

CHU-YOUNG KIM

Department of Chemistry and Biochemistry
The University of Texas at El Paso
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El Paso, Texas 79902

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EDUCATION

Ph.D. Department of Chemistry, University of Pennsylvania, 2001
Advisor: David W. Christianson

M.S.E. Department of Bioengineering, University of Pennsylvania, 1998

B.A. Department of Chemistry and Chemical Biology, Cornell University, 1996
Advisors: Roald Hoffmann, John E. McMurry

PROFESSIONAL APPOINTMENTS

2021–present Professor
Department of Chemistry and Biochemistry, The University of Texas at El Paso

2016–2021 Associate Professor
Department of Chemistry and Biochemistry, The University of Texas at El Paso

2015–2016 Associate Professor
Department of Biological Sciences, National University of Singapore

2006–2015 Assistant Professor
Department of Biological Sciences, National University of Singapore

2001–2005 Postdoctoral Associate
Department of Chemistry and Chemical Engineering, Stanford University
Advisor: Chaitan Khosla

OTHER APPOINTMENTS

2021–present Visiting Scientist, Stanford-SLAC Cryo-EM Center – Wah Chiu group

HONORS

2022 Ralph and Kathleen Ponce de Leon Endowed Professorship, The University of Texas at El Paso

2016 University of Texas STARS Award, The University of Texas System

2014, 2013 Top Publication Award, National University of Singapore

2012, 2006 Young Scientist Award, National University of Singapore

2012, 2011 Inspiring Research Mentor Award, National University of Singapore

PUBLICATIONS

Research articles

1. Saket R. Bagde, Irimpan I. Mathews, J. Christopher Fromme, Chu-Young Kim. Modular polyketide synthase contains two reaction chambers that operate asynchronously. *Science* 374, 723-729 (2021).
2. Ying Gao, Yulu Hu, Qimeng Liu, Xiaokang Li, Xinming Li, Chu-Young Kim, Tony D. James, Jian Li, Xi Chen, Yuan Guo. Two-dimensional design strategy to construct smart fluorescent probes for the precise tracking of senescence. *Angewandte Chemie International Edition* 60, 10756-10765 (2021).
3. Xiaokang Li, Wenjing Qiu, Jinwen Li, Xi Chen, Yulu Hu, Ying Gao, Donglei Shi, Xinming Li, Huiling Lin, Huiling Lin, Zelan Hu, Guoqiang Dong, Chunquan Sheng, Bei Jiang, Conglong Xia, Chu-Young Kim, Yuan Guo, Jian Li. First-generation species-selective chemical probes for fluorescence imaging of human senescence-associated β -galactosidase. *Chemical Science* 11, 7292-7301 (2020).
4. Zilong Wang, Saket R. Bagde, Gerardo Zavala, Tsutomu Matsui, Xi Chen, Chu-Young Kim. De novo design and implementation of a tandem acyl carrier protein domain in a type I modular polyketide synthase. *ACS Chemical Biology* 13, 3072-3077 (2018).
5. Thanh-Binh Nguyen, Priya Jayaraman, Elin Bergseng, M. S. Madhusudhan, Chu-Young Kim, Ludvig Sollid. Unraveling the structural basis for the unusually rich association of human leukocyte antigen DQ2.5 with class-II-associated invariant chain peptides. *Journal of Biological Chemistry* 292, 9218-9228 (2017).
6. Fong T. Wong, Kinya Hotta, Xi Chen, Minyi Fang, Kenji Watanabe, Chu-Young Kim. Epoxide hydrolase-lasalocid A structure provides mechanistic insight into polyether natural product biosynthesis. *Journal of the American Chemical Society* 137, 86-89 (2015).
7. Kinya Hotta, Ronan M. Keegan, Soumya Ranganathan, Minyi Fang, Jaclyn Bibby, Martyn D. Winn, Michio Sato, Mingzhu Lian, Kenji Watanabe, Daniel J. Rigden, Chu-Young Kim. Conversion of a Disulfide Bond to a Thioacetal Group during Echinomycin Biosynthesis. *Angewandte Chemie International Edition* 53, 824-828 (2014).
8. Sathya Dev Unudurthi, Kinya Hotta, Chu-Young Kim. Engineering the Polyproline II Propensity of a Class II Major Histocompatibility Complex Ligand Peptide. *ACS Chemical Biology* 8, 2382-2387 (2013).
9. Kinya Hotta, Xi Chen, Robert S. Paton, Atsushi Minami, Hao Li, Kunchithapadam Swaminathan, Irimpan I. Mathews, Kenji Watanabe, Hideaki Oikawa, Kendall N. Houk, Chu-Young Kim. Enzymatic catalysis of anti-Baldwin ring-closure in polyether biosynthesis. *Nature* 483, 355-358 (2012).
10. Stig Tollefsen, Kinya Hotta, Xi Chen, Bjørn Simonsen, Kunchithapadam Swaminathan, Irimpan I. Mathews, Ludvig M. Sollid, Chu-Young Kim. Structural and functional studies of the *trans*-encoded HLA-DQ2.3 (DQA1*03:01/DQB1*02:01) protein molecule. *Journal of Biological Chemistry* 2012, 287, 13611-13619.

11. Michael Bodd, Chu-Young Kim, Knut E. Lundin, Ludvig M. Sollid. T-cell response to gluten in patients with HLA-DQ2.2 reveals requirement of peptide-MHC stability in celiac disease. *Gastroenterology* 142, 552-561 (2012).
12. Kinya Hotta, Chu-Young Kim, David T. Fox, Andrew T. Koppisch. Siderophore-mediated iron acquisition in *Bacillus anthracis* and related strains. *Microbiology* 156, 1918-1925 (2010).
13. Lars-Egil Fallang, Elin Bergseng, Kinya Hotta, Axel Berg-Larsen, Chu-Young Kim, Ludvig M. Sollid. Differences in the risk of celiac disease associated with HLA-DQ2.5 or HLA-DQ2.2 are related to sustained gluten antigen presentation. *Nature Immunology* 10, 1096-1101 (2009).
14. David T. Fox, Kinya Hotta, Chu-Young Kim, Andrew T. Koppisch. The missing link in Petrobactin biosynthesis: AsbF encodes a (-)-3-dehydroshikimate dehydratase. *Biochemistry* 47, 12251-12253 (2008).
15. Andrew T. Koppisch, Kinya Hotta, David T. Fox, Christy E. Ruggiero, Chu-Young Kim, Timothy Sanchez, Srinivas Iyer, Cindy C. Browder, Pat J. Unkefer, Clifford J. Unkefer. Biosynthesis of the 3,4-dihydroxybenzoate moieties of petrobactin by *Bacillus anthracis*. *Journal of Organic Chemistry* 73, 5759-5765 (2008).
16. Jiang Xia, Elin Bergseng, Burkhard Fleckenstein, Matthew Siegel, Chu-Young Kim, Chaitan Khosla, Ludvig M. Sollid. Cyclic and dimeric gluten peptide analogues inhibiting DQ2-mediated antigen presentation in celiac disease. *Bioorganic & Medicinal Chemistry* 15, 6565-6573 (2007).
17. Yinyan Tang, Alice Y. Chen, Chu-Young Kim, David E. Cane, Chaitan Khosla. Structural and Mechanistic Analysis of Protein Interactions in Module 3 of the 6-Deoxyerythronolide B Synthase. *Chemistry & Biology* 14, 931-943 (2007).
18. Yinyan Tang, Ho Young Lee, Yi Tang, Chu-Young Kim, Irimpan Mathews, Chaitan Khosla. Structural and Functional Studies on SCO1815: A b-Ketoacyl-Acyl Carrier Protein Reductase from *Streptomyces coelicolor*A3(2). *Biochemistry* 45, 14085-14093 (2006).
19. Yinyan Tang, Chu-Young Kim, Irimpan I. Mathews, David E. Cane, Chaitan Khosla. The 2.7-Å crystal structure of a 194-kDa homodimeric fragment of the 6-deoxyerythronolide B synthase. *Proceedings of the National Academy of Sciences of the U.S.A.* 103, 11124-11129 (2006).
20. Alice Y. Chen, Nathan A. Schnarr, Chu-Young Kim, David E. Cane, Chaitan Khosla. Extender Unit and Acyl Carrier Protein Specificity of Ketosynthase Domains of the 6-Deoxyerythronolide B Synthase. *Journal of the American Chemical Society* 128, 3067-3074 (2006).
21. Elin Bergseng, Jiang Xia, Chu-Young Kim, Chaitan Khosla, Ludvig M. Sollid. Main chain hydrogen bond interactions in the binding of proline-rich gluten peptides to the celiac disease associated HLA-DQ2 molecule. *Journal of Biological Chemistry* 280, 21791-21796 (2005).
22. Chu-Young Kim, Viktor Y. Alekseyev, Alice Y. Chen, Yinyan Tang, David E. Cane, Chaitan Khosla. Reconstituting modular activity from separated domains of 6-deoxyerythronolide B synthase. *Biochemistry* 43, 13892-13898 (2004).

23. Chu-Young Kim, Hanne Quarsten, Elin Bergseng, Chaitan Khosla, Ludvig M. Sollid. Structural basis for HLA-DQ2 mediated presentation of gluten epitopes in celiac disease. *Proceedings of the National Academy of Sciences of the U.S.A.* 101, 4175-4179 (2004).
24. Vijay M. Krishnamurthy, Brooks R. Bohall, Chu-Young Kim, Demetri T. Moustakas, David W. Christianson, George M. Whitesides. Thermodynamic Parameters for the Association of Fluorinated Benzenesulfonamides with Bovine Carbonic Anhydrase II. *Chemistry - An Asian Journal* 2, 94-105 (2007).
25. Chu-Young Kim, Douglas A. Whittington, Jeanne S. Chang, John Liao, Jesse A. May, David W. Christianson. Structural aspects of isozyme selectivity in the binding of inhibitors to carbonic anhydrases II and IV. *Journal of Medicinal Chemistry* 45, 888-893 (2002).
26. Bartosz A. Grzybowski, Alexey V. Ishchenko, Chu-Young Kim, George Topalov, Robert Chapman, David W. Christianson, George M. Whitesides, Eugene I. Shakhnovich. Combinatorial computational method gives new picomolar ligands for a known enzyme. *Proceedings of the National Academy of Sciences of the U.S.A.* 99, 1270-1273 (2002).
27. Ryan D. Madder, Chu-Young Kim, Pooja P. Chandra, Jeffrey B. Doyon, Teaster A. Baird Jr., Carol A. Fierke, David W. Christianson, Judith G. Voet, Ahamindra Jain. Twisted amides inferred from QSAR analysis of hydrophobicity and electronic effects on the affinity of fluoroaromatic inhibitors of carbonic anhydrase. *Journal of Organic Chemistry* 67, 582-584 (2002).
28. Chu-Young Kim, Pooja P. Chandra. Ahamindra Jain, David W. Christianson. Fluoroaromatic-fluoroaromatic interactions between inhibitors bound in the crystal lattice of human carbonic anhydrase II. *Journal of the American Chemical Society* 123, 9620-9627 (2001).
29. Chu-Young Kim, Jeanne S. Chang, Jeffrey B. Doyon, Teaster T. Baird Jr., Carol A. Fierke, Ahamindra Jain, David W. Christianson. Contribution of fluorine to protein-ligand affinity in the binding of fluoroaromatic inhibitors to carbonic anhydrase II. *Journal of the American Chemical Society* 122, 12125-12134 (2000).
30. Jeffrey B. Doyon, Elizabeth A. M. Hansen, Chu-Young Kim, Jeanne S. Chang, David W. Christianson, Ryan D. Madder, Judith G. Voet, Teaster A. Baird Jr., Carol A. Fierke, Ahamindra Jain. Linear free energy relationships implicate three modes of binding for fluoroaromatic inhibitors to a mutant of carbonic anhydrase II. *Organic Letters* 2, 1189-1192 (2000).

Review articles

1. Suttinee Poolsup, Chu-Young Kim. Therapeutic applications of synthetic nucleic acid aptamers. *Current Opinion in Biotechnology* 48, 180-186 (2017).

Book chapter

1. Chu-Young Kim. Three-dimensional structure of megasynthases - mammalian fatty acid synthase, type I modular polyketide synthase, and nonribosomal peptide synthetase. In: Hung-Wen (Ben) Liu and Tadhg P. Begley (eds.) *Comprehensive Natural Products III: Chemistry and Biology*, vol.[6], pp. 318-335. UK: Elsevier (2020).

Article recommendations

1. Chu-Young Kim. Recommendation of [Kim LJ et al., Nat Chem Biol 2021 17(8):872-877]. In *Faculty Opinions*, 26 Oct 2021; [10.3410/f.740541613.793589089](https://doi.org/10.3410/f.740541613.793589089)
2. Chu-Young Kim. Recommendation of [de la Mora E et al., Proc Natl Acad Sci USA 2020 117(8):4142-4151]. In *Faculty Opinions*, 09 Aug 2021; [10.3410/f.737364182.793587321](https://doi.org/10.3410/f.737364182.793587321)
3. Chu-Young Kim. Recommendation of [Sikora M et al., PLoS Comput Biol 2021 17(4):e1008790]. In *Faculty Opinions*, 10 May 2021; [10.3410/f.739862732.793585401](https://doi.org/10.3410/f.739862732.793585401)
4. Chu-Young Kim. Recommendation of [Wilson MR et al., Science 2019 363(6428)]. In *Faculty Opinions*, 21 Feb 2019; [10.3410/f.735089517.793556577](https://doi.org/10.3410/f.735089517.793556577)
5. Chu-Young Kim. Recommendation of [Jarmoskaite I et al., elife 2020 9]. In *Faculty Opinions*, 22 Jan 2021; [10.3410/f.738447994.793582105](https://doi.org/10.3410/f.738447994.793582105)
6. Chu-Young Kim. Recommendation of [Edwards MJ et al., J Biol Chem 2020 295(45):15174-15182]. In *Faculty Opinions*, 23 Nov 2020; [10.3410/f.738650481.793580391](https://doi.org/10.3410/f.738650481.793580391)
7. Chu-Young Kim. Recommendation of [Ruijtenberg S et al., Nat Struct Mol Biol 2020 27(9):790-801]. In *Faculty Opinions*, 05 Oct 2020; [10.3410/f.738317416.793578795](https://doi.org/10.3410/f.738317416.793578795)
8. Chu-Young Kim. Recommendation of [Kneller DW et al., Nat Commun 2020 11(1):3202]. In *Faculty Opinions*, 29 Jul 2020; [10.3410/f.738192970.793577108](https://doi.org/10.3410/f.738192970.793577108)
9. Chu-Young Kim. Recommendation of [Zargar A et al., J Am Chem Soc 2020 142(22):9896-9901]. In *Faculty Opinions*, 29 May 2020; [10.3410/f.737956814.793574731](https://doi.org/10.3410/f.737956814.793574731)
10. Chu-Young Kim. Recommendation of [Förster A and Schulze-Briese C, Struct Dyn 2019 6(6):064302]. In *Faculty Opinions*, 27 Feb 2020; [10.3410/f.737110896.793571475](https://doi.org/10.3410/f.737110896.793571475)
11. Chu-Young Kim. Recommendation of [Ratnayake AS et al., Bioconjug Chem 2019 30(1):200-209]. In *Faculty Opinions*, 15 Jan 2020; [10.3410/f.734628905.793569412](https://doi.org/10.3410/f.734628905.793569412)
12. Chu-Young Kim. Recommendation of [Barnes CO et al., Proc Natl Acad Sci USA 2019 116(19):9333-9339]. In *Faculty Opinions*, 24 Oct 2019; [10.3410/f.735614750.793566309](https://doi.org/10.3410/f.735614750.793566309)
13. Chu-Young Kim. Recommendation of [Kawano S et al., Sci Rep 2019 9(1):8656]. In *Faculty Opinions*, 10 Sep 2019; [10.3410/f.735996414.793564680](https://doi.org/10.3410/f.735996414.793564680)
14. Chu-Young Kim. Recommendation of [Wojtaszek JL et al., Cell 2019 178(1):152-159.e11]. In *Faculty Opinions*, 28 Jun 2019; [10.3410/f.735918247.793561717](https://doi.org/10.3410/f.735918247.793561717)
15. Chu-Young Kim. Recommendation of [Lyumkis D, J Biol Chem 2019 294(13):5181-5197]. In *Faculty Opinions*, 10 May 2019; [10.3410/f.735165326.793559716](https://doi.org/10.3410/f.735165326.793559716)
16. Chu-Young Kim. Recommendation of [Mahata T et al., Biochemistry 2018 57(38):5557-5563]. In *Faculty Opinions*, 17 Dec 2018; [10.3410/f.733896235.793554078](https://doi.org/10.3410/f.733896235.793554078)
17. Chu-Young Kim. Recommendation of [Macdonald-Obermann JL and Pike LJ, J Biol Chem 2018 293(35): 13401-13414]. In *Faculty Opinions*, 05 Oct 2018; [10.3410/f.733629181.793551196](https://doi.org/10.3410/f.733629181.793551196)

18. Chu-Young Kim. Recommendation of [Edwardson TGW et al., J Am Chem Soc 2018 140(33):10439-10442]. In *Faculty Opinions*, 30 Aug 2018; [10.3410/f.733793248.793549847](https://doi.org/10.3410/f.733793248.793549847)
19. Chu-Young Kim. Recommendation of [Knappenberger AJ et al., elife 2018 7]. In *Faculty Opinions*, 26 Jul 2018; [10.3410/f.733397290.793548305](https://doi.org/10.3410/f.733397290.793548305)
20. Chu-Young Kim. Recommendation of [Kim W et al., Nature 2018 556(7699):103-107]. In *Faculty Opinions*, 21 May 2018; [10.3410/f.732909342.793545839](https://doi.org/10.3410/f.732909342.793545839)
21. Chu-Young Kim. Recommendation of [Hover BM et al., Nat Microbiol 2018 3(4):415-422]. In *Faculty Opinions*, 08 Mar 2018; [10.3410/f.732646025.793543292](https://doi.org/10.3410/f.732646025.793543292)
22. Chu-Young Kim. Recommendation of [Prokhorova I et al., Proc Natl Acad Sci USA 2017 114(51): E10899-E10908]. In *Faculty Opinions*, 30 Jan 2018; [10.3410/f.732234543.793541787](https://doi.org/10.3410/f.732234543.793541787)

RESEARCH FUNDING

Current research support

1. R01GM138990 (National Institute of General Medical Sciences, NIH), PI. Structural biology of polyether antibiotic biosynthesis (09/15/2020–08/31/2025, \$1,208,000).
2. R21EY030981 (National Eye Institute, NIH), PI. Developing isozyme-selective inhibitors against carbonic anhydrase isozymes expressed in the eye (04/01/2020–02/28/2023, \$408,455).
3. SC2GM136445 (National Institute of General Medical Sciences, NIH), PI. Selective targeting of human alkaline phosphatase isozymes (03/02/2020–02/28/2023, \$302,000).

Completed research support

1. R-154-000-644-112 (Singapore Ministry of Education), PI. Detoxification of gluten using DNA (2014–2017).
2. R-154-000-548-112 (Singapore Ministry of Education), PI. Biosynthesis of natural product antibiotic drugs in soil bacteria (2012–2015)
3. R-182-000-204-133 (National University of Singapore), co-PI. Peptide-assisted delivery of DNA minimal vectors for RNAi-based knockdown of target genes (2011–2013).
4. R-154-000-495-133 (Japan Society for the Promotion of Science), PI. Structural and enzymological investigations of enzymes involved in natural product modifications and precursor biosynthesis (2011–2013).
5. R-154-000-277-112 (Singapore Ministry of Education), PI. Coordinated DNA double-strand break repair by gp46 and gp47 proteins (2010–2012).
6. R-154-000-363-305 (Singapore Agency for Science, Technology and Research), PI. Exploring the structure and function of trans-encoded MHC's (2008–2011).
7. R-154-000-386-275 (Singapore Ministry of Health), PI. Toward the development of polyproline type II peptide-based, entropy-driven MHC blocker as novel and general therapeutics and prophylactics for treating autoimmune diseases (2008–2010).

8. R-154-000-277-101 (National University of Singapore), PI. Multivalent MHC blockers for treatment of autoimmune diseases (2006–2009).

CLASSROOM TEACHING

The University of Texas at El Paso

Biochemistry I
Biochemistry II
Advanced Biochemistry
Laboratory for General Chemistry

National University of Singapore

Fundamentals of Biochemistry
Laboratory Techniques in Life Sciences
Synthetic Biology

Korea University International Summer Campus

Introductory Life Science
General Biology I

RESEARCH MENTORING

Postdoctoral associates supervised

Haram Cha, University of Texas at El Paso
Kinya Hotta, National University of Singapore

Ph.D. students graduated

Priyanka Gade, University of Texas at El Paso
Qian Wang, University of Texas at El Paso
Zilong Wang, National University of Singapore
Minyi Fang, National University of Singapore
Priya Jayaraman, National University of Singapore
Thanh-Binh Nguyen, National University of Singapore (co-supervised)
Roopsha Brahma, National University of Singapore
Sathya Dev Unudurthi, National University of Singapore
Xi Chen, National University of Singapore

Master's students graduated

Afroz Karim, University of Texas at El Paso
Saket Bagde, University of Texas at El Paso
Soumya Ranganathan, National University of Singapore

Undergraduate students supervised

Gerardo Vargas, University of Texas at El Paso (NIH RISE Scholarship recipient)
Lham Tsering, University of Texas at El Paso
Alheli Romero, University of Texas at El Paso (NIH BUILD Scholarship recipient)
Xay Pham, University of Texas at El Paso
Jerrica Foster, University of Texas at El Paso (NIH MARC Scholarship recipient)
Gerardo Zavala, University of Texas at El Paso (NIH BUILD Scholarship recipient)
Jennifer Villa, University of Texas at El Paso
Katherine McCormick, University of Texas at El Paso
Jonathan Vaquera, University of Texas at El Paso
Keira Howard, University of Texas at El Paso
Kevin Lim Jie Han, National University of Singapore
Lynn Yap Lin, National University of Singapore
Ju Ih Shin, National University of Singapore
Ju Hong Lee, National University of Singapore
Kuk Chun Yin, National University of Singapore
Sakshi Sikka, National University of Singapore
Tang An Ting Nicole, National University of Singapore
Tan Mingli Yvonne, National University of Singapore
Tan Yaw Sing, National University of Singapore
Eu Kum Wah Dominic, National University of Singapore
Lee Lin Elijah, National University of Singapore

CONFERENCE PRESENTATIONS

1. American Chemical Society Southwest & Rocky Mountain Regional Meeting (USA, Nov 13-16, 2019)
2. 14th Federation of Asian and Oceanian Biochemists and Molecular Biologists Conference (India, Nov 27-30, 2015)
3. 9th Asian Biophysics Association Symposium (China, May 9-12, 2015)
4. 8th Singapore International Chemistry Conference (Singapore, Dec 14-17, 2014)
5. National University Health System Synthetic Biology Symposium (Singapore, Oct 20, 2014)
6. ESF-EMBO Symposium on Synthetic Biology of Antibiotic Production II (Spain, Aug 30-Sep 4, 2014)
7. 1st Chulalongkorn University & National University of Singapore Joint Seminar in Biochemistry (Thailand, Jun 24, 2014)
8. UK-Singapore Workshop on Synthetic Biology (Singapore, Feb 18-19, 2014)

9. 3rd Asia-Korea Conference on Science and Technology (Singapore, Nov 21-23, 2013)
10. 264th American Chemical Society National Meeting (USA, Sep 8-12, 2013)
11. Keystone Symposia, Structural Analysis of Supramolecular Assemblies by Hybrid Methods (USA, Mar 3-7, 2013)
12. International Conference on Biomolecular Forms and Functions & Celebration of 50 Years of the Ramachandran Map (India, Jan 08-11, 2013)
13. 10th Global COE International Symposium on Biochemistry and Cell Biology (Singapore, Dec 22-23, 2011)
14. A Special Symposium Celebrating the 40th Anniversary of the Protein Data Bank (USA, Oct 28-30, 2011)
15. XXII Congress and General Assembly of the International Union of Crystallography (Spain, Aug 22-30, 2011)
16. 1st Asian Chemical Biology Conference (Korea, Jun 25-27, 2010)
17. Gordon Research Conferences, Immunochemistry & Immunobiology (Switzerland, May 16-21, 2010)
18. Joint A-Star Bioinformatics Institute & Department of Biological Sciences Workshop (Singapore, Sep 3-4, 2009)
19. 13th International Coeliac Disease Symposium (Netherlands, April 6-8, 2009)
20. Nanyang Technological University Bioinformatics Research Centre Workshop on Protein Structure and Function (Singapore, Oct 25, 2008)
21. Gordon Research Conferences, Chemistry and Biology of Peptides (USA, Feb 17-22, 2008)
22. Keystone Symposia, Frontiers of Structural Biology (USA, Jan 6-11, 2008)
23. 13th International Congress of Immunology (Brazil, Aug 21-25, 2007)
24. Joint 3rd Asia Oceania Human Proteome Organization & 4th Structural Biology and Functional Genomics Conference (Singapore, Dec 4-7, 2006)
25. 7th Frontier Science Symposium (Taiwan, Nov 23-26, 2006)

DEPARTMENT SEMINARS

1. Stanford-SLAC Cryo-Electron Microscopy Center (Oct 13, 2021, Menlo Park, CA)
2. University of Connecticut, School of Pharmacy (Sep 22, 2021, Storrs, CT)
3. University of Texas at El Paso, School of Pharmacy (Feb 2, 2021, El Paso, TX)
4. New Mexico State University, Department of Chemistry and Biochemistry (Oct 4, 2019, Las Cruces, NM)
5. Northern Arizona University, Department of Chemistry and Biochemistry (Sep 27, 2019, Flagstaff, AZ)

6. Northwest University, Department of Chemistry and Materials Science (Jun 19, 2019, Xi'an, The People's Republic of China)
7. Indian Institute of Science Education and Research, Bhopal, Department of Chemistry (Jun 13, 2019, Bhopal, India)
8. Indian Institute of Science Education and Research, Pune, Department of Biology (Jun 10, 2019, Pune, India)
9. Indian Institute of Science Education and Research, Pune, Department of Biology (Dec 3, 2015, Pune, India)
10. Korea Advanced Institute of Science and Technology, Department of Biological Science (Aug 8, 2014, Daejeon, South Korea)
11. Chinese University of Hong Kong, Department of Chemistry (Apr 29, 2014, Hong Kong SAR, The People's Republic of China)
12. Chinese Academy of Medical Sciences, Institute of Materia Medica (Apr 15, 2014, Beijing, The People's Republic of China)
13. Tsinghua University, School of Life Sciences (Apr 14, 2014, Beijing, The People's Republic of China)
14. Dartmouth College, Department of Chemistry (Feb 25, 2014, Hanover, NH)
15. University of Minnesota, Department of Biochemistry, Molecular Biology, and Biophysics (Jan 6, 2014, Minneapolis, MN)
16. National University of Singapore, Department of Chemistry (Mar 5, 2012, Singapore)

SERVICE

Editorial

- | | |
|--------------|--|
| 2020–present | Editorial board member, <i>Microorganisms</i> |
| 2017–present | Faculty member, <i>Faculty Opinions</i> (Chemical Biology section) |
| 2016–2017 | Guest editor, <i>Current Opinions in Biotechnology</i> |

External

- | | |
|--------------|---|
| 2021–present | Panel member – Biological and Biomedical Sciences, Ford Foundation Fellowship Programs, The National Academies of Sciences, Engineering, and Medicine |
|--------------|---|

University

- | | |
|--------------|---|
| 2018–present | Department Awards and Scholarship Committee |
| 2017–present | Judge, Undergraduate Research Symposium |
| 2016–present | College of Science Grant Writing Group |
| 2020–2021 | Chair, Biochemistry Division |
| 2018–2021 | University Faculty Senate |
| 2019–2020 | Department Workload Policy Committee |

2019–2020	College of Science Workload Policy Committee
2019	Department Chair Search Committee, Chemistry and Biochemistry
2018	Laboratory Coordinator Search Committee, Chemistry and Biochemistry
2017	School of Pharmacy Research Committee
2016–2017	School of Pharmacy Curriculum Committee
2016	Faculty Search Committee, Pharmacy Practice and Clinical Sciences
2016	Faculty Search Committee, Pharmaceutical Sciences
2016	Department Chair Search Committee, Pharmaceutical Sciences
2016	Associate Dean for Research Search Committee, School of Pharmacy