

Katherine Nalani Maloney

Point Loma Nazarene University
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ACADEMIC POSITIONS

Point Loma Nazarene University	
<i>Professor of Chemistry</i>	2018-present
<i>Associate Professor of Chemistry</i>	2014-2018
<i>Assistant Professor of Chemistry</i>	2012-2014
Harvey Mudd College	
<i>Assistant Professor of Chemistry</i>	2009-2011

EDUCATION AND EXPERIENCE

Visiting Scholar	2019-2020
Dorrestein Lab, UCSD Skaggs School of Pharmacy & Pharmaceutical Sciences	
Cancer Therapeutics Training (CT2) Postdoctoral Fellowship	2006-2009
Scripps Institution of Oceanography/UCSD	
Advisor: Professor William Fenical	
Isolation and structure elucidation of bioactive compounds from marine actinomycetes	
Ph.D. in Chemistry and Chemical Biology	2000-2006
Cornell University	
Advisor: Professor Jon Clardy	
Dissertation title: Biologically active natural products from plants and their endophytes	
B.S. in Chemistry, <i>summa cum laude</i>	1996-2000
Pacific Lutheran University	
Advisor: Professor Duane Swank	
Synthesis and characterization of copper halide dimers ligated by substituted pyridines	
Undergraduate Researcher, NSF-REU	Summer 1999
University of Washington	
Advisor: Tomikazu Sasaki	
Multi-step organic synthesis of a modified carbohydrate ligand	

TEACHING

2012-	Point Loma Nazarene University	
	<ul style="list-style-type: none"> CHE 1003L, General, Organic & Biological Chemistry Lab CHE 1003, General, Organic & Biological Chemistry CHE 294L, Organic Chemistry I Laboratory CHE 2096 (formerly CHE 304), Organic Chemistry II CHE 2096L (formerly CHE 304L), OChem II Laboratory CHE 3051, Organic Structure Elucidation CHE 3051L, Organic Structure Elucidation Laboratory CHE 370, Instrumental Analysis CHE 370L, Instrumental Analysis Laboratory CHE 4075, Natural Products Biosynthesis 	2020-2021 2018-2021 2012-2015 2012-2021 2012-2021 2012-2020 2012-2020 2012-2018 2012-2018 2021
2009-2011	Harvey Mudd College:	
	<ul style="list-style-type: none"> Chem 23S (formerly Chem 21), General Chemistry: Structure Chem 199, Seminar Chem 56, Carbon Compounds Chem 58, Carbon Compounds Laboratory Chem 111, Organic Chemistry Laboratory Chem 25, General Chemistry Laboratory 	2009-2011 2010-2011 2010, 2011 2010, 2011 2009-2011 2009
2004-2006	<i>Teaching Fellow, 'Molecules of Life' (Science Core course), Harvard University</i>	
2000-2001	<i>Teaching Assistant, 'Organic Chemistry for the Life Sciences,' Cornell University</i>	
1998-2000	<i>Chemistry Tutor and Grader, Pacific Lutheran University</i>	

RESEARCH STUDENT MENTORING

#Denotes students who have coauthored one or more peer-reviewed publications on their research

§Denotes honors project student (PLNU) or senior thesis student (HMC)

PLNU

Oscar Alvarado [#] (PLNU Biology-Chemistry '14; DC, SCUHS)	2012-2013
Victoria Berry [#] (PLNU Chemistry '19)	2017-2018
Connor Brandenburg ^{#,§} (PLNU Philosophy '19; <i>PhD student in Chemistry, UCSD</i>)	2017-2019
Kyler Brinton [#] (PLNU Biology-Chemistry '21)	2019
Diana Corral [#] (PLNU Biology-Chemistry '21)	2019
Jason Chari [#] (Cornell Univ. Biostatistics '17; <i>PhD student in Chemistry, UCLA</i>)	2016
Brent Chicoine [#] (PLNU Biology-Chemistry '15)	2013
Jennifer Cordoza ^{#,§} (PLNU Biology-Chemistry '19; <i>PhD student in Chemistry, UCSC</i>)	2018-2019
Nick Cornelius (PLNU Biology MS student)	2021
Taylor Davis ^{#,§} (PLNU Biology-Chemistry '14; <i>MPH, Azusa Pacific University</i>)	2012-2014
Sydney Davis ^{#,§} (PLNU Biology-Chemistry '18; <i>MD student at University of Utah</i>)	2016-2018
Lindsey D'Elia (PLNU Biology-Chemistry '17)	2015-2016
Eunice Granados (PLNU Biology-Chemistry '14; <i>Alere Inc.</i>)	2014
Julia Kelly (PLNU Biology-Chemistry '21)	2019-2021

Lia Lozano# (PLNU Chemistry '19; MIT)	2018-2019
Elizabeth Maloney# (Pacific Lutheran Univ. Economics, Math, & Computer Science '16; 2012, 2016 <i>PhD student in Economics, UC Irvine</i>)	
Jeremiah Meloch# (PLNU Biology-Chemistry '20)	2018-2019
Morgan Papineau ^s (PLNU Biology-Chemistry '17; <i>DO student at Idaho College of Osteopathic Medicine</i>)	2015-2017
Heather Rainbow (PLNU Biology-Chemistry '22)	2020-
Jordan Reader# (PLNU Biology-Chemistry '15; <i>DO, Univ. of New England</i>)	2013-2014
Sierra Ruvalcaba (PLNU Biology-Chemistry '21)	2021
Jonathan Sawada (PLNU Biology-Chemistry '17; <i>MD student at Loma Linda</i>)	2015-2016
Lindsay Semmler ^s (PLNU Biology-Chemistry '16)	2015-2016
Matthew Steinhaus# (PLNU Biology-Chemistry '15; <i>MD, UC Irvine</i>)	2013-2014
Samantha Thompson (PLNU Biology-Chemistry '18; <i>PharmD student at UCSD</i>)	2017-2018
Sara Versales (PLNU Chemistry '21; <i>MS student at UCI</i>)	2019
Lauren Wilson (PLNU Biology-Chemistry '22)	2021-

HMC

Thomas Aldrich# ^s (HMC Chemistry '12; <i>NSF GRFP PhD in Chemistry, Northwestern</i>)	2010-2012
Kyle Chakos (HMC Engineering '13)	2010
Alix Chan (HMC Chemistry & Biology '12; <i>PhD in Chemical Biology, Harvard</i>)	2011
William Chen (HMC Mathematical Biology '12)	2010
Jonathan 'Chance' Crompton# (HMC Chemistry '13)	2011
Brian Fielder (HMC Chemistry '14; <i>Schrödinger, Inc.</i>)	2010-2011
Millie Fung ^s (HMC Chemistry & Biology '11; <i>PhD in Chemistry, UC Irvine</i>)	2010-2011
Katie Near ^s (HMC Chemistry '10; <i>NSF GRFP PhD in Chemistry, Stanford</i>)	2009-2010
Bethany Okada# (HMC Chemistry '13; <i>PhD in Chemistry, Princeton</i>)	2011
Caitlin Olmsted ^s (HMC Chemistry '10)	2009-2010
Emily Putnam (HMC Chemistry & Biology '12)	2010
Kim Quach# (HMC Chemistry '12; <i>PhD in Chemistry, Yale</i>)	2011
Jessie Roy ^s (HMC Chemistry '11; <i>MS in Biology, Georgia Tech</i>)	2010-2011
Kathryn Schmiedicke ^s (HMC Biology '11)	2010-2011
Vincent Shieh# (HMC Chemistry & Biology '12)	2010
Camille Sultana# ^s (HMC Chemistry '10; <i>PhD in Environmental Chemistry, UCSD</i>)	2009-2010

PUBLICATIONS

* Undergraduate student co-authors

- Schor, M. A.; Verhoeven, S.; Ridder, L.; Huber, F.; Acharya, D. D.; Aksenov, A. A.; Aleti, G.; Moghaddam, J. A.; Aron, A. T.; Aziz, S.; Bauermeister, A.; Bauman, K. D.; Baunach, M.; Beemelmans, C.; Beman, J. M.; Berlanga-Clavero, M. V.; Blacutt, A. A.; Bode, H. B.; Boullie, A.; Brejnrod, A.; Bugni, T. S.; Calteau, A.; Cao, L.; Carrion, V. J.; Castelo-Branco, R.; Chanana, S.; Chase, A. B.; Chevrette, M. G.; Costa-Lotufo, L. V.; Crawford, J. M.; Currie, C. R.; Cuypers, B.; Dang, T.; de Rond, T.; Demko, A. M.; Dittmann, E.; Du, C.; Drozd, C.; Dujardin, J.-C.; Dutton, R. J.; Edlund, A.; Fewer, D. P.; Garg, N.; Gauglitz, J. M.; Gentry, E. C.; Gerwick, L.; Glukhov, E.; Gross, H.; Gugger, M.; Guillén Matus, D. G.; Helfrich, E. J. N.; Hempel, B.-F.; Hur, J.-S.; Iorio, M.; Jensen, P. R.; Kang, K. B.; Kaysser, L.; Kelleher, N. L.; Kim, C. S.; Kim, K. H.; Koester, I.; König, G. M.; Leao, T.; Lee, S. R.; Lee, Y.-Y.; Li, X.; Little, J. C.; **Maloney, K. N.**; Männle, D.;

- Martin H., C.; McAvoy, A. C.; Metcalf, W. W.; Mohimani, H.; Molina-Santiago, C.; Moore, B. S.; Mullowney, M. W.; Muskat, M.; Nothias, L. F.; O'Neill, E. C.; Parkinson, E. I.; Petras, D.; Piel, J.; Pierce, E.; Pires, K.; Reher, R.; Romero, D.; Roper, M. C.; Rust, M.; Saad, H.; Saenz, C.; Sanchez, L. M.; Sørensen, S. J.; Sosio, M.; Süßmuth, R. D.; Sweeney, D.; Tahlan, K.; Thomson, R. J.; Tobias, N. J.; Trindade-Silva, A. E.; van Wezel, G. P.; Wang, M.; Weldon, K. C.; Zhang, F.; Ziemert, N.; Duncan, K. R.; Crüsemann, M.; Rogers, S.; Dorrestein, P. C.; Medema, M. H.; van der Hoof, J. J. J. A community resource for paired genomic and metabolomic data mining. *Nat. Chem. Biol.* **2021**, *17*, 363-368.
2. Aksenov, A. A.; Laponogov, I.; Zhang, Z.; Doran, S. L. F.; Belluomo, I.; Veselkov, D.; Bittremieux, W.; Nothias, L. F.; Nothias-Esposito, M.; **Maloney, K. N.**; Misra, B. B.; Melnik, A. V.; Smirnov, A.; Du, X.; Jones, K. L.; Dorrestein, K.; Panitchpakdi, M.; Ernst, M.; van der Hoof, J. J. J.; Gonzalez, M.; Carazzone, C.; Amézquita, A.; Callewaert, C.; Morton, J. T.; Quinn, R. A.; Bouslimani, A.; Orio, A. A.; Petras, D.; Smania, A. M.; Couvillion, S. P.; Burnet, M. C.; Nicora, C. D.; Zink, E.; Metz, T. O.; Artaev, V.; Humston-Fulmer, E.; Gregor, R.; Meijler, M. M.; Mizrahi, I.; Eyal, S.; Anderson, B.; Dutton, R.; Lugan, R.; Boulch, P. L.; Guitton, Y.; Prevost, S.; Poirier, A.; Dervilly, G.; Le Bizec, B.; Fait, A.; Persi, N. S.; Song, C.; Gashu, K.; Coras, R.; Guma, M.; Manasson, J.; Scher, J. U.; Barupal, D. K.; Alseekh, S.; Fernie, A. R.; Mirnezami, R.; Vasiliou, V.; Schmid, R.; Borisov, R. S.; Kulikova, L. N.; Knight, R.; Wang, M.; Hanna, G. B.; Dorrestein, P. C.; Veselkov, K. Auto-deconvolution and molecular networking of gas chromatography-mass spectrometry data. *Nat. Biotechnol.* **2021**, *39*, 169-173.
 3. Brandenburg, C. A.*; Castro, C. A.; Blacutt, A. A.; Costa, E. A.; Brinton, K. C.*; Corral, D. W.*; Drozd, C. L.; Roper, M. C.; Rolshausen, P. E.; **Maloney, K. N.**; Lockner, J. W. Synthesis of deoxyradicinin, an inhibitor of *Xylella fastidiosa* and *Liberibacter crescens*, a culturable surrogate for *Candidatus Liberibacter asiaticus*. *J. Nat. Prod.* **2020**, *83*: 6, 1810-1816.
 4. Blacutt, A.; Ginnan, N.; Dang, T.; Bodaghi, S.; Vidalakis, G.; Ruegger, P.; Peacock, B.; Viravathana, P.; Campos Vieira, F.; Drozd, C.; Jablonska, B.; Borneman, J.; McCollum, G.; Cordoza, J.*; Meloch, J.*; Berry, V.*; Lozano Salazar, L.*; **Maloney, K. N.**; Rolshausen, P. E.; Roper, M. C. An *in vitro* pipeline to screen and select citrus-associated microbiota with potential anti-*Candidatus Liberibacter asiaticus* properties. *Appl. Environ. Microbiol.* **2020**, *86*: 8, e02883-19.
 5. **Maloney, K. N.**; Botts, R. T.; Davis, T. S.*; Okada, B. K.*; Maloney, E. M.*; Leber, C. A.; Alvarado, O.*; Brayton, C.*; Caraballo, M.; Chari, J. V.*; Chicoine, B.*; Crompton, J. C.*; Davis, S. R.*; Gromek, S. M.; Kurnianda, V.; Quach, K.*; Samples, R. M.; Shieh, V.*; Sultana, C. M.*; Tanaka, J.; Dorrestein, P. C.; Balunas, M. J.; McFadden, C. S. "Cryptic species account for the seemingly idiosyncratic secondary metabolism of *Sarcophyton glaucum* specimens collected in Palau." *J. Nat. Prod.* **2020**, *83*: 3, 693-705.
 6. **Maloney, K.** "In Praise of a Nonelite Education" *Inside Higher Ed*, 22 May 2019. Op-ed. <https://www.insidehighered.com/advice/2019/05/22/nonelite-colleges-can-give-students-excellent-education-and-phd-grads-chance-grow>
 7. Kearney, S. E.; Zahoránszky-Köhalmi, G.; Brimacombe, K. R.; Henderson, M. J.; Lynch, C.; Zhao, T.; Wan, K. K.; Itkin, Z.; Dillon, C.; Shen, M.; Cheff, D. M.; Lee, T. D.; Bougie, D.; Cheng, K.; Coussens, N. P.; Dorjsuren, D.; Eastman, R. T.; Huang, R.; Iannotti, M. J.; Karavadi, S.;

- Klumpp-Thomas, C.; Roth, J. S.; Sakamuru, S.; Sun, W.; Titus, S. A.; Yasgar, A.; Zhang, Y.; Zhao, J.; Andrade, R. B.; Brown, M. K.; Burns, N. Z.; Cha, J. K.; Mevers, E. E.; Clardy, J.; Clement, J. A.; Crooks, P. A.; Cuny, G. D.; Ganor, J.; Moreno, J.; Morrill, L. A.; Picazo, E.; Susick, R. B.; Garg, N. K.; Goess, B. C.; Grossman, R. B.; Hughes, C. C.; Johnston, J. N.; Joullie, M. M.; Kinghorn, A. D.; Kingston, D. G. I.; Krische, M. J.; Kwon, O.; Maimone, T. J.; Murphy, B. T.; Nagorny, P.; Majumdar, S.; **Maloney, K. N.**; Mohamed, E.; Olson, D. E.; Overman, L. E.; Brown, L. E.; Snyder, J. K.; Porco, J. A., Jr.; Sharma, I.; Shaw, J. T.; Rivas, F.; Ross, S. A.; Sarpong, R.; Xu, Z.; Shen, B.; Shi, W.; Stephenson, C. R. J.; Tang, Y.; Taylor, R. E.; Thomson, R. J.; Wuest, W. M.; Zakarian, A.; Zhang, Y.; Verano, A. L.; Tan, D. S.; Vosburg, D. A.; Wu, J.; Ren, T.; Zuo, Z.; Inglese, J.; Michael, S.; Simeonov, A.; Zheng, W.; Shinn, P.; Jadhav, A.; Boxer, M. B.; Hall, M. D.; Xia, M.; Guha, R.; Rohde, J. M. "Canvass: A Crowd-Sourced, Natural-Product Screening Library for Exploring Biological Space" *ACS Cent. Sci.* **2018**, *4*, 1727-1741.
8. Kim, D.; Lee, E. J.; Lee, J.; Leutou, A. S.; Shin, Y.-H.; Choi, B.; Hwang, J. S.; Hahn, D.; Choi, H.; Chin, J.; Cho, S. J.; Hong, Y. D.; Ko, J.; Seong, C. N.; **Maloney, K. N.**; Oh, D.-C.; Yang, I.; Hwang, H.; Nam, S.-J. "Antartin, a cytotoxic zizaane-type sesquiterpenoid from a *Streptomyces* sp. isolated from an Antarctic marine sediment." *Marine Drugs* **2018**, *16*, 130.
 9. Aldrich, T. J.*; Rolshausen, P.; Roper, M. C.; Reader, J. M.*; Steinhaus, M. J.*; Rapicavoli, J.; Vosburg, D. A.; **Maloney, K. N.** "Radicinin from *Cochliobolus* sp. inhibits *Xylella fastidiosa*, the causal agent of Pierce's Disease of grapevine." *Phytochemistry* **2015**, *116*, 130-137.
 10. Sun, P.; **Maloney, K. N.**; Nam, S.-J.; Haste, N. M.; Raju, R.; Aalbersberg, W.; Jensen, P. R.; Nizet, V.; Hensler, M. E.; Fenical, W. "Fijimycins A-C, three antibacterial etamycin-class depsipeptides from a marine-derived *Streptomyces* sp." *Bioorg. Med. Chem.* **2011** *19* (22), 6557-6562.
 11. Udvary, D. W.; Gontang, E. A.; Jones, A. C.; Schultz, A. W.; Sorrels, C. M.; Winter, J. M.; Yang, J. Y.; Beauchemin, N.; Capson, T. L.; Clark, B. R.; Esquenazi, E.; Eustáquio, A. S.; Freel, K.; Gonzalez, D. J.; Gerwick, L.; Gerwick, W. H.; Liu, W.-T.; Malloy, K. L.; **Maloney, K. N.**; Nett, M.; Nunnery, J. K.; Penn, K.; Prieto-Davo, A.; Simmons, T. L.; Weitz, S.; Wilson, M. C.; Tisad, L. S.; Dorrestein, P. C.; Moore, B. S. "Significant natural product biosynthetic potential of actinorhizal symbionts of the genus *Frankia*, as revealed by comparative genomic and proteomic analyses." *Appl. Environ. Microb.* **2011** *77* (11), 3617-3625.
 12. Choi, Y.; Jermihov, K.; Nam, S.; Sturdy, M.; **Maloney, K.**; Qiu, X.; Main, M.; Mesecar, A. D.; Pauli, G. F.; Fenical, W. Pezzuto, J. M.; van Breemen, R. R. "Screening natural products for inhibitors of quinone reductase-2 using ultrafiltration LC-MS." *Anal. Chem.* **2011** *83* (3), 1048-1052.
 13. Murphy, B. T.; **Maloney, K. N.**; Fenical, W., **2011**, Natural Products from Marine Microorganisms. In *Natural Products: Phytochemistry and Pharmacognosy*. Pezzuto, J. M.; Kato M. J., Eds.; in Encyclopedia of Life Support Systems (EOLSS), Developed under the Auspices of the UNESCO, Eolss Publishers, Paris, France.
 14. Haste, N. M.; Perera, V.; **Maloney, K. N.**; Tran, D. N.; Jensen, P. R.; Fenical, W.; Nizet, V.; Hensler, M. E. "Activity of the streptogramin antibiotic etamycin against methicillin-resistant *Staphylococcus aureus*." *J. Antibiot.* **2010** *63* (5), 219-224.

15. **Maloney, K. N.**; MacMillan, J. B.; Kauffman, C. A.; Jensen, P. R.; DiPasquale, A. G.; Rheingold, A. L.; Fenical, W. "Lodopyridone, a structurally-unprecedented alkaloid from a marine actinomycete." *Org. Lett.* **2009** 11 (23), 5422-5424.
16. **Maloney, K. N.**; Fujita, M.; Eggert., U. S.; Schroeder, F. C.; Field, C. M.; Mitchison, T. J.; Clardy J. "Actin-aggregating cucurbitacins from *Physocarpus capitatus*." *J. Nat. Prod.* **2008** 71 (11), 1927-1929.
17. **Maloney, K. N.**; Hao, W.; Xu, J.; Gibbons, J.; Hucul, J.; Roll, D.; Brady, S. F.; Schroeder, F. C.; Clardy, J. "Phaeosphaeride A, a selective inhibitor of STAT3-dependent signaling isolated from an endophytic fungus." *Org. Lett.* **2006** 8 (18), 4067-4070.
18. Smith, P. L.; **Maloney, K. N.**; Pothen, R. G.; Clardy, J.; Clapham, D. E. "Bisandrographolide from *Andrographis paniculata* activates TRPV4 channels." *J. Biol. Chem.* **2006** 281 (40), 29897-29904.
19. Hieronymus, H.; Lamb, J.; Ross, K. N.; Clement, C.; Peng, X. P.; Rodina, A.; Nieto, M.; Du, J.; Stegmaier, K.; Raj, S. M.; **Maloney, K. N.**; Clardy, J.; Hahn, W. C.; Chiosis, G.; Golub T. R. "Gene expression signature-based chemical genomic prediction identifies novel class of HSP90 pathway modulators." *Cancer Cell* **2006** 10 (4), 321-330.
20. **Maloney, K. N.** "Book Review: Natural Products Isolation, Second Edition. Satyajit D. Sarker, Zahid Latif, and Alexander I. Gray, Editors. Humana Press." *Chemical Educator* **2006** 11 (2), 146-147.

PATENTS & PATENT APPLICATIONS

* Undergraduate student co-authors

1. Roper, M.C.; Rolshausen, P.; Lockner, J.; Maloney, K. Citrus Huanglongbing Therapeutic Compounds. U.S. Provisional Pat. Appl. No. 62/965,625, filed January 24, 2020.
2. Rolshausen, P.; Roper, M. C.; Maloney, K. N.; Aldrich, T.* Identification of fungi antagonistic to *Xylella fastidiosa*. (2019) US Patent 10,238,118.
3. Clardy, J. C.; Maloney, K. N.; Schroeder, F. C. Bioplastics based on polymers extracted from cultured media of carbohydrates and a fungus. *PCT Int. Appl.* (2009), WO 2009045719 A2 20090409.

EXTERNAL GRANTS

USDA Citrus Disease Research and Extension (CDRE) Program, co-investigator 2017-2021
 (with PD Caroline Roper and co-Is Robert Turgeon, Georgios Vidalakis, Philippe Rolshausen, Greg McCollum, David Jassby, Pieter Dorrestein, James Borneman and Jonathan Kaplan)
 Deployment of a Spectrum of Bactericides to Cure and Prophylactically Treat Citrus Huanglongbing.
 \$5,112,000 (\$131,207 for my part)

<p><i>CDFR UC Pierce's Disease Research Grant</i>, co-PI (with PI Philippe Rolshausen and co-PIs Caroline Roper and James Borneman, UC Riverside) Greenhouse evaluation of grapevine microbial endophytes and fungal natural products for control of Pierce's Disease. \$94,402 (\$17,759 for my part)</p>	2016-2017
<p><i>NSF Scholarships in Science Technology Engineering and Math (S-STEM)</i>, PI (with co-PIs Maria Zack, Dawne M. Page, Lorinda Carter, and Paul Schmelzenbach) Scholarships to Support STEM majors Computational Sciences Minors \$576,750</p>	2015-2020
<p><i>CDFR UC Pierce's Disease Research Grant</i>, co-PI (with PI Philippe Rolshausen and co-PI Caroline Roper, UC Riverside) Greenhouse Evaluation of Grapevine Fungal Endophytes and Fungal Natural Products Antagonistic to <i>Xylella fastidiosa</i> for Control of Pierce's Disease. \$175,007 (\$31,990 for my part)</p>	2014-2016
<p><i>Research Corporation Multiple Investigator-Cottrell College Science Awards</i>, PI (with Catherine McFadden, HMC Dept of Biology) Variation in secondary metabolite chemistry among cryptic species of the soft coral Sarcophyton, a source of bioactive cembranoids \$75,000</p>	2010-2012
<p><i>American Society of Pharmacognosy Research Starter Grant</i>, PI Discovery of natural product inhibitors of <i>Xylella fastidiosa</i> from endophytic fungi \$5,000</p>	2010
<p><i>National Science Foundation Major Research Instrumentation</i>, co-PI MRI: Acquisition of a Liquid Chromatograph-Ion Trap Mass Spectrometer for Undergraduate Research and Research Training \$234,310</p>	2009

HONORS AND FELLOWSHIPS

Cancer Therapeutics Training Fellowship, UCSD Moores Cancer Center	2007-2009
Certificate of Distinction in Teaching, Harvard University	2006, 2005
American Chemical Society Travel Award	2005
American Society of Pharmacognosy Lynn Brady Travel Award	2005
NSF Graduate Research Fellowship	2001-2004
Herman & Margaret Sokol Fellowship	2001
Cornell University Graduate Fellowship	2000-2001
American Institute of Chemists Award (top chemistry senior)	2000
NSF REU Fellowship, University of Washington	1999
Barry Goldwater Scholarship	1998-2000
Olsen Fellowship for Undergraduate Research, PLU Department of Chemistry	1997-1998
Robert C. Byrd Scholarship	1996-2000
PLU Academic Scholarship	1996-2000

SERVICE

2020-	Tiny Earth Curriculum Committee (<i>Chair, Tiny Earth Chemistry Course Working Group</i>)
2021-2023	ACS National Award Selection Committee (2022-2024 award cycle)
2018-2023	Councilor, ACS Division of Organic Chemistry Executive Committee (<i>member of Awards, Membership, and Nomination Committees</i>)
2021	Rank & Tenure Committee, PLNU
2017-2019	Diversity Committee, PLNU (<i>2018-19 Chair</i>)
2013-	Pre-Health Committee, PLNU (<i>conduct sophomore and junior pre-med interviews; provide feedback on application materials</i>)
2013-	Goldwater Faculty Representative, PLNU (<i>assist PLNU students applying for the Barry Goldwater Scholarship and coordinate final application submission</i>)
2008-	Manuscript Reviewer: <i>ACS Omega; Journal of Natural Products; Marine Drugs; Organic Letters; Phytochemistry; Metabolites; Journal of Undergraduate Chemical Research</i>
2018, 2019	Expert Reviewer (NSF S-STEM program, Citrus Research Board)
2015-2017	Alternate Councilor, ACS Division of Organic Chemistry Executive Committee (<i>member of Awards, Membership, and Nomination Committees</i>)
2015-2016	2016 Organic Chemistry Examination Committee, ACS Division of Chemical Education Examinations Institute (<i>write 2016 ACS Organic Chemistry examination</i>)
2015-2016	Faculty Development Committee, PLNU (<i>one year appointment</i>)
2015	NSF Panelist (S-STEM program)
2015	Expert Reviewer: ACS Petroleum Research Fund Undergraduate New Investigator Research Grant program; North Carolina Biotechnology Center Biotechnology Research Grant program
2013-2014	Faculty Status Committee, PLNU (<i>elected for one-year position</i>)
2012-2014	Member-At-Large, ACS Division of Organic Chemistry Executive Committee (<i>Chaired Membership Committee; member of Graduate Fellowship, Membership, and Communications Committees; headed up Social Media initiative</i>)
2010	NSF Panelist (MRI program)
2009, 2010	Keynote Speaker, BE WiSE Overnight
2006-2009	Program Co-Chair, San Diego Expanding Your Horizons Conference
2009	Judge (AWIS), Greater San Diego Science and Engineering Fair
2007, 2008	Assistant Event Captain, San Diego Science Olympiad
2007, 2008	Volunteer, National Ocean Sciences Bowl
2007	Presenter, Reuben H. Fleet Saturday Science Club for Girls
2004-2005	Mentor, Boston Latin School Science Mentor Program
2001, 2002	Transportation Chair, Cornell Expanding Your Horizons Conference

PROFESSIONAL MEMBERSHIPS

American Chemical Society (Division of Organic Chemistry Executive Committee, Organic Chemistry Examination Committee)
 American Society of Pharmacognosy (Younger Members Committee)
 Council on Undergraduate Research