

# Curriculum Vitae

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## **Education**

Ph.D. Cell and Molecular Biology, University of Texas at Austin, 2012  
Graduate Research Assistant, Advisor: Professor Marvin Whiteley, Molecular Biosciences Department

B.S. Cellular and Molecular Biology and Political Science, University of Michigan, 2007  
Undergraduate Research Assistant, Advisor: Associate Professor Ruthann Nichols, Biological Chemistry Department

## **Teaching Experience**

**Instructor, Loyola University Chicago**

August 2018-Present

### Primary Instructor

Fall 2018: UCSF 137 The Scientific Basis of Environmental Issues

Description: Introductory course for non-science majors on the basic science concepts underlying environmental issues. Topics covered include biodiversity, human population growth, water quality, agriculture and food ecology, energy, and climate change.

**Clinical Assistant Professor, Research Educator, or Lecturer University of Texas at Austin**  
August 2012-August 2018:

Dell Medical School Curriculum Development Consultant, Teaching Assistant, and Instructor:

Spring 2018: Foundations of Disease

Description: Co-instructor of record for second iteration of the Dell Medical School course on Microbiology, Immunology, and Infectious Disease for first year medical students.

Spring 2017: Foundations of Disease

Description: Teaching Assistant for first iteration of the Dell Medical School course on Microbiology, Immunology, and Infectious Disease for first year medical students. Curriculum development occurred over the summer and fall of 2016 in preparation for the course to be taught in January 2017.

College of Natural Sciences Primary Instructor:

Spring 2018: CH 204 Freshman Research Experience

Description: Introductory Biology/Chemistry laboratory course for students in the Freshman Research Initiative program. The course is designed to teach freshman students the technical and critical thinking skills required to conduct independent, peer-reviewed research.

Fall 2017: UGS 018 First Year Interest Group

Description: Seminar course for small group of first year students. Topics relevant to first year students transitioning to college were discussed.

Fall 2017: BIO 377, CH 369K Undergraduate Research

Description: Upper division laboratory course for students in the Freshman Research Initiative program. The course allows students who completed an introductory research course to continue to conduct independent, peer-reviewed research.

Spring 2017: NSC 209 Science Olympiad Near-Peer Mentoring

Description: A seminar course for developing students' peer mentoring skills in the context of mentoring middle and high school Science Olympiad teams. The class met for a weekly seminar with discussion topics relevant to peer mentoring, and the students were required to complete 3 hours per week of logged mentoring activities.

Spring 2017: BIO 206L/170C, CH 204/108 Freshman Research Experience

Description: Introductory Biology/Chemistry laboratory course for students in the Freshman Research Initiative program. The course is designed to teach freshman students the technical and critical thinking skills required to conduct independent, peer-reviewed research.

Fall 2016: UGS 018 First Year Interest Group

Description: Seminar course for small group of first year students. Topics relevant to first year students transitioning to college were discussed.

Fall 2016: NSC 209 Science Olympiad Near-Peer Mentoring

Description: A seminar course for developing students' peer mentoring skills in the context of mentoring middle and high school Science Olympiad teams. The class met for a weekly seminar with discussion topics relevant to peer mentoring, and the students were required to complete 3 hours per week of logged mentoring activities.

Fall 2016: BIO 377, CH 369K Undergraduate Research

Description: Upper division laboratory course for students in the Freshman Research Initiative program. The course allows students who completed an introductory research course to continue to conduct independent, peer-reviewed research.

Spring 2016: NSC 209 Science Olympiad Near-Peer Mentoring

Description: A seminar course for developing students' peer mentoring skills in the context of mentoring middle and high school Science Olympiad teams. The class met for a weekly seminar with discussion topics relevant to peer mentoring, and the students were required to complete 3 hours per week of logged mentoring activities.

Spring 2016: BIO 206L/170C, CH 204/108 Freshman Research Experience

Description: Introductory Biology/Chemistry laboratory course for students in the Freshman Research Initiative program. The course is designed to teach freshman students the technical and critical thinking skills required to conduct independent, peer-reviewed research.

Fall 2015: BIO 377, CH 369K Undergraduate Research

Description: Upper division laboratory course for students in the Freshman Research Initiative program. The course allows students who completed an introductory research course to continue to conduct independent, peer-reviewed research.

Spring 2015: BIO 206L/170C, CH 204/108 Freshman Research Experience

Description: Introductory Biology/Chemistry laboratory course for students in the Freshman Research Initiative program. The course is designed to teach freshman students the technical and critical thinking skills required to conduct independent, peer-reviewed research.

Fall 2014: BIO 377, CH 369K Undergraduate Research

Description: Upper division laboratory course for students in the Freshman Research Initiative program. The course allows students who completed an introductory research course to continue to conduct independent, peer-reviewed research.

Spring 2014: BIO 206L/170C, CH 204/108 Freshman Research Experience

Description: Introductory Biology/Chemistry laboratory course for students in the Freshman Research Initiative program. The course is designed to teach freshman students the technical and critical thinking skills required to conduct independent, peer-reviewed research.

Fall 2013: BIO 377, CH 369K Undergraduate Research

Description: Upper division laboratory course for students in the Freshman Research Initiative program. The course allows students who completed an introductory research course to continue to conduct independent, peer-reviewed research.

Spring 2013: BIO 206L/170C, CH 204/108 Freshman Research Experience

Description: Introductory Biology/Chemistry laboratory course for students in the Freshman Research Initiative program. The course is designed to teach freshman students the technical and critical thinking skills required to conduct independent, peer-reviewed research.

Fall 2012: BIO 344 Molecular Biology

Description: Advanced course in the molecular basis of cellular process. Topics include gene structure and function, DNA replication, RNA and protein synthesis, Regulation of gene expression, recombinant DNA technology, and genomics.

College of Natural Sciences Co-Instructor:

Fall 2014: BIO 326R General Microbiology: Cell Structure and Genetics

Description: Large, 300 student introductory microbiology survey course covering microbial cell structure, growth, basic physiology, and genetics. Co-instructor duties include developing discussion section content, exams and grading, and guest lecturing.

Fall 2012: NSC 110 Health Science Scholars Seminar

Description: 1 credit seminar for Honors students interested in Health Sciences professions. Students lead group discussions regarding topics in microbial pathogenicity and infectious disease including virulence factor production, cell-to-cell communication, vaccines, and antibiotic resistance.

**Teaching Assistant University of Texas at Austin August 2010-June 2012:**

Summer 2012 BIO F344 Molecular Biology

Description: Advanced course in the molecular basis of cellular process. Topics include gene structure and function, DNA replication, RNA and protein synthesis, Regulation of gene expression, recombinant DNA technology, and genomics.

Spring 2012 BIO 126L General Microbiology Lab

Description: Lab sessions covering microbiology techniques and concepts including isolation, biochemical and molecular characterization, and genetics.

Spring 2011 BIO 326M Introductory Medical Microbiology and Immunology

Description: Introductory microbiology course for students pursuing health professions covering topics including microbial physiology, genetics, and immunology.

Fall 2010 BIO 301L From Molecules to Organisms

Description: Introductory course in Biology for non-major students covering biological macromolecules, cell structure and function, and animal diversity.

Grading only:

Fall 2011 BIO 326R General Microbiology: Microbial Cell Structure and Genetics

Description: Introductory microbiology covering topics including microbial physiology, genetics, and diversity with an emphasis on experimental approaches.

#### **Guest Lectures:**

Fall 2016 UT-Austin BIO 326R General Microbiology: Microbial Cell Structure and Genetics

Spring 2012 Texas State University BIO 4447 Microbial Physiology and Genetics

Spring 2010 UT-Austin BIO 393 Bacterial Signal Transduction

#### **Awards**

2011 University of Texas at Austin Graduate School Bruton Continuing Fellowship

2011 University of Texas at Austin School of Biological Sciences Teaching Assistant Award nominee

2009 Wind River Conference on Prokaryotic Biology Travel Award

#### **Publications**

Corwin, L. A., Runyon, C. R., Ghanem, E., Sandy, M., Clark, G., **Palmer, G. C.**, Reichler, S., Rodenbusch, S. E., Dolan, E. L. 2018. Effects of Discovery, Iteration, and Collaboration in Laboratory Courses on Undergraduates' Research Career Intentions Fully Mediated by Student Ownership. *CBE Life Sciences Education*. 17:ar20.

Leander M, Heimonen J, Brocke T, Rasmussen M, Bass C, **Palmer G**, Egle J, Mispelon M, Berry K, Nichols R. 2016. The 5-amino acid N-terminal extension of non-sulfated drosulfakinin II is a unique target to generate novel agonists. *Peptides*. 83:49-56.

Turner, K. H., Wessel, A. K., **Palmer, G. C.**, Murray, J. L., Whiteley, M. 2015. Essential genome of *Pseudomonas aeruginosa* in cystic fibrosis sputum. *Proceedings of the National Academy of Sciences USA*. 112:4110-4115.

**Palmer, G. C.** and Whiteley, M. 2015. Metabolism and Pathogenicity of *Pseudomonas aeruginosa* Infections in the Lungs of Individuals with Cystic Fibrosis. *Microbiology Spectrum*. 3:185-213.

**Palmer, G. C.**, Jorth, P. A., and Whiteley, M. 2013. The role of two *Pseudomonas aeruginosa* anthranilate synthases in tryptophan and quorum signal production. *Microbiology*. 159:959-969.

Wessel, A. K.\*, **Palmer, G. C.\***, and Whiteley, M. 2012. Regulation of vesicle formation. In: *Regulation of Bacterial Virulence*. ASM Press, Washington, DC.

**Palmer, G. C.**, Schertzer, J. W., Mashburn-Warren, L., and Whiteley, M. 2011. Quantifying *Pseudomonas aeruginosa* quinolones and examining their interactions with lipids. *Methods in Molecular Biology*. 692:207-217.

Ng, D. W., Zhang, C., Miller, M., **Palmer, G.**, Whiteley, M., Tholl, D., and Chen, Z.J. 2011. cis- and trans-Regulation of miR163 and target genes confers natural variation of secondary metabolites in two *Arabidopsis* species and their allopolyploids. *Plant Cell*. 23:1729-1740.

**Palmer, G. C.\***, Palmer, K. L.\*, Jorth, P. A., and Whiteley, M. 2010. Characterization of the *Pseudomonas aeruginosa* transcriptional response to phenylalanine and tyrosine. *The Journal of Bacteriology*. 192: 2722-2728.

Nichols, R., Egle, J. P., Langan, N. R., and **Palmer, G. C.** 2008. The different effects of structurally related sulfakinins on *Drosophila melanogaster* odor preference and locomotion suggest involvement of distinct mechanisms. *Peptides*. 29:2128-2135.

**Palmer, G. C.**, Tran, T., Duttlinger, A., Nichols, R. 2007. The drosulfakinin 0 (DSK 0) peptide encoded in the conserved Dsk gene affects adult *Drosophila melanogaster* crop contractions. *Journal of Insect Physiology*. 53:1125-1133.

\* Indicates authors contributed equally

### **Pedagogical/Research Presentations**

ASM Branch Meeting Texas Branch, Dallas, Texas, November 11-13, 2016

Talk title: The University of Texas at Austin Freshman Research Initiative: Antibiotics Discovery and Function Stream

National Academies Special Topics Summer Institute on Course-based Undergraduate Research Experiences, Austin, Texas, June 26-June 30, 2016

Summer Institute Organizing Committee member, Facilitator for session on "Next Steps" in planning research based courses

Freshman Research Initiative Conference, Austin, Texas March 2-4, 2016

Organizing Committee Member, Facilitator for session on student assessment in FRI courses

National Academies Special Topics Summer Institute on Course-based Undergraduate Research Experiences, Austin, Texas, June 28-July 2, 2015

Summer Institute Organizing Committee member, Facilitator for session on assessing student progress research based courses

ASM Conference for Undergraduate Educators, Austin, Texas, May 28-31, 2015

Microbrew talk title: Research proposals as tools to develop first year undergraduate's research projects.

Freshman Research Initiative Conference, Austin, Texas March 26-28, 2014

Panel Discussion Participant: The Research Educator: A Vehicle for Professional Development, Inspiring Undergraduates to Effectively Communicate Science, STEM Outreach

ASM Branch Meeting Texas Branch, San Marcos, Texas, October 28-30, 2010  
Talk title: Characterization of the *Pseudomonas aeruginosa* response to aromatic amino acids.

Wind River Conference on Prokaryotic Biology, Estes Park, Colorado, June 3-7, 2009  
Talk title: Phenylalanine ammonia lyase: a nutritional approach to therapeutic development

ASM Branch Meeting Texas/South Central Branches, Austin, Texas, November 9-11, 2008  
Poster title: Phenylalanine ammonia lyase: a nutritional approach to therapeutic development

### **Service and Outreach**

University of Texas at Austin First Year Interest Group facilitator Fall 2016-present

Dell Medical School Health Sciences Summer Camp microbiology session co-planner and facilitator Summer 2016-present

University of Texas at Austin TIP scholar academic coach Spring 2016

Organizing Committee Chair for the University of Texas at Austin Molecular Biosciences Students Association Undergraduate Research Symposium October 2015 and September 2016.

University of Texas at Austin Regional Science Olympiad Tournament Director 2012-present

Member of Science Olympiad National Life Sciences Rules Committee 2012-present

University of Texas at Austin UTeach PREP camp mentor 2014-present

University of Texas at Austin Shadow a Scientist outreach program for middle school students mentor 2014-present

Co-advisor to University of Texas at Austin American Society for Microbiology student chapter 2014-present

University of Texas at Austin Summer Research Academy for high school students mentor 2013-present

Mentor to nationally competitive high school Science Olympiad team at Liberal Arts and Science Academy, Austin, TX 2011-2014

Cystic Fibrosis Foundation Great Strides Fundraiser participant 2008-2012