

Jun Yin
Professor

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A. Education

| | | |
|--|------------------------------|-----------------|
| Harvard Medical School, Boston, MA | Postdoctoral Research Fellow | 08/2003-07/2006 |
| University of California, Berkeley, CA | Ph.D. in Organic Chemistry | 05/2003 |
| Rutgers University, New Brunswick, NJ | M.S. in Chemistry | 05/1997 |
| Peking University, Beijing, China | B.S. in Chemistry | 07/1995 |

B. Professional Credentials

Academic appointments

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| 2019-present | Professor, Department of Chemistry and Center for Diagnostics & Therapeutics, College of Arts & Sciences, Georgia State University |
| 2013-2019 | Associate Professor, Department of Chemistry and Center for Diagnostics & Therapeutics, College of Arts & Sciences, Georgia State University |
| 2006-2013 | Assistant Professor, Department of Chemistry, University of Chicago |
| 2003-2006 | Postdoctoral Fellow, Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, Boston, MA; Laboratory of Professor Christopher T. Walsh |
| 1999-2003 | Research Assistant, Department of Chemistry, The Scripps Research Institute, La Jolla, CA; Laboratory of Professor Peter G. Schultz |
| 1997-1999 | Research Assistant, Department of Chemistry, The University of California at Berkeley, CA; Laboratory of Professor Peter G. Schultz |
| 1995-1997 | Research Assistant, Department of Chemistry, Rutgers University, New Brunswick, NJ; Laboratory of Professor Stephen Anderson |
| 1994-1995 | Research Assistant, Department of Chemistry, Peking University, Beijing, China; Laboratory of Professor Baohuai Wang and Youmin Zhang |

Honors and Awards

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| 2011 | Catalyst Award from the Chicago Biomedical Consortium and Searle Foundation |
| 2011 | NSF Faculty Early Career Development (CAREER) Award |
| 2006 | Camille and Henry Dreyfus Foundation New Faculty Award |
| 1995-1996 | Graduate student fellowship, Rutgers University |
| 1993-1994 | Outstanding student scholarship, Peking University |

C. Scholarship and Professional Development

Peer-reviewed publications

Undergraduate and graduate publications

1. [Yin, J.](#); Wang, B. H.; Li, Z. F.; Zhang, Y. M.; Zhou, X. H.; Gu, Z. N. *J. Chem. Thermodyn.*, Enthalpies of dissolution of C-60 and C-70 in o-xylene, toluene, and CS₂ at temperatures from 293.15 K to 313.15 K, **1996**, *28*, 1145. [Journal website.](#)
2. Romesberg, F. E.; Santarsiero, B. D.; Spiller, B.; [Yin, J.](#); Barnes, D.; Schultz, P. G.; Stevens, R. C. *Biochemistry*, Structural and kinetic evidence for strain in biological catalysis, **1998**, *37*, 14404. [PubMed.](#)
3. [Yin, J.](#); Mundorff, E. C.; Yang, P. L.; Wendt, K. U.; Hanway, D.; Stevens, R. C.; Schultz, P. G. *Biochemistry*, A comparative analysis of the immunological evolution of antibody 28B4, **2001**, *40*, 10764. [PubMed.](#)
4. Schultz, P. G.; [Yin, J.](#); Lerner, R. A. *Angew Chem Int Ed Engl*, The chemistry of the antibody molecule, **2002**, *41*, 4427. [PubMed.](#)
5. [Yin, J.](#); Andryski, S. E.; Beuscher, A. E. t.; Stevens, R. C.; Schultz, P. G. *Proc Natl Acad Sci U S A*, Structural evidence for substrate strain in antibody catalysis, **2003**, *100*, 856. [PubMed.](#)
6. [Yin, J.](#); Beuscher, A. E. t.; Andryski, S. E.; Stevens, R. C.; Schultz, P. G. *J Mol Biol*, Structural plasticity and the evolution of antibody affinity and specificity, **2003**, *330*, 651. [PubMed.](#)
7. This paper was featured on the cover of the issue.
8. [Yin J.](#) & Schultz P. G. (2004) Immunological evolution of antibody catalysis. In "*Catalytic Antibodies*" (Keinan, E. ed), Wiley-VCH, Weinheim, pp. 1-29.
9. Jimenez, R.; Salazar, G.; [Yin, J.](#); Joo, T.; Romesberg, F. E. *Proc Natl Acad Sci U S A*, Protein dynamics and the immunological evolution of molecular recognition, **2004**, *101*, 3803. [PubMed.](#)
10. [Yin, J.](#); Mills, J. H.; Schultz, P. G. *J Am Chem Soc*, A catalysis-based selection for peroxidase antibodies with increased activity, **2004**, *126*, 3006. [PubMed.](#)
11. Venkatesh Rao, S.; [Yin, J.](#); Jarzecki, A. A.; Schultz, P. G.; Spiro, T. G. *J Am Chem Soc*, Porphyrin distortion during affinity maturation of a ferroxidase antibody, monitored by Resonance Raman spectroscopy, **2004**, *126*, 16361. [PubMed.](#)

Postdoctoral publications

12. [Yin, J.](#); Liu, F.; Li, X.; Walsh, C. T. *J Am Chem Soc*, Labeling proteins with small molecules by site-specific posttranslational modification, **2004**, *126*, 7754. [PubMed.](#) This paper was featured in *Chem & Eng News* 82, [24] 31 (2004).
13. [Yin, J.](#); Liu, F.; Schinke, M.; Daly, C.; Walsh, C. T. *J Am Chem Soc*, Phagemid encoded small molecules for high throughput screening of chemical libraries, **2004**, *126*, 13570. [PubMed.](#)
14. Vaillancourt, F. H.; [Yin, J.](#); Walsh, C. T. *Proc Natl Acad Sci U S A*, SyrB2 in syringomycin E biosynthesis is a nonheme FeII alpha-ketoglutarate- and O₂-dependent halogenase, **2005**, *102*, 10111. [PubMed.](#)
15. [Yin, J.](#); Lin, A. J.; Buckett, P. D.; Wessling-Resnick, M.; Golan, D. E.; Walsh, C. T. *Chem Biol*, Single-cell FRET imaging of transferrin receptor trafficking dynamics by Sfp-catalyzed, site-specific protein labeling, **2005**, *12*, 999. [PubMed.](#)

16. This paper was featured in a Previews article in *Chem Biol* 12, 954-956 (2005) and in Research Highlights in *Nature Methods* 2, 808 (2005).
17. [Yin, J.](#); Straight, P. D.; McLoughlin, S. M.; Zhou, Z.; Lin, A. J.; Golan, D. E.; Kelleher, N. L.; Kolter, R.; Walsh, C. T. *Proc Natl Acad Sci U S A*, Genetically encoded short peptide tag for versatile protein labeling by Sfp phosphopantetheinyl transferase, **2005**, *102*, 15815. [PubMed](#).
18. McLoughlin, S. M.; Mazur, M. T.; Miller, L. M.; [Yin, J.](#); Liu, F.; Walsh, C. T.; Kelleher, N. L. *Biochemistry*, Chemoenzymatic approaches for streamlined detection of active site modifications on thiotemplate assembly lines using mass spectrometry, **2005**, *44*, 14159. [PubMed](#).
19. [Yin, J.](#); Lin, A. J.; Golan, D. E.; Walsh, C. T. *Nat Protoc*, Site-specific protein labeling by Sfp phosphopantetheinyl transferase, **2006**, *1*, 280. [PubMed](#).
20. Singh, G. M.; Vaillancourt, F. H.; [Yin, J.](#); Walsh, C. T. *Chem Biol*, Characterization of SyrC, an Aminoacyltransferase Shuttling Threonyl and Chlorothreonyl Residues in the Syringomycin Biosynthetic Assembly Line, **2007**, *14*, 31. [PubMed](#).
21. [Yin, J.](#); Straight, P. D.; Hrvatin, S.; Dorrestein, P. C.; Bumpus, S. B.; Jao, C.; Kelleher, N. L.; Kolter, R.; Walsh, C. T. *Chem Biol*, Genome-wide high-throughput mining of natural-product biosynthetic gene clusters by phage display, **2007**, *14*, 303. [PubMed](#). This paper was featured in Research Highlights in *Nature Methods* 4, 470-1 (2007).

Independent publications

20. Zhou, Z.; Cironi, P.; Lin, A. J.; Xu, Y.; Hrvatin, S.; Golan, D. E.; Silver, P. A.; Walsh, C. T.; [Yin, J.](#) *ACS Chem Biol*, Genetically encoded short peptide tags for orthogonal protein labeling by Sfp and AcpS phosphopantetheinyl transferases, **2007**, *2*, 337. [PubMed](#).
22. Marshall, N. J.; [Yin, J.](#) In *Chemical Probes and Tags*; Miller, L. M., Ed.; Wiley-VCH: Weinheim, 2007.
23. Yen, M.; [Yin, J.](#) *Biotechniques*, High-throughput profiling of posttranslational modification enzymes by phage display, **2007**, *43*, 31. [PubMed](#).
24. Zou, Y.; [Yin, J.](#) *Bioorganic & medicinal chemistry letters*, Cu-free cycloaddition for identifying catalytic active adenylation domains of nonribosomal peptide synthetases by phage display, **2008**, *18*, 5664. [PubMed](#).
25. Zou, Y.; [Yin, J.](#) *Chembiochem*, Alkyne-functionalized chemical probes for assaying the substrate specificities of the adenylation domains in nonribosomal peptide synthetases, **2008**, *9*, 2804. [PubMed](#).
26. Sunbul, M.; Yen, M.; Zou, Y.; [Yin, J.](#) *Chemical communications (Cambridge, England)*, Enzyme catalyzed site-specific protein labeling and cell imaging with quantum dots, **2008**, 5927. [PubMed](#).
27. Sunbul, M.; Zhang, K.; [Yin, J.](#) *Methods Enzymol*, Chapter 10 using phosphopantetheinyl transferases for enzyme posttranslational activation, site specific protein labeling and identification of natural product biosynthetic gene clusters from bacterial genomes, **2009**, *458*, 255. [PubMed](#).
28. Sunbul, M.; Marshall, N. J.; Zou, Y.; Zhang, K.; [Yin, J.](#) *J Mol Biol*, Catalytic turnover-based phage selection for engineering the substrate specificity of Sfp phosphopantetheinyl transferase, **2009**, *387*, 883. [PubMed](#).
29. Zou, Y.; [Yin, J.](#) *J Am Chem Soc*, Phosphopantetheinyl transferase catalyzed site-specific protein labeling with ADP conjugated chemical probes, **2009**, *131*, 7548. [PubMed](#).

30. Sunbul, M.; Yin, J. *Org Biomol Chem*, Site specific protein labeling by enzymatic posttranslational modification, **2009**, *7*, 3361. [PubMed](#).
31. Zhang, K.; He, J.; Yang, M.; Yen, M.; Yin, J. *Chembiochem*, Identifying natural product biosynthetic genes from a soil metagenome by using T7 phage selection, **2009**, *10*, 2599. [PubMed](#).
32. Wegner, S. V.; Arslan, H.; Sunbul, M.; Yin, J.; He, C. *Journal of the American Chemical Society*, Dynamic copper(I) imaging in mammalian cells with a genetically encoded fluorescent copper(I) sensor, **2010**, *132*, 2567. [PubMed](#).
33. Sunbul, M.; Emerson, N.; Yin, J. *Chembiochem*, Enzyme-catalyzed substrate attachment to phage surfaces for the selection of catalytic activities, **2011**, *12*, 380. [PubMed](#).
34. Zhao, B.; Bhuripanyo, K.; Zhang, K.; Kiyokawa, H.; Schindelin, H.; Yin, J. *Chem Biol*, Orthogonal Ubiquitin Transfer through Engineered E1-E2 Cascades for Protein Ubiquitination, **2012**, *19*, 1265. [PubMed](#).
35. Zhao, B.; Choi, C. H.; Bhuripanyo, K.; Villhauer, E. B.; Zhang, K.; Schindelin, H.; Yin, J. *Org Lett*, Inhibiting the protein ubiquitination cascade by ubiquitin-mimicking short peptides, **2012**, *14*, 5760. [PubMed](#)
36. Zhao, B.; Bhuripanyo, K.; Schneider, J.; Zhang, K.; Schindelin, H.; Boone, D.; Yin, J. *ACS Chem Biol*, Specificity of the E1-E2-E3 enzymatic cascade for ubiquitin C-terminal sequences identified by phage display, **2012**, *7*, 2027. [PubMed](#).
37. Zhang, K.; Nelson, K. M.; Bhuripanyo, K.; Grimes, K. D.; Zhao, B.; Aldrich, C. C.; Yin, J. *Chemistry & biology*, Engineering the substrate specificity of the DhbE adenylation domain by yeast cell surface display, **2013**, *20*, 92. [PubMed](#).
38. Previewed by Cacho, R. A. & Tang, Y. (2013). Bringing Protein Engineering and Natural Product Biosynthesis Together. *Chem Biol*, *20*, 3-5. [PubMed](#).
39. Zhang, K.; Li, H.; Bhuripanyo, K.; Zhao, B.; Chen, T. F.; Zheng, N.; Yin, J. *Chembiochem : a European journal of chemical biology*, Engineering new protein-protein interactions on the beta-propeller fold by yeast cell surface display, **2013**, *14*, 426. [PubMed](#).
40. Zhao, B.; Zhang, K.; Bhuripanyo, K.; Choi, C. H.; Villhauer, E. B.; Li, H.; Zheng, N.; Kiyokawa, H.; Schindelin, H.; Yin, J. *PLoS One*, Profiling the cross reactivity of ubiquitin with the nedd8 activating enzyme by phage display, **2013**, *8*, e70312. [PubMed](#).
41. Zhao, B.; Zhang, K.; Villhauer, E. B.; Bhuripanyo, K.; Kiyokawa, H.; Schindelin, H.; Yin, J. *Chembiochem : a European journal of chemical biology*, Phage display to identify nedd8-mimicking peptides as inhibitors of the nedd8 transfer cascade, **2013**, *14*, 1323. [PubMed](#).
42. Zhao, B.; Villhauer, E. B.; Bhuripanyo, K.; Kiyokawa, H.; Schindelin, H.; Yin, J. *Chembiochem*, SUMO-Mimicking Peptides Inhibiting Protein SUMOylation, **2014**, *15*, 2662. [PubMed](#).
43. Zhao, B.; Zhang, K.; Bhuripanyo, K.; Wang, Y.; Zhou, H.; Zhang, M.; Yin, J. *Methods Mol Biol*, Phage selection assisted by Sfp phosphopantetheinyl transferase-catalyzed site-specific protein labeling, **2015**, *1266*, 161. [PubMed](#).
44. Zhang, K.; Bhuripanyo, K.; Wang, Y.; Yin, J. *Methods Mol Biol*, Coupling Binding to Catalysis: Using Yeast Cell Surface Display to Select Enzymatic Activities, **2015**, *1319*, 245. [PubMed](#).

45. Liu, X.; Zhao, B.; Sun, L.; Bhuripanyo, K.; Wang, Y.; Bi, Y.; Davuluri, R. V.; Duong, D. M.; Nanavati, D.; Yin, J.*; Kiyokawa, H.* *Nat Commun*, Orthogonal ubiquitin transfer identifies ubiquitination substrates under differential control by the two ubiquitin activating enzymes, **2017**, *8*, 14286. [PubMed](#). *Corresponding authors.
46. Liu, X.; Sun, L.; Gursel, D. B.; Cheng, C.; Huang, S.; Rademaker, A. W.; Khan, S. A.; Yin, J.; Kiyokawa, H. *Oncotarget*, The non-canonical ubiquitin activating enzyme UBA6 suppresses epithelial-mesenchymal transition of mammary epithelial cells, 2017, *8*, 87480. [PubMed](#).
47. Wang, Y.; Liu, X.; Zhou, L.; Duong, D.; Bhuripanyo, K.; Zhao, B.; Zhou, H.; Liu, R.; Bi, Y.; Kiyokawa, H.; Yin, J. *Nat Commun*, Identifying the ubiquitination targets of E6AP by orthogonal ubiquitin transfer, **2017**, *8*, 2232. [PubMed](#).
48. Bhuripanyo, K.; Wang, Y.; Liu, X.; Zhou, L.; Liu, R.; Duong, D.; Zhao, B.; Bi, Y.; Zhou, H.; Chen, G.; Seyfried, N. T.; Chazin, W. J.; Kiyokawa, H.; Yin, J. *Sci Adv*, Identifying the substrate proteins of U-box E3s E4B and CHIP by orthogonal ubiquitin transfer, **2018**, *4*, e1701393. [PubMed](#).
49. Sane, S.; Hafner, A.; Srinivasan, R.; Masood, D.; Slunicka, J. L.; Noldner, C. J.; Hanson, A. D.; Kruisselbrink, T.; Wang, X.; Wang, Y.; Yin, J.; Rezvani, K. *Mol Oncol*, UBXXN2A enhances CHIP-mediated proteasomal degradation of oncoprotein mortalin-2 in cancer cells, **2018**, *12*, 1753. [PubMed](#).
50. Jin, B.; Wang, J.; Fang, S.; Liu, X.; Jiang, B.; Hofmann, K.; Yin, J.*; Zhao, B.* *BioMed Research International* Ubiquitin-mimicking peptides transfer differentiates by E1 and E2 enzymes, **2018**, 6062520. *Corresponding authors. [PubMed](#).
51. Zhou, H.; Cheung, J. W.; Carpenter, T.; Jones, S. K., Jr.; Luong, N. H.; Tran, N. C.; Jacobs, S. E.; Galbada Liyanage, S. A.; Cropp, T. A.; Yin, J., *Bioorganic & medicinal chemistry letters*, Enhancing the incorporation of lysine derivatives into proteins with methylester forms of unnatural amino acids. **2020**, *30*, 126876. [PubMed](#).
52. Zhao, B.; Tsai, Y. C.; Jin, B.; Wang, B.; Wang, Y.; Zhou, H.; Carpenter, T.; Weissman, A. M.; Yin, J., *Pharmacol Rev*, Protein Engineering in the Ubiquitin System: Tools for Discovery and Beyond. **2020**, *72*, 380-413. [PubMed](#).
53. Zhu, H.; Wang, S.; Liu, D.; Ding, L.; Chen, C.; Liu, Y.; Wu, Z.; Bollag, R.; Liu, K.; Alexander, W. M.; Yin, J.; Ma, C.; Li, L.; Wang, P. G., Identifying Sialylation Linkages at the Glycopeptide Level by Glycosyltransferase Labeling Assisted Mass Spectrometry (GLAMS). *Anal Chem* **2020**, *92* (9), 6297-6303. <https://www.ncbi.nlm.nih.gov/pubmed/32271005>.
54. Wang, Y.; Fang, S.; Chen, G.; Ganti, R.; Chernova, T. A.; Zhou, L.; Duong, D.; Kiyokawa, H.; Li, M.; Zhao, B.; Shcherbik, N.; Chernoff, Y. O.; Yin, J., Regulation of the endocytosis and prion-chaperoning machineries by yeast E3 ubiquitin ligase Rsp5 as revealed by orthogonal ubiquitin transfer. *Cell Chem Biol* **2021**, *28*, 1283-1297. <https://www.ncbi.nlm.nih.gov/pubmed/33667410>.
55. Peng, K.; Liu, R.; Jia, C.; Wang, Y.; Jeong, G. H.; Zhou, L.; Hu, R.; Kiyokawa, H.; Yin, J.*; Zhao, B.*, Regulation of O-Linked N-Acetyl Glucosamine Transferase (OGT) through E6 Stimulation of the Ubiquitin Ligase Activity of E6AP. *Int J Mol Sci* **2021**, *22* (19). *Corresponding authors. <https://www.ncbi.nlm.nih.gov/pubmed/34638625>.
56. Wang, Y.; Liu, R.; Liao, J.; Jiang, L.; Jeong, G. H.; Zhou, L.; Polite, M.; Duong, D.; Seyfried, N. T.; Wang, H.; Kiyokawa, H.; Yin, J., Orthogonal ubiquitin transfer reveals human papillomavirus E6 downregulates nuclear transport to disarm interferon-gamma dependent apoptosis of cervical cancer cells. *FASEB J* **2021**, *35* (11), e21986. <https://www.ncbi.nlm.nih.gov/pubmed/34662469>.

57. Fu, X.; Gadi, M. R.; Wang, S.; Han, J.; Liu, D.; Chen, X.; Yin, J.*; Li, L.*, General Tolerance of Galactosyltransferases toward UDP-galactosamine Expands Their Synthetic Capability. *Angew Chem Int Ed Engl* **2021**, *60* (51), 26555-26560. *Corresponding authors. <https://www.ncbi.nlm.nih.gov/pubmed/34661966>.
58. Yu, H.; Gadi, M. R.; Bai, Y.; Zhang, L.; Li, L.; Yin, J.; Wang, P. G.; Chen, X., Chemoenzymatic Total Synthesis of GM3 Gangliosides Containing Different Sialic Acid Forms and Various Fatty Acyl Chains. *J Org Chem* **2021**, *86* (13), 8672-8682. <https://www.ncbi.nlm.nih.gov/pubmed/34152144>.
59. Zhou, H.; Carpenter, T.; Fu, X.; Jin, B.; Ody, B.; Hassan, M. S.; Jacobs, S. E.; Cheung, J.; Nicholson, E. M.; Jones, S. K., Jr.; Turlington, M.; Zhao, B.; Lorenz, S.; Cropp, T. A.; Yin, J., Linkage-Specific Synthesis of Di-ubiquitin Probes Enabled by the Incorporation of Unnatural Amino Acid ThzK. *ChemBioChem* **2022**, *23* (8), e202200133. <https://www.ncbi.nlm.nih.gov/pubmed/35263494>
60. Hou, Y.; Sun, X.; Gheinani, P. T.; Guan, X.; Sharma, S.; Zhou, Y.; Jin, C.; Yang, Z.; Naren, A. P.; Yin, J.; Denning, T. L.; Gewirtz, A. T.; Liu, Y.; Xie, Z.; Li, C., Epithelial SMYD5 Exaggerates IBD by Down-regulating Mitochondrial Functions via Post-Translational Control of PGC-1alpha Stability. *Cell Mol Gastroenterol Hepatol* **2022**, *14* (2), 375-403. <https://www.ncbi.nlm.nih.gov/pubmed/35643234>.
61. Terrell, J. R.; Tang, S.; Faniyi, O. O.; Jeong, I. H.; Yin, J.; Nijampatnam, B.; Velu, S. E.; Wang, W.; Zhang, R.; Luo, M., Structural studies of antitumor compounds that target the RING domain of MDM2. *Protein Sci* **2022**, *31* (8), e4367. <https://www.ncbi.nlm.nih.gov/pubmed/35900024>.

Patents

- Walsh, C. T., Yin, J., Straight, P. D., Kolter, R. & Zhou, Z. (2005) Genetically encoded short peptide tag for versatile protein labeling by Sfp phosphopantetheinyl transferase. United States patent 60/723,640.
- Yin, J., Kiyokawa, H., Zhao, B., Wang, Y., Bhuripanyo, H., Zhou, L. (2019) Identifying the substrates of HECT and U-box E3 ubiquitin ligases by orthogonal ubiquitin transfer. United States patent 16/721,345. File Date: December 19, 2019. Owners: Georgia State University Research Foundation Inc. & Northwestern University

Invited Research Presentations

- Yin, J., Beuscher, A. E. t., Andryski, S., Stevens, R. C.; Schultz, P. G. (2003). In vivo and in vitro evolution of catalytic antibodies. 225th ACS National Meeting, New Orleans, LA, USA, March 23-27, 2003 (invited oral presentation).
- Vaillancourt F. H., Yin, J., Walsh, C. T. (2005). A novel type of chlorinating enzyme in Syringomycin E biosynthesis. Experimental Biology 2005, San Diego Convention Center, San Diego, CA, USA, April 2-6. FASEB J. 19(4): A306-A307 (poster presentation).
- Yin, J., Liu, F., Lin, A. J., Buckett, P. D., Wessling-Resnick, M., Golan, D. E. & Walsh, C. T. (2005). Labeling protein with small molecules by site specific posttranslational modification. 14th Gordon Research Conference on Bioorganic Chemistry, Proctor Academy, Andover, NH, USA, June 12 - 17, 2005 (poster presentation).
- Yin, J., Liu, F., Lin, A. J., Buckett, P. D., Wessling-Resnick, M., Golan, D. E. & Walsh, C. T. (2005). Labeling protein with small molecules by site specific posttranslational modification. 19th Annual Symposium of The Protein Society, Boston, MA, USA, July 29 - August 3, 2005 (poster presentation).

5. Yin, J., (2005). Labeling protein with small molecules by site specific post-translational modification. Young Protein Scientist Symposium at the 19th Annual Symposium of The Protein Society, Boston, MA, USA, July 29 - August 3, 2005 (invited oral presentation).
6. Yin, J., (2006). Sfp phosphopantetheinyl transferase catalyzed chemical biology -from protein labeling to gene profiling. Bauer Center for Genomics Research, Harvard University. March 15, 2006.
7. Yin, J., (2006). Site-specific protein labeling by Sfp phosphopantetheinyl transferase. Frontiers of Science, New England BioLabs, July 14, 2006.
8. Yin, J., (2007). Sfp phosphopantetheinyl transferase catalyzed chemical biology -from protein labeling to gene profiling. Benzene, Undergraduate Chemistry Society at the University of Chicago, October 30, 2006.
9. Yin, J., (2007). Orthogonal Protein Labeling by Phosphopantetheinyl Transferases. Interdisciplinary Predoctoral Training Program in Chemistry and Biology (CBI), University of Chocago, February 14, 2007.
10. Yin, J. (2007) Site Specific Protein Labeling and Imaging by Phosphopantetheinyl Transferases. Center for Biochemical and Biophysical Studies, Department of Biology, Northern Illinois University. March 23, 2007.
11. Yin, J. (2007) Phosphopantetheinyl Transferase Catalyzed Protein Labeling and Gene Profiling. Science at the Interface Symposium, University of Chicago. May 31, 2007.
12. Yin, J. (2009) Directed Evolution of Posttranslational Modification Enzymes by Phage Display. Department of Chemistry, Roosevelt University, March 2, 2009.
13. Yin, J. (2011) Engineering Protein Posttranslational Enzymes by Phage Display. Phage and Yeast Display of Antibodies & Proteins Conference, Boston (Invited oral presentation).
14. Yin, J. (2011) Investigate and Engineer Protein Ubiquitination Pathways by Phage Display and Yeast Cell Surface Display (Poster presentation). The Ubiquitin Family Meeting, Cold Spring harbor Laboratory, New York.
15. Yin, J. (2011) Engineer Protein Ubiquitination by Phage Display and Yeast Cell Surface Display. Department of Chemistry, UCLA.
16. Yin, J. (2012) Department of Biological Sciences, Wayne State University, Detroit, Michigan.
17. Yin, J. (2012) Engineer the Adenylation Domain for Enterobactin Biosynthesis. 243rd American Chemical Society National Meeting, San Diego, California (Invited oral presentation).
18. Yin, J. (2012) Engineering an Orthogonal Ubiquitin Transfer (OUT) Cascade to Profile E3 Substrate Specificity (Poster presentation). FASEB meeting on Ubiquitin and Cellular Regulation, Saxtons River, Vermont.
19. Yin, J. (2013) Department of Chemistry and Biochemistry, Montana State University.
20. Yin, J. (2013) Department of Chemistry, Mississippi State University.
21. Yin, J. (2013) Department of Chemistry, Iowa State University.
22. Yin, J. (2013) Department of Chemistry, Virginia Commonwealth University.
23. Yin, J. (2013) Department of Chemistry, Georgia State University.
24. Yin, J. (2013) Department of Pharmaceutical & Biomedical Sciences, University of Georgia.
25. Yin, J. (2013) Department of Chemistry, University of Hong Kong, Hong Kong, China.
26. Yin, J. (2013) Engineering the enzymatic cascades for the transfer of ubiquitin and ubiquitin-like proteins by phage and yeast cell surface display (Poster presentation). The Ubiquitin Family Meeting, Cold Spring harbor Laboratory, New York.

27. Yin, J. (2013) Department of Chemistry and Chemical Biology, McMaster University, Ontario, Canada.
28. Yin, J. (2014) Department of Chemistry, Berry College.
29. Yin, J. (2014) The 34th National Medicinal Chemistry Symposium. Invited Speaker.
30. Yin, J. (2014) FASEB meeting on Ubiquitin and Cellular Regulation, Saxtons River, Vermont.
31. Yin, J. (2014) School of Biology, Georgia Institute of Technology, Atlanta, Georgia.
32. Yin, J. (2014) Department of Biochemistry, Emory University School of Medicine, Decatur, Georgia.
33. Yin, J. (2014) Department of Chemistry, University of Florida, Gainesville, Florida.
34. Yin, J. (2015) Rudolf Virchow Center for Experimental Medicine and Structural Biology, University of Wuerzburg, Wuerzburg, Germany.
35. Yin, J. (2015) Scuola Normale Superiore, Pisa, Italy.
36. Wang, Y. and Yin, J. (2016) FASEB meeting on Ubiquitin and Cellular Regulation, Big Sky Mountain, Montana.
37. Zhou, H. and Yin, J. (2016) Genetic Code Expansion Conference, Oregon State University, Corvallis, Oregon.
38. Yin, J. (2017) Department of Pharmacology, Shanghai Jiao Tong University, Shanghai, China.
39. Yin, J. (2017) Department of Pharmacology, Tsinghua University, Beijing, China.
40. Jones, S., Zhou, H., and Yin, J. (2017), Annual Biomedical Research Conference for Minority Students (ABRCMS), Phoenix, Arizona. Jones, S. won the traveling award and the best poster award.
41. Yin, J. (2017), Armstrong University, Georgia.
42. Yin, J. (2017), Georgia Southern University, Georgia.
43. Yin, J. (2017), University of West Georgia, Georgia.
44. Yin, J. (2018), Sanford School of Medicine, The University of South Dakota.
45. Yin, J. (2018), [Experimental Biology meeting](#), Oral presentation, San Diego, California.
46. Yin, J. (2018), [FASEB summer research conference](#) on Ubiquitin and Cellular Regulation, Oral presentation, Snowmass Village, Colorado.
47. Yin, J. (2018), Florida Gulf Coast University, Florida.
48. Yin, J. (2018), Georgia College and State University, Georgia.
49. Yin, J. (2018), Kennesaw State University, Georgia.
50. Yin, J. (2018), University of North Georgia, Georgia.
51. Yin, J. (2018), Southeast Regional Meeting of the American Chemical Society (SERMACS) meeting, Augusta, Georgia. Invited oral presentation.
52. Yin, J. (2020), “The Ubiquitin Code of Mitophagy and Autophagy”. Department of Biology, Georgia State University.
53. Li Zhou, Presenter; In Ho Geong; Savannah Jacobs; Sazid Hassan; Jun Yin (2021), “Profiling the substrate proteins of RING-type E3 ubiquitin ligase by the engineering of orthogonal ubiquitin transfer (OUT) cascades”. [BIOT] Division of Biochemical Technology, National Meeting of American Chemical Society (ACS), Atlanta, Georgia. Invited Oral Presentaion.

54. Sydney Nelson, Presenter; Britton Ody; Ruochuan Liu; Cayden Dodd; Jun Yin; Mark Turlington (2021), "Synthesis and evaluation of cereblon-targeting haloPROTACs" [MEDI] Division of Medicinal Chemistry, National Meeting of American Chemical Society (ACS), Atalanta, Georgia. Poster - In-person.
55. Xuan Fu, Presenter; Tomaya Carpenter; Sazid Hassan; Britton Ody; Jun Yin (2021), "Tools for probing the catalytic mechanism of protein ubiquitination enabled by unnatural amino acid incorporation", [BIOL] Division of Biological Chemistry, National Meeting of American Chemical Society (ACS), Atalanta, Georgia. Invited Oral Presentaion.
56. Ruochuan Liu, Presenter; Yiyang Wang; Geon Jeong; Jun Yin (2021), "Stirring of the ubiquitination targets of E6AP by human papillomavirus protein E6 revealed by orthogonal ubiquitin transfer (OUT)", [BIOL] Division of Biological Chemistry, National Meeting of American Chemical Society (ACS), Atalanta, Georgia. Invited Oral Presentaion.
57. Tomaya Carpenter and Jun Yin (2021), "Elucidating the mechanisms of ubiquitin (UB) chain assembly by di-UB probes enabled by unnatural amino acid incorporation", [BIOT] Division of Biochemical Technology, National Meeting of American Chemical Society (ACS), Atalanta, Georgia. Invited Oral Presentaion.
58. Christopher Gibbons, Presenter; Britton Ody; Jun Yin; Lei Li (2021), "Tau glycopeptide array for Alzheimer's disease biomarker discovery", [CARB] Division of Carbohydrate Chemistry, National Meeting of American Chemical Society (ACS), Atalanta, Georgia. Poster - Virtual.
59. Yin, J. (2021), "Engineering ubiquitin transfer in the cell – the orthogonal way", [BIOL] Division of Biological Chemistry, National Meeting of American Chemical Society (ACS), Atalanta, Georgia. Invited Oral Presentaion.
60. Yin, J. (2021), "Engineering ubiquitin transfer in the cell – the orthogonal way", Department of Chemistry, Brandeis University, March 15th, 2021.

D. Teaching and Advising

Georgia State University

| | |
|----------------|---|
| CHEM 3400 | Strcuture and Reactivity of Biomoeclcules, autumn, 2017-2019, and spring 2021 |
| CHEM 3410 | Honors Organic Chemistry II, spring, 2014-2016. |
| CHEM 4240/6240 | Chemical Biology, spring, 2017-2020. |
| CHEM 4400/6400 | Mechanistic Organic Chemistry, autumn, 2013-2016, 2020, and 2021 |
| CHEM 4600/6600 | Biochemistry I, autumn, 2013-2014. |

University of Chicago

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| CHEM 22000 | Organic Chemistry I, autumn, 2012. |
| CHEM 22100 | Organic Chemistry II, winter, 2012-2013. |
| CHEM 23300 | Intermediate Organic Chemistry, autumn, 2007-2011. |
| CHEM 32100 | Physical Organic Chemistry I, autumn, 2006. |
| CHEM 32400 | Physical Organic Chemistry II, winter, 2008. |
| CHEM 33200 | Chemical Biology I, winter, 2009-2011. |

Supervised student research

| Name | Years in the lab | Degree | Subsequent position |
|--------------------------------|------------------|--------|---|
| University of Chicago | | | |
| Undergraduate students | | | |
| Michelle Yen | 2006-2008 | B.S. | Ph.D. student at the Stanford University |
| Angelica Wong | 2006-2008 | B.S. | |
| Karishma Furtado | 2007-2009 | B.S. | Ph.D. student at Washington University in St. Louis, |
| Khalid Khayr | 2008-2009 | B.S. | |
| Matthew Joannou | 2008-2009 | B.S. | Ph.D. student at University of North Carolina at Chapel Hill |
| Cynthia Liu | 2008-2009 | B.S. | |
| Josh Seale | 2009-2010 | B.S. | Ph.D. student at the Georgetown University |
| Nyssa Emerson | 2009-2011 | B.S. | Ph.D. student at the Princeton University |
| Hongseok Yun | 2009-2011 | B.S. | Ph.D. student at the University of Pennsylvania |
| Chan Hee J. Choi | 2010-2011 | B.S. | Ph.D. student at the Sloan-Kettering Cancer Institute |
| Eric B. Villhauer | 2012-2013 | B.S. | Ph.D. student at The Scripps Research Institute |
| Caryssa Lim | 2012-2013 | B.S. | |
| Christina Chan | 2012-2013 | B.S. | |
| Graduate students | | | |
| Norman Marshall | 2006-2007 | M.S. | Argonne National Lab |
| Murat Sunbul | 2006-2011 | Ph.D. | Postdoc at Zentrum für Molekulare Biologie der Universität Heidelberg (ZMBH), Germany |
| Keya Zhang | 2006-2012 | Ph.D. | Scientist at DuPont Research & Development Center in Shanghai, China |
| Karan Bhuripanyo | 2010-2016 | Ph.D. | Scientist at Qiagen |
| Postdoctoral associates | | | |
| Min Yang | 2006-2007 | Ph.D. | Staff researcher at University of Wisconsin at Milwaukee |
| Yekui Zou | 2006-2009 | Ph.D. | Postdoc at MIT |
| Jing He | 2007-2008 | Ph.D. | Professor at the Chinese Agriculture University in Wuhan, China |
| Sung Jin Cho | 2009-2010 | Ph.D. | Scientist at Daewoong Pharmaceutical in South Korea |
| Hyosung Lee | 2010-2011 | Ph.D. | Postdoc at University of North Carolina at Chapel Hill |
| Bo Zhao | 2010-2013 | Ph.D. | Assistant Professor at Shanghai Jiao Tong University, China |

Georgia State University
Undergraduate students

| | | | |
|---------------------------------|-----------|------|--|
| Johnny Truong | 2013-2014 | B.S. | Ph.D. student at the University of California at Berkeley 2013 Best Overall University Scholar |
| Phuong H Nguyen | 2014-2015 | B.S. | |
| Jeong-Min Kim | 2014-2015 | B.S. | |
| Jiarong Zhong | 2015-2016 | B.S. | Ph.D. student at the biology department of GSU |
| Stacey Jones (minority) | 2016-2018 | B.S. | Post-baccalaureate at the University of Chicago. Won the best poster award and traveling award at the 2017 ABRCMS meeting. |
| Autumn Tobin | 2018-2019 | B.S. | |
| Kwaku Adu-Boahene (minority) | 2018-2019 | B.S. | |
| Monica Polite | 2018-2019 | B.S. | |
| Nhu Luong | 2018-2019 | B.S. | |
| Nhi Tran | 2018-2019 | B.S. | |
| Victory Nwankwo (minority) | 2018-2019 | B.S. | |
| Savannah Jacobs | 2018-2020 | B.S. | Now a Ph.D. student in the Yin lab at Department of Chemistry of GSU. |
| Tro Nguyen | 2018-2020 | B.S. | Now a Pharm.D. student at Mercer University. |
| Ryan J O'Neill | 2019-2020 | B.S. | |
| Chris Mogaka | 2019-2020 | B.S. | |
| Linda Bui | 2019-2021 | B.S. | |
| Ivy Bui | 2019-2021 | | |
| Deshay Smith | 2021 | B.S. | |

Graduate students

| | | | |
|-----------------------------|--------------|----------------|--|
| Han Zhou | 2013-2019 | Ph.D. | Postdoctoral associate at The Scripps Research Institute |
| Patrick Major (minority) | 2013-2015 | M.S. | Pharm.D. candidate at the University of Georgia Athens |
| Jessica L. Siemer | 2014-2015 | M.S. | Ph.D. candidate at another lab of GSU |
| Archana Iyer | 2014-2015 | M.S. | Ph.D. candidate at another lab of GSU |
| Nicolas Rios | 2016-2018 | M.S. | Research scientist at IDEXX Laboratories/OPTIMedical |
| Li Zhou | 2015-present | M.S. and Ph.D. | Ph.D. awarded in 12/2021 |

| | | | |
|---------------------------------|---------------------------|---------------|--|
| Ruochuan Liu | 2016-present | M.S. | Ph.D. candidate |
| Tomaya Carpenter (minority) | 2016-2018 2018-present | M.S. | Ph.D. candidate |
| In Ho Jeong | 2018-present | B.S. | M.S. candidate |
| Peter Jeong | 2019-present | B.S. | M.S. candidate |
| Kwaku Adu-Boahene (minority) | 2019-2021 | B.S. and M.S. | M.S. awarded in 05/2021 |
| Britton Ody | 2019-present | B.S. | Ph.D. candidate |
| Xuan Fu | 2019-present | B.S. | Ph.D. candidate |
| Mohammad Sazid Hassan | 2020-present | M.S. | Ph.D. candidate |
| Jing Zhang | 2021-present | | Ph.D. candidate |
| Postdoctoral associates | | | |
| Yiyang Wang | 2013-2016 | Ph.D. | Associate Professor at the Ji Nan University Medical School in China |
| Geng Chen | 2014-2018 | Ph.D. | Research Assistant Professor at the Chinese University of Hong Kong |

E. Services

University of Chicago

Member of the Graduate Student Admission Committee (2006-2010).

Member of the Laboratory Safety Committee (2010-2013).

Member of the Candidacy Exam Committee (2006-2013).

Member of the graduate student 6th Year Review Committee (2006-2013).

Member of the Advisory Panel for Cross-Disciplinary Program in Biophysical Dynamics, 2006.

Faculty Roundtables, 2007 - 2010. Helped undergraduate students to choose majors and plan their study at the College.

Science in the City, October 2007-2008. Gave lectures on natural product drug discovery to Chicago Public School teachers.

Family Weekend Model Classes, 2007 - 2010. Gave lectures to undergraduate students and their parents on the history of biochemical research at the University of Chicago.

Member of the admission and recruitment committee for the Graduate Program in Biophysical Sciences in the Biological Sciences Division (BSD) (2007-2012).

Beckman Scholar/PCBio Program Retreat, 2006 - 2008. Served in panel discussions.

Georgia State University

Member of the Core Facility Task Force of Georgia State University (2021-present)
Member of the Georgia State University Radiation Protection Committee (2014 - present).
Member of the Oral Qualifying Exam Committee (2013 - present).
Member of the Graduate Student Thesis Committee (2013 - present).
Associate Graduate Director of the Department of Chemistry (2015 – 2018).
Chair of the Graduate Recruitment and Evaluation Committee (GREC) (2015 – 2018).
Member of the Chemistry Department Leading Team (2015 – 2017).
Member of the Executive Committee of the Department of Chemistry (2014 - 2017).
Member of the Curriculum Committee (2014 - 2016).
Member of the University Senate Committee on Sustainability (2015 – 2016).
Member of the University Senate Committee on Student Discipline (2015 – 2016).
Member of the University Senate Committee on Culture Diversity (2016 – 2017).
Member of the University Senate Committee on Enrollment Management (2016 – 2017).
Member of the Computer Support Committee of the Department of Chemistry (2014).
Member of the Organization Committee for the 2nd CDT Symposium on April 25th, 2015.
Judge of Oral Presentations of the Molecular Basis of Disease Program (2014).
Member of the Junior Faculty Search Committee (2013).

Service for the Funding Agencies

Referee for the Research Grants Council, Hong Kong (2013-present).
Member of the Enabling Bioanalytical and Imaging Technologies study section of the National Institutes of Health (March, 2019 and June 2021).
Member of the review panel for National Science Foundation Chemistry of Life program (June 2021)
Member of the review panel for National Science Foundation CAREER proposals (2014, 2016, 2017-8).
Member of the Chemistry Predoctoral and Postdoctoral study section of the National Institute of Health (2018 - present).
Member of the Macromolecular Structure and Function A (MSFA) study section of the National Institutes of Health (March, 2020).
Member of the Synthetic and Biological Chemistry B (SBCB) study section of the National Institute of Health (June 2016).
Member of the Study Section for Small Business Innovation Research (SBIR) of the National Institutes of Health (2011 and 2012).
Member of the Study Section for the In Vivo Cellular and Molecular Imaging Centers (ICMICs) of the National Cancer Institute and the National Institutes of Health (2006).
Referee for the National Natural Science Foundation of China (2007-2009).

Referee for the Biotechnology and Biological Sciences Research Council, United Kingdom (2010).

Referee for pilot proposal applications submitted to the Morehouse School of Medicine/Tuskegee University/UAB Comprehensive Cancer Center Partnership (2014).

F. Research Support

Completed research support

New Faculty Award, Camille and Henry Dreyfus Foundation

08/01/2006 – 07/31/2011

High throughput profiling of posttranslational modification enzymes targeting p53 and histone
Goal: Identifying protein kinases and acetyltransferases modifying p53 and histone to reveal the cell regulation pathways.

Role: PI.

NSF Materials Research Science and Engineering Center (MRSEC)

01/2007 – 12/2008

Enzymatic conjugation of quantum dots to cell surface proteins for live cell molecular imaging
Goal: Developing methods to label proteins with quantum dots by Sfp phosphopantetheinyl transferase.

Role: co-PI

Catalyst Award

Chicago Biomedical Consortium and the Searle Funds of the Chicago Community Trust

07/01/2011 - 06/30/2013

Identify cell cycle-regulatory substrates ubiquitinated by the apoptosis inhibitor BRUCE
Goal: Elucidating the mechanism of BRUCE-regulated cell apoptosis by identifying the substrates of BRUCE as an E3 ubiquitin ligase.

Role: PI.

NSF Faculty Early Career Development Program [1420193](#)

01/01/2011 - 12/31/2016

Identifying the Substrate Proteins of Nedd4 Family of E3 Ubiquitin Ligase by Orthogonal Ubiquitin Transfer (OUT)

Goal: Developing OUT cascades to profile the substrate proteins of HECT E3 ubiquitin ligases.

Role: PI.

NSF Supplemental Award to the Faculty Early Career Development Program [1420193](#)

09/04/2014 - 12/31/2015

Role: PI.

NIH [5R01GM104498-05](#)

01/01/2013 - 12/31/2016

Orthogonal Ubiquitin Transfer to Profile E3 Substrates

Goal: Constructing orthogonal ubiquitin transfer (OUT) cascades of HECT and U-box E3s to profile their substrate specificities.

Role: PI with Professor Hiroaki Kiyokawa of Northwestern University as the co-PI.

NSF [1710460](#)

09/2017 – 08/2020

Elucidating Cell Signaling by Orthogonal Ubiquitin Transfer and Linkage-Specific di Ubiquitin Probes

Role: PI with Professor T. Ashton Cropp of the Virginia Commonwealth University as the co-PI.

Goal: (1) Engineering OUT cascades of RBR and Ring E3s to profile their substrates; (2) Solving the crystal structures of E2s bound with donor and acceptor ubiquitin to elucidate the mechanism of ubiquitin chain assembly.

Currently on none-cost extension.

NSF Supplemental Award for International Collaboration on NSF grant [1710460](#)

09/01/2018 - 8/31/2020

Role: PI.

Currently on none-cost extension.

NIH [1R56AG062258-01](#)

Innovative Glycomic/Glycoproteomic Investigation on Alzheimer's Disease

09/01/2019 – 08/31/2020

Role: PI with Dr. Lian Li (Emory University) as the co-PI.

Goal: Developing glycoarray to identify biomarkers of Alzheimer's disease.

Currently on none-cost extension.

NIH [5U01GM120419-03](#)

Facile chemoenzymatic synthesis and purification of glycolipids

Subaward from UC Davis

Role: contractor with Dr. Xi Chen (UC Davis) as the co-PI.

Goal: Developing simple and convenient chemoenzymatic synthesis and facile purification methods for efficient production of complex bioactive glycolipids including those containing neutral and/or charged glycans with diverse lipid forms.

Currently on none-cost extension.

Ongoing research support

NIH [2 R01 GM104498-06A1](#)

07/2018 – 06/2022

Orthogonal Ubiquitin Transfer to Profile E3 Substrate Specificity

Role: PI with Dr. Hiroaki Kiyokawa (Northwestern University) as the co-PI

Goal: Engineering OUT cascades to profile the substrates of key E3 enzymes in cell regulation.

Pilot Award of the Simons Foundation Autism Research Initiative

Roles of UBE3A-mediated ubiquitination in autism spectrum disorders

03/01/2021 – 02/28/2023

Role: Co-PI with Dr. Hiroaki Kiyokawa (Northwestern University) as the PI.

NIH [1R21NS116760-01](#)

Insights into Golden Holmes syndrome by substrate profiling of Triad3A and CHIP using Orthogonal Ubiquitin Transfer

04/01/2020 – 03/31/2022

Role: MPI with Dr. Angela M Mabb of Georgia State University as the contact PI.

Goal: Using the OUT cascade to profile the substrate proteins of Triad3A and CHIP E3 UB ligases in neurodegeneration.

NSF

Elucidating the Roles of E3 Ligases and Deubiquitinating Enzymes in Mitophagy by Orthogonal Ubiquitin Transfer and Linkage-Specific Ubiquitin Probes

07/01/2021 – 06/30/2024

Role: PI with Dr. T. Ashton Cropp of the Virginia Commonwealth University serving as the co-PI.

Goal: (1) Identifying the substrates of Parkin, HHARI and CHIP at the initiation phase of mitophagy by orthogonal UB transfer (OUT), (2) Synthesizing linkage-specific UB probes enabled by unnatural amino acid (UAA) incorporation to capture DUBs expressed in the cell in response to mitochondria damage.