

Curriculum Vitae
Matthew R. Marcello, Ph.D.

Pace University
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Education

- 2010 Ph.D., Biochemistry and Molecular Biology
 Johns Hopkins Bloomberg School of Public Health
- 2010 Certificate, Environmental and Occupational Health
 Johns Hopkins Bloomberg School of Public Health
- 2003 B.S. (Magna Cum Laude with Honors), Molecular Biology
 and Microbiology
 University of Central Florida

Academic Appointments

- 2019 – present Associate Professor
 Pace University, Department of Biology
- 2021 – present Co-Director
 Pace University, Transformation Management Office
- 2013 – 2019 Assistant Professor
 Pace University, Department of Biology
- 2010 – 2013 Postdoctoral Fellow
 Rutgers University, Robert Wood Johnson Medical School
 and Waksman Institute
- 2012 Adjunct Assistant Professor
 New York University

Teaching Experience

Classroom Instruction

Since joining Pace University

<u>Semester</u>	<u>Course</u>	<u>Hours/ week</u>
Spring 2021	<i>Introduction to Toxicology</i> (BIO 345)	3
	<i>Research in Biology I</i> (BIO 480)	1
	<i>Research in Biology II</i> (BIO 481)	1

CURRICULUM VITAE

Matthew R. Marcello, Ph.D.

	<i>Research II</i> (BMB 711)	1.33
Fall 2020	<i>Genetics</i> (BIO 231) Lecture	3
	<i>Genetics</i> (BIO 231) Laboratory	3
	<i>Independent Study in Biology</i> (BIO 395)	1
	<i>Research in Biology</i> (BIO 480)	1.67
	<i>Research I</i> (BMB 710)	1.33
Spring 2020	<i>Developmental Biology</i> (BIO 321)	3
	<i>Research in Biology II</i> (BIO 481)	2
	<i>Research II</i> (BMB 711)	1.33
Fall 2019	<i>General Biology I</i> (BIO 101)	3
	<i>Genetics</i> (BIO 231) Lecture	3
	<i>Genetics</i> (BIO 231) Laboratory	3
	<i>Research in Biology</i> (BIO 480)	2
	<i>Research I</i> (BMB 710)	1.33
	<i>Research II</i> (BMB 711)	1.33
Summer 2019	<i>Research I</i> (BMB 710)	1.33
Spring 2019	<i>Toxicology</i> (BIO 345)	3
	<i>Advanced Cell Biology</i> (BIO 375)	3
	<i>Independent Study in Biology</i> (BIO 395)	1
	<i>Research in Biology II</i> (BIO 481)	1
	<i>Research II</i> (BMB 711)	1.33
Fall 2018	<i>General Biology I</i> (BIO 101)	3
	<i>Genetics</i> (BIO 231) Lecture	3
	<i>Independent Study in Biology</i> (BIO 395)	1.33
	<i>Guided Study in Biology</i> (BIO 396)	1
	<i>Research in Biology</i> (BIO 480)	1
	<i>Research in Biology II</i> (BIO 481)	1
	<i>Internship in Biology</i> (BIO 491)	1.33
	<i>Research I</i> (BMB 710)	1.33
	<i>First-Year Seminar University Community</i> (UNV 101)	1
Spring 2018	<i>Fundamentals in Reproductive Biology</i> (BIO 399I) Lecture	3
	<i>Fundamentals in Reproductive Biology</i> (BIO 399I) Laboratory	3
	<i>Research in Biology</i> (BIO 480)	1
	<i>Research in Biology II</i> (BIO 481)	1
	<i>Internship in Biology</i> (BIO 491)	1
	<i>Research II</i> (BMB 711)	1.33
Fall 2017	<i>General Biology I</i> (BIO 101)	3
	<i>Genetics</i> (BIO 231) Lecture	3

	<i>Advanced Cell Biology</i> (BIO 375) Tutorial	1
	<i>Independent Study in Biology</i> (BIO 395)	1
	<i>Research in Biology</i> (BIO 480)	1
	<i>Internship in Biology</i> (BIO 491)	1
	<i>Research I</i> (BMB 710)	1.33
	<i>First-Year Seminar University Community</i> (UNV 101)	1
Summer 2017	<i>General Biology I</i> (BIO 101) Lecture	3
Spring 2017	<i>Advanced Cell Biology</i> (BIO 375)	3
	<i>Independent Study in Biology</i> (BIO 395)	1.33
	<i>Research in Biology</i> (BIO 480)	2.67
	<i>Research in Biology II</i> (BIO 481)	1.33
Fall 2016	<i>Genetics</i> (BIO 231) Lecture	3
	<i>Genomics</i> (BIO 399X) Tutorial	1
	<i>Independent Study in Biology</i> (BIO 395)	1
	<i>Research in Biology</i> (BIO 480)	1
	<i>Internship in Biology</i> (BIO 491)	1.67
Spring 2016	<i>Fundamentals in Reproductive Biology</i> (BIO 399I) Lecture	3
	<i>Fundamentals in Reproductive Biology</i> (BIO 399I) Laboratory	3
	<i>Independent Study in Biology</i> (BIO 395)	1
	<i>Research in Biology II</i> (BIO 481)	1
	<i>Internship in Biology</i> (BIO 491)	1
Fall 2015	<i>Biology of Sexual Reproduction</i> (BIO 103)	3
	<i>Genetics</i> (BIO 231) Lecture	3
	<i>Genetics</i> (BIO 231) Laboratory	3
	<i>Independent Study in Biology</i> (BIO 395)	1
	<i>Research in Biology</i> (BIO 480)	1.33
	<i>Internship in Biology</i> (BIO 491)	1
Spring 2015	<i>Molecular and Cellular Biology</i> (BIO 335) Laboratory	3
	<i>Advanced Cell Biology</i> (BIO 375)	3
	<i>Research in Biology</i> (BIO 480)	1
	<i>Research in Biology II</i> (BIO 481)	1
Fall 2014	<i>Biology of Sexual Reproduction</i> (BIO 103)	3
	<i>Genetics</i> (BIO 231) Lecture	3
	<i>Genetics</i> (BIO 231) Laboratory	3
	<i>Research in Biology</i> (BIO 480)	1
Spring 2014	<i>General Biology II</i> (BIO 102) Laboratory	3
	<i>Fundamentals in Reproductive Biology</i> (BIO 399I) Lecture	3
	<i>Fundamentals in Reproductive Biology</i> (BIO 399I) Laboratory	3

	<i>Research in Biology</i> (BIO 480)	1.3
Fall 2013	<i>General Biology I</i> (BIO 101) Laboratory	3
	<i>Genetics</i> (BIO 231) Laboratory (two sections)	6
<i>Prior to joining Pace University</i>		
<u>Semester</u>	<u>Course</u>	<u>Hours/week</u>
City University of New York-Medgar Evers College		
Spring 2013	<i>General Biology II</i>	3
Spring 2012	<i>General Biology II</i>	3
New York University School of Medicine		
Fall 2012	<i>Fundamentals of Teaching</i>	1.5
Robert Wood Johnson Medical School		
Fall 2011	<i>Ethical Scientific Conduct</i> (Group Discussion Leader)	1.5

STEM Education Workshops

<u>Semester</u>	<u>Location</u>	<u>Title</u>
Fall 2015	Northeast Regional PULSE Conference	<i>Using Active Learning in the Classroom</i>
Spring 2015	Pace University Faculty Institute	<i>Helping our students learn: Tools we can bring into the classroom to help our students master difficult subjects</i>
Spring 2014	Pace University Faculty Institute	<i>Backwards Design</i>
Spring 2014	New York City College of Technology	<i>Backwards Design</i>
Fall 2013	New York City College of Technology	<i>How We Learn</i>
Spring 2013	New York City College of Technology	<i>Active Learning</i>
Spring 2013	New York City College of Technology	<i>Effective Science Teaching</i>
Fall 2012	New York University School of Medicine	<i>Improving Student Learning and Outcomes</i>
Spring 2012	New York Academy of Sciences	<i>Introduction to Scientific Teaching</i>
Fall 2012	Robert Wood Johnson Medical School	<i>Scientific Teaching Workshop</i>

Peer-Reviewed Publications (* indicates undergraduate authors)

1. **Marcello MR** and Evans JP. "The Molecular Basis of Fertilization in Animals." *In preparation*.
2. **Marcello MR**. "Sperm-Egg Fusion: Analyzing Primary Research Data to Teach Genetics and Cell Biology." CourseSource. *In revision*.
3. Krauchunas AR, **Marcello MR**, Mei X, Putiri E, Singaravelu G, Ahmed II*, Singson A. "The EGF-motif containing protein SPE-36 is a secreted protein required for sperm function at fertilization in *C. elegans*." bioRxiv. 2021 July 8. doi: <https://doi.org/10.1101/2021.07.07.451551>
4. Schumacker ST, Chidester CAM*, Enke RA, and **Marcello MR**. "RNA sequencing dataset characterizing transcriptomic responses to dietary changes in *Caenorhabditis elegans*." Data Brief. 2019 May 24;25:104006. doi: 10.1016/j.dib.2019.104006. eCollection 2019 Aug.
5. **Marcello MR**, Druzhinina M, and Singson A. "The *Caenorhabditis elegans* Sperm Membrane Protein Interactome." Biol Reprod. 2018 Mar 13. doi: 10.1093/biolre/i0y055.
6. Peteroy-Kelly M, **Marcello MR**, Crispo E, Buraei Z, Strahs D, Isaacson M, Jaworski L, Lopatto D, and Zuzga D. "Participation in a year-long CURE embedded into major core Genetics and Cellular and Molecular Biology laboratory courses results in gains in foundational biological concepts and experimental design skills by novice undergraduate researchers." J Microbiol Biol Educ. 2017 Apr 21;18(1). pii: 18.1.1. doi: 10.1128/jmbe.v18i1.1226. eCollection 2017.
7. Krauchunas AR, **Marcello MR**, and Singson A. "The molecular complexity of fertilization: Introducing the concept of a fertilization synapse." Mol Reprod Dev. 2016 May;83(5):376-86. doi: 10.1002/mrd.22634.
8. **Marcello MR**, Singaravelu G, and Singson A. "Fertilization." Adv Exp Med Biol. 2013;757:321-50.
9. Geldziler B, **Marcello MR**, Shakes DC, and Singson A. "The Genetics and Cell Biology of Fertilization." Methods Cell Biol. 2011 106:343-75.
10. **Marcello MR**, Jia W, Leary JA, Moore KL, and Evans JP. "Lack of tyrosylprotein sulfotransferase-2 activity results in altered sperm-egg interactions and loss of ADAM3 and ADAM6 in epididymal sperm." J Biol Chem. 2011 286:13060.
11. **Marcello MR** and Singson A. "Germline Determination: Don't Mind the P Granules." Curr Biol. 2011 21:R155.
12. Singaravelu G, Chatterjee I, **Marcello MR**, and Singson A. "Isolation and *in vitro* activation of *Caenorhabditis elegans* sperm." J Vis Exp. 2011 47. pii: 2336. doi:10.3791/2336.
13. **Marcello MR** and Singson A. "Fertilization and the oocyte-to-embryo transition in *C. elegans*." BMB Rep. 2010 43:389.
14. **Marcello MR** and Evans JP. "Multivariate analysis of male reproductive function in *Inpp5b*^{-/-} mice reveals heterogeneity in defects in fertility, sperm-egg membrane interaction, and proteolytic cleavage of sperm ADAMs." Mol Hum Reprod. 2010 16:492.
15. Chen LM, Wang C, Chen M, **Marcello MR**, Chao J, Chao L, and Chai KX. "Prostasin attenuates inducible nitric oxide synthase expression in

lipopolysaccharide-induced urinary bladder inflammation.” *Am J Physiol Renal Physiol*. 2006 291:F567.

16. Borghei A, Ouyang AB, Westmuckett AD, **Marcello MR**, Landel CP, Evans JP, and Moore KL. “Targeted disruption of tyrosylprotein sulfotransferase-2, an enzyme that catalyzes post-translational protein tyrosine O-sulfation, causes male infertility.” *J Biol Chem*. 2006 281:9423.

Presentations (* indicates undergraduate students; # indicates graduate students)

Since joining Pace University

External Presentations

1. Hui A# and **Marcello MR**. Analysis of *Caenorhabditis elegans* Genes Hypothesized to Regulate Testosterone to Dihydrotestosterone Conversion. Poster presentation at: American Society of Andrology (ASA) Annual Meeting; April 2021; Virtual.
2. Clark BL* and **Marcello MR**. “Generating a Reproductive Genetics Database to Use Model Organisms Evaluating Genome-Wide Sequencing Data”. Poster presentation at: American Society of Andrology (ASA) Annual Meeting; April 2021; Virtual.
3. Ahmed A* and **Marcello MR**. Analyzing the Effect of Mutations in Multiple Genes Required for Fertilization in *Caenorhabditis elegans*. Poster presentation at: American Society of Andrology (ASA) Annual Meeting; April 27, 2020; Philadelphia, PA. [Accepted; Not Presented (COVID-19)]
4. Hui A # and **Marcello MR**. Analysis of *Caenorhabditis elegans* Genes Hypothesized to Regulate Testosterone to Dihydrotestosterone Conversion. Poster presentation at: American Society of Andrology (ASA) Annual Meeting; April 27, 2020; Philadelphia, PA. [Accepted; Not Presented (COVID-19)]
5. Garcia B* and **Marcello MR**. Determining the function the Zinc Finger Protein 706 ortholog, C01F6.9, in *Caenorhabditis elegans*. Poster presentation at: The Allied Genetics Conference; April 22-26, 2020; Washington, DC. [Accepted; Not Presented (COVID-19)]
6. Mamisashvili N*, Mojica E-R, and **Marcello MR**. Analyzing the Effect of Bee Propolis Exposure on Reproduction in *C. elegans*. Poster presentation at: The Allied Genetics Conference; April 22-26, 2020; Washington, DC. [Accepted; Not Presented (COVID-19)]
7. Wayland N* and **Marcello MR**. Investigated the role of T26C12.1, a potential enzyme necessary for branched-chain amino acid synthesis in *C. elegans*. Poster presentation at: The Allied Genetics Conference; April 22-26, 2020; Washington, DC. [Accepted; Not Presented (COVID-19)]
8. Cooley DC*, Lopes EM*, Jacob AJ*, and **Marcello MR**. The gene M05D6.2, an ortholog of Human T-Complex Protein 11 (TCP11), is necessary for sperm production and fertility. Poster presentation at: Fertilization and Activation of Development Gordon Research Conference; July 31 & August 1, 2019; Holderness, NH.

9. Cooley DC*, Lopes EM*, Jacob AJ*, and **Marcello MR**. The *Caenorhabditis elegans* Ortholog of Human T-Complex Protein 11 (TCP11), M05D6.2, Is Necessary for Sperm Production and Fertility. Poster presentation at: Society for the Study of Reproduction 52nd Annual Meeting; July 19, 2019; San Jose, CA.
10. Cooley DC*, Lopes EM*, Jacob AJ*, and **Marcello MR**. The gene M05D6.2, an ortholog of Human T-complex protein 11 (TCP11), is necessary for sperm production and fertility. Poster presentation at: American Society of Andrology 44th Annual Conference; April 8, 2019; Chicago, IL.
11. Cooley DC*, Lopes EM*, Jacob AJ*, and **Marcello MR**. The *C. elegans* gene M05D6.2, an ortholog of human T-complex protein 11 (TCP11), is necessary for sperm production and fertility. Invited oral presentation at: The New York Area Worm Meeting – Winter 2019; January 18, 2019; New York, NY.
12. **Marcello MR**. Using *Caenorhabditis elegans* to Understand the Molecular Basis of Fertilization and Egg Activation. Invited oral presentation at: Rutgers School of Environmental and Biological Sciences Seminars in Endocrinology and Animal Biosciences; December 7, 2018; New Brunswick, NJ.
13. Lopes EM*, Jacob AJ*, Cooley DC*, and **Marcello MR**. M05D6.2, an ortholog of human T-complex protein 11 (TCP11), is necessary for sperm function and fertility in *Caenorhabditis elegans*. Poster presented at: European Molecular Biology Organization (EMBO) Workshop: *C. elegans* Development, Cell Biology, and Gene Expression; June 15, 2018; Barcelona, Spain.
14. Jacob AJ*, Lopes EM*, Cooley DC*, and **Marcello MR**. Analyzing the Function of the *Caenorhabditis elegans* gene M05D6.2, an Ortholog of Human T-Complex Protein (TCP11) in Sperm Function and Fertility. Poster presented at: American Society of Andrology 43rd Annual Conference; April 2018; Portland, OR.
15. Lopes EM* and **Marcello MR**. “Evaluating the function of the *Caenorhabditis elegans* ortholog of human t-complex protein 11 (TCP11), M056.2, in sperm function and fertility.” Poster presented at: 50th Annual Meeting of the Society for the Study of Reproduction; July 15, 2017; Washington, DC.
16. Lopes EM* and **Marcello MR**. “Evaluating the function of the *Caenorhabditis elegans* ortholog of human t-complex protein 11 (TCP11), M056.2, in sperm function and fertility.” Poster presented at: Fertilization and Activation of Development Gordon Research Conference; July 16-21, 2017; Holderness, NH.
17. Lopes EM* and **Marcello MR**. Investigating the role of the *Caenorhabditis elegans* gene M05D6.2, an ortholog of human t-complex protein 11 (TCP11), in sperm function and fertility. Poster presented at: American Society of Andrology 42nd Annual Conference; April 2017; Miami, FL.
18. **Marcello MR**. Understanding Sperm Membrane Organization and Function in *C. elegans*. Oral Presentation at: CUNY Worm Labs Meeting 2017; February 18, 2017; Brooklyn, NY.
19. Lopes EM* and **Marcello MR**. The *Caenorhabditis elegans* ortholog of Human T-Complex Protein 11 (TCP11), M05D6.2, is necessary for male

- fertility. Poster presented at: American Society of Andrology 41st Annual Conference; April 4, 2016; New Orleans, LA.
20. **Marcello MR**. Leveraging Available Molecular Genetic Tools to Investigate the Function of Genes Important for Sperm Function and Fertility Using *Caenorhabditis elegans*. Oral presentation at: American Society of Andrology Basic Science Workshop; April 2, 2016; New Orleans, LA.
 21. **Marcello MR**, Druzhinina M, and Singson A. Mapping the Sperm Membrane Protein Interactome in *C. elegans*. Invited oral presentation at: Fertilization and Activation of Development Gordon Research Conference; July 21, 2015; Holderness, NH.
 22. Rivera Gomez KA* and **Marcello MR**. Characterization of spliceosome activating protein in *Caenorhabditis elegans* embryo development. Poster presented at: Fertilization and Activation of Development Gordon Research Conference. July 19-24, 2015; Holderness, NH.
 23. Rivera Gomez KA*, and **Marcello MR**. Characterization of spliceosome activating protein in *Caenorhabditis elegans* embryo development. Poster presented at: Fertilization and Activation of Development Gordon Research Seminar; July 18-19, 2015; Holderness, NH.
 24. Buraei Z, **Marcello MR**, Strahs D, Zuzga D, Crispo E, and Kelly M. Development of a year-long, research-based laboratory integrated within core genetics and cellular & molecular biology courses. Poster presented at: American Society for Microbiology Conference for Undergraduate Educators; May 28-31, 2015; Austin, TX.
 25. **Marcello MR**, Druzhinina M, and Singson A. Mapping the Sperm Membrane Protein Interactome. Poster presented at: American Society of Andrology 39th Annual Conference; April 5-8, 2014; Atlanta, GA.

External Presentations at Undergraduate Research Conferences

1. Durda AA* and **Marcello MR**. Evaluating the Function of Genes Implicating Glioblastoma Multiforme (GBM) Formation Using *Caenorhabditis elegans*. Poster presented at: 12th Annual Undergraduate Research Symposium in the Biological & Chemical Sciences at William Paterson University; April 14, 2018; Wayne, NJ.
2. Jacob AJ*, Lopes EM*, Cooley DC*, and **Marcello MR**. Analyzing the Function of the *Caenorhabditis elegans* gene M05D6.2, an Ortholog of Human T-Complex Protein (TCP11) in Sperm Function and Fertility. Poster presented at: 12th Annual Undergraduate Research Symposium in the Biological & Chemical Sciences at William Paterson University; April 14, 2018; Wayne, NJ.
3. Bonnett M* and **Marcello MR**. The Function of T20B12.7 in Reproduction. Poster presented at: 71st Annual Eastern Colleges Science Conference; April 1, 2017; Wilkes-Barre, PA.
4. Chidester C* and **Marcello MR**. Analyzing the Transcriptional Response to Diet in *C. elegans*." Poster presented at: 71st Annual Eastern Colleges Science Conference; April 1, 2017; Wilkes-Barre, PA.

5. Durda AA and **Marcello MR**. Analyzing Transcriptional Changes in a *C. elegans* Fertilization Defective Mutant. Poster presented at: 71st Annual Eastern Colleges Science Conference; April 1, 2017; Wilkes-Barre, PA.
6. Gobin M* and **Marcello MR**. Determining the function of F10C2.4 in reproduction using *Caenorhabditis elegans*. Poster presented at: 71st Annual Eastern Colleges Science Conference; April 1, 2017; Wilkes-Barre, PA.
7. Hui A* and **Marcello MR**. Reproduction role of gene ZK1128.4, GTF2H3 human ortholog in *Caenorhabditis elegans*. Poster presented at: 71st Annual Eastern Colleges Science Conference; April 1, 2017; Wilkes-Barre, PA.
8. James J* and **Marcello MR**. Determining the role of gene C17E4.6 in reproduction using *Caenorhabditis elegans* and the translation to the human ortholog gene VSP72. Poster presented at: 71st Annual Eastern Colleges Science Conference; April 1, 2017; Wilkes-Barre, PA.
9. Lopes EM* and **Marcello MR**. Investigating the role of the *Caenorhabditis elegans* gene M05D6.2, an ortholog of human t-complex protein 11 (TCP11), in sperm function and fertility. Poster presented at: 71st Annual Eastern Colleges Science Conference; April 1, 2017; Wilkes-Barre, PA.
10. Muñoz D* and **Marcello MR**. Evaluating the Role of Gene C33A11.2 in *C. elegans* and its Effects on Fertility in Connection to the Human Orthologs DRAM1 and DRAM 2. Poster presented at: 71st Annual Eastern Colleges Science Conference; April 1, 2017; Wilkes-Barre, PA.
11. Pagán T* and **Marcello MR**. The Reproductive Impact of R08D7.1 on *Caenorhabditis elegans*' Progeny Production Capabilities. Poster presented at: 71st Annual Eastern Colleges Science Conference; April 1, 2017; Wilkes-Barre, PA.
12. Gobin M* and **Marcello MR**. Determining the Function of F10C2.4 in Reproduction. Oral presentation at: 70th Annual Eastern Colleges Science Conference; April 2, 2016; Springfield, MA.
13. Lopes EM* and **Marcello MR**. Evaluating the potential role of the gene M05D6.2 in reproduction using *Caenorhabditis elegans* and its connection to the TCP11 gene in humans. Poster presented at: 70th Annual Eastern Colleges Science Conference; April 2, 2016; Springfield, MA.
14. Rivera Gomez, KA* and **Marcello MR**. Characterization of an eLLRon like protein in *Caenorhabditis elegans* embryo development. Poster presented at 47th Annual Metropolitan Association of College and University Biologists (MACUB) Conference; November 1, 2014; Rockville Centre, NY.

Internal Presentations at Pace University

1. Clark BL* and **Marcello MR**. Generating a Reproductive Genetics Database to Use Model Organisms Evaluating Genome-Wide Sequencing Data. Poster presentation at: Student Research Day; April 23, 2021; New York, NY.
2. Mamisashvili N* and **Marcello MR**. Analyzing the Effect of Bee Propolis Exposure on Reproduction in *C. elegans*. Poster presentation at: Student Research Day; April 23, 2021; New York,

3. Wayland N* and **Marcello MR**. Analyzing Altered microRNA Expression in *C. elegans* Fertility Mutants. Poster presentation at: Student Research Day; April 23, 2021; New York, NY.
4. Garcia B and **Marcello MR**. Determining the function of the Zinc Finger Protein 706 ortholog, C01F6.9, in *Caenorhabditis elegans*. Poster presentation at Biology Department Poster Session; April 23, 2021; New York, NY.
5. Rojas V and **Marcello MR**. Evaluating Reproduction in Amyloid Mutants. Poster presentation at Biology Department Poster Session; April 23, 2021; New York, NY.
6. Ahmed A* and **Marcello MR**. Analyzing the Effect of Mutations in Multiple Genes Required for Fertilization in *Caenorhabditis elegans*. Poster presented at: Student and Faculty Research Day; May 6, 2020; New York, NY.
7. Herod T* and **Marcello MR**. Prohibitin and Mitochondrial Significance for Viable Progeny in *Caenorhabditis elegans*. Poster presented at: Student and Faculty Research Day; May 6, 2020; New York, NY.
8. DeAnna A*, Devlin J*, **Marcello MR**, and Peteroy-Kelly MA. Immune Response in *Caenorhabditis elegans* when exposed to *Mycobacterium Bovis-BCG*. Poster presented at: Student and Faculty Research Day; May 8, 2019; New York, NY.
9. Cooley DC*, Lopes EM*, Jacob AJ*, and **Marcello MR**. M05D6.2, an ortholog of human T-complex protein 11 (TCP11), is necessary for sperm function and fertility in *Caenorhabditis elegans*. Poster presented at: Biology Department Poster Session; May 3, 2019; New York, NY.
10. Durda AA* and **Marcello MR**. Evaluating the Function of Genes Implicated in Glioblastoma Multiforme (GBM) Formation using *Caenorhabditis elegans*. Poster presented at: 38th Annual Meeting of the Society of Fellows of Dyson College; March 9, 2019; New York, NY.
11. Durda AA* and **Marcello MR**. Identifying the Function of Genes Implicated in Glioblastoma Multiforme (GBM) Formation using *Caenorhabditis elegans*. Poster presented at: Biology Department Poster Session; December 13, 2018; New York, NY.
12. Cooley DC*, Lopes EM*, Jacob AJ*, and **Marcello MR**. M05D6.2, an ortholog of human T-complex protein 11 (TCP11), is necessary for sperm function and fertility in *Caenorhabditis elegans*. Poster presented at: Biology Department Poster Session; December 13, 2018; New York, NY.
13. Durda AA* and **Marcello MR**. Evaluating the Function of Genes Implicating Glioblastoma Multiforme (GBM) Formation Using *Caenorhabditis elegans*. Poster presented at: Student and Faculty Research Day; May 3, 2018; New York, NY.
14. Jacob AJ*, Lopes EM*, Cooley DC*, and **Marcello MR**. Analyzing the Function of the *Caenorhabditis elegans* gene M05D6.2, an Ortholog of Human T-Complex Protein (TCP11) in Sperm Function and Fertility. Poster presented at: Student and Faculty Research Day; May 3, 2018; New York, NY.

15. Durda AA* and **Marcello MR**. Evaluating the Function of Genes Implicating Glioblastoma Multiforme (GBM) Formation Using *Caenorhabditis elegans*. Poster presented at: Dyson Science Day; May 1, 2018; New York, NY.
16. Jacob AJ*, Lopes EM*, Cooley DC*, and **Marcello MR**. Analyzing the Function of the *Caenorhabditis elegans* gene M05D6.2, an Ortholog of Human T-Complex Protein (TCP11) in Sperm Function and Fertility. Poster presented at: Dyson Science Day; May 1, 2018; New York, NY.
17. Bonnett M*, Braun M*, and **Marcello MR**. The Function of F55A3.3 in *Caenorhabditis elegans* Reproduction. Poster presented at: Biology Department Poster Session; May 5, 2017; New York, NY
18. Chidester C* and **Marcello MR**. “Epigenetic Mechanisms and Histone-Modifying Genes Regulate Ethanol Preference in *C. elegans* and their Progeny. Poster presented at: Biology Department Poster Session; May 5, 2017; New York, NY.
19. Gobin M* and **Marcello MR**. Determining the function of F10C2.4 in reproduction using *Caenorhabditis elegans*.” Poster presented at: Biology Department Poster Session; May 5, 2017; New York, NY.
20. Hui A* and **Marcello MR**. Reproduction role of gene ZK1128.4, GTF2H3 human ortholog in *Caenorhabditis elegans*. Poster presented at: Biology Department Poster Session; May 5, 2017; New York, NY.
21. James J*, Rivera Gomez KA*, and **Marcello MR**. Determining the role of gene D1081.8 in reproduction using *Caenorhabditis elegans* and the translation to the human ortholog gene CDC5L. Poster presented at: Biology Department Poster Session; May 5, 2017; New York, NY.
22. Lopes EM* and **Marcello MR** “Investigating the role of the *Caenorhabditis elegans* gene M05D6.2, an ortholog of human t-complex protein 11 (TCP11), in sperm function and fertility. Poster presented at: Biology Department Poster Session; May 5, 2017; New York, NY.
23. Muñoz D* and **Marcello MR** “Evaluating the Role of Gene C33A11.2 in *C. elegans* and its Effects on Fertility in Connection to the Human Orthologs DRAM1 and DRAM 2. Poster presented at: Biology Department Poster Session; May 5, 2017; New York, NY.
24. Pagán T* and **Marcello MR**. The Reproductive Impact of R08D7.1 on *Caenorhabditis elegans*’ Progeny Production Capabilities. Poster presented at: Biology Department Poster Session; May 5, 2017; New York, NY.
25. Bonnett M*, Braun M*, and **Marcello MR**. The Function of F55A3.3 in *Caenorhabditis elegans* Reproduction. Poster presented at: Office of Sponsored Research’s Annual Research Day and the Division for Student Success’ Undergraduate Student-Faculty Research Showcase; May 4, 2017; New York, NY.
26. Gobin M* and **Marcello MR** Determining the function of F10C2.4 in reproduction using *Caenorhabditis elegans*. Poster presented at: Office of Sponsored Research’s Annual Research Day and the Division for Student Success’ Undergraduate Student-Faculty Research Showcase; May 4, 2017; New York, NY.

27. Lopes EM* and **Marcello MR** Investigating the role of the *Caenorhabditis elegans* gene M05D6.2, an ortholog of human t-complex protein 11 (TCP11), in sperm function and fertility. Poster presented at: Office of Sponsored Research's Annual Research Day and the Division for Student Success' Undergraduate Student-Faculty Research Showcase; May 4, 2017; New York, NY.
28. Lopes EM* and **Marcello MR**. RNA interference (RNAi) Screen to Identify New Genes that Control Fertilization and Embryo Development. Poster presented at: 36th Annual Meeting of the Society of Fellows of Dyson College; March 4, 2017; New York, NY.
29. James J* and **Marcello MR**. Determining the role of gene C17E4.6 in reproduction using *Caenorhabditis elegans* and the translation to the human ortholog gene VSP72. Poster presented at: Biology Department Research Day; December 13, 2016; New York, NY
30. Catanzarite A* and **Marcello MR**. *Caenorhabditis elegans* Genes F52C6.4 and D1069.3 and their Reproductive Effects post RNAi Treatment. Poster presented at: Biology Department Poster Session; April 29, 2016; New York, NY.
31. Gobin M* and **Marcello MR**. Determining the Function of F10C2.4 in Reproduction. Poster presented at: Office of Sponsored Research's Annual Research Day and the Division for Student Success' Undergraduate Student-Faculty Research Showcase; May 3, 2016; New York, NY.
32. Gobin M* and **Marcello MR**. Determining the Function of F10C2.4 in Reproduction. Poster presented at: 35th Annual Meeting of Society of Fellows of Dyson College; May 13, 2016; New York, NY.
33. Braun MK* and **Marcello MR**. Characterization of F55A3.3 in *Caenorhabditis elegans* germline development. Poster presented at: Department of Biology Poster Session; May 1, 2015; New York, NY.
34. Rivera Gomez KA* and **Marcello MR**. Characterization of spliceosome activating protein in *Caenorhabditis elegans* embryo development. Poster presented at: Department of Biology Poster Session; May 1, 2015; New York, NY.
35. Rivera Gomez KA*, and **Marcello MR**. Characterization of spliceosome activating protein in *Caenorhabditis elegans* embryo development. Poster presented at: Pace University Undergraduate Student-Faculty Research Showcases; 2015; New York, NY.
36. Rivera Gomez KA* and **Marcello MR**. Characterization of an eLLRon like protein in *Caenorhabditis elegans* embryo development. Poster presented at: The Society of Fellows of Dyson College of Arts and Sciences 34th Annual Meeting; March 13, 2015; New York, NY.
37. Braun MK*, Gobin M*, Rivera Gomez KA*, and **Marcello MR**. Characterization of novel genes necessary for reproduction. Poster presented at: Pace Research Day; 2015; New York, NY.
38. Arora K*, and **Marcello MR**. The role of T20D12.7 on the reproduction of *Caenorhabditis elegans*. Poster presented at: Department of Biology Poster Session; 2014; New York, NY.

39. Hussain S* and **Marcello MR**. The role of F45F2.10 on the reproduction of *Caenorhabditis elegans*. Poster presented at: Department of Biology Poster Session; 2014; New York, NY.
40. **Marcello MR**, Druzhinina M, and Singson A. Mapping the Sperm Membrane Protein Interactome. Poster presented at: Pace Research Day; May 2014; New York, NY.

Funding Applications

Funded External Grant Applications

1. Marcello MR (Principal) “MRI: Acquisition of a quantitative real-time gene expression monitoring system for undergraduate research and teaching at Pace University 2016”, **National Science Foundation**, \$33,455. (September 1, 2016 – August 31, 2019). Status: **Funded**.

Pending External Grant Applications

2. Marcello MR (Co-Principal) and Peteroy-Kelly MA. (Co-Principal) “U-RISE at Pace University,” **National Institutes of Health**, \$480,000 (July 1, 2021 – June 30, 2026).

External Funding Applications

3. Mojica E-M (Principal) [Marcello MR (Co-Investigator)] “MRI: Acquisition of a Raman microscope for undergraduate research and teaching at Pace University” **National Science Foundation**, \$152,449 (September 1, 2021 – August 31, 2024). Status: *Not funded*.
4. Marcello MR (Co-Principal) and Peteroy-Kelly MA. (Co-Principal) “U-RISE at Pace University,” **National Institutes of Health**, \$441,760 (July 1, 2020 – June 30, 2025). Status: *Not funded*.
5. Mojica E-M (Principal) [Marcello MR (Co-Investigator)] “MRI: Acquisition of a Raman microscope for undergraduate research and teaching at Pace University” **National Science Foundation**, \$147,144 (September 1, 2020 – August 31, 2023). Status: *Not funded*.
6. Marcello MR (Principal) and Peteroy-Kelly MA. (Co-Principal) “A Literature-Based, Individualized, Research Experience (LIRE) Designed to Teach the Foundation of Scientific Practice and Increase Student Motivation,” **National Science Foundation**, \$299,998 (National Science Foundation, \$299,878 (July 1, 2018 – June 30, 2021). Status: *Not funded*.
7. Marcello MR (Principal) and Peteroy-Kelly MA. (Co-Principal) “A Literature-Based, Individualized, Research Experience (LIRE) Designed to Teach the

Core Elements of Scientific Practice,” **National Science Foundation**, \$299,878 (July 1, 2017 – June 30, 2020). Status: *Not funded*.

8. Marcello MR (Principal). “ContentMine Fellowship,” **Shuttleworth Foundation**, £1,000 (July 1, 2016 – December 31, 2016). Status: *Not funded – Award finalist*.
9. Marcello MR (Principal). “The Mozilla Fellowships for Science.” **Mozilla Science Foundation**, \$76,000 (October 2015 – September 2016). Status: *Not funded – Award finalist*.

Internal Funding Awards

2020	Bridge Fund Award
Fall 2019	Scholarly Research Award
2019 – 2020	Provost’s Open Educational Resource Grants
Summer 2019	Dyson College Summer Research Award
Summer 2018	Dyson College Summer Research Award
Summer 2016	Dyson College Summer Research Award
Spring 2016	Scholarly Research Award
Summer 2015	Dyson College Summer Research Award
Spring 2015	Scholarly Research Award

Internal Funding Awards with Undergraduate Principal Investigators

2020 – 2021	Provost’s Undergraduate Research Award (Brandon Clark)
2019 – 2020	Provost’s Undergraduate Research Award (Iqra Ahmed)
2019 – 2020	Provost’s Undergraduate Research Award (Terri Herod)
Summer 2019	Dyson College Summer Research Award (Iqra Ahmed)
2018 – 2019	Provost’s Undergraduate Research Award (Alexa Deanna)
Summer 2018	Provost’s Undergraduate Research Award (Agata Durda)
2017 – 2018	Provost’s Undergraduate Research Award (Danielle Cooley)
2017 – 2018	Provost’s Undergraduate Research Award (Agata Durda)
Summer 2016	Dyson College Summer Research Award (Emily Lopes)
2015 – 2016	Provost’s Undergraduate Research Award (Mohini Gobin)
2015 – 2016	Provost’s Undergraduate Research Award (Emily Lopes)
Summer 2015	Provost’s Undergraduate Research Award (Mary Braun)
Summer 2015	Provost’s Undergraduate Research Award (Katherine Rivera Gomez)
2014 – 2015	Provost’s Undergraduate Research Award (Katherine Rivera Gomez)

Research Mentoring

Undergraduate Students

Pace University

Spring 2021	Brandon Clark, Brandon Garcia, Nino Mamisashvili, Victor Rojas, Natalie Wayland
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Fall 2020	Brandon Clark, Brandon Garcia, Nino Mamisashvili, Victor Rojas, Natalie Wayland
Spring 2020	Iqra Ahmed, Brandon Garcia, Terri Herod, Nino Mamisashvili, Natalie Wayland
Fall 2019	Iqra Ahmed, Alexa DeAnna, Brandon Garcia, Terri Herod, Nino Mamisashvili, Natalie Wayland
Summer 2019	Iqra Ahmed
Spring 2019	Danielle Cooley, Alexa DeAnna, and Agata Durda
Fall 2018	Danielle Cooley, Alexa DeAnna, and Agata Durda
Summer 2018	Jesse Devlin and Agata Durda
Spring 2018	Danielle Cooley, Margarita Devyatkina, Agata Durda, and Amber Jacob
Fall 2017	Danielle Cooley, Margarita Devyatkina, Agata Durda, and Amber Jacob
Spring 2017	Mikayla Bonnett, Chloe Chidester, Agata Durda, Mohini Gobin, Arlena Hui, Jonelle James, Emily Lopes, Daniela Muñoz, and Tatiana Pagán
Fall 2016	Mikayla Bonnett, Mohini Gobin, Jonelle James, and Emily Lopes
Spring 2016	Alissa Catanzarite, Mohini Gobin, Jonelle James, and Emily Lopes
Fall 2015	Alissa Catanzarite, Francesca Difroschia, Mohini Gobin, Jonelle James, Emily Lopes, and Lane McManus
Summer 2015	Mary K. Braun, Emily Lopes, and Katherine A. Rivera Gomez
Spring 2015	Mary K. Braun, Mohini Gobin, and Katherine A. Rivera Gomez
Fall 2014	Katherine A. Rivera Gomez
Summer 2014	Katherine A. Rivera Gomez
Spring 2014	Karishma Arora and Sabrina Hussain

Rutgers University

Summer 2013	Matthew Rexroad
Spring 2013	Tori Gartmond, Anam Rizvi, and Matthew Rexroad
Fall 2012	Anam Rizvi and Tori Gartmond
Summer 2012	Anam Rizvi
Spring 2012	Tori Gartmond, Anam Rizvi, and Priyanka Vijay
Fall 2011	Tori Gartmond, Anam Rizvi, and Priyanka Vijay
Summer 2011	Anam Rizvi and Priyanka Vijay
Spring 2011	Anam Rizvi
Fall 2010	Anam Rizvi
Summer 2010	Anam Rizvi

Graduate Students*Pace University*

Fall 2021	Arlena Hui, Derrick Peña
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Spring 2020	Arlena Hui
Fall 2019	Arlena Hui
Summer 2019	Michael Testa
Spring 2019	Nigar Ismayilzada
Fall 2018	Nigar Ismayilzada
Spring 2018	Sabah Khurshid, Yeva Shamailova
Fall 2017	Sabah Khurshid, Yeva Shamailova

Biochemistry and Molecular Biology Master of Science Theses

2020	Testa MM. "Amyloid Properties of Male-Enriched Genes in <i>Caenorhabditis elegans</i> "
2020	Ismayilzada N. "Analysis of amyloid proteins in the vitelline layer of <i>Caenorhabditis elegans</i> "
2018	Khurshid S. "Bovine Serum Albumin Does Not Induce Sperm Activation in <i>Caenorhabditis elegans</i> "
2018	Shamailova Y. "Amyloid Properties of the Vitelline Layer in <i>Caenorhabditis elegans</i> "

Pforzheimer Honors College Undergraduate Theses

2021	Clark BL. "Generating a Reproductive Genetics Database to Use Model Organisms Evaluating Genome-Wide Sequencing Data"
2021	Mamisashvili N. "Analyzing the Effect of Bee Propolis Exposure on Reproduction in <i>C. elegans</i> "
2021	Wayland N. "Analyzing Altered microRNA Expression in <i>C. elegans</i> Fertility Mutants"
2020	Ahmed I. "Male Infertility: Analyzing the Effect of Mutations in Multiple Genes Required for Fertilization in <i>Caenorhabditis elegans</i> "
2020	Herod T. "Prohibitin and Mitochondrial Significance for Viable Progeny in <i>Caenorhabditis elegans</i> "
2015	Catanzarite A. " <i>Caenorhabditis elegans</i> Genes F52C6.4 and D1069.3 and their Reproductive Effects post RNAi Treatment"

Honors and Awards

2019 – 2020	Summer Institutes on Scientific Teaching Scientific Teaching Mentor
2019	Pace University Kenan Award for Faculty Development
2018 – 2019	Summer Institutes on Scientific Teaching Scientific Teaching Mentor
2018	Pace University Kenan Award for Faculty Development

2017	2016 – 2017 Pace University NYC Undergraduate Student and Faculty Research Showcase Winner
2017	Pace University Kenan Award for Faculty Development
2016	Inducted to Dyson College Society of Fellows
2015	Pace University Kenan Award for Faculty Development
2010 – 2013	National Institute of General Medical Sciences (NIGMS) K12 Institutional Research and Academic Career Development Award (IRACDA)
2011 – 2012	National Academies Education Fellow in the Life Sciences
2007, 2008, 2010, and 2012	American Society of Andrology Trainee Merit Award
2008, 2012	American Society of Andrology Thomas S.K. Chang Trainee Travel Award
2011	American Society of Andrology Outstanding Trainee Investigator Award
2010	American Society of Andrology Lonnie D. Russell Trainee
2007	Johns Hopkins Bloomberg School of Public Health Student Recognition Award
2002	University of Central Florida College of Health and Public Affairs Honors in the Major Research Award
2002	American Cancer Society Summer Research Fellowship

Awards to Undergraduate Research Students

2020	Dyson College of Arts and Sciences The Society of Fellows Outstanding Science Poster (Iqra Ahmed)
2017	2016 – 2017 Pace University NYC Undergraduate Student and Faculty Research Showcase Winner (Mikayla Bonnett)
2017	Department of Biology Best Poster Award (Mikayla Bonnett)
2017	ECSC Award for Outstanding Poster Presentation in Genetics/Molecular Biology (Jonelle James)
2017	ECSC Award for Outstanding Poster Presentation in Genetics/Molecular Biology (Emily Lopes)
2016	Department of Biology Best Poster Award (Alissa Catanzarite)
2015	Department of Biology Best Poster Award (Mary Braun)

Professional Service

American Society of Andrology

2019 – present	Board of Directors, American Society of Andrology
2019 – 2020	Ex-officio, Trainee Affairs Committee, American Society of Andrology
2017 – 2019	Chairperson, Trainee Affairs Committee, American Society of Andrology
2008 – present	Member, Trainee Affairs Committee, American Society of Andrology

Career Development

- 2019 Meeting Organizer, 2019 Mobile Summer Institute on Scientific Teaching
- 2018 Meeting Organizer, 2018 Mobile Summer Institute on Scientific Teaching
- 2018 – 2019 Secretary, Partnerships for Undergraduate Life Science Education (PULSE) Northeast Regional Network
- 2017 – present Member, PULSE Northeast Regional Network
- 2017 Panelist, “Careers in Teaching and Education Panel”, What Can You Be with a PhD?, New York University Langone Medical Center.
- 2016 Panelist, “Teaching and Education Careers Panel for PhD students and Postdocs”, Columbia University.
- 2015 Panelist, “Careers in Teaching and Education Panel”, What Can You Be with a PhD?, New York University Langone Medical Center.
- 2015 Faculty Mentor, Fertilization and Activation of Development Gordon Research Seminar
- 2015 Panelist, Johns Hopkins School of Public Health Biochemistry and Molecular Biology Career Development Luncheon
- 2015 Panelist, Columbia University Teaching and Education Career Panel
- 2015 Panelist, New York University Langone Medical Center Teaching Career Panel

Journal/Textbook Reviewer

- 2019 – present Reviewer, Proceedings of the National Academy of Sciences (PNAS)
- 2018 – present Reviewer, CourseSource Journal
- 2015 – present Reviewer, Pearson: Higher Education
- 2013 – present Editorial Board, Journal of Microbiology and Biology Education

Additional Professional Service

- 2020 Reviewer on National Institutes of Health (NIH) Special Emphasis Panel/Scientific Review Group 2020/05 Cellular, Molecular and Integrative Reproduction Study Section (CMIR) meeting.
- 2020 Reviewer on National Institutes of Health (NIH) Special Emphasis Panel/Scientific Review Group 2020/05 ZRG1 EMNR-P (56) R meeting
- 2019 Reviewer, National Institutes of Health (NIH) Special Emphasis Panel/Scientific Review Group 2019/05 Cellular,

	Molecular and Integrative Reproduction Study Section (CMIR) meeting
2019	Reviewer on National Institutes of Health (NIH) Special Emphasis Panel/Scientific Review Group 2019/05 ZRG1 EMNR-P (56) R meeting
2018	Poster Judge, 12 th Annual Undergraduate Research Symposium at William Paterson University
2017	Poster Judge, 71 st Annual Eastern Colleges Science Conference
2016	Participant, Mozilla Science Global Sprint
2014	Poster Judge, 47 th Annual Fall MACUB Conference
2013	Chairperson, Fertilization and Activation of Development Gordon Research Seminar
2012	Poster Judge, 45 th Annual Fall MACUB Conference
2011	Poster Judge, 44 th Annual Fall MACUB Conference

Institutional Service

New York Faculty Council

2020 – present	Second Vice Chairperson, Executive Committee
2018 – 2020	Faculty Co-Chair, Strategic Planning Task Force
2017 – 2019	Chairperson, Committee on Buildings, Maintenance, and Space Allocation
2017 – 2019	Member, Nominations Committee
2016 – 2018	Secretary, Executive Committee
2015 – 2019	Member, Committee on Buildings, Maintenance, and Space Allocation
2015 – 2017	Co-Chairperson, Committee on Buildings, Maintenance, and Space Allocation

Dyson Faculty Council

2017 – present	Member, Nominations Committee
2017 – 2018	Convener, Admissions and Retention Committee
2015 – 2018	Member, Admissions and Retention Committee

Department Service

2019 and 2020	Chairperson, Department of Biology Faculty Search
2014, 2015, 2017, 2019, and 2020	Committee Member, Department of Biology Faculty Search
2014 – 2018	Committee Member, Curriculum Committee
2014 – present	Advisor, Biology Department Curriculum (~25 students/year)
2014 – 2016	Co-organizer, Department of Biology Seminar Series

Student Group Advising

2017 – present Faculty Advisor, Beta Beta Beta Biological Honor Society
2015 – present Faculty Advisor, Pre-Professional Medical Society

Additional Service

2017 – 2018 Member, Provost Search Committee
2016 and 2017 Grand Marshal, Pace University New York Commencement
2016 and 2017 Faculty Representative, New Faculty Orientation

Professional Memberships

2017 – present Society for the Study of Reproduction (SSR)
2011 – present Genetics Society of America (GSA)
2006 – present American Society of Andrology (ASA)
2015 – 2016 American Society for Microbiology (ASM)
2012 – 2020 American Society of Cell Biology (ASCB)
2011 – 2014 Metropolitan Association of College and University Biologists
(MACUB)
2010 – 2013 American Society for Biochemistry and Molecular Biology
(ASBMB)
2009 – 2013 New York Academy of Sciences (NYAS)