

EDUCATION AND EMPLOYMENT

2011- present	The University of Tampa, Tampa, FL Organic Chemistry Lecturer and Lab Coordinator
2010-2011	H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL Postdoctoral Research Fellow, Molecular Oncology
2004-2010	New York University, New York, NY Ph.D., Chemistry
2004-2007	New York University, New York, NY M.S., Chemistry
2000-2004	University of South Florida, Tampa, FL B.S., Chemistry

TEACHING EXPERIENCE

2011-present The University of Tampa

- Organic Chemistry I Lecture I (*3 semesters*)
 - Lectured ~40 science majors in topics discussed in traditional organic chemistry I courses
 - Experience with online homework platforms including WileyPlus
- Organic Chemistry Laboratory I/II (*multiple semesters*)
 - Instructed students on organic chemistry concepts and techniques addressed in the organic chemistry courses at The University of Tampa
 - Collaborated with faculty members and developed a lab manual for the organic chemistry laboratory courses
 - Participated in curriculum development by introducing a computational molecular modeling lab to the lab sequence
- Senior Seminar (*multiple semesters*)
 - Instructed students on a semester long literature review on a topic of their choosing
 - Guided students on proper scientific literature research
 - Advised students on proper research presentation techniques
- Advanced Biochemistry (*one semester*)
 - Co-instructed six advanced students in a combined lab/lecture setting
 - Directed students on advanced biochemistry techniques
- Chemistry for Health Professionals (*one semester*)
 - Lectured 35-40 health professional students per class section in an intense overview of the fundamental principles of general, organic, and biochemistry.
 - Assigned and reviewed online homework to aid in course development using Mastering Chemistry
- General Chemistry Laboratory I/II (*three semesters*)
 - Instructed students in general chemistry concepts and techniques addressed in the general chemistry courses at The University of Tampa
 - Directed students on basic general chemistry techniques, concepts, and calculations

- Chemistry & Society (*multiple summer sessions*)
 - Lectured 25-40 non-science major students in a chemistry course designed to raise students' general knowledge of chemistry

2004-2008 New York University

- Honors Organic Chemistry Laboratory, Teaching Assistant
 - Supervised 12-15 students per laboratory period in an advanced undergraduate laboratory setting
 - Supervised an ongoing laboratory project with students in an "unknown" aldol condensation laboratory, which led to a publication in the *Journal of Chemical Education*
 - Received a Departmental Graduate Teaching Award for this work
- Organic Chemistry Laboratory I/II, Teaching Assistant
 - Generally supervised 12-15 students, but up to 30 undergraduate students in the organic chemistry teaching laboratory
- Organic Chemistry Recitation I/II, Teaching Assistant
 - Instructed 25-30 students per class on topics addressed in Organic Chemistry I and II at New York University
 - Graded quizzes in each class (about 50 per week)
 - Graded in a collaborative effort with other TA's up to 300 exams for Organic I and II classes
- Teaching experience within the research laboratory
 - Trained members of the research laboratory (including graduate and undergraduate students) and other research laboratories on the microwave peptide synthesizer, HPLC, and the fundamentals of protein expression
 - Mentored several undergraduate students with their projects within the research laboratory. Aided in experimental design, running reactions and analytical equipment including HPLC, LC-MS/MS and a microwave peptide synthesizer, as well as microwave assisted chemical reactions

SERVICE AND SKILLS

- Experience in curriculum development in both laboratory and senior seminar courses
- Departmental committees at UT
 - Served on hiring committees, one as chair in a visiting line search
 - Member of department outreach committee, chair for one year
 - Current member of the instrument committee
- Co-advisor of the UT ACS student members (2014-2020)
- Extensive experience in managing undergraduate students as mentors and laboratory assistants
- 9+ years of lab management experience in the organic chemistry teaching laboratory at UT

RESEARCH EXPERIENCE

2010 – 2011 Postdoctoral Research

Molecular Oncology, H. Lee Moffitt Cancer Center and Research Institute

- Investigation of the modulation of signal transduction pathways that affect cell adhesion mediated drug resistance (CAM-DR), specifically Bim and AMPK
- Technical proficiencies:
 - mammalian cell culture techniques
 - cell biology techniques including western blotting, immunoprecipitation, and qPCR
 - advanced mass spectrometry-based proteomics techniques to identify novel protein-protein interactions

2005 – 2010 Graduate Research

Department of Chemistry & Biochemistry, New York University

- Thesis Title: Mimicking α -Helical Transactivation Domains with Hydrogen Bond Surrogate Derived Artificial α -Helices
- Engaged in chemical biology and peptidomimetic research to target protein-protein interactions
 - Synthesis of Hydrogen Bond Surrogate artificial α -helices to target p53/HDM2
 - Inhibition of Hif-1 α /p300 with Hydrogen Bond Surrogate α -helices
 - Mimicking epitopes of the HIV-1 4E10 antibody with Hydrogen Bond Surrogate α -helices
- Technical expertise:
 - structural and thermodynamic properties peptides and peptidomimetics
 - fluorescence polarization and circular dichroism (CD) spectroscopy
 - design, synthesis, and characterization of peptides and peptidomimetics: LC-MS/MS, HPLC, microwave assisted chemistry and solid phase peptide synthesis
 - synthesis and characterization of small molecules: 1D-NMR and UV spectroscopies, TLC, and flash column chromatography
 - biochemical techniques including protein expression and purification and SDS-PAGE

2003 – 2004 Undergraduate Honors Research

Department of Chemistry, University of South Florida

- Thesis Title: Synthesis of Carbohydrate Macrolactones
 - Utilized green chemistry and chemoenzymatic reactions
 - Carbohydrate macrolactones for use as surfactants
- Synthesis of Substituted Resorcinarenes

PUBLICATIONS

Swati Kushal, Brooke Bullock Lao, **Laura K. Henchey**, Ramin Dubey, Hanah Mesallati, Nathaniel J. Traaseth, Bogdan Z. Olenyuk, and Paramjit S. Arora. "Protein domain mimetics as in vivo modulators of hypoxia-inducible factor signaling." *Proc. Natl. Acad. Sci. USA*, **2013**, *110*, 15602-15607.

Laura K. Henchey, Jason R. Porter, Indraneel Ghosh, Paramjit S. Arora. "High Specificity in Protein Recognition by hydrogen-bond-surrogate α -helices: selective inhibition of the p53/MDM2 complex." *Chembiochem*, **2010**, *11*, 2104-2107.

Laura K. Henchey, Swati Kushal, Ramin Dubey, Ross N. Chapman, Bogdan Z. Olenyuk, and Paramjit S. Arora. "Inhibition of hypoxia inducible factor 1 - transcription coactivator interaction by a hydrogen bond surrogate α -helix." *J. Am. Chem. Soc.*, **2010**, *132*, 941-943.

Katherine M. Block, Hui Wang, Lajos Z. Szabó, Nathan W. Polaske, **Laura K. Henchey**, Ramin Dubey, Swati Kushal, Csaba F. László, Joshua Makhoul, Zuohe Song, Emmanuelle J. Meillet and Bogdan Z. Olenyuk. "Direct inhibition of hypoxia-inducible transcription factor complex with designed dimeric epidithiodiketopiperazine." *J. Am. Chem. Soc.*, **2009**, *131*, 18078-18088.

Laura K. Henchey, Andrea L. Jochim and Paramjit S. Arora. "Contemporary strategies for the stabilization of peptides in the α -helical conformation." *Curr. Opin. Chem. Biol.* **2008**, *12*, 692-697.

Nicholas G. Angelo, **Laura K. Henchey**, Adam J. Waxman, James W. Canary, Paramjit S. Arora, and Donald Wink. "Synthesis and characterization of aldol condensation products from unknown aldehydes and ketones: an inquiry-based experiment in the undergraduate laboratory." *J. Chem. Ed.* **2007**, *84*, 1816-1818.

AFFILIATIONS

2004 – 2020 American Chemical Society, Member

Tampa Bay Local Section

2015, 2019 Secretary

2017 – 2020 Newsletter Editor

The University of Tampa

2014 – 2020 Co-advisor of Student Members

2010 – 2011 Moffitt Postdoctoral Association, Member

2007 – 2008 Chemistry Graduate Student Organization, Vice President, New York University

2005 – 2010 New York Academy of Sciences, Member

HONORS & AWARDS

2021 10-Year Service Award, The University of Tampa

2015 Employee of the Month, The University of Tampa

2015 Unsung Hero Award, Leadership Awards Night, The University of Tampa

2013 Volunteer of the Year, Tampa Bay Section of the ACS

2006 Departmental Graduate Teaching Award, New York University

2004 – 2010 MacCracken Fellowship, New York University