

# Katherine Nalani Maloney

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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                                        |                             |
|           | • CHE 1003L, General, Organic & Biological Chemistry Lab              | 2020                        |
|           | • CHE 1003, General, Organic & Biological Chemistry                   | 2018, 2020                  |
|           | • CHE 294L, Organic Chemistry I Laboratory                            | 2012-2015                   |
|           | • CHE 304, Organic Chemistry II                                       | 2012-2019                   |
|           | • CHE 304L, Organic Chemistry II Laboratory                           | 2012-2017                   |
|           | • CHE 3051, Organic Structure Elucidation                             | 2012-2020                   |
|           | • CHE 3051L, Organic Structure Elucidation Laboratory                 | 2012-2020                   |
|           | • CHE 370, Instrumental Analysis                                      | 2012-2018                   |
|           | • CHE 370L, Instrumental Analysis Laboratory                          | 2012-2018                   |
| 2009-2011 | Harvey Mudd College:                                                  |                             |
|           | • Chem 23S, General Chemistry: Structure                              | 2010, 2011                  |
|           | • Chem 199, Seminar                                                   | 2010-2011                   |
|           | • Chem 56, Carbon Compounds                                           | 2010, 2011                  |
|           | • Chem 58, Carbon Compounds Laboratory                                | 2010, 2011                  |
|           | • Chem 111, Organic Chemistry Laboratory                              | 2009-2011                   |
|           | • Chem 21, General Chemistry                                          | 2009                        |
|           | • Chem 25, General Chemistry Laboratory                               | 2009                        |
| 2004-2006 | <i>Teaching Fellow, 'Molecules of Life' (Science Core course),</i>    | Harvard University          |
| 2000-2001 | <i>Teaching Assistant, 'Organic Chemistry for the Life Sciences,'</i> | Cornell University          |
| 1998-2000 | <i>Chemistry Tutor and Grader,</i>                                    | Pacific Lutheran University |

**RESEARCH STUDENT MENTORING**

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

<sup>§</sup>Denotes honors project student (PLNU) or senior thesis student (HMC)

*PLNU*

|                                                                                                                      |           |
|----------------------------------------------------------------------------------------------------------------------|-----------|
| Oscar Alvarado <sup>#</sup> (PLNU Biology-Chemistry '14; DC student at Southern California Univ. of Health Sciences) | 2012-2013 |
| Victoria Berry <sup>#</sup> (PLNU Chemistry '19; Drug Delivery Experts)                                              | 2017-2018 |
| Connor Brandenburg <sup>#,§</sup> (PLNU Philosophy '19; PhD student in Chemistry, UCSD)                              | 2017-2019 |
| Kyler Brinton <sup>#</sup> (PLNU Biology-Chemistry '21)                                                              | 2019      |
| Diana Corral <sup>#</sup> (PLNU Biology-Chemistry '21)                                                               | 2019      |
| Jason Chari <sup>#</sup> (Cornell Univ. Biostatistics '17; PhD student in Chemistry, UCLA)                           | 2016      |
| Brent Chicoine <sup>#</sup> (PLNU Biology-Chemistry '15)                                                             | 2013      |
| Jennifer Cordoza <sup>#,§</sup> (PLNU Biology-Chemistry '19; PhD student in Chemistry, UCSC)                         | 2018-2019 |
| Taylor Davis <sup>#,§</sup> (PLNU Biology-Chemistry '14; MPH, Azusa Pacific University)                              | 2012-2014 |
| Sydney Davis <sup>#,§</sup> (PLNU Biology-Chemistry '18; MD student at University of Utah)                           | 2016-2018 |
| Lindsey D'Elia (PLNU Biology-Chemistry '17)                                                                          | 2015-2016 |
| Eunice Granados (PLNU Biology-Chemistry '14; Alere Inc.)                                                             | 2014      |
| Julia Kelly (PLNU Biology-Chemistry '21)                                                                             | 2019-     |

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

## HMC

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

## PUBLICATIONS

\* Undergraduate student co-authors

1. 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.
2. 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.

3. **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.
4. **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>
5. 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.; Karavadhi, 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.
6. 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.
7. 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.
8. 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.
9. Udworthy, 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.

10. 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.
11. 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.
12. 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.
13. **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.
14. **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.
15. **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.
16. 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.
17. 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.
18. **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

|                                                                                                                                                                                                                                                                                                                                                                                                                              |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <p><i>USDA Citrus Disease Research and Extension (CDRE) Program</i>, co-investigator<br/> (with PD Caroline Roper and co-Is Robert Turgeon, Georgios Vidalakis, Philippe Rolshausen, Greg McCollum, David Jassby, Pieter Dorrestein, James Borneman and Jonathan Kaplan)<br/> Deployment of a Spectrum of Bactericides to Cure and Prophylactically Treat Citrus Huanglongbing.<br/> \$5,112,000 (\$131,207 for my part)</p> | 2017-2021 |
| <p><i>CDFA UC Pierce's Disease Research Grant</i>, co-PI<br/> (with PI Philippe Rolshausen and co-PIs Caroline Roper and James Borneman, UC Riverside)<br/> Greenhouse evaluation of grapevine microbial endophytes and fungal natural products for control of Pierce's Disease.<br/> \$94,402 (\$17,759 for my part)</p>                                                                                                    | 2016-2017 |
| <p><i>NSF Scholarships in Science Technology Engineering and Math (S-STEM)</i>, PI<br/> (with co-PIs Maria Zack, Dawne M. Page, Lorinda Carter, and Paul Schmelzenbach)<br/> Scholarships to Support STEM majors Computational Sciences Minors<br/> \$576,750</p>                                                                                                                                                            | 2015-2020 |
| <p><i>CDFA UC Pierce's Disease Research Grant</i>, co-PI<br/> (with PI Philippe Rolshausen and co-PI Caroline Roper, UC Riverside)<br/> Greenhouse Evaluation of Grapevine Fungal Endophytes and Fungal Natural Products Antagonistic to <i>Xylella fastidiosa</i> for Control of Pierce's Disease.<br/> \$175,007 (\$31,990 for my part)</p>                                                                                | 2014-2016 |
| <p><i>Research Corporation Multiple Investigator-Cottrell College Science Awards</i>, PI<br/> (with Catherine McFadden, HMC Dept of Biology)<br/> Variation in secondary metabolite chemistry among cryptic species of the soft coral Sarcophyton, a source of bioactive cembranoids<br/> \$75,000</p>                                                                                                                       | 2010-2012 |
| <p><i>American Society of Pharmacognosy Research Starter Grant</i>, PI<br/> Discovery of natural product inhibitors of <i>Xylella fastidiosa</i> from endophytic fungi<br/> \$5,000</p>                                                                                                                                                                                                                                      | 2010      |
| <p><i>National Science Foundation Major Research Instrumentation</i>, co-PI<br/> MRI: Acquisition of a Liquid Chromatograph-Ion Trap Mass Spectrometer for Undergraduate Research and Research Training<br/> \$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> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2018-2020  | Councilor, ACS Division of Organic Chemistry Executive Committee ( <i>member of Awards, Membership, and Nomination Committees</i> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 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> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 2012-      | Honors Project Committees <ul style="list-style-type: none"> <li>• 2018-19, Jennifer Cordoza</li> <li>• 2018-19, Connor Brandenburg (advisor Jonathan Lockner)</li> <li>• 2017-18, Sydney Davis</li> <li>• 2016-17, Morgan Papineau</li> <li>• 2015-16, Marcela Bucardo (advisor Dale Shellhamer)</li> <li>• 2015-16, Lindsay Semmler</li> <li>• 2015-16, Connor Voss (advisor Matthieu Rouffet)</li> <li>• 2014-15, Hannah Quinn (advisor Mike McConnell)</li> <li>• 2013-14, Taylor Davis</li> <li>• 2013-14, William Frye (advisor David Cummings)</li> <li>• 2012-13, Zachary Sedillo and Jack Rusing (advisor Mike Dorrell)</li> </ul> |
| 2008-      | Manuscript Reviewer: <i>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                                                |
| 2015       | Enrollment Management Committee, PLNU ( <i>one year appointment</i> )                                                                                                                                                       |
| 2015       | Commencement Honor Guard, PLNU                                                                                                                                                                                              |
| 2015       | Student Success Collaborative (SSC) Department Representative, PLNU                                                                                                                                                         |
| 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> ) |
| 2013       | Faculty Mentor, PLNU First Year Experience                                                                                                                                                                                  |
| 2010-2011  | Academic Affairs Committee, Harvey Mudd College                                                                                                                                                                             |
| 2010-2011  | Assessment Committee, Harvey Mudd College                                                                                                                                                                                   |
| 2010-2011  | Seminar Coordinator, HMC Department of Chemistry                                                                                                                                                                            |
| 2008-2011  | Workshop Leader, WEST Conference, Harvey Mudd College                                                                                                                                                                       |
| 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                                                                                                                                                                          |
| 2003-2005  | Emergency Department Volunteer, Brigham & Women's Hospital                                                                                                                                                                  |
| 2001, 2002 | Transportation Chair, Cornell Expanding Your Horizons Conference                                                                                                                                                            |
| 2000       | Session Leader, Cornell University Materials Science Workshop                                                                                                                                                               |
| 1998       | Volunteer Tutor, Keithley Middle School 'Extra Innings' Program                                                                                                                                                             |

## 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