

Curriculum Vitae – WENJUN ZHANG

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PROFESSIONAL EXPERIENCE

Co-director , Agilent/UC Berkeley Synthetic Biology Institute (SBI)	2019 to current
Associate Professor , Dept. of Chemical and Biomolecular Engineering, UC Berkeley	2018 to current
Biologist Faculty Sci/Engr , Lawrence Berkeley National Laboratory	2014 to current
Assistant Professor , Dept. of Chemical and Biomolecular Engineering, UC Berkeley	2011-2018

EDUCATION

Research Fellow , Harvard Medical School (adviser: Christopher T. Walsh)	2009-2011
Ph.D., Chemical Engineering , University of California, Los Angeles (adviser: Yi Tang)	2004-2009
M.S., Biochemistry and Molecular Biology , Nanjing University, China (adviser: Genxi Li)	2002-2004
B.S., Biochemistry , DII, Nanjing University, China	1998-2002

AWARDS AND HONORS

Presidential Early Career Award for Scientists and Engineers (PECASE) (2019)
Scialog Fellow, Research Corporation and the Gordon and Betty Moore Foundation (2018)
American Cancer Society Research Scholar (2017)
Chau Hoi Shuen Foundation Women in Science Program New Research Grant Award (2017)
Chan Zuckerberg Biohub Investigator (2017)
Alfred P. Sloan Research Fellow (2016)
Paul Saltman Memorial Award in Bioinorganic Chemistry (2016)
NIH Director's New Innovator Award (2015)
Hellman Fellow (2015)
F1000Prime Faculty (Chemical Biology, Small Molecule Chemistry section) (2015)
The Charles R. Wilke Endowed Chair in Chemical Engineering, UC Berkeley (2014)
University of California Cancer Research Coordinating Committee Research Award (2013)
Pew Scholar (2012)
Energy Biosciences Institute Proposal Award (2011, 2014)
Outstanding Ph.D. Award, UCLA ChBME (2009)
National Nell I. Mondy Fellowship, Graduate Women in Science (SDE/GWIS) (2008)
Dissertation Year Fellowship, University of California, Los Angeles (2008)
WIC Travel Grant Award, American Institute of Chemical Engineers (2007)
Hewlett-Packard National Fellowship, Nanjing University, China (2004)
BASF Fellowship, Nanjing University, China (2003)
NJU "Outstanding Student" Award and People's Scholarship 1st Prize (1998-2002)

PUBLICATIONS (†: Corresponding Author)

1. Hu, Z., Zhang, W. "Signaling Natural Products from Human Pathogenic Bacteria" Submitted (invited review).
2. Zhang, B., Rajakovich, L., Cura, D., Blaes, E., Mitchell, A., Tysoe, C., Zhu, X., Streit, B., Rui, Z., Zhang, W.,† Boal, A.,† Krebs, C.,† Bollinger, J. M.† "Substrate-triggered Formation of a Peroxo-Fe₂(III/III) Intermediate during Fatty Acid Decarboxylation by UndA" Submitted
3. Huang, Y.,† Cai, W., Del Rio Flores, A., Twigg, F., Zhang, W.† "Facile discovery of isonitrile natural products via tetrazine based click reactions" Submitted. BioRxiv doi: <https://doi.org/10.1101/711853>

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- Richards, J., Cai, W., Zill, N., Zhang, W., Ojha, A. “Adaptation of Mycobacterium tuberculosis to biofilm growth is genetically linked to drug tolerance” Submitted. BioRxiv doi: <https://doi.org/10.1101/663369>
- Li, Z., Li, J., Cai, W., Lai, J. Y. H., McKinnie, S. M. K., Zhang, W., Moore, B. S., Zhang, W.,[†] Qian, P.[†] “Macrocyclic colibactin induces DNA double-strand breaks via copper-mediated oxidative cleavage” *Nat. Chem.* In press.
- Seidel, J., Miao, Y., Porterfield, W., Cai, W., Zhu, X., Kim, S., Hu, F., Bhattarai-Kline, S., Min, W.,[†] Zhang, W.[†] “Structure-activity-distribution relationship study of anti-cancer antimycin-type depsipeptides” *Chem. Commun.* **2019**, 55, 9379-9382.
- Twigg, F. F., Cai, W., Huang, W., Liu, J., Sato, M., Perez, T., Geng, J., Dror, M., Montanez, I., Tong, T., Lee, H., Zhang, W.[†] "Identifying the Biosynthetic Gene Cluster for Triacsins with an N-hydroxytriazene Moiety" *ChemBioChem.* **2019**, 20, 1145-1149. (VIP, ChemBioTalents)
- Li, J. S., Barber, C. C., Zhang, W.[†] "Natural products from anaerobes" *J. Ind. Microbiol. Biotechnol.* **2019**, 46, 375-383.
- Harris, N., Born, D., Cai, W., Huang, Y., Martin, J., Khalaf, R., Drennan, C., Zhang, W.[†] “Isonitrile Formation by a Non-heme Iron(II)-dependent Oxidase/Decarboxylase” *Angew. Chem. Int. Ed. Engl.* **2018**, 57, 9707-9710. (VIP)
- Su, M., Zhu, X., Zhang, W.[†] “Probing the Acyl Carrier Protein-Enzyme Interactions within Terminal Alkyne Biosynthetic Machinery” *AICHE J.* **2018**, 64, 4255–4262. (Tribute to Founders: Jay Bailey. Biomolecular Engineering, Bioengineering, Biochemicals, Biofuels, and Food)
- Skyrud, W., Liu, J., Thankachan, D., Cabrera, M., Seipke, R.,[†] Zhang, W.[†] “Biosynthesis of the 15-membered ring depsipeptide neoantimycin” *ACS Chem. Biol.* **2018**, 13(5), 1398-1406.
- Zhu, X., Zhang, W.[†] “Terminal Alkyne Biosynthesis in Marine Microbes” *Methods in Enzymology: biosynthetic enzymes of marine natural products*, **2018**, 604, 89-112.
- Cai, W., Zhang, W.[†] “Engineering modular polyketide synthases for production of biofuels and industrial chemicals” *Curr. Opin. Biotechnol.* **2018**, 50, 32-38.
- Herman, N. A., Kim, S., Li, J. S., Cai, W., Koshino, H., Zhang, W.[†] “The industrial anaerobe *Clostridium acetobutylicum* uses polyketides to regulate cellular differentiation” *Nat. Commun.* **2017**, 8, 1514.
- Liu, J., Kaganjo, J., Zhang, W., Zeilstra-Ryalls, J. “Investigating the bifunctionality of cyclizing and "classical" 5-aminolevulinic synthases” *Protein Sci.* **2017**, 27, 402-410.
- Harris, N. C., Sato, M., Herman, N. A., Twigg, F., Cai, W., Liu, J., Zhu, X., Downey, J., Khalaf, R., Martin, J., Koshino, H., Zhang, W.[†] “Biosynthesis of isonitrile lipopeptides by conserved non-ribosomal peptide synthetase gene clusters in *Actinobacteria*” *Proc. Natl. Acad. Sci. U. S. A.* **2017**, 114, 7025-7030.
- Herman, N., Li, J., Bedi, R., Turchi, B., Liu, X., Miller, M., Zhang, W.[†] “Development of a high-efficiency transformation method and implementation of rational metabolic engineering for the industrial butanol hyper-producer *Clostridium saccharoperbutylacetonicum* strain N1-4” *Appl. Environ. Microb.* **2017**, 83, e02942-16.
- Savage, D., Zhang, W. “Editorial overview. Biofuels: at the crossroads” *Curr. Opin. Chem. Biol.* **2016**, 35, A1-A3. (Editorial)
- Herman, N., Zhang, W.[†] “Enzymes for fatty acid-based hydrocarbon biosynthesis” *Curr. Opin. Chem. Biol.* **2016**, 35, 22-28.
- Zhu, X., Shieh, P., Su, M., Bertozzi, C., Zhang, W.[†] “A fluorogenic screening platform enables directed evolution of an alkyne biosynthetic tool” *ChemComm.*, **2016**, 52, 11239-11242.
- Liu, J., Zhu, X., Kim, S., Zhang, W.[†] “Antimycin-type depsipeptides: discovery, biosynthesis, chemical synthesis, and bioactivities” *Nat. Prod. Rep.* **2016**, 33, 1146-1165.
- Rui, Z., Zhang, W. “Combining genome mining and biosynthesis research to discover bioactive natural products and new targets for medicinal chemistry” *Curr. Top. Med. Chem.* **2016**, 16, 1643-1644. (Editorial)

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23. Zhang, W.,[†] Liu, J. “Recent advances in understanding and engineering polyketide synthesis” *F1000 Faculty Rev.* **2016**, 5.
24. Rui, Z., Zhang, W.[†] “Engineering biosynthesis of non-ribosomal peptides and polyketides by directed evolution” *Curr. Top. Med. Chem.* **2016**, 16, 1755-1762.
25. Rui, Z., Harris, N. C., Zhu, X., Huang, W., Zhang, W.[†] "Discovery of a family of desaturase-like enzymes for 1-alkene biosynthesis." *ACS Catal.* **2015**, 5, 7091-7094.
26. Huang, W., Kim, S., Liu, J., Zhang, W.[†] "Identification of the polyketide biosynthetic machinery for the indolizidine alkaloid cyclizidine." *Org. Lett.* **2015**, 17, 5344-5347.
27. Liu, J., Zhu, X., Zhang, W.[†] "Identifying the minimal enzymes required for biosynthesis of epoxyketone proteasome inhibitors." *ChemBioChem.* **2015**, 16, 2585-2589.
28. Zhu, X., Su, M., Manickam, K., Zhang, W.[†] “Bacterial genome mining of enzymatic tools for alkyne biosynthesis” *ACS Chem. Biol.* **2015**, 10, 2785-2793.
29. Rui, Z., Huang, W., Xu, F., Han, M., Liu, X., Lin, S.,[†] Zhang, W.[†] “Sparsomycin biosynthesis highlights unusual module architecture and processing mechanism in non-ribosomal peptide synthetase” *ACS Chem. Biol.* **2015**, 10, 1765-1769.
30. Zhu, X., Zhang, W.[†] “Tagging polyketides/non-ribosomal peptides with a clickable functionality and applications” *Front. Chem.* **2015**, 3:11.
31. Zhu, X., Liu, J., Zhang, W.[†] “De novo biosynthesis of terminal alkyne-labeled natural products” *Nat. Chem. Biol.* **2015**, 11, 115-120.
32. Liu, J., Zhu, X., Seipke, R., Zhang, W.[†] “Biosynthesis of antimycins with a reconstituted 3-formamidosalicylate pharmacophore in *Escherichia coli*” *ACS Synth. Biol.* **2015**, 4(5):559-565.
33. Rui, Z., Xin, Li., Zhu, X., Liu, J., Domigan, B., Barr, I., Cate, J., Zhang, W.[†] “Microbial biosynthesis of medium-chain 1-alkenes by a non-heme iron oxidase” *Proc. Natl. Acad. Sci. U. S. A.* **2014**, 111, 18237-18242.
34. Liu, J., Ng, T., Rui, Z., Ad, O., Zhang, W.[†] “Unusual acetylation-dependent reaction cascade in the biosynthesis of the pyrroloindole drug physostigmine” *Angew. Chem. Int. Ed. Engl.* **2014**, 53, 136-139.
35. Sandy, M., Zhu, X., Rui, Z., Zhang, W.[†] “Characterization of AntB, a promiscuous acyltransferase involved in antimycin biosynthesis” *Org. Lett.* **2013**, 15, 3396-3399.
36. Rui, Z., Sandy, M., Jung, B., Zhang, W.[†] “Tandem enzymatic oxygenations in biosynthesis of epoxyquinone pharmacophore of manumycin-type metabolites” *Chem. Biol.* **2013**, 20, 879-887.
37. Sandy, M., Rui, Z., Gallagher, J., Zhang, W.[†] “Enzymatic synthesis of dilactone scaffold of antimycins” *ACS Chem. Biol.* **2012**, 7, 1956-1961.
38. Rui, Z., Ye, M., Wang, S., Fujikawa, K., Akerele, B., Aung, M., Floss, H., Zhang, W., Yu, T. “Insights into a divergent phenazine biosynthetic pathway governed by a plasmid-born emeraldin gene cluster” *Chem. Biol.* **2012**, 19, 1116-1125.
39. Walsh, C. T.,[†] Zhang, W.[†] “Chemical logic and enzymatic machinery for biological assembly of peptidyl nucleoside antibiotics” *ACS Chem. Biol.* **2011**, 6, 1000-1007.
40. Ames, B. D., Lee, M. Y., Moody, C. L., Zhang, W., Tang, Y., Tsai, S. C. “Structural and biochemical characterization of ZhuI aromatase/cyclase from the R1128 polyketide pathway” *Biochemistry* **2011**, 50, 8392-8406.
41. Zhang, W., Ntai, I., Kelleher, N. L., Walsh, C. T. “tRNA-dependent peptide bond formation by the transferase PacB in biosynthesis of the pacidamycin group of pentapeptidyl nucleoside antibiotics” *Proc. Natl. Acad. Sci. U. S. A.* **2011**, 108, 12249-12253.
42. Zhang, W., Ames, B. D., Walsh, C. T. “Identification of phenylalanine 3-hydroxylase for meta-tyrosine biosynthesis” *Biochemistry* **2011**, 50, 5401-5403.
43. Zhang, W., Ntai, I., Bolla, M. L., Malcolmson, S. J., Kahne, D., Kelleher, N. L., Walsh, C. T. “Nine enzymes are required for assembly of the pacidamycin group of peptidyl nucleoside antibiotics” *J. Am. Chem. Soc.* **2011**, 133, 5240-5243.

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44. Qiao, K., Zhou, H., Xu, W., Zhang, W., Garg, N., Tang, Y. “A fungal nonribosomal peptide synthetase module that can synthesize thiopyrazines” *Org. Lett.* **2011**, 13, 1758-1761.
45. Zhang, W., Heemstra, J. R., Walsh, C. T., Imker, H. J. “Activation of the pacidamycin PacL adenylation domain by MbtH-like proteins” *Biochemistry* **2010**, 49, 9946-9947.
46. Zhang, W., Ostash, B., Walsh, C. T. “Identification of the biosynthetic gene cluster for the pacidamycin group of peptidyl nucleoside antibiotics” *Proc. Natl. Acad. Sci. U. S. A.* **2010**, 107, 16828-16833.
47. Zhang, W., Bolla, M. L., Kahne, D., Walsh, C. T. “A three enzyme pathway for 2-amino-3-hydroxycyclopent-2-enone formation and incorporation in natural product biosynthesis” *J. Am. Chem. Soc.* **2010**, 132, 6402-6411.
48. Yan, M., Du, J., Gu, Z., Liang, M., Hu, Y., Zhang, W., Priceman, S., Wu, L., Segura, T., Liu, Z., Tang, Y., Lu, Y. “A novel protein delivery platform based on single protein nanocapsules” *Nat. Nanotech* **2010**, 5, 48-53.
49. Zhang, W., Tang, Y. “In vitro Analysis of Type II PKS” *Methods in Enzymology: microbial natural product biosynthesis*, **2009**, 459, 367-393.
50. Gao, X., Xie, X., Pashkov, I., Sawaya, R. M., Laidmen, J., Zhang, W., Cacho, R., Yeates, T. O., Tang, Y. “Directed evolution and structural characterization of a simvastatin synthase” *Chem. Biol.* **2009**, 16, 1064-1074.
51. Wang, P.*, Zhang, W.*, Zhan, J., Tang, Y. “Identification of OxyE as an ancillary oxygenase during tetracycline biosynthesis” *ChemBioChem*, **2009**, 10, 1554-1550. (*Equal contribution)
52. Zhang, W., Li, Y., Tang, Y. “Engineered biosynthesis of bacterial aromatic polyketides in *Escherichia coli*” *Proc. Natl. Acad. Sci. U. S. A.*, **2008**, 105, 20683-20685.
53. Zhang, W., Watanabe, K., Cai, X., Jung, M. E., Tang, Y., Zhan, J. “Identifying the minimal enzymes required for anhydrotetracycline biosynthesis” *J. Am. Chem. Soc.* **2008**, 130, 6068-6069.
54. Ames, B., Korman, T., Zhang, W., Vu, T., Tang, Y., Tsai, S-C. “Crystal structure and functional analysis of tetracenomycin ARO/CYC: implication for cyclization specificity of aromatic polyketides” *Proc. Natl. Acad. Sci. U. S. A.* **2008**, 105, 5349-5354.
55. Zhang, W., Tang, Y. “Combinatorial biosynthesis of natural products” *J. Med. Chem.* **2008**, 51, 2629-2633.
56. Ma, S. M.*, Zhan, J., Xie, X., Watanabe, K., Tang, Y., Zhang, W.* “Redirecting the cyclization steps of fungal polyketide synthase” *J. Am. Chem. Soc.* **2007**, 130, 38-39. (*Equal contribution)
57. Zhang, W., Wilke, B. I., Zhan, J., Watanabe, K., Boddy, C. N., Tang, Y. “A new mechanism for benzopyrone formation in aromatic polyketide biosynthesis” *J. Am. Chem. Soc.* **2007**, 129, 9304-9305.
58. Zhang, W., Watanabe, K., Wang, C. C. C., Tang, Y. “Investigation of early tailoring reactions in the oxytetracycline biosynthetic pathway” *J. Biol. Chem.* **2007**, 282, 25717-25725.
59. Ma, S. M., Zhan, J., Watanabe, K., Xie, X., Zhang, W., Wang, C. C. C., Tang, Y. “Enzymatic synthesis of aromatic polyketides using PKS4 from *Gibberella fujikuroi*” *J. Am. Chem. Soc.* **2007**, 129, 10642-10643.
60. Zhang, W., Watanabe, K., Wang, C. C. C., Tang, Y. “Heterologous biosynthesis of amidated polyketides with novel cyclization regioselectivity from oxytetracycline polyketide synthase” *J. Nat. Prod.* **2006**, 69, 1633-1636.
61. Zhang, W., Ames, B., Tsai, S-C., Tang, Y. “Engineered biosynthesis of a novel amidated polyketide, using the malonamyl-specific initiation module from the oxytetracycline polyketide synthase” *Appl. Environ. Microb.* **2006**, 72, 2573-2580.
62. Zhu, X., Zhang, W., Xiao, H., Huang, J., Li, G. “Electrochemical study of a hemin-DNA complex and its activity as a ligand binder” *Electrochim. Acta* **2008**, 53, 4407-4413.
63. Huang, Y., Zhang, W., Xiao, H., Li, G. “An electrochemical investigation of glucose oxidase at a US nanoparticles modified electrode” *Biosens. & Bioelectro.* **2005**, 21, 817-821.
64. Liu, X., Huang, Y., Zhang, W., Fan, G., Fan, C., Li, G. “Electrochemical investigation of redox thermodynamics of immobilized myoglobin: Ionic and ligation effects” *Langmuir* **2005**, 21, 375-378.

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65. Zhang, W., Zhou, H., Li, G., Scheer, H. “An electrochemical study of hemoglobin in water-glycerol solutions” *Biophys. Chem.* **2004**, 111, 229-233.
66. Zhang, W., Huang, Y., Dai, H., Wang, X., Fan, C., Li, G. “Tuning the redox and enzymatic activity of glucose oxidase in layered organic films and its application in glucose biosensors” *Anal. Biochem.* **2004**, 329, 85-90.
67. Zhang, W., Li, G. “Third-generation biosensors based on the direct electron transfer of proteins” *Anal. Sci.* **2004**, 20, 603-609.
68. Liu, X., Zhang, W., Huang, Y., Li, G. “Enhanced electron-transfer reactivity of horseradish peroxidase in phosphatidylcholine films and its catalysis to nitric oxide” *J. Biotech.* **2004**, 108, 145-152.
69. Sun, Z., Ma, Z., Zhang, W., Wang, X., Fan, C., Li, G. “Electrochemical investigations of baicalin and DNA-baicalin interactions” *Anal. Bioanal. Chem.* **2004**, 379, 283-286.
70. Sun, Y., Liu, X., Fan, C., Zhang, W., Li, G. “Electrochemical investigation of the chloride effect on hemoglobin” *Bioelectrochemistry* **2004**, 64, 23-27.
71. Zhang, W., Fan, C., Sun, Y., Li, G. “An electrochemical investigation of ligand-binding abilities of film-entrapped myoglobin” *Biochim. Biophys. Acta. Gen. Subj.* **2003**, 1623, 29-32.
72. Peng, W., Liu, X., Zhang, W., Li, G. “An electrochemical investigation of effect of ATP on hemoglobin” *Biophys. Chem.* **2003**, 106, 267-273.
73. Fan, C., Liu, J., Zhang, W., Suzuki, I., Li, G. “Enhanced electron-transfer reactivity of cytochrome b(5) by dimethylsulfoxide and N,N'-dimethylformamide” *Anal. Sci.* **2002**, 18, 1031-1033.

BOOK CHAPTERS

1. Porterfield, W., Zhang, W. “Mutasythesis for Natural Product Bioengineering” In: *Comprehensive Natural Products III: Chemistry and Biology*. Eds Tadhg Begley and Ben Liu; Elsevier, in press
2. Twigg, F., Skyrud, D., Li, J., Zhang, W. “Engineering Enzymes for Natural Product Biosynthesis and Diversification” In *Modern Biocatalysis: Advances Towards Synthetic Biological Systems*. eds G. Williams and M. Hall; Royal Society of Chemistry, **2018**.
3. Zhang, W., Ferreira, J. P., Tang, Y. “Regulation of Secondary Metabolism Biosynthesis” In: Smolke, C.D., ed. *The Metabolic Pathway Engineering Handbook: Tools and Applications*. CRC Press. **2009**.
4. Zhang, W., Tang, Y. "Engineering Starter Units in Aromatic Polyketides" In *ACS Volume Based on Polyketides: Biosynthesis, Biological Activity and Genetic Engineering*. eds S. R. Baerson; American Chemical Society, **2006**.

PATENTS

1. Zhang, W., Rui, Z. “Biosynthesis of 1-undecene and related terminal olefins” US Patent US10,000,775.

INVITED TALKS

1. Directing Biosynthesis VI, The Royal Society of Chemistry, University of Edinburgh, UK, June **2020***
2. Department of Chemistry, Texas A&M University, College Station, TX, October **2019***
3. 2019 SIMB Annual Meeting, Washington, DC, July **2019**
4. 2nd Synthetic Biology for Natural Products conference, Puerto Vallarta, Mexico, June **2019**
5. Biohub investigators meeting, San Francisco, CA, May **2019**
6. 2019 Microbiology Society Annual Conference, Belfast Waterfront, UK, April **2019**
7. 257th ACS National Meeting (Division of Chemical Biology), Orlando, FL, April, **2019**
8. The Center for Theoretical Biological Physics (CTBP), Rice University, Houston, TX, March, **2019**
9. Department of Chemical Engineering & Materials Science, University of Minnesota, Minneapolis, MN, November, **2018**
10. 2018 Scialog: Chemical Machinery of the Cell, Tucson, AZ, October, **2018**

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11. International Forum on Natural Products, Beijing, China, August **2018**
12. 2018 SIMB Annual Meeting, Chicago, IL, August **2018**
13. Biological Sciences Department, University at Buffalo, Buffalo, NY, May **2018**
14. Scripps Institution of Oceanography, UCSD, San Diego, CA, February **2018**
15. 2nd Natural Product Discovery and Development in the Genomic Era, Clearwater, FL, January **2018**
16. ICBE Asia 2018: International Conference on Biomolecular Engineering, Singapore, January **2018**
17. South China Sea Institute of Oceanology, Chinese Academy of Sciences, Guangzhou, China, January **2018**
18. Biohub investigators meeting, San Francisco, CA, October **2017**
19. 2017 Gordon Research Conference on Natural Products & Bioactive Compounds, Andover, NH, July **2017**
20. 2017 Microbial and Plant Systems Modulated by Secondary Metabolites, DOE Joint Genome Institute, Walnut Creek, CA, July **2017**
21. 9th US-Japan Seminar on the Biosynthesis of Natural Products, Los Angeles, CA, June **2017**
22. Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA, April **2017**
23. Department of Chemical Engineering, Stanford University, Stanford, CA, November **2016**
24. Department of Chemical Engineering, California Institute of Technology, Pasadena, CA, November **2016**
25. Department of Chemical and Biological Engineering, Rensselaer Polytechnic Institute, Troy, NY, September **2016**
26. Department of Chemical and Biomolecular Engineering, Cornell University, Ithaca, NY, September **2016**
27. Metabolic Engineering and Green Manufacturing Symposium, Beijing, China, July **2016**
28. Sino-USA Chinese Collaborative Workshop - Opportunities and Challenges in Synthetic Biology (SUCC SynBio), Guangzhou, China, July **2016**
29. DuPont Industrial Biosciences, Palo Alto, CA, May **2016**
30. Pew 2016 Annual Meeting, Greensboro, GA, March **2016**
31. 251th ACS National Meeting (BIOT), San Diego, CA, March **2016**
32. DOE Joint Genome Institute, Walnut Creek, CA, January **2016**
33. 2016 Gordon Research Conference in Metals in Biology, Ventura, CA, January **2016**
34. Cenovus Energy, Calgary, AB, Canada, November **2015**
35. Agilent Technologies | UC Berkeley Synthetic Biology Institute, 9th Technical Exchange Workshop, Berkeley, CA, October **2015**
36. Department of Chemical and Biomolecular Engineering, University of Illinois at Urbana-Champaign, IL, October **2015**
37. 2015 Gordon Research Conference on Enzymes, Coenzymes and Metabolic Pathways, Waterville Valley, NH, July **2015** (Poster talk)
38. REG Life Sciences, LLC, South San Francisco, CA, April **2015**
39. 249th ACS National Meeting (Division of Organic Chemistry), Denver, CO, March **2015**
40. Department of Biological and Agricultural Engineering, UC Davis, Davis, CA, February **2015**
41. 5th International Conference on Biomolecular Engineering (ICBE), Lost Pines, TX, January **2015**
42. 8th Singapore International Chemistry Conference (SICC-8), Singapore, December **2014**
43. Biochemical Engineering Seminar, Agency for Science, Technology and Research (A*STAR), Singapore, December **2014**
44. Department of Chemical and Biomolecular Engineering, UCLA, Los Angeles, CA, November **2014**
45. Department of Molecular Biology & Biochemistry, UC Irvine, Irvine, CA, November **2014**
46. Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, China, September **2014**
47. School of Life Sciences and Biotechnology, Shanghai Jiaotong University, Shanghai, China, September **2014**

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48. 248th ACS National Meeting (BIOL, Lilly Award Symposium), San Francisco, CA, August **2014**
49. 2014 SIMB Annual Meeting, St. Louis, MO, July **2014**
50. 2014 Beckman Young Investigator Program Last Phase Presentation, Irvine, CA, June **2014**
51. 247th ACS National Meeting (BIOL), Dallas, TX, March **2014**
52. Microbiology Retreat, Berkeley, CA, November **2013**
53. Sino-USA Chinese Collaborative Workshop - Opportunities and Challenges in Synthetic Biology (SUCC SynBio), Tianjin, China, August **2012**
54. Kuang Yaming Honors School, Nanjing University, Nanjing, China, May **2012**
55. Energy Biosciences Institute, Berkeley, CA, December **2011**
56. International Synthetic Biology Workshop, Berkeley, CA, August **2011**
57. Joint Informational Agilent SBI meeting, Berkeley, CA, August **2011**
58. 2010 Gordon Research Conference on Enzymes, Coenzymes and Metabolic Pathways, Waterville Valley, NH, July **2010** (Poster talk)

COURSE DEVELOPMENT

Biomolecular Engineering (274), Biochemical Engineering (170A, 170B), Biochemical Engineering Lab (170L), Berkeley Lectures on Energy: Energy from Biomass (195A), Chemical Engineering Thermodynamics (141)

TECHNICAL AND PROFESSIONAL SOCIETY MEMBERSHIPS

American Chemical Society (ACS), American Institute of Chemical Engineers (AIChE), Society for Industrial Microbiology and Biotechnology (SIMB), American Society for Microbiology (ASM), American Association for the Advancement of Science (AAAS), Graduate Women in Science (GWIS)

EXTERNAL PROFESSIONAL SERVICE

Conference Organizing

- 11/2013 Session Chair for "Biobased Fuels and Chemicals III" AIChE Annual Meeting
- 07/2014 Session Convener for "Novel enzyme mechanisms in biosynthesis" in the topic of natural products, SIMB Annual Meeting
- 11/2015 Session Chair for "Biocatalysis and Biosynthesis II: Biofuels and Commodity Chemicals Applications", AIChE Annual Meeting
- 03/2016 Chair for the session "Engineering Natural Products Biosynthesis" of the BIOT Upstream Processes symposium at the 251st ACS National Meeting & Exposition
- 11/2016 Session Chair for "Advances in Biocatalysis and Biosynthesis", AIChE Annual Meeting
- 01/2017 Session chair for the session "Novel synthetic biology tools and applications" at the 7th International Conference on Biomolecular Engineering in San Diego
- 01/2018 organizing committee for the 2018 International Conference on Biomolecular Engineering (ICBE Asia 2018)
- 08/2018 Session Convener for "Natural Products from Unusual Microorganisms" in the topic of natural products, SIMB Annual Meeting
- 10/2018 – present member of International Program Committee for the 2020 3rd meeting of "Natural Products Discovery & Development in the Genomics Era"
- 07/2019 Session Convener for "New Enzymology in Natural Product Biosynthesis" in the topic of natural products, SIMB Annual Meeting
- 05/2019 Agilent Technologies/UC Berkeley Synthetic Biology Institute (SBI) 15th Technical Exchange Workshop

Journal Editorial

- 01/2015 - 12/2015 Co-Guest Editor for Journal "*Current Topics in Medicinal Chemistry*"
- 09/2015 - 12/2016 Co-Guest Editor for Journal "*Current Opinion in Chemical Biology*"

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- 12/2015 – present Editorial Board Member for the Journal “*Cell Chemical Biology*”
11/2017 – present A member of the inaugural editorial board of “*iScience*”
02/2018 - 02/2019 Co-Guest Editor for Journal “*Organic & Biomolecular Chemistry*”
03/2018 – present ACS Catalysis Early Career Advisory Board
02/2019 – present Co-Guest Editor for Journal “*iScience*” in collaboration with “*Trends in Biotechnology*”.

Grant Review Panel

- 08/2011 NSF SBIR/STTR Phase I Renewable Fuels Panel
01/2012 NSF SBIR/STTR Phase I Bio-based Chemicals Panel
08/2013 NSF SBIR/STTR Phase I Biobased & Renewable Chemicals Panel
03/2014 JGI Synthetic Biology CSP Review
02/2016 Ad hoc reviewer for NIH study section of Synthetic and Biological Chemistry B (SBCB)
10/2016 Ad hoc reviewer for NIH study section of Synthetic and Biological Chemistry B (SBCB)
06/2017 Ad hoc reviewer for NIH study section for SBIR and STTR grant applications in the broad area of Drug Discovery and Development (BCMB-10)
03/2019 Semi-annual CSP DNA Synthesis Science Review panel
06/2019 Ad hoc reviewer for NIH study section for SBIR and STTR grant applications in the broad area of Drug Discovery and Development (BCMB-10)

Grant Proposals Review

- 03/2014 NSF Electronic Proposal Review for the Chemistry of Life Processes program in the Chemistry Division
05/2014 UK Biotechnology and Biological Sciences Research Council
06/2014 French National Research Agency (Biomedical innovation)
08/2014 French Aix-Marseille excellence initiative A*MIDEX
03/2016 Kentucky Science and Engineering Foundation R&D Excellence Award
03/2018 Sir Henry Dale Fellowship at Wellcome Trust, United Kingdom
09/2018 Marsden Fund, Royal Society Te Apārangi, New Zealand

Peer Reviewer for Journals

Science, Nature Chemical Biology, Nature Communications, Nature Microbiology, PNAS, Journal of the American Chemical Society, Angewandte Chemie, eLife, Chemical Science, Chemical Reviews, Accounts of Chemical Research, ACS Chemical Biology, ACS Catalysis, ACS Synthetic Biology, ACS Central Science, Natural Product Reports, Advanced Synthesis & Catalysis, Organic Letters, Chemistry & Biology, Scientific Reports, ChemComm, Microbial Cell Factories, Bioresource Technology, ChemBioChem, Metabolic Engineering, Applied and Environmental Microbiology, PLOS Biology, Critical Reviews In Biochemistry & Molecular Biology, mSystems, BBA-Proteins and Proteomics, Medicinal Chemistry Communications, Applied Biochemistry and Biotechnology, Biochemical Engineering Journal, Chemical Engineering Science, Journal of Natural Products, Journal of Antibiotics, Current Opinion in Systems Biology, AIChE Journal, Current Microbiology, Marine Biotechnology, International Journal of Molecular Sciences, Journal of Biotechnology, Natural Product Research, Recent Patents on CNS Drug Discovery

RESEARCH SUPPORT

Ongoing

- 11/2018 - 11/2019 Quadriga Biosciences, *Engineered Biosynthesis of Brasilicardin and Related Analogs*. PI: Wenjun Zhang. Total: \$69,878.

Curriculum Vitae – WENJUN ZHANG

07/2017 - 06/2021 American Cancer Society (130381-RSG-17-013-01-CDD), *Antimycin-Type Anti-Cancer Drug Development: Go Beyond Natural Evolution*. PI: Wenjun Zhang. Total: \$792,000.

02/2017 - 06/2022 Chan Zuckerberg Biohub Investigator Award. PI: Wenjun Zhang. Total: \$750,000.

09/2016 - 09/2020 Sloan Research Fellowship. PI: Wenjun Zhang. Total: \$55,000.

09/2015 - 06/2020 NIH/NCCIH (DP2AT009148), *In situ Natural Product Labeling and Applications*. PI: Wenjun Zhang. Total: \$2,355,000.

Completed

04/2017 - 06/2018 Chau Hoi Shuen Foundation Women in Science Program New Research Grant. PI: Wenjun Zhang. Total: \$50,000.

03/2016 - 07/2019 GlaxoSmithKline, *Discovery and Characterization of Enzyme Libraries for the Demonstration and Optimization of Pathways to GSK Chemical Intermediate and Targets of Interest*. PI: Wenjun Zhang and Others. Total: \$1,810,954.

05/2015 – 06/2016 Hellman Foundation, *Biosynthesis of Tagged Natural Products and Their Applications*. PI: Wenjun Zhang. Total: \$40,000.

01/2014 - 05/2017 Energy Biosciences Institute, *Improving Clostridial Fermentation Performance by Signaling Molecules*. PI: Wenjun Zhang. Total: ~\$723,000.

07/2013 - 06/2014 UC CRCC Cancer Research Coordinating Committee, *Engineered Biosynthesis of Antimycin-Type Anticancer Drugs*. PI: Wenjun Zhang. Total: \$55,000.

08/2012 - 07/2017 Pew Charitable Trusts, *Unveiling Hidden Signaling Molecules in Pathogenic Bacteria*. PI: Wenjun Zhang. Total: \$240,000.

07/2011 - 05/2017 Energy Biosciences Institute, *Microbial Production of 1-Undecene and Related Fuel-like Molecules*. PI: Wenjun Zhang. Total: ~\$1,016,000.

POSTDOCTORAL MENTORING

07/2011 - 05/2015 Zhe Rui (Senior Scientist at Antheia, Inc.)

10/2011 - 05/2013 Moriah Sandy (Assistant Professor of Practice at UT Austin)

06/2013 - 05/2016 Wei Huang (Assistant Professor at Qingdao Institute of Bioenergy and Bioprocess Technology, Chinese Academy of Sciences)

08/2014 - 07/2015 Michio Sato (Assistant Professor at University of Shizuoka, Japan)

11/2014 - 10/2016 Seong-Jong Kim (Research Chemist, Thad Cochran Research Center)

11/2016 - present Wenlong Cai

07/2017 - present William Porterfield

09/2017 - present Yaobing Huang

04/2018 - present Juan Wang

05/2019 - present Zhijuan Hu

VISITING SCHOLAR MENTORING

06/2012 - 05/2013 Liang (Jack) Zhang

09/2015 - 12/2016 Ella Zafir (Research Scientist at Gilead)

Curriculum Vitae – WENJUN ZHANG

03/2016 - 10/2017 Juan Zhang (Associate Professor, Shanghai University)
04/2016 - 03/2017 Junying Ma (Associate Professor, South China Sea Institute of Oceanology, Chinese Academy of Sciences)

GRADUATE STUDENT MENTORING

2011 - 2013 Bonnie Domigan (MS, Chemical Engineering, Senior Research Associate at KnipBio)
2011 - 2016 Joyce Liu (PhD, Bioengineering, Scientist at Codexis)
2012 - 2017 Xuejun Zhu (PhD, Chemical Engineering, Assistant Professor at Texas A&M)
2012 - 2017 Nico Herman (PhD, Chemical Engineering, Scientist at Zymogen)
2014 - 2019 Michael Su (PhD, Chemical Engineering)
2014 - 2019 Nick Harris (PhD, Microbiology, Co-Founder of Berkeley Brewing Science)
2015 - present David Will Skyrud (PhD candidate, Chemistry)
2015 - present Jeremy Seidel (PhD candidate, Chemical Engineering)
2015 - present Frederick Twigg (PhD candidate, Chemical Engineering)
2015 - present Jeffrey Li (PhD candidate, Chemical Engineering)
2017 - present Nick Zill (PhD candidate, Chemical Engineering)
2017 - present Colin Barber (PhD candidate, Microbiology)
2017 - present Zhongrui Li (MS candidate, Chemical Engineering)
2018 - present Antonio Del Rio Flores (PhD candidate, Chemical Engineering)

UNDERGRADUATE STUDENT MENTORING

06/2019 - 12/2019 Yuan Wu (Nanjing University Chemistry; ZhengGang Fellow)
06/2019 - 08/2019 Daniel Aguirre, New Mexico State University Chemical Engineering; Amgen Scholar)
06/2019 – present Joyce Guo (Chemical Engineering)
03/2019 - 06/2019 Jeeyoung Park (Chemical Biology)
03/2019 – present Jonathan Su (Chemical Engineering)
01/2019 - 05/2019 Grace Li (Chemical Engineering)
01/2019 – present Julie Kong (Chemical Engineering)
09/2018 – present Nannalin Poenateetai (Chemical Biology)
08/2018 – present Samantha Marinkovich (Chemical Engineering)
07/2018 - 09/2018 Di Gu (Nanjing University Chemistry; ZhengGang Fellow)
05/2018 - 05/2019 Rohin Devanathan (Chemical Engineering)
05/2018 - 12/2018 Ismael Montanez (Chemical Biology)
02/2018 - 06/2018 Xin (Ted) Gao (Nanjing University; ZhangGang Fellow; PhD student at Columbia)
01/2018 - 05/2019 Moriel Dror (Chemical Engineering)
01/2018 - 05/2019 Richard Law (Chemical Engineering)
01/2018 - 05/2019 Li Cao (Chemical Engineering; PhD student at Princeton with NSF GRFP)
01/2018 - 01/2019 Sarah Lee (Chemical Biology)
01/2018 - 12/2018 Allison Green (Chemical Engineering)
12/2017 - 07/2018 Patrick Negulescu (Chemical Engineering)
09/2017 - 05/2019 Samuel Ng (Chemical Engineering)
08/2017 – 05/2019 Joy Geng (PMB; Honor's Thesis Advisor)
05/2017 – 08/2017 Brianna Lax (University of Michigan Chemical Engineering; Amgen Scholar)
05/2017 – 05/2018 Tynan Perez (Chemical Biology; Cooke Foundation's Summer Internship Fellow; Senior Thesis Advisor)
05/2017 - 05/2018 Santi Battarai-Kline (Chemical Biology; Senior Thesis Advisor)
03/2017 – 12/2018 Alex Leung (Materials Science/Bioengineering)

Curriculum Vitae – WENJUN ZHANG

02/2017 – 01/2019 Tate Tong (Chemical Engineering)
01/2017 – 05/2018 Maria Cabrera (Molecular and Cell Biology; SMART; Honor's Thesis Advisor; Research Technician at Caltech)
01/2017 – 05/2017 Theodore Sun (Chemical Engineering)
08/2016 – 12/2017 Keqin (Katherine) Zhou (Chemical Engineering; COC Summer Research Fellow; MS student at UPenn)
01/2016 – 05/2018 Ryan Khalaf (Chemical Biology; Medicinal Chemistry Internship at Genentech)
01/2016 – 05/2018 Joelle Martin (Chemical Biology; COC Summer Research Fellow; Pharmaceutical Development Internship at Genentech)
04/2016 - 05/2017 Amy Li (Chemical Engineering)
08/2016 - 05/2017 Frank Gao (Chemistry)
06/2016 - 05/2017 Jordan Downey (Chemical Engineering BS 2017; Bioprocess Manufacturing Technician at Genentech)
10/2015 - 05/2017 Emily Sun (Chemical Engineering; PhD student at UC Santa Barbara)
01/2015 - 01/2016 Kadhivel Manickam (Bioengineering; Software Engineer at Allevi)
06/2015 - 12/2015 Dylan Mendonca (Chemical Engineering; Research Associate at JUUL Labs)
05/2015 - 08/2015 Vinh Tran (Chemical Engineering; PhD student at UIUC)
10/2014 - 05/2016 Phoebe Yeh (Chemical Engineering BS 2016; Amyris)
08/2013 - 08/2015 Ripika Bedi (Chemical Biology BS 2015; SMART; Medical student at Touro University College of Osteopathic Medicine)
05/2014 - 10/2014 Yongsheng Li (Chemical Engineering & Computer Science)
06/2014 - 08/2014 Haedyn Christie (UCSC; BERET 2013)
06/2014 - 08/2014 Joel Sanchez (UC Riverside Chemical Engineering; Amgen Scholar; PhD student at Stanford University)
09/2013 - 05/2014 Jin Soo Chung (Chemical Engineering BS; Samsung BioLogics)
09/2013 - 05/2014 Rajandeep Brayana (Chemical Engineering)
07/2013 - 05/2014 Wenyuan Bao (Chemistry)
09/2012 - 05/2014 Tai Lun Ng (Chemistry & Bioengineering BS 2014; SURF/ROSEHILL Fellow; PhD student at Harvard University)
11/2012 - 09/2013 Esther Kemper (Chemical Biology BS 2015; PhD student at Scripps Research Institute)
01/2013 - 06/2013 Emil Olsson (Chemical Engineering Exchange student 2013; Haldor Topsoe A/S)
06/2012 - 12/2012 Ziyang Feng (Chemical Biology BS 2012; MS student at Columbia University)
06/2012 - 12/2012 Zihao (Peter) Yan (Chemical Engineering BS 2014; MS student at University of Pittsburgh)
07/2011 - 12/2012 Tiffany Hwang (Chemical Engineering BS 2013; USC School of Pharmacy)
07/2011 - 08/2012 Brian Jung (Chemical Engineering BS 2012; Fluor)
06/2012 - 08/2012 Shyh-Herng (James) Lo (TTE-REU 2012)
01/2012 - 05/2012 Himani Nadgauda (Chemical Engineering BS 2013; University of Illinois at Chicago)
09/2011 - 05/2012 Vincent Yeh (Chemical Engineering BS 2013; Stryker Neurovascular)
09/2011 - 12/2011 Scott Ahn (Chemical Engineering BS 2012; Fluor)