, 1st Annual UGSA Leadership Training Workshop, NCSU
- 2012 – 2013 *Member*, UGSA Community Service Committee, NCSU
- 2012 – 2013 *Graduate Representative*, College of Veterinary Medicine Graduate Student Association, NCSU
- 2012 *Awardee*, Preparing Future Leaders (PFL) Season Pass Certificate, NCSU
- 2011 *Participant*, Graduate Student Professional Development Workshop (GSPDW) 3-day workshop (nominated by the Department of Plant Biology to attend this three-day workshop), NCSU
- 2010 – 2012 *Treasurer*, Plant Biology Graduate Student Association, NCSU
- 2008 – 2009 *President*, Zeta Delta Chapter for the βββ Biological Honor Society, PUCPR

AFFILIATIONS, SERVICE, & MEMBERSHIPS

- 2019 – Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Professional Membership (gifted for my contributions towards Science Communication)
- 2018 – American Association for the Advancement of Science (AAAS)
- 2017 – Ad Hoc Reviewer for: *Virology, Biochimica et Biophysica Acta, Cells, J Biol Chem*
- 2012 – American Society for Virology (ASV)
- 2009 – American Society for Cell Biology (ASCB)
- 2007 – βββ Biological Honor Society