

Dr. Wenshe Ray Liu

Regents Professor and Harry E. Bovay, Jr. Endowed Chair

Professor of Chemistry (75%)

Professor of Institute of Biosciences & Technology and Department of Translational Medical Sciences (25%)

Professor of the Department of Biochemistry & Biophysics (courtesy)

Professor of the Department of Cell Biology and Genetics (courtesy)

Adjunct Professor of the Department of Pharmaceutical Sciences

Texas A&M Presidential Impact Fellow

Texas A&M EDGES Fellow

Founding Director of the Texas A&M Drug Discovery Center

www.liuresearchlab.com

ORCID ID: 0000-0002-7078-6534

Tel:	001-979-845-1746	Department of Chemistry
E-mail:	wslu2007@tamu.edu	Texas A&M University
		MS 3255
		College Station, TX 77843

Education:	Scripps Research Institute, CA	2005-2007	Postdoc in Chemical Biology
	UC-Davis, CA	2000-2005	Ph.D. in Chemistry
	Beijing University, China	1996-2000	B.S. in Chemistry

Awards and Honors:

2025	Regents Professor Award of Texas A&M University System
2025	50 th MALTO Meeting Keynote Lecture Award
2022-curr.	Harry E. Bovay J. Endowed Chair in Chemistry
2021	Texas A&M EDGES Fellow
2018	Texas A&M Presidential Impact Fellow
2018-2022	Gradipore Endowed Chair in Chemistry
2017	ACS Chemical Biology Most Prolific Author
2016	Biomatrik Distinguished Professor Award
2014-2018	Emile and Marta Schweikert Endowed Professorship
2012	NSF CAREER Award
2010	<i>Molecular BioSystems</i> Emerging Investigator
2004	UCDavis Summer Research Award
2003	UCDavis Travel Award
2000-2004	UC Biotechnology Research Training Fellow
1999	Outstanding Student Leader Award
1998	Canon Undergraduate Award
1997	Huikai Undergraduate Award
1996-2000	Geru Zen Fellowship

<u>Administrative Roles:</u>	2025-curr.	Faculty Fellow in Clinical Research Enterprise, Division of Research, Texas A&M University
-------------------------------------	------------	--

2017-2020 Chair, Division of Chemical Biology
 2014-2019 Chair, Mass Spectrometry User Committee

Professional Affiliations: 2003-curr. American Chemical Society (Program Vice Chair Elect, 2025; Program Vice Chair, 2026; Program Chair, 2027)
 2007-curr. Chinese American Chemistry and Chemical Biology Professors' Association (Communication Director: 2020-2023; President: 2023-2025)
 2019-curr. American Peptide Society
 2019-curr. Protein Society
 2019-curr. American Society for Biochemistry and Molecular Biology
 2022-curr. Society of Chinese Bioscientists in America (Council member: 2023-curr.)
 2022-curr. International Society for Antiviral Research
 2023-curr. International Society of Cell & Gene Therapy
 2023-curr. American Association for Cancer Research
 2023-curr. American Association for the Advancement of Science

Research Experience:

Texas A&M University **10/2023 – curr.**
Position: Adjunct Professor of Department of Pharmaceutical Sciences, College of Pharmacy
Texas A&M University **09/2022 – curr.**
Position: Harry E. Bovay, Jr. Endowed Chair and Professor, Department of Chemistry
Texas A&M University **09/2020 – curr.**
Position: Professor, Institute of Biosciences and Technology and Department of Translational Medical Sciences
Texas A&M University **12/2019 – curr.**
Position: Professor, Department of Biochemistry and Biophysics
Texas A&M University **09/2019 – curr.**
Position: Professor, Department of Cell Biology and Genetics
Texas A&M University **09/2018 – curr.**
Position: Directory of the Texas A&M Drug Discovery Laboratory
Texas A&M University **09/2018 – 08/2022**
Position: Gradipore Endowed Chair and Professor, Department of Chemistry
Texas A&M University **09/2017 – 09/2020**
Position: Chair of the chemical biology division, Department of Chemistry
Texas A&M University **09/2016 – 08/2018**
Position: Emile and Marta Schweikert Professor, Department of Chemistry
Texas A&M University **09/2014 – 08/2016**
Position: Emile and Marta Schweikert Associate Professor, Department of Chemistry
Texas A&M University **09/2013 – 08/2014**
Position: Associate Professor, Department of Chemistry
Texas A&M University **08/2007 – 08/2013**
Position: Assistant Professor, Department of Chemistry
Research focus: 1) Engineering pyrrolysyl-tRNA synthetase and its cognate tRNA^{PyI} for the synthesis of proteins with posttranslational modifications and apply these tools to studying epigenetic roles of posttranslational modifications and their related writer and eraser enzymes in cell differentiation and cancer development; 2) Engineering pyrrolysyl-tRNA synthetase and its

cognate tRNA^{Pyl} for the synthesis of proteins with active chemical functionalities for protein bioconjugation and applying the developed methods to the synthesis of antibody-drug conjugates and protein imaging in cells; 3) Use bacteria phage to construct macrocyclic and peptide-small molecule conjugate libraries for the identification of peptide therapeutics for cancer and COVID-19; 4) Develop small molecule therapeutics for cancer and COVID-19.

Scripps Research Institute**07/2005 – 07/2007****Position:** Postdoctoral Researcher**Advisor:** Dr. Peter G. Schultz

Research focus: 1) Using evolved *E. coli* tyrosyl-tRNA synthetase mutants coupled with an amber suppressing tRNA^{Tyr} for the genetic incorporation of unnatural amino acids into proteins by means of amber suppression in mammalian cells; 2) Structurally characterize evolved *M. jannaschii* and *E. coli* tyrosyl-tRNA synthetases that were used for genetic incorporation of unnatural amino acids in bacteria and yeast.

University of California-Davis**09/2000 – 06/2005****Position:** Graduate Researcher**Advisor:** Dr. Michael D. Toney

Research focus: Structural and mechanistic characterization pyridoxyl-5'-phosphate dependent enzymes.

Peer Reviewed Publications (more than 100 total publications; *Corresponding authors.)

As an independent principal investigator (Undergraduates are underscored)

1. Zhang Z.A., Herring L., Shwe T.H., Hu Y., Song X., Cao W*, and Liu W.R.*, "Precise Control of Switchable Chimeric Antigen Receptor T Cells Allows Enhanced Safety and Less T Cell Exhaustion", *bioRxiv*, **2025**, 2025.12.07.692875.
2. Kuo S.-T., Xi Z., Sheng Y., Xu S., **Liu W.R.**, Russell D., and Xin Y.*, "Peptidomimetic Inhibitor-Induced Conformational Changes in Main Protease Prevent Subunit Exchange Communication", under review.
3. Chanda S. and Liu W.R.*, "From Covalent Traps to Fluorescent Beacons: The Expanding Arsenal of Chemical Probes for Ubiquitin and Ubiquitin-Like Proteins", *Angew. Chem. Int. Ed.*, under review
4. Khatua K., Atla S., Coleman D., Blankenship L.R., Alugubelli Y.R., Guo X.S., Xia H., Kalveram B.K., Walker D.H., Kumar S., Cho C.-C.D., Sharma S., Vulupala V., Yang K., Rabie D., Nyalata S., Neuman B.W., Xie X., Xu S., and **Liu W.R.***, "From Nicotine to SARS-CoV-2 Antivirals with Potent In Vivo Efficacy and a Broad Anti-Coronavirus Spectrum", *Nat. Commun.* revision.
5. Altangeral N., Ocola E.J., Neuman B.W., Yakovlev V.V., Kuo S.-T., Vulupapa V.R., Khatua K., Zhang H., Yan X., Russell D.H., Xu S., Fierke C.A., **Liu W.R.**, Sokolov A., Hemmer P.R., and Scully M.O.*, "From Vibrations to Function: Spectroscopic Detection and Quantification of π - π Stacking in Drug-Responsive Protein Complexes", *Science Adv.*, accepted.
6. Chakraborty S., Cao Z., Pham A., Zhang Z., Chanda S., Wang Y., Cao W., and **Liu W.R.***, "NAE1/UBA3-UBE2M are E1 and E2 enzymes for the URM1 Modification in Human Cells", *Nat. Commun.* revision.

7. Chanda S. and **Liu W***, "Synthesis of Ubiquitin-7-coumarinyl-acetic acid (Ub-ACA) as a Readily Available Fluorogenic Substrate for Deubiquitinases via the Activated Cysteine-Directed Protein Ligation (ACPL) Technique", **Meths Mol. Biol.** **2025**, in press.
8. Pa S., Nyamadzawo R., Dubey G., Hampton J.T., and Liu W.R.*, "Incorporation of Butyryl-Lysine into Phage-Displayed Peptide Libraries", **Meths. Mol. Biol.** **2025**, in press.
9. Zangirolami A.C., Benjamin A.B., Kyodemir H.C., Liu W.R., and Cirillo J.D., "Mycobacterium tuberculosis Fluorescent and Bioluminescent Imaging Technologies: Addressing the Issue of Sensitivity", **Expert Rev. Respir. Med.** **2025**, 30:1-12.
10. Jin G., Shi Y., Sharma S., and **Liu W.R.***, "Advancing Genetically Encoded Lysine (GEK) Chemistry: From Precision Modulation to Therapeutic Innovation", **Acc. Chem. Res.** **2025**, 58(19), 2985-2996.
11. Chanda S., Shi Y., Atla S., Hampton T., and **Liu W.R.***, "A Simple, Quick, and Scalable Route to Fluorogenic Ubiquitin and Ubiquitin-Like Protein Substrates for Assessing Activities of Deubiquitinases and Ubiquitin-Like Protein-Specific Proteases", **ACS Chem. Biol.** **2025**, 20(8): 1828-1840.
12. Guo X.S., Khalifa A., Selvam K., Kutateladze T.G.*, and **Liu W.R.***, "Development of Chemical Tools for the Human YEATS Domain", **ACS Chem. Biol.** **2025**, 20(8):1828-1840.
13. Hampton J.T. and **Liu W.R.***, "Editing Proteins inside a Cell", **Science** **2025**, 388(6746): 472.
14. Chanda S., Atla S., Sheng X., Nyalata S., Alugubelli Y.R., Coleman D.D., Jiang W., Lopes R., Guo S., Wand A.J., Zhao Y., and **Liu W.R.***, "Ubiquitin Azapeptide Esters as Next-Generation Activity-Based Probes for Cysteine Enzymes in the Ubiquitin Signalling Pathway", **J. Am. Chem. Soc.** **2025**, 147(21): 17817-17828 (Cover Story).
15. Sharma S., Hampton J.T., Kutateladze T.G.*, and **Liu W.R.***, "Epigenetic Reader Chromodomain as a Potential Therapeutic Target", **RSC Chem. Biol.** **2025**, 6, 833-844.
16. Hampton J.T., Dobie C.R., Coleman D.D., Cherif M.I., Das S., and **Liu W.R.***, "2-Cyanopyrimidine-Containing Molecules for N-Terminal Selective Cyclization of Phage-Displayed Peptides", **ACS Chem. Biol.** **2025**, 20(1):219-228.
17. Colvin L., Hussein D., Tu D., Dunlap D., Lalonde T., Ucuncu M., Megia-Fernandez A., Braley M., **Liu W.R.**, Grunlan M.A., and Cote G.L., "Computational Model-Assisted Development of a Nonenzymatic Fluorescent Glucose-Sensing Assay", **ACS Sens.** **2024**, 9(11):6218-6227.
18. Guo X.S., Alta S., Nyalata S., Alugubelli Y.R., Chen P.-H.C., Xu S.*, and **Liu W.R.***, "Prioritization of Eleven-Nineteen-Leukemia Inhibitors as Orally Available Drug Candidates for Acute Myeloid Leukemia", **J. Med. Chem.** **2024**, 67(22):20100-20117.
19. Cho C.-C.D., Leeuwon W.M., and **Liu, W.R.***, "Directed Evolution of *Candidatus Methanomethylophilus alvus* Pyrrolysyl-tRNA Synthetase for the Genetic Incorporation of Two Different Noncanonical Amino Acids in One Protein", **ACS Bio & Med Chem Au** **2024**, 4:233-241.
20. Blankenship L.R., Yang K.S., Vulupala V.R., Alugubelli Y.R., Khatua K., Coleman D., Ma X.R., Sankaran B., Cho C.-C.D., Ma Y., Neuman B.W., Xu S.*, and **Liu W.R.***, "SARS-CoV-2 Main Protease Inhibitors That Leverage Unique Interactions with the Solvent Exposed S3 Site of the Enzyme", **ACS Med. Chem. Lett.** **2024**, 15(6):950-957.

21. Hampton J.T.* and **Liu W.R.***, "Diversification of Phage-Displayed Peptide Libraries with Noncanonical Amino Acid Mutagenesis and Chemical Modification", **Chem. Rev.** **2024**, 124(9):6051-6077.
22. Alugubelli Y.R., Xiao J., Khatua K., Kumar S., Sun L., Ma Y., Ma X., Vulupala V.R., Atla S.R., Blankenship L.R., Coleman D., Xie X., Neuman B.W.*, **Liu W.R.***, and Xu S.*, "Discovery of First-in-Class PROTAC Degradors of SARS-CoV-2 Main Protease", **J. Med. Chem.** **2024**, 67(8):6495-6507.
23. Khatua K., Alugubelli Y.R., Yang K.S., Vulupala V.R., Blankenship L.R., Coleman D.D., Atla S., Chaki S.P., Geng Z.Z., Ma X.R., Xiao J., Chen P.-H.C., Cho C.-C.D., Vatansever E.C., Ma Y., Yu G., Neuman B.W., Xu S.*, and **Liu W.R.***, "Azapeptides with Unique Covalent Warheads as SARS-CoV-2 Main Protease Inhibitors", **Antiviral Res.** **2024**, 225, 105874.
24. Chen P.-H.C., Guo X.S., Zhang H.Z., Dubey G.K., Geng Z.Z., Fierke C.A., Xu S., Hampton J.T.*, and **Liu W.R.***, "Leveraging a Phage-Encoded Noncanonical Amino Acid: A Novel Pathway to Potent and Selective Epigenetic Reader Protein Inhibitors", **ACS Cent. Sci.** **2024**, 10(4): 782-792.
25. Sheng Y.J., Kuo S.-T.A., Yang T., Zhang H.E., Russell D.H., Yan X., Xu S., **Liu, W.R.***, and Fierke, C.A.*, "BRD454 Is a Potent Covalent Inhibitor against the SARS-CoV-2 Main Protease", **Biochemistry** **2024**, 63(4), 402-406.
26. Geng Z.Z., Atla S., Shaabani N., Vulupala V.R., Yang K.S., Alugubelli Y.R., Khatua K., Chen P.-H.C., Xiao J., Blankenship L.R., Ma X.R., Vatansever E.C., Cho C.-C.D., Ma Y., Allen R., Ji H., Xu S., and **Liu W.R.***, A Systematic Survey of Reversible Covalent Dipeptidyl Inhibitors of the SARS-CoV-2 Main Protease, **J. Med. Chem.** **2023**, 66(16): 11040-11055.
27. Hampton J.T., Cho C.-C.D., Coleman D.D., Geng Z.Z., Chen P.-H.C., Dubey G.K., Sylvain L.D., Xu S., and **Liu W.R.***, "An Amber-Encoding Helper Phage for More Efficient Phage Display of Noncanonical Amino Acids" **Nucleic Acids Res.** **2023**, 51(13): 6566-6577.
28. Yang K.S., Kuo S.T., Blankenship L.R., Sheng Y.J., Sankaran B., Li P., Fierke C.A., Russell D.H., Yan X., Xu S.*, and **Liu W.R.***, "A Novel Y-Shaped, S-O-N-O-S-Bridged Crosslink between Three Residues C22, C44, and K61 Is a Redox Switch of the SARS-CoV-2 Main Protease", **ACS Chem. Biol.** **2023**, 18(3):449-455 (Cover Story).
29. Morse J.S., Shen Y.J., Hampton J.T., Sylvain L.D., Das S., Alugubelli Y.R., Chen P.C., Yang K.S., Xu S., Fierke C.A.*, and **Liu W.R.***, "Phage-Assisted, Active Site-Directed Ligand Evolution of a Potent and Selective Histone Deacetylase 8 Inhibitor", **Protein Sci.** **2022**, 31(12): e4512.
30. Hampton J.T., Lalonde T.J., Tharp J.M., Kurra Y., Alugubelli Y.R., Roundy C.M., Hamer G.L., Xu S., and Liu W.R., "Novel Regioselective Approach to Cyclize Phage-Displayed Peptides in Combination with Epitope-Directed Selection to Identify a Potent Neutralizing Macrocyclic Peptide for SARS-CoV-2", **ACS Chem. Biol.** **2022**, 17(10):2911-2922.
31. Alugubelli Y.R., Geng Z.Z., Yang K.S., Shaabani N., Khatua K., Ma X.R., Vatansever E.C., Cho C.C., Ma Y., Xiao J., Blankenship L.R., Yu G., Sankaran B., Li P., Allen R., Ji H.*, Xu S.*, and **Liu W.R.***, "A Systematic Exploration of Boceprevir-Based Main Protease Inhibitors as SARS-CoV-2 Antivirals", **Eur. J. Med. Chem.** **2022**, 240: 114596.
32. Ma Y., Yang K., Geng Z.Z., Alugubelli Y.R., Shaabani N., Vatansever E.C., Ma X.R., Cho C.C., Khatua K., Xiao J., Blankenship L.R., Yu G., Sankaran B., Li P., Allen R., Ji H.*, Xu S.*, and **Liu W.R.***, "A Multi-Pronged Evaluation of Aldehyde-Based Tripeptidyl Main Protease Inhibitors as SARS-CoV-2 Antivirals", **Eur. J. Med. Chem.** **2022**, 240: 114570.

33. Yang K.S., Leeuwon S.Z., Xu S., and **Liu W.R.***, "Evolution and Structural Insights about Potential SARS-CoV-2 Evasion of Nirmatrelvir", *J. Med. Chem.* **2022**, 65(13): 8686-8698.
34. Yu G., Qiao Y., Blankenship L.R., and Liu W.R.*, "Protein Synthesis via Activated Cysteine-Directed Protein Ligation", *Methods Mol. Biol.* **2022**, 2530:159-167.
35. Wang Y., Xie H., Alugubelli Y.R., Ma Y., Xu S., Ma J., **Liu W.R.***, and Liang D.*, "Accurate Mass Identification of an Interfering Water Adduct and Strategies in Development and Validation of an LC-MS/MS Method for Quantification of MPI8, a Potent SARS-CoV-2 Main Protease Inhibitor, in Rat Plasma in Pharmacokinetic Studies", *Pharmaceuticals* **2022**, 15(6):676.
36. Zhang L., Martin G., Mohankumar K., Hampton J.T., **Liu W.R.**, and Safe S.*, "Resveratrol Binds Nuclear Receptor 4A1 (NR4A1) and Acts as an NR4A1 Antagonist in Lung Cancer Cells", *Mol. Pharmacol.* **2022**, MOLPHARM-AR-2021-000481.
37. Klein B.J., Feigerle J.T., Ebmeier C.C., Fan L., Singh R.K., Wang W.W., Schmitt L.R., Lee T., Hansen K.C., **Liu W.R.**, Wang Y.X., Strahl B.D., Anthony Weil P., and Kutateladze T.G.*, "Taf2 mediates DNA Binding of Taf14", *Nat. Commun.* **2022**, 13(1):3177.
38. Yang K.S., Kuo S.A., Blankenship L.R., Geng Z.Z., Li S.G., Russell D.H., Yan X., Xu S.*, and **Liu W.R.***, "Repurposing Halicin as a Potent Covalent Inhibitor for the SARS-CoV-2 Main Protease", *Curr. Res. Chem. Biol.* **2022**, 2, 100025.
39. Vatansever E.C., Yang K.S., Geng Z.Z., Qiao Y., Li P., Xu S., and **Liu W.R.***, "A Designed Highly Efficient Pyrrolysyl-tRNA Synthetase Mutant Binds *o*-Chlorophenylalanine Using Two Halogen Bonds", *J. Mol. Biol.* **2022**, 434(8):167534.
40. Li S.G., Yang K.S., Blankenship L.R., Cho C.D., Xu S.*, Wang H.*, and **Liu W.R.***, "An Enhanced Hybrid Screening Approach to Identify Potent Inhibitors for the SARS-CoV-2 Main Protease from the NCI Compound Library", *Front. Chem.*, **2022**, 10, 816576
41. Cho C.-C.D., Blankenship L.R., Ma X., Xu S., **Liu W.R.***, "The Pyrrolysyl-tRNA Synthetase can be Improved by a P188 Mutation that Stabilizes the Full-Length Enzyme", *J. Mol. Biol.* **2022**, 434(8):167453.
42. Cao W., Geng Z., Wang N., Pan Q., Guo S., Xu S., Zhou J.*, and **Liu W.R.***, "A Reversible Chemogenetic Switch for Chimeric Antigen Receptor T Cells", *Angew. Chem. Int. Ed.* **2022**, 61: e202109550 (Hot Paper; Front Cover).
43. Cao W., Cho C.-C.D., Geng Z.Z., Shaabani N., Ma X.R., Vatansever E.C., Alugubelli Y.R., Ma Y., Chaki S., Ellenburg W.H., Yang K.S., Qiao Y., Allen R., Neumann B., Ji H.*, Xu S.*, and **Liu W.R.***, "Evaluation of SARS-CoV-2 Main Protease Inhibitors Using a Novel Cell-Based Assay", *ACS Cent. Sci.* **2022**, 8(2):194-204 (Front Cover).
44. Ma X.R., Alugubelli Y.R., Ma. Y., Vatansever E.C., Scott D.A., Qiao Y., Yu G., Xu S.*, and **Liu W.R.***, "MPI8 is Potent against SARS-CoV-2 by Inhibiting Dually and Selectively the SARS-CoV-2 Main Protease and the Host Cathepsin L", *ChemMedChem* **2022**, 17(1):e202100456 (Front Cover Story).
45. Cho C.-C., Li S.G., Lalonde T.J., Yang K.S., Ge Y., Qiao Y., Xu S., and **Liu W.R.***, "Drug Repurposing for the SARS-CoV-2 Papain-Like Protease", *ChemMedChem* **2022**, 17(1):e202100455.
46. Delaney C., Sheng Y., Pectol D.C., Vatansever E.C., Zhang H., Bhuvanesh N., Salas I, **Liu W.R.**, Fierke C.F., Danrensbourg M.Y.*, "Zinc Thiotropolone Cominations as Inhibitors of the SARS-CoV-2 Main Protease", *Dalt Trans.* **2021**, 50(35):12226-12233.

47. Chen P.C., Liu W.R., "The Construction of a Genetically Encoded, Phage-Displayed Cyclic-Peptide Library", **Methods Mol. Biol.** **2021**, 2355:219-230.
48. Li L., Chenna B.C., Yang K.S., Cole T.R., Goodall Z.T., Giardini M., Moghadamchargari Z., Hernandez E.A., Gomez J., Calvet C.M., Bernatchez J.A., Mellott D.M., Zhu J., Rademacher A., Thomas D., Blankenship L.R., Drelich A., Laganowsky A., Tseng C.K., **Liu W.R.**, Wand A.J., Cruz-Reyes J., Siqueira-Neto J.L., and Meek T.D.*, "Self-Masked Aldehyde Inhibitors: A Novel Strategy for Inhibiting Cysteine Proteases". **J. Med. Chem.** **2021**, 64(15):11267-11287.
49. Ma X.R., Xu L., Xu S., Klein B.J., Wang H., Das S., Li K., Yang K.S., Sohail S., Chapman A., Kutateladze T.G., Shi X., **Liu W.R.***, and Wen H.*, "Discovery of Selective Small-Molecule Inhibitors for the ENL YEATS Domain", **J. Med. Chem.** **2021**, 64(15): 10997-11013.
50. Qiao Y., Yu G., Leeuwon S.Z., **Liu W.R.***, "Site-Specific Conversion of Cysteine in a Protein to Dehydroalanine Using 2-Nitro-5-thiocyanatobenzoic Acid", **Molecules** **2021**, 26, 2619.
51. Vatansever E.C., Yang K., Kratch K.C., Drelich A., Cho C.-C., Mellott D.M., Xu S., Tseng C.-T.K.*, and **Liu W.R.***, "Bepiridil is Potent Against SARS-CoV-2 In Vitro", **Proc. Natl. Acad. Sci. U. S. A.**, **2021**, 118(10): e2012201118.
52. Yang K.S., Ma X.R., Ma Y., Alugubelli Y.R., Scott D.A., Vatansever E.C., Drelich A.K., Sankaran B., Geng Z.Z., Blankenship L.R., Ward H.E., Sheng Y.J., Hsu J.C., Kratch K.C., Zhao B., Hayatshshi H.S., Liu J., Li P., Fierke C.A.*, Tseng C.-T.K.*, Xu S.*, and **Liu W.R.***, "A Speedy Route to Multiple Highly Potent SARS-CoV-2 Main Protease Inhibitors", **ChemMedChem**, **2021**, 16(6):942-948 (VIP paper).
53. Rowlett C.M. and **Liu, W.R.***, "Site Specific Lysine Acetylation of Histones for Nucleosome Reconstitution Using Genetic Code Expansion in *Escherichia coli*", **J. Vis. Exp.** **2020**, DOI: 10.3791/62113.
54. Vatansever E.C., Kang J., Tuley A., Ward E.S.*, and **Liu W.R.***, "An Optimal "Click" Formulation Strategy for Antibody-Drug Conjugate Synthesis", **Bioorg. Med. Chem.** **2020**, 28(24): 115808.
55. Zhao B., Rowlett C.M., Jing T., Shinde O., Lei Y., West A.P., **Liu W.R.***, and Li P.*, "The Molecular Basis of Tight Nuclear Tethering and Inactivation of cGAS", **Nature**, **2020**, 587(7835): 673-677.
56. Qiao Y., Yu G., Wang X.A., Kratch K.C., Leeuwon S.Z., Wang W.W., Xu S., Morse J.S., and **Liu W.R.***, "Expressed Protein Ligation without Intein", **J. Am. Chem. Soc.** **2020**, 145(14): 7047-7054.
57. Li J., Yuan S., Qin J.S., Pang J., Zhang P., Zhang Y., Huang Y., Drake H.F., **Liu W.R.**, and Zhou H.C.*, "Stepwise Assembly of "Turn-on" Fluorescent Sensors in Multicomponent Metal-Organic Frameworks for *in vitro* Cyanide Detection", **Angew. Chem. Int. Ed.**, **2020**, 59(24): 9319-9323.
58. Tharp J.M., Hampton J.T., Reed C.A., Ehnobom A., Chen P.C., Morse J.S., Kurra Y., Perez L.M., Xu S.*, and **Liu W.R.***, "An Amber Obligate Active Site-Directed Ligand Evolution Technique for Phage Display", **Nat. Commun.** **2020**, 11(1):1392. (*Co-corresponding authors)
59. Morse J.S., Lalonde T., Xu S., and **Liu W.R.***, "Learning from the Past: Possible Urgent Prevention and Treatment Options for Severe Acute Respiratory Infections Caused by 2019-nCoV", **ChemBioChem**, **2020**, 21(5):730-738 (VIP paper).
60. Klein B.J., Jang S.M., Lachance C., Mi W., Lyu J., Sakuraba S., Krajewski K., Wang W.W., Sidoli S., Liu J., Zhang Y., Wang X., Warfield B.M., Kueh A.J., Voss A.K., Thomas T., Garcia B.A., **Liu W.R.**,

- Strahl B.D., Knon H., Li W., Shi X., Cote J., and Kutateladze T.G.*, "Histone H3K23-Specific Acetylation by MORF is Coupled to H3K14 acylation", **Nat. Commun.** **2019**, 10(1):4724.
61. Wang X.S., Chen P.C., Hampton J.T., Tharp J.M., Reed C.A., Das S.K., Wang D.-S., Hayatshahi H.S., Shen Y., Liu J. and **Liu W.R.***, "A Genetically Encoded, Phage-Displayed Cyclic-Peptide Library", **Angew. Chem. Int. Ed.** **2019**, 58(44): 15904-15909.
62. Ghosh A.K., Samanta I., Mondal A., and **Liu W.R.***, "Covalent Inhibition in Drug Discovery", **ChemMedChem**, **2019**, 14(9): 889-906.
63. Wang W.W., Angulo-Ibanez M., Lyu J., Kurra Y., Tong Z., Wu B., Zhang L., Sharma V., Zhou J., Lin H., Gao Y.Q., Li W., Chua K.F., and **Liu W.R.***, "A Click Chemistry Approach Reveals the Chromatin-Dependent Histone H3K36 Deacetylase Nature of SIRT7", **J. Am. Chem. Soc.** **2019**, 141(6): 2472-2473.
64. Yan H., Yang W., Zhou F., Li X., Pan Q., Shen Z., Han G., Newell-Fugate A., Tian Y., Majeti R., **Liu W.R.**, Xu Y., Wu C., Allred K., Allred C., Sun Y., and Guo S.*, "Estrogen Improves Insulin Sensitivity and Suppresses Gluconeogenesis via the Transcription Factor Foxo 1", **Diabetes**, **2019**, 68(2): 291-304.
65. Klein B., Van K.R., Andrew F.H., Wang W.W., Zhang J., Zhang Y., Beloglazkina A.A., Mi W., Li Y., Li H., Shi X., Kutateladze A.G., Strahl B.D., **Liu W.R.**, and Kutateladze T.G.*, "Structural Insights into the π - π - π Stacking Mechanism and DNA-Binding Activity of the YEATS Domain", **Nat. Commun.**, **2018**, 9(1):4574.
66. Weinert B.T., Narita T., Satpathy S., Srinivasan B., Hansen B.K., Schölz C., Hamilton W., Zucconi B.E., Wang W.W., **Liu W.R.**, Brickman J., Kesicki E.A., Lai A., Bromberg K.D., Cole P.A., Choudhary C.*, "Time-Resolved Analysis Reveals Rapid Dynamics and Broad Scope of the CBP/P300 acetylome", **Cell**, **2018**, 174(1):231-244.
67. Kakkar N., Perez J.G., **Liu W.R.**, Jewett M.C., and van der Donk W.A.*, "Incorporation of Nonproteinogenic Amino Acids in Class I and II Lantibiotics", **ACS Chem. Biol.**, **2018**, 13(4): 951-957.
68. Huang J., Mousley C. J., Dacquay L., Maitra N., Drin G., He C., Ridgway N.D., Tripathi A., Kennedy M., Kennedy B.K., **Liu W.R.**, Baetz K., Polymenis M., and Bankaitis V.A.*, "A Lipid Transfer Protein Signaling Axis Exerts Dual Control of Cell-Cycle and Membrane Trafficking Systems", **Dev. Cell**, **2018**, 44(3):378-391.
69. Tharp J.M. and **Liu W.R.***, "Using Amber and Ochre Nonsense Codons to Code Two Different Noncanonical Amino Acids in One Protein Gene", **Methods Mol. Biol.**, **2018**, 1728:147-154.
70. Sharma V., Zeng Y., Wang W.W., Wiao Y., Kurra Y., and **Liu W.R.***, "Evolving the N-terminal Domain of Pyrrolysyl-tRNA Synthetase for Improved Incorporation of Noncanonical Amino Acids", **ChemBioChem**, **2018**, 19(1):26-30 (Cover Story).
71. Tharp J.M., Ehnbohm A., and **Liu W.R.***, "tRNA^{Pyl}: Structure, Function, and Applications", **tRNA Biol.**, **2018**, 15(4-5):441-452.
72. Tharp J.M. and **Liu W.R.***, "Genetic Code Expansion: Synthetases Pick Up the PACE", **Nat. Chem. Biol.** **2017**, 13(12):1205-1206.
73. Wang Z.A., Hsu W., and **Liu W.R.***, "Role of SIRT1 in Epigenetics", **Handbook of Nutrition, Diet, and Epigenetics**, 1-19 (2017).

74. Wang Z.A. and **Liu W.R.***, "Proteins with Site-specific Lysine Methylation", *Chem. EUR. J.*, **2017**, 23(49):11732-11737.
75. Tian Y., de Vera Jacinto M.P., Yu Z., Jun Q., **Liu W.R.**, and Lin Q.*, "Genetically Encoded 2-Aryl-5-carboxytetrazoles for Site-selective Protein Photo-cross-linking", *J. Am. Chem. Soc.*, **2017**, 139(17):6078-6081.
76. Zhu M., Harshbarger W.D., Robles O., Krysiak J., Hull K.G., Cho W., Richardson R.D., Yang Y., Garcia A., Spiegelman L., Ramirez B., Wilson C.T., Yau J.A., Moore J.T., Walker C.B., Sacchettini J.C., **Liu W.R.**, Siber S.A, Smith J.W., and Romo D.*, "A Strategy for Dual Inhibition of the Proteasome and Fatty Acid Synthase with Belactosin C-Orlistat Hybrids", *Bioorg. Med. Chem.*, **2017**, 25(11):2901-2916.
77. Wang Z.A., Kurra Y., Wang X., Zeng Y., Lee Y.J., Sharma V., Lin H., Dai S.Y., and **Liu W.R.***, "A Versatile Approach for Site-Specific Lysine Acylation in Proteins", *Angew. Chem. Int. Ed.*, **2017**, 56(6):1643-1647.
78. Wang Z.A., Zeng Y., Kurra Y., Wang X., Tharp J.M., Vatansever E.C., Hsu W.W., Dai S., Fang X.*, and **Liu W.R.***, "A Genetically Encoded Allysine for the Synthesis of Proteins with Site-specific Lysine Dimethylation", *Angew. Chem. Int. Ed.*, **2017**, 56(1):212-216. (*Co-corresponding authors)
79. Sharma V., Wang Y.-S., and **Liu W.R.***, "Probing the Catalytic Charge-Relay System in Alanine Racemase with Genetically Encoded Histidine Mimetics", *ACS Chem. Biol.* **2016**, 11(12):3305-3309.
80. Lee Y.-J., Schmidt M.J., Tharp J.M., Weber A., Koenig A. L., Zhang H., Gao J., Waters M.L., Summerer D.*, and **Liu W.R.***, "Genetically Encoded Fluorophenylalanines Enable Insights into the Recognition of Lysine Trimethylation by an Epigenetic Reader", *Chem. Commun.*, **2016**, 52(85): 12606-12609. (*Co-corresponding authors)
81. Wang, W.W., Zeng, Y., Wu B., Deiters A., and **Liu W.R.***, "A Chemical Biology Approach to Reveal Sirt6-targeted Histone H3 sites in nucleosomes", *ACS Chem. Biol.*, **2016**, 11(7): 1973-1981.
82. Tharp, J.M. and **Liu, W.R.***, "The "pi-Clamp" Offers a Novel Strategy for Site-selective Protein Modification", *ChemBioChem*, **2016**, 17(10): 883-885.
83. Hsu, W. W., Wu, B., and **Liu, W.R.***, "Sirtuins 1 and 2 are Universal Histone Deacetylases", *ACS Chem. Biol.*, **2016**, 11(3):792-799.
84. Lee, Y.-J., Kurra, Y., and **Liu, W.R.***, "Phospha-Michael addition as a new click reaction for protein functionalization", *Chembiochem*, **2016**, 17(6):456-461.
85. He T., Gershenson A., Eyles S.J., Lee Y.J., **Liu W.R.**, Wang J., Gao J., & Roberts M.F.*, "Fluorinated aromatic amino acids distinguish cation-pi interactions from membrane insertion", *J. Biol. Chem.*, **2015**, 290(31): 19334-19342.
86. Bindman N.A., Bobeica S.C., **Liu W.R.*** & van der Donk W.A.*, "Facile removal of leader peptides from lanthipeptides by incorporation of a hydroxy acid", *J. Am. Chem. Soc.*, **2015**, 137(22): 6975-6978. (*Co-corresponding authors)
87. Xin X, **Liu W.R.** & Sun L.*, "Improving the Bioactivity of rHirudin with Boronophenylalanine Site-specific Modification", *Mol. Med. Rep.*, **2015**, 11(5):3774-3779.

88. Guan D., Kurra Y., **Liu W.R.*** & Chen Z.*, "A Click Chemistry Approach to Site-specific Immobilization of a Small Laccase Enables Efficient Direct Electron Transfer in a Biocathode", **Chem. Commun.**, **2015**, 51: 2522-2525. (*Co-corresponding authors)
89. Piscotta F., Tharp J.M., **Liu W.R.*** & Link J.A.*, "Expanding the Chemical Diversity of Lasso Peptide MccJ25 with Genetically Encoded Noncanonical Amino Acids", **Chem. Commun.**, **2015**, 51:409-412.
90. Lee Y.-J., Kurra Y., Yang Y., Torres-Kolbus J., Deiters A. & **Liu W.R.***, "Genetically Encoded Terminal Olefins for Live Cell Labeling with Tetrazine Dyes", **Chem. Commun.**, **2014**, 50: 13085-13088.
91. Kurra Y., Odoi K.A., Lee Y.-J., Lu T., Wheeler S.E., Torres-Kolbus J., Deiters A. & **Liu W.R.***, "Two Rapid Catalyst-free Click Reactions for *In Vivo* Protein Labeling of Genetically Encoded Strained Alkene/alkyne Functionalities", **Bioconjug. Chem.**, **2014**, 25: 1730-1738.
92. Zeng Y., Wang W. & **Liu W.R.***, "Toward Reassigning the Rare AGG Codon in *Escherichia coli*", **ChemBioChem**, **2014**, 15:1750-1754.
93. Tuley A., Lee Y.-J., Wu B., Wang Z.U. & **Liu W.R.***, "A Genetically Encoded Aldehyde for Rapid Protein Labeling", **Chem. Commun.**, **2014**, 50:7424-7426.
94. Wan W., Tharp M.J. & **Liu W.R.***, "Pyrrolysyl-tRNA synthetase: an ordinary enzyme but an outstanding genetic code expansion tool", **Biochem. Biophys. Acta**, **2014**, 1844:1059-1070.
95. Tharp J.M., Wang Y.-S., Lee Y.-J. & **Liu W.R.***, "The Genetic Incorporation of Seven *Ortho*-substituted Phenylalanine Derivatives", **ACS Chem. Biol.**, **2014**, 9:884-890.
96. **Liu W.R.***, "Reports from the chemical Biology of Texas Symposium at the 69th Southwest Regional Meeting of the American Chemical Society", **ACS Chem. Biol.**, **2014**, 9: 319-322.
97. Wang X.S., Lee Y.-J., & **Liu W.R.***, "The Nitrilimine-Alkene Cycloaddition is an Ultra Rapid Click Reaction", **Chem. Commun.**, **2014**, 50: 3176-3179.
98. Tuley A., Wang Y.-S., Fang X., Kurra Y., Reznom Y.H. & **Liu W.R.***, "The Genetic Incorporation of Thirteen Novel Non-Canonical Amino Acids", **Chem. Commun.**, **2014**, 50: 2673-2675.
99. Wang X.A., Kurra Y., Huang Y., Lee Y.-J. & **Liu W.R.***, "E1-catalyzed Ubiquitin C-terminal Amidation for the Facile Synthesis of Deubiquitinase Substrates", **ChemBioChem**, **2014**, 15:37-41.
100. Hladilkova J., Heyda J., Rembert K.B., Okur H.I., Kurra Y., **Liu W.R.**, Hilty C., Cremer P.S.* & Jungwirth P.*, "Effects of End-group Termination on Salting-out Constants for Triglycine", **J. Phys. Chem. Lett.**, **2013**, 4:4069-4073. (*Co-corresponding authors)
101. Paterova J., Rembert K., Heyda J., Kurra Y., Okur H., **Liu W.R.**, Hilty C., Cremer P.S.* & Jungwirth P.*, "Reversal of the Hofmeister Series: Specific Ion Effects on Peptides", **J. Phys. Chem. B**, **2013**, 117:8150-8158.
102. Lee Y.-J., Wu B., Raymond J.E., Zeng Y., Fang X., Wooley K.L. & **Liu W.R.***, "A Genetically Encoded Acrylamide Functionality", **ACS Chem. Biol.**, **2013**, 8:1664-1670.
103. Odoi K.A., Huang Y., Reznom Y.H. & **Liu W.R.***, "Nonsense and Sense Suppression Abilities of Original and Derivative *Methanosarcina mazei* Pyrrolysyl-tRNA Synthetase-tRNA^{Pyl} Pairs in the *Escherichia coli* BL21(DE3) Cell Strain", **PLOS One**, **2013**, 8:e57035.

104. Wang Y.-S., Fang X., Chen H.-Y., Wu B., Wang Z.U., Hilty C.B., & **Liu W.R.***, "Genetic Incorporation of Twelve *Meta*-Substituted Phenylalanine Derivatives Using a Single Pyrrolysyl-tRNA Synthetase Mutant", **ACS Chem. Biol.**, **2013**, 8: 405-415.
105. O'Donoghue P, Prat L, Heinemann I, Ling J, Odoi K.A., **Liu W.R.*** & Soll D.*, "Near-cognate Suppression of Amber, Opal, and Quadruplet Codons Compete with Aminoacyl-tRNA^{PyI} for Genetic Code Expansion", **FEBS Lett.**, **2012** 586:3931-3937 (*co-corresponding authors).
106. Wan W, Wang Y.-S., & **Liu W.R.***, "Genetically Encoding Bioorthogonal Functional Groups for Site-selective Protein Labeling", **Organic Chem. Curr. Res.**, **2012**, 1:e111, DOI: 10.4172/2161-0401.1000e111
107. Wang Z.U., Wang Y.-S., Pai P.-J., Russell W.K., Russell D.H. & **Liu W.R.***, "A Facile Method to Synthesize Histones with Posttranslational Modification Mimics", **Biochemistry**, **2012**, 51:5232-5234.
108. Wu B., Wang Z., Huang Y. & **Liu W.R.***, "Catalyst-Free and Site-Specific One-Pot Dual Labeling of a Protein Directed by Two Genetically Incorporated Noncanonical Amino Acids", **ChemBioChem**, **2012**, 13: 1405-1408.
109. Wang Y.-S., Fang X., Wallace A.L., Wu B. & **Liu W.R.***, "A Rationally Designed Pyrrolysyl-tRNA Synthetase Mutant Has a Broad Substrate Specificity", **J. Am. Chem. Soc.**, **2012**, 134: 2950-2953.
110. Weinert B.T., Wagner S.A., Horn H., Henriksen P., **Liu W.R.**, Olsen J.V., Jensen L.J. & Choudhary C.*, "Proteome-wide Mapping of the Drosophila Acetylome Demonstrates a High Degree of Conservation of Lysine Acetylation", **Sci. Signal**, **2011**, 4: ra48.
111. Wang Y.-S., Russell W.K., Wang Z., Wan W., Dodd L.E., Pai P.-J., Russell D.H., & **Liu W.R.***, "The *De Novo* Engineering of Pyrrolysyl-tRNA Synthetase for Genetic Incorporation of L-phenylalanine and Its Derivatives", **Mol. BioSyst.**, **2011**, 7: 714-717.
112. **Liu W.R.***, Wang Y.-S. & Wan W., "Synthesis of Proteins with Defined Posttranslational Modifications Using the Genetic Noncanonical Amino Acid Incorporation Approach", **Mol. BioSyst.**, **2011**, 7: 38-47.
113. Wang Y.-S., Wu B., Wang Z., Huang Y., Wan W., Russell W.K., Pai P.-J., Moe Y.N., Russell D.H. & **Liu W.R.***, "A Genetically Encoded Photocaged *N*^ε-methyl-L-lysine" **Mol. Biosyst.**, **2010**, 6: 1557-1560. This was an invited submission and featured on *Molecular BioSystems 2010 Emerging Investigators Issue*.
114. Wan W., Huang Y., Wang Z., Russell W.K., Pai P.-J., Russell D.H. & **Liu W.R.***, "A Facile System for Genetic Incorporation of Two Different Noncanonical Amino Acids into One Protein in *Escherichia coli*", **Angew. Chem. Int. Ed.**, **2010**, 49: 3211-3214.
115. Huang Y., Russell W.K., Wan W., Pai P.-J., Russell D.H. & **Liu W.R.***, "A convenient Method for Genetic Incorporation of Multiple Noncanonical Amino Acids into One Protein in *Escherichia coli*". **Mol. BioSyst.**, **2010**, 6: 683-686.
116. Huang Y., Wan W., Russell W.K., Pai P.-J., Wang Z., Russell D.H. & **Liu W.R.***, "Genetic Incorporation of An Aliphatic Keto-Containing Amino Acid into Proteins for Their Site-specific Modification". **Bioorg. Med. Chem. Lett.**, **2010**, 3: 878-880

Before becoming an independent investigator

117. Brustad E., Bushey M.L., Lee J.W., Groff D., **Liu W.R.** & Schultz P.G.* "A Genetically Encoded Boronate Containing Amino Acid" *Angew. Chem. Int. Ed. Engl.*, **2008**, 47: 8220-8223
118. Graziano, J.J., Liu, W.R., Perera R., Geierstanger, B.H., Lesley, S.A., & Schultz, P.G.* "Selecting Folded Proteins from a Library of Secondary Structural Elements", *J. Am. Chem. Soc.*, **2008**, 130: 176-185
119. Tippmann, E.M.⁺, **Liu, W.R.**⁺, Summerer, D., Geierstanger, B., Mack, A.V., & Schultz, P.G.* "A Genetic Encoded Diazirine Photocrosslinker in *Escherichia coli*", *ChemBioChem*, **2007**, 8: 2210-2214 (*equally contributing authors)
120. Liu C.C., Braustad E., **Liu W.R.*** & Schultz P.G.* "Crystal Structure of a Biosynthetic Sulfo-hirudin Complexed with Thrombin", *J. Am. Chem. Soc.*, **2007**, 129: 10648-10649 (*corresponding authors in this paper)
121. **Liu, W.R.**, Brock, A., Chen, S., Chen, S. & Schultz P.G.* "The Genetic Incorporation of Unnatural Amino Acids into Proteins in Mammalian Cells", *Nat. Methods*. **2007**, 4: 239-44
122. Xie, J., **Liu, W.R.**, & Schultz, P.G.* "A Genetic Encoded Bidentate, Metal Ion Binding Amino Acid", *Angew. Chem. Int. Ed.*, **2007**, 46: 9239-9242,
123. **Liu, W.R.**, Alfonta, L., Mack, A.V. & Schultz, P.G.* "Structural Basis for the Recognition of p-Benzoyl-L-phenylalanyl by Evolved Aminoacyl-tRNA Synthetases", *Angew. Chem. Int. Ed.*, **2007**, 46: 6073-6075,
124. **Liu, W.R.**, Peterson, P.E., Langston, J.A., Jin, X., Zhou, X., Fisher, A.J. & Toney, M.D.* "Kinetic and Crystallographic Analysis of Active Site Mutants of *Escherichia coli* ©-Aminobutyrate Aminotransferase", *Biochemistry*, **2005**, 44: 2982-92,
125. Fogle, E.J., **Liu, W.R.**, Keller, J. & Toney, M.D.* "Role of Q52 in the Decarboxylation and Transamination of Dialkylglycine Decarboxylase", *Biochemistry*, **2005**, 44: 16392-404,
126. **Liu W.R.**, Peterson P.E., Carter R.J., Zhou X., Langston J.A., Fisher A.J. & Toney M.D. Crystal Structures of Unbound and Aminooxyacetate-bound *Escherichia coli* ©-Aminobutyrate Aminotransferase. *Biochemistry*, **2004**, 43: 10896-905
127. **Liu W.R.** & Toney M.D. "Kinetic and thermodynamic analysis of the interaction of cations with dialkylglycine decarboxylase", *Biochemistry*, **2004**, 43: 4998-5010
128. **Liu W.R.**, Rogers C.J., Fisher A.J. & Toney M.D. "Aminophosphonate inhibitors of dialkylglycine decarboxylase: Structural basis for slow binding inhibition", *Biochemistry*, **2002**, 41: 12320-28.

Patent Applications:

1. Cao W. and Liu, W.R., "Synergistic Anti-Hepatocellular Carcinoma Combinations", U.S. Provisional Application No. 63/887,904 (2025).
2. Guo S., Liu, W.R. *et al.*, "Methods and Compositions for the Treatment of Diabetes", U.S. PCT Application No. (2025).
3. Liu, W.R. *et al.*, "Composition and Methods for Monitoring Ubiquitin Signaling and Deubiquitinase Activity", U.S. PCT Application No. (2025).
4. Liu, W.R. *et al.*, "PROTAC Degradors of SARS-CoV-2 Main Protease", U.S. PCT Application No. 18/889,910 (2024).

5. Liu, W.R. *et al.*, “Methods and Compositions for the Treatment of Cancer”, U.S. PCT Application No. 63/716,616 (2024). PCT/US2025/053493.
6. Liu, W.R. *et al.*, “PROTAC Degraders of SARS-CoV-2 Main Protease”, U.S. PCT Application No. 18/889,910 (2024).
7. Liu W.R. *et al.*, “SARS-CoV-2 Main Protease Inhibitors”, U.S. PCT Application No. 63/424,294 (2022).
8. Liu W.R., *et al.*, “SARS-CoV-2 Main Protease Inhibitors”, U.S. PCT Application No. 63/424,293 (2022).
9. Liu W.R., *et al.*, “SARS-CoV-2 Main Protease Inhibitors”, Appl. No. 18/168,409, PCT/US2021/042956 (07/24/2020).
10. Liu W.R. *et al.*, “Compositions and Methods for Inhibition of SARS-CoV-2 Viral Infections”, Patent No. US 11,806,322, Appl. No. 17/748,351, PCT/US2020/041179 (05/19/2020).
11. Liu W.R., “An Activated Cysteine-Directed Polypeptide Ligation Technique”, Appl. No. 17/783,639, PCT/US2020/012128 (01/03/2020).
12. Cao W. and Liu W.R., “Novel Protease Switch for Dual Targets Chimeric Antigen Receptor T Cell Therapy”, Appl. No. 17/772,539, PCT/US2020/058185 (10/30/2020).
13. Liu W.R., “Methods of Making and Utilizing Amber-Obligated Phagemid Libraries”, Appl. No. 17/436,494, PCT/US2020/020961 (03/04/2019). Patent No. 12371817 granted on 7/29/2025.
14. Liu W.R., “A Genetically Encoded, Phage-Displayed Cyclic Peptide Library and Methods of Making the Same”, Appl. No. 17/606,938, PCT/US2019/033046 (05/29/2019).
15. Liu W.R., “A Chemical Biology Method for the Synthesis of Protein Site-specifically with Lysine Methylation”, U.S. Application No. 62/425,054 (2016).
16. Liu W.R., “Functionalized Ubiquitin Derivatives and Related Methods”, U.S. Application No. 61/915934 (2013).
17. Liu W.R. & Wan W., “Fusion Proteins of Superfolder Green Fluorescent Protein and Use Thereof”, U. S. Application No. 61/615,178 (2012).
18. Liu W.R., “Incorporation of Two Different Noncanonical Amino Acids into A Single Protein”, U.S. Application No. 61/467,728 (2012).
19. Liu W.R. & Huang Y., “Methods, Cells, and Systems for Incorporating Noncanonical Amino Acids into Proteins”, U.S. Application No. 61/438,743 (2011).
20. Liu W.R. & Schultz P.G., “Genetic Incorporation of Unnatural Amino Acids into Proteins in Mammalian Cells”, U.S. Application No. 12/311,545 (2007).

Curr. Grants:

- | | | |
|---|--------------------------------|-----------------------|
| 1. CPRIT RP250505 | \$3,000,000 | 06/01/2025-05/31/2030 |
| “Drug Discovery Resource Center” | | |
| Principal investigator: Peter Davies, Ph.D.; co-PI: Wenshe Ray Liu, Ph.D. | | |
| 2. NIH-R01AI186092 | \$3,500,000 (\$750,000 to Liu) | 07/01/2024-06/30/2029 |
| “Ultrasensitive Detection of Mycobacterium Tuberculosis Infection” | | |

- Instrument Supplement for “Use of the Noncanonical Amino Acid Mutagenesis Technique in Combination with Other Approaches to Study Functions of Posttranslational Lysine Modifications in Proteins”
Principal Investigator: Wenshe Ray Liu
2. CPRIT RP230449 \$995,767 09/01/2023-08/31/2025
“TREC Major Instrument Award: The Acquisition of an Instrument Suite to Set Up a High-Throughput Screening Core at Texas A&M University”
Principal Investigator: Wenshe Ray Liu, Ph.D.
 3. Kleberg Foundation \$750,000 (\$50,000 to Liu) 09/01/2023-08/31/2025
“Early Lyme Disease Diagnostic to Detect Viable *B. burgdoferi*”
Principal Investigator: Jenny Hyde, Ph.D.
Co-PI: Wenshe Ray Liu, Ph.D.
 4. NIH-R21EB032983 \$410,000 05/01/2022-03/31/2024
Extended to 03/31/2025
“Development of Fluorogenic and Chemiluminogenic Main Protease Substrates for Cellular and In Vivo Imaging of SARS-CoV-2”
Principal Investigator: Wenshe Ray Liu
 5. NIH-R21CA267512 \$410,000 12/01/2021-11/30/2023
Extended to 11/30/2024
“Targeting the ENL YEATS Domain for the Development of Anti-Leukemia Agents”
Principal Investigator: Wenshe Ray Liu
 6. University X Grant \$1,275,000 09/01/2021-08/31/2024
“Mapping and Meeting the Directed Evolution of a Pandemic”
Principal Investigator: Benjamin Newman, Ph.D.
Co-PI: Wenshe Ray Liu, Ph.D.
 7. Welch Research Grant A-1715 \$240,000 06/01/2021-05/31/2024
“The Identification and Characterization of SARS-CoV-2 Main Protease Inhibitors with Novel Chemical Entities”
Principal Investigator: Wenshe Ray Liu, Ph.D.
 8. NIH-R01GM127575 \$1,429,642 12/01/2018-11/30/2023
“Develop General Methods for the Synthesis of Proteins with Posttranslational Lysine Modifications”
Principal Investigator: Wenshe Ray Liu, Ph.D.
 9. University X Grant \$1,275,000 09/01/2020-08/31/2023
“A Multidisciplinary Drug Discovery Platform for the Identification of Anti-Cancer Therapeutics”
Principal Investigator: Wenshe Ray Liu, Ph.D.
 10. NIH-R21AI164088 \$410,000 07/01/2021-06/30/2023
“The Development of Reversible Covalent PROTAC as a New Anti-COVID-19 Strategy”
Principal Investigator: Shiqing Xu, Ph.D.;
Co-PI: Wenshe Ray Liu, Ph.D.
 11. NSF Award 2111297 \$255,472 07/01/2021-06/30/2022
“STTR Phase I: Discovery and Development of Macrocyclic Peptide Inhibitors of SARS-CoV-2 Spike protein for the treatment of COVID-19”
Principal Investigator: Shoutian Zhu, Ph.D.; co-PI: Wenshe Ray Liu, Ph.D.
 12. NIH-R01GM121584 \$1,077,681 12/01/2016-11/30/2022
“Study Reversible Histone Acylations in Nucleosome Contexts”

- Principal Investigator: Wenshe Ray Liu, Ph.D.
13. Translational Investment Fund \$75,000 10/02/2020-09/30/2021
"Bepiridil as a Potent Anti-SARS-CoV-2 Medicine"
Principal Investigator: Wenshe Ray Liu, Ph.D.
14. IASO Bio Sponsored Research \$435,789 10/01/2018-06/30/2021
"Collaborative Development of Switchable Chimeric Antigen Receptor T-cell Therapies"
Principal Investigator: Wenshe Ray Liu, Ph.D.
15. TAMU T3 program \$36,000 06/01/2018-09/31/2020
"Genetically Encoded Photocrosslinking Techniques to Profile the HDAC Interactome"
Principal Investigator: Wenshe Ray Liu, Ph.D.
16. CPRIT-RP170797 \$200,000 09/01/2017-03/31/2020
"The preparation of Novel Phage Displayed Macrocyclic Peptide Libraries for the Identification of Anticancer Agents"
Principal Investigator: Wenshe Ray Liu, Ph.D.
17. TAMU STRP program \$50,000 09/01/2019-08/31/2020
"Explore Regulatory Roles of Protein Lysine Succinylation in *Mycobacterium tuberculosis*"
Principal Investigator: Wenshe Liu, Ph.D.
18. NIH-R01GM121584-02S1 \$186,066 07/01/2018-06/30/2019
"Studying Reversible Histone Acylations in Nucleosome Contexts: Administrative Supplement for Equipment"
Principal Investigator: Wenshe Liu, Ph.D.
19. NIH-R01GM085092 \$141,325 (to TAMU) 10/01/2014-09/30/2018
"Development and application of bioorthogonal chemistry"
Principal investigator: Qing Lin, Ph.D. at University at Buffalo, the State University of New York
Co-PI: Wenshe Liu, Ph.D.
20. NSF CAREER Award CHE-1148684 \$575,000 04/01/2012-09/31/2017
"CAREER: Site-specific dual-labeling of a protein through two genetically incorporated noncanonical amino acids"
Principal investigator: Wenshe Liu, Ph.D.
21. NIH-1R01CA161158 \$1,483,085 07/01/2011-04/30/2017
"Phage display with two genetically incorporated noncanonical amino acids"
Principal investigator: Wenshe Liu, Ph.D.
22. National Institute of Health \$154,032 01/01/2013-08/31/2015
"Chemical/biochemical tools for studying novel protein acyl lysine modifications"
Principal investigator: Hening Lin, Ph.D. at Cornell University
Co PI: Wenshe Liu, Ph.D.
23. Welch Research Grant A-1715 \$225,000 06/01/2012-05/31/2015
"Sensors for small molecules and enzymes"
Principal investigator: Wenshe Liu, Ph.D.
24. Welch Research Grant A-1715 \$150,000 06/01/2009-05/30/2012
"Synthesis and evaluation of methyltransferase-mediated alkylating agents"
Principal investigator: Wenshe Liu, Ph.D.
-

Invited Seminars:

1. Department of Veterinary Pathobiology, Texas A&M University, 11/03/2025
2. Department of Medicinal Chemistry and Molecular Pharmacology, Purdue University, 10/30/2025
3. University of Texas Health Science Center at Tyler, 05/08/2025

4. Houston Methodist Research Institute, 05/01/2025
5. Department of Chemistry, University of New York at Albany, 04/08/2025
6. Department of Biochemistry and Molecular Biology, University of Texas Medical Branch, 03/27/2025
7. Department of Biochemistry and Biophysics, University of Pennsylvania, 11/06/2024
8. Department of Biology, Texas A&M University, 10/29/2024
9. Department of Biochemistry and Biology, University of Houston, 10/02/2024
10. The Brown Foundation Institute of Molecular Medicine (IMM), University of Texas Health Science Center at Houston, 05/16/2024
11. Department of Chemistry, Prairie View A&M University, 03/21/2024
12. College of Pharmacy and Health Sciences, Texas Southern University, 09/22/2023
13. The CSI Seminar Series, MD Anderson Cancer Center, 05/25/2023
14. Beijing Normal University, 11/04/2022
15. The ACS Shanghai Chapter Webinar, 07/15/2022
16. Department of Structural and Cellular Biology, Tulane University, 04/07/2022
17. Department of Drug Design and Pharmacology, University of Copenhagen, 03/04/2022
18. Department of Physics, Chemistry and Pharmacy, South Denmark University, 03/03/2022
19. Center for Infectious and Inflammatory Diseases, Institute of Biosciences and Technology, Texas A&M Health Science Center, 02/21/2022
20. Department of Chemistry and Physics, Southwestern Oklahoma State University, 02/17/2022
21. Chemistry Colloquium, Valparaiso University, 04/23/2021
22. Department of Medicinal Chemistry, University of Kansas, 04/08/2021
23. Biochemistry & Genetic Society, Texas A&M University, 02/10/2021
24. Department of Veterinary Pathobiology, Texas A&M University, 10/12/2020
25. Muséum National d'Histoire Naturelle, France, 01/31/2020
26. INSERM Research Unit U1195, Bicêtre Hospital, France, 01/30/2020
27. Department of Pharmacology and Chemical Biology, Baylor College of Medicine, 01/21/2020
28. Department of Chemistry, Central China Normal University, 11/14/2019
29. Molecular & Cellular Medicine Department, Texas A&M University, 10/10/2019
30. Department of Chemistry & Biochemistry, University of Arkansas, 09/09/2019
31. Department of Chemistry, University of North Texas, 03/08/2019
32. Department of Chemistry, Rice University, 02/11/2019
33. Department of Biochemistry and Biophysics, Texas A&M University, 01/30/2019
34. College of Medicine, Texas A&M University, 10/09/2018
35. Department of Chemistry, South University of Science and Technology, 07/03/2018
36. Tongji Medical College, Huazhong University of Science and Technology, 06/21/2018
37. Department of Chemistry, Peking University, 03/27/2018
38. Department of Chemistry, Zhejiang University, 03/22/2018
39. College of Pharmacy, University of South California, 03/09/2018
40. Department of Chemistry, University of Washington, 11/16/2017
41. College of Pharmacy, University of Minnesota, 11/06/2017
42. Department of Chemistry, Brandeis University, 10/16/2017
43. College of Pharmacy, University of Arizona, 09/12/2017
44. Department of Chemistry, Tsinghua University, 07/20/2017
45. Department of Chemistry, Georgia State University, 11/18/2016
46. Department of Chemistry, Fudan University, 09/09/2016
47. Department of Chemistry, National Taiwan University, 09/01/2016
48. Institute of Biological Chemistry, Academia Sinica, 08/30/2016

49. School of Medicine, Texas A&M University, 06/01/2016
50. Department of Chemistry, Ohio State University, 03/03/2016
51. Department of Chemistry, University of Houston, 09/21/2015
52. Department of Chemistry, University of South Florida, 09/03/2015
53. Department of Chemistry, University of California-Davis, 01/06/2015
54. Shanghai Institute of Organic Chemistry, Shanghai, China, 07/01/2014
55. Department of Chemistry, University of North Carolina, 02/19/2014
56. Department of Microbiology & Molecular Genetics, The University of Texas Medical School at Houston, 02/06/2014
57. Department of Chemistry and Biochemistry, University of Georgia, 10/10/2013
58. Department of Chemistry, Mercer University, 10/09/2013
59. Department of Biochemistry, Michigan State University, 02/21/2013
60. Department of Chemistry, North Carolina State University, 01/16/2013
61. Department of Chemistry, Duke University, 01/15/2013
62. Department of Chemistry, Princeton University, 11/05/2012
63. Department of Chemistry, University of Illinois at Urbana Champaign, 10/15/2012
64. Department of Chemistry, University of California-Irvine, 09/28/2012
65. Department of Chemistry, University of Utah, 09/06/2012
66. Department of Chemistry, University of California-Berkeley, 09/04/2012
67. Department of Chemistry, Baylor University, 08/24/2012
68. Department of Chemistry, Wuhan University, 07/25/2012
69. Department of Physics, Huazhong University of Science and Technology, 07/24/2012
70. Department of Chemistry, Peking University, China, 06/16/2012
71. Department of Chemistry, University of Delaware, 05/02/2012
72. Department of Chemistry, University of South Carolina, 04/19/2012
73. Skaggs Institute of Chemical Biology, Scripps Research Institute, 04/17/2012
74. Department of Chemistry, University of New Mexico, 04/13/2012
75. Department of Chemistry, Cornell University, 04/09/2012
76. Department of Chemistry, Columbia University, 04/10/2012
77. Department of Chemistry, University of Chicago, 04/06/2012
78. School of Medicine, University of Miami, 03/20/2012
79. Department of Chemistry, Arizona State University, 03/09/2012
80. Department of Chemistry, Boston College, 02/14/2012
81. Department of Chemistry, Massachusetts Institute of Technology, 02/13/2012
82. Department of Chemistry, University of Nebraska-Lincoln, 02/03/2012
83. Department of Pharmacology, Johns Hopkins Medical School, 02/01/2012
84. Interdisciplinary Faculty of Toxicology, Texas A&M University, 01/23/2012
85. Department of Chemistry and Biochemistry, University of Texas-Austin, 01/20/2012
86. Department of Chemistry, Stanford University, 12/13/2011
87. Sutro Biopharma Inc., 12/12/2011
88. Department of Molecular and Cellular Oncology, UT Anderson Cancer Center, 10/12/2011
89. Department of Biochemistry, University of Texas Health Science Center at San Antonio, 09/30/2011
90. Department of Molecular Biophysics and Biochemistry, Yale University, 09/07/2011
91. School of Pharmacy, Wuhan University, 07/28/2011
92. Department of Chemistry, Shandong University, 07/8/2011
93. Department of Chemistry, University of California-Davis, 1/11/2011
94. Institute of Organic Chemistry, Chinese Academy of Science, 06/01/2010

95. Department of Biochemical Engineering, East China University of Science and Technology, 05/28/2010
96. Department of Natural Sciences, Albany State University-Georgia, 10/21/2008
97. Department of Chemistry, Beijing University, 01/11/2008
-

Organized Conferences or Conference Sessions:

1. The 2024 Chinese American Chemistry and Chemical Biology Professors' Association Summer Symposium, Aug 17th, 2024, Boulder, CO (**Chair**, Scheduled)
 2. The 2024 Annual Conference of Chinese American Chemistry and Chemical Biology Professors' Association, Wuhan University, China, May 31st-Jun 2nd, 2024 (**Chair**)
 3. The 2024 Texas Chemical Biology Conference, May 24-25th, 2024, Houston, TX (**Chair**)
 4. "The 2023 CAPA Winter Symposium and Award Ceremony", Dec 20, 2023, Tampa, FL (**Chair**)
 5. "The 2023 CAPA Summer Symposium and Award Ceremony", Aug 12, 2023, San Francisco, CA (**Chair**)
 6. The 2019 Texas Chemical Biology Conference, May 23-24th, 2019, College Station, TX (**Chair**)
 7. The Chemical Biology of Texas Symposium, the 69th Southwest Regional Meeting of American Chemistry Society, Nov 16-19th, 2013, Waco, TX (**Chair**)
-

Talks and Posters at Conferences and Meetings:

1. Liu, W.R., "Macrocyclic Peptides as Modalities for Drug Discovery", PepCon-2026, Jul 22-24, 2026, Helsinki, Finland (**Keynote Speaker**, scheduled)
2. Liu, W.R., "Title: TBD", Enzymes, Coenzymes and Metabolic Pathways Gordon Research Conference, Jul 26-31, 2026, Newry, ME (**Invited Speaker**, scheduled)
3. Liu, W.R. "Title: TBD", Bioorganic Chemistry Gordon Research Conference 2026, Jun 7-11, 2026, Proctor Academy, Andover, NH (**Invited Speaker**, scheduled)
4. Liu, W.R., "Proximity-Driven and Regioselective Peptide Bicyclization Approach on Phage for Drug Discovery", The American Chemical Society Meeting, Spring 2026, Atlanta, GA, Mar 22-26, 2026 (**Invited Speaker**, scheduled)
5. Liu, W.R., "Phage-Assisted Active Site-Directed Ligation Evolution of Peptide Ligands for Epigenetic Drug Targets", PepTalk 2026, Jan 19-22, 2026, San Diego, California (**Invited Speaker**, scheduled)
6. Liu, W.R., "Phage-Displayed Noncanonical Amino Acids for Peptide-Based Drug Discovery", Session of Recent Advances in Expanding the Genetic Code, PacifiChem 2025, Dec 15-20, Honolulu, Hawaii (**Invited Speaker**, scheduled)
7. Liu, W.R., "Targeting the ENL YEATS Domain for Probe Development", Session of Epigenetic Mechanisms and Advances in Chromatin Biology, PacifiChem 2025, Dec 15-20, Honolulu, Hawaii (**Invited Speaker**, scheduled)
8. Liu, W.R., "Targeting the SARS-CoV-2 Main Protease for Drug Discovery Reveals Unique Chemistry for Both Enzyme Function Regulation and Covalent Drug Development", The American Chemical Society Meeting Fall 2025, Washington D.C., Aug 16-21, 2025 (**Invited Speaker** in Gordon Hammes Lectureship Symposium in Honor of Karen Allen)
9. Liu, W.R., "Activated Cysteine-Based Protein Ligation for Functionalizing Ubiquitin and Ubiquitin-Like Proteins as Activity-Based Protein Probes", The American Chemical Society Meeting Fall 2025, Washington D.C., Aug 16-21, 2025 (**Invited Speaker** in Bioconjugate Chemistry/PMSE Young Investigator Award: Symposium in Honor of Han Xiao)

10. Liu, W.R., "Phage-Displayed Noncanonical Amino Acids for Peptide-Based Drug Discovery", The American Chemical Society Meeting Fall 2025, Washington D.C., Aug 16-21, 2025 (**Invited Speaker** in the Deep Dive in Drug Discovery: Peptidomimetics Meeting Session)
11. Liu, W.R., "Targeting YEATS – An Epigenetic Reader Domain for Anti-Cancer Drug Discovery", 50th Annual MALTO Medicinal Chemistry and Pharmacognosy Meeting, May 22-23, 2025, College Station, TX (**Keynote Speaker**)
12. Liu, W.R., "Phage-Displayed Noncanonical Amino Acids for Drug Discovery", PepCon-2025, Apr 23-24, 2025, Nara, Japan (**Keynote Speaker**)
13. Liu, W.R., "The Development of Small Molecule Therapeutics for Pandemic Preparation", the Global Annual Meeting on Medicinal Chemistry and Drug Discovery, Mar 10-12, 2025, Rome, Italy (**Keynote Speaker**)
14. Liu, W.R., "Phage-Displayed Noncanonical Amino Acids for Epigenetic Drug Discovery", Cell Symposia: Chemical Biology in Drugging the Undrugged, December 2-4, 2024, San Francisco, CA (**Invited Speaker**)
15. Liu, W.R., "Ubiquitin Azapeptide Esters as Next-Generation Activity-Based Probes for Mapping Cysteine Enzymes in Ubiquitin Proteasome System", Southwest Regional Meeting of American Chemical Society, Oct 22, 2024, Waco, TX (**Invited Speaker**)
16. Liu, W.R., "Next-Generation Activity-Based Probes for Studying the Ubiquitin-Proteasome Pathway", the 2024 Chinese American Chemistry and Chemical Biology Professors' Association Summer Symposium, Aug 17, 2024, Boulder, CO (**Invited Speaker**)
17. Liu, W.R., "Phage-Encoded Noncanonical Amino Acids for Epigenetic Drug Discovery", Telluride Workshop on Epigenetics Mechanisms, Jul 7-12, 2024, Telluride, CO (**Invited Speaker**)
18. Liu, W.R., "An Active Site-Directed Ligand Evolution Strategy Aided by Phage Display", 2024 Texas Chemical Biology Conference, May 24-25, 2024, Houston, TX (**Invited Speaker**)
19. Liu, W.R., "Phage-Displayed Noncanonical Amino Acids (ncAAs) to Direct the Search of Potent Ligands for Epigenetic Proteins", Festival of Biologics 2024, Apr 15-17, 2024, San Diego, CA (**Invited Speaker**)
20. Liu, W.R., "Using a Phage Display System to Target Histone Epigenetic Enzymes and Readers for Drug Discovery", the 2023 Chromatin Modifications in Health and Disease GRC, Bryant University, Smithfield, RI, Jun 11-16, 2023 (**Invited Speaker**)
21. Liu, W.R., "Phage-Displayed Noncanonical Amino Acids for Drug Discovery", PEGS Boston Summit, Boston, MA, May 15-19, 2023 (**Invited Speaker**)
22. Liu, W.R., "A Chemistry-Reprogramed Phage Display Platform to Develop Epigenetic Probes", the 36th SCBA-TX Annual Symposium, Houston, TX, May 6, 2023 (**Invited Speaker**)
23. Khatua K and Liu W.R., "Azapeptides with Covalent Warheads as Potent Irreversible Inhibitors for the SARS-CoV-2 Main Protease", International Conferences on Antiviral Research, Lyon, France, Mar 13-17, 2023 (**Poster**)
24. Liu W.R., "Targeting Essential SARS-CoV-2 Cysteine Proteases for the Development of Antiviral PROTACs", Promega's 1st Targeted Protein Degradation Symposium, Madison, WI, Sept 20-21, 2022 (**Invited Speaker**)
25. Liu, W.R., "The Development of Covalent Inhibitors for the SARS-CoV-2 Main Protease", The American Chemical Society Meeting 2022 Fall, Chicago, IL, Aug 202-5, 2022
26. Qiao Y, Yu G, Kratch K.C., and Liu W.R., "A simple Chemical Method to Synthesize Ub and Ubl Probes for Biological Studies", 36th Annual Symposium of the Protein Society, San Francisco, CA, July 7-10, 2022 (**Poster**)
27. Liu, W.R., "Expressed Protein Ligation without an Enzyme", the 27th American Peptide Symposium, Whistler, Canada, Jun 11-16, 2022 (**Invited Speaker**)

28. Liu, W.R., "Activated Cysteine-Based Protein Ligation: From the Genetic Code Expansion to Ubiquitin/Ubiquitin-Like Proteins", Pacificchem 2021, Dec 16-22, 2021 (**Invited Speaker**)
29. Liu, W.R., "Cellular Activities of SARS-CoV-2 Main Protease Reveals Their Unique Characteristics", Southwest Regional Meeting, American Chemical Society, Nov 1-4, 2021 (**Invited Speaker**)
30. Liu, W.R., "The Development of Reversible Covalent Inhibitors for the SARS-CoV-2 Main Protease", the 3rd RAS Targeted Drug Discovery, Sept 21-23, 2021 (**Invited Speaker**)
31. Liu, W.R., "Targeting the SARS-CoV-2 Main Protease for Drug Discovery", Annual Meeting Virtual Seminar Series, Association of Chinese Americans in Cancer Research, Jul 30, 2021 (**Invited Speaker**)
32. Liu, W.R., "Targeting the SARS-CoV-2 Main Protease for Drug Discovery", Chinese-American Biopharmaceutical Society Webinar: COVID-19 Small Molecule Drug Discovery, Feb 27th, 2021 (**Invited Keynote Speaker**)
33. Liu, W.R., "Targeting the SARS-CoV-2 Main Protease for Drug Discovery", The TAMU-Princeton-Casper-Baylor Summer School on COVID-19, Jul 30, 2020 (**Invited Speaker**).
34. Liu, W.R., "A Click Chemistry Approach Reveals the Chromatin-dependent Histone H3 K36 Deacetylase Nature of Sirt7", American Society of Biochemistry and Molecular Biology, Metabolism and Bioenergetics Spotlight Virtual Meeting, April 16, 2020 (**Invited Speaker**).
35. Liu, W.R., Wang X., & Chen P.S.C., "A Genetic Encoded, Phage Displayed Peptide Library", Chemistry and Biology of Peptides Gordon Research Conference, Ventura Beach Marriot, CA, Feb 9-14, 2020.
36. Liu, W. R., Qiao Y., & Wang X., "Expressed Protein Ligation without Intein", the 4th Chemical Ligation Meeting, the European Peptide Society, Orleans, France, Jan 27-29, 2020 (**Invited Speaker**)
37. Liu, W.R., "Phage-Coded Noncanonical Amino Acids for Drug Discovery", the 2019 China Blood Disease Symposium, Nov 15-17, 2019, Wuhan, China (**Invited Speaker**)
38. Liu, W.R., "Phage-Coded Noncanonical Amino Acids for Drug Discovery", the 2019 International Conference on Aminoacyl-tRNA Synthetases, Nov 5-9, 2019, Hangzhou, China (**Invited speaker**)
39. Liu, W. R., "Using an Expanded Genetic Code to Study Histone Acetylation", The Reversible Protein Acetylation in Health and Disease Conference, Lisbon, Portugal, Aug 4-9, 2019 (**Invited Speaker**)
40. Liu, W. R., "Using the Expanded Genetic Code to Study Epigenetic Modifications", 1st CAPA Award Symposium and CAPA Career Development Workshop, Orlando, FL, Mar 30-31, 2019 (Invited speaker)
41. Liu, W.R., A Click Chemistry Approach to Reveal the Chromatin-Dependent Histone H3 K36 Deacylase Nature of SIRT7, Keystone Symposium: Epigenetics and Human Disease, Banff, Alberta, Canada, Mar 17-21, 2019
42. Liu, W.R., A Click Chemistry Approach to Reveal the Chromatin-Dependent Histone H3 K36 Deacylase Nature of SIRT7, Enzyme Mechanism Conference, New Orleans, LA, Jan 6-9, 2019
43. Liu, W.R., Using an Expanded Genetic Code to Study Epigenetic Modifications, 15th Chinese International Peptide Symposium, Shenzhen, China, Jul 5th, 2018 (**Invited Speaker**)
44. Liu, W.R., Using an Expanded Genetic Code to Study Epigenetic Modifications, Chinese American Chemistry & Chemical Biology Processor Association Conference, Wuhan, China, June 22, 2018 (**Invited speaker**)
45. Liu, W.R., The synthesis of proteins with site-specific lysine methylation/acylation, GRC Research Conference: Posttranslational Modification Networks, Hong Kong, Aug 13-17, 2017 (**Invited Speaker**)

46. Liu W.R., Study Posttranslational Nucleosomal Modifications with an Expanded Genetic code, GRC Research Conference: Translation Machinery in Health & Disease, Galveston, Mar 19-24, 2017 (**Invited Speaker**)
47. Liu, W.R., Expanding chemical diversities of ribosomal peptide natural products with genetically encoded noncanonical amino acids, 72nd Southwest Regional Meeting of American Cancer Society, Galveston, TX, USA, Nov 11-13, 2016 (**Invited Speaker**)
48. Liu, W.R., Probing histone deacetylases with uniquely engineered nucleosomes, 72nd Southwest Regional Meeting of American Cancer Society, Galveston, TX, USA, Nov 11-13, 2016 (**Invited Speaker**)
49. Liu W.R., The synthesis of structurally defined nucleosomes and its applications, tRNA 26th Conference, Jeju, Korea, Sept 4-8, 2016 (**Invited Speaker**)
50. Liu W.R., A refined mechanism of the copper(I)-catalyzed azide-alkyne Huisgen cycloaddition reaction, Pacifichem 2015, Honolulu, HI, Dec 15-20, 2015 (**Invited Speaker**)
51. Liu W.R., Using structurally defined nucleosomes to profile epigenetic targets of histone lysine deacylases and demethylases, Pacifichem 2015, Honolulu, HI, Dec 15-20, 2015 (**Invited Speaker**)
52. Liu W.R., Using structurally defined nucleosomes to profile epigenetic targets of histone lysine deacylases and demethylases, Konstanz Symposium Chemical Biology 2015, Konstanz, Germany, Oct 8-9, 2015 (**Invited Speaker**)
53. Liu W.R., Wang Y.-S., Fang X & Kurra Y., Engineering pyrrolysyl-tRNA synthetase for the genetic incorporation of tyrosine, phenylalanine, and histidine derivatives, Gordon Research Conference, Waterville Valley, NH, June 14-19, 2013
54. Liu W.R. & Lee Y.J., A genetically encoded acrylamide functionality, the 9th Sino-US Symposium on Organic Chemistry, Chengdu, China, Jul 12-14/2013 (**Invited Speaker**)
55. Liu W.R. & Lee Y.J., A fascinating chemistry of a genetic encoded acrylamide, Gordon Research Conference, Proctor Academy, NH, June 9-14, 2013 (**Invited Speaker**)
56. Liu W.R., A Rationally Designed Pyrrolysyl-tRNA Synthetase Has a Broad Substrate Spectrum, Gordon Research Conference, Proctor Academy, NH, June 10-15, 2012
57. Tharp J.M., Wang Y.-S. & Liu W.R., Increasing Insulin Yield by Fusion with Superfolder Green Fluorescent Protein, Abstracts of Papers, 243rd ACS National Meeting & Exposition, San Diego, CA, United States, March 25-29, 2012, CHED-433
58. Odoi K.A. & Liu W.R., Alternative Codon Study for Genetic Code Expansion in *Escherichia coli*, Abstracts of Papers, 243rd ACS National Meeting & Exposition, San Diego, CA, United States, March 25-29, 2012, BIOL-135
59. Wang Y.-S. & Liu W.R., Tools to Study Posttranslational Lysine Modifications of Histone, Chemistry and Biology of Peptides, Gordon Research Conference, Ventura, CA, 02/19-24/2012
60. Wang Y.-S. & Liu W.R., Tools to Study Posttranslational Lysine Modifications of Histone, Chromatin: Structure and Function, Aruba, 12/05-08/2011
61. 67th Southwest Regional Meeting of the American Chemical Society, Austin, TX, 11/09-11/2011
62. Wang Y.-S. & Liu W.R., Genetic Encoding of Methyl- and Acetyl-lysine Analogs into Proteins, Abstracts of Papers, 242nd ACS National Meeting & Exposition, Denver, CO, United States, August 28-September 1, 2011 (2011), BIOL-116
63. Jacobs K.J., Wang Y.-S. & Liu W. "Probing the active site of alanine racemase by incorporation of non-canonical amino acids". Abstracts of Papers, 241st ACS National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011 (2011), CHED-352
64. Huang Y., Wan W. & Liu W. "Facile system for genetic incorporation of two different noncanonical amino acids into one protein in *Escherichia coli*". Abstracts of Papers, 241st ACS National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011 (2011), BIOL-51.

65. Huang Y. & Liu W.R., Site-specific Installation of Two Lysine Derivatives in Histone H3, Enzyme Mechanism Conference, St. Petersburg, FL, 01/02-06/2011
66. Wang Y.-S., Wu B. & Liu W. "Genetically encoded photocaged *N*^ε-methyl-L-lysine". Abstracts of Papers, 240th ACS National Meeting, Boston, MA, United States, August 22-26, 2010 (2010), BIOL-156.
67. Dodd L.E., Wang Y.-S. & Liu W. "Site specific post-translational modifications of protein by expanding the genetic code: Protein methylation and structure enrichment". Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), CHED-458.
68. Wan W., Huang Y. & Liu W.R., Genetic Incorporation of Two Different Noncanonical Amino Acids into One Protein, Challenges in Organic Chemistry and Chemical Biology (ISACS1), San Francisco, 07/06-09/2010
69. Wan W., Huang Y. & Liu W.R., Genetic Incorporation of Two Different Noncanonical Amino Acids into One Protein, Bioorganic Chemistry, Gordon Research Conference, Proctor Academy, 06/13-18/2010
70. Liu W.R., Engineering Pyrrolysyl-tRNA Synthetase for Genetic Code Expansion, The 3rd Texas Enzyme Conference, Austin, TX, 01/80-09/2010
71. Liu W.R., The Genetic Code Expansion, The 4th Sino-US Symposium on Organic Chemistry, Beijing, China, 06/12-13/2008 (**Invited Speaker**)

Teaching Experience:**Texas A&M University****08/07 – curr.**

Fall 24:	CHEM 227.502-257-589 – Organic Chemistry (enrolment: 60)
Fall 23:	CHEM 630 - Bioorganic Chemistry/Chemical Biology (enrolment: 10)
Fall 22:	CHEM 630 - Bioorganic Chemistry/Chemical Biology (enrolment: 12)
Spring 22:	CHEM 630 - Bioorganic Chemistry/Chemical Biology (enrolment: 8)
Spring 21:	CHEM 630 – Bioorganic Chemistry/Chemical Biology (enrolment: 9)
Fall 19:	CHEM 630 – Bioorganic Chemistry/Chemical Biology (enrolment: 13)
Fall 18:	CHEM 228-501-Organic Chemistry (total enrollment: 103)
Fall 17:	CHEM 227.507-508-Organic Chemistry (total enrolment: 207)
Spring 17:	CHEM 630-Bioorganic Chemistry/Chemical Biology (enrolment: 11)
Fall 16:	CHEM 228.517-Organic Chemistry (enrolment: 72)
Spring 16:	CHEM 228.502-Organic Chemistry (enrolment: 69)
Spring 14:	CHEM 630-Bioorganic Chemistry/Chemical Biology (enrolment: 7); CHEM 681.605-Seminar (enrolment: 12)
Fall 13:	CHEM 228.504-Organic Chemistry II (enrolment: 69)
Spring 13:	ChEM 630-Bioorganic Chemistry/Chemical Biology (enrolment: 14); CHEM 681.605-Seminar (enrolment: 13)
Fall 12:	CHEM 228.504-Organic Chemistry II (enrolment: 76)
Fall 11:	CHEM 228.503-Organic Chemistry II (enrolment: 68); CHEM 690.609-Theory of Chemistry Research (enrolment: 5)
Spring 11:	CHEM 630-Bioorganic Chemistry/Chemical Biology (enrolment: 4); CHEM 681.605-Seminar (enrolment: 12)
Fall 10:	CHEM 627-Principals of Biological Chemistry (enrolment: 19)
Spring 10:	CHEM 689.603-S. T. in Chemical Biology (enrolment: 6)
Fall 09:	CHEM 627-Principals of Biological Chemistry (enrolment: 22)
Spring 09:	CHEM 228-Organic Chemistry II (enrolment: 39)
Fall 08:	CHEM 689.603-S. T. in Chemical Biology (enrolment: 6)

Fall 07: CHEM 689.603-S. T. in Chemical Biology (enrolment: 6)

Research Track Faculty Mentored

NAME	PROGRAM	DATE	Position
Shiqing Xu	Chemistry	09/17-12/22	Research Associate
Professor (currently tenure-track Assistant Professor in Chemistry and Pharmacy)			
Dr. Trae Hampton	Chemistry	10/24-curr.	Research Assistant
Professor			

Research Scientists Mentored

NAME	PROGRAM	DATE	Curr. Employer
Dr. Trae Hampton	Chemistry	04/23-09/24	Research Assistant
Professor at TAMU			
Dr. Wenyue Cao	Chemistry	10/24-curr.	

Postdoctoral Researchers Mentored

NAME	PROGRAM	DATE	Curr. Employer
Dr. Thuzar Hla Shwe	IBT	10/24-curr.	
Dr. Guoqing Jin	Chemistry	11/23-curr.	
Dr. Satyanarayana Nylata	Chemistry	01/23-curr.	
Chia-Chuan Cho	Chemistry	10/22-07/24	Demeetra AgBio Inc.
Dr. Nagarjun Mallampudi	Chemistry	10/22-12/22	TAMU Chemistry
Dr. Xuejiao Guo	Chemistry	01/22-curr.	
Dr. Chaoyang Zhu	Chemistry	03/22-03/24	Methodist Research Inst.
Dr. Jing Xiao	Cell Biology	12/21-12/22	Baylor COM
Dr. Sandeep Atla	Chemistry	11/21-curr.	
Dr. Veerabhadra Vulupala	Chemistry	09/21-12/22	TAMU
Dr. Biswajit Saha	Cell Biology	03/21-11/21	Left for India
Dr. Shuhua Gianna Li	Chemistry	09/20-11/21	Left for industry
Dr. Yugendar Alugubelli	Chemistry	11/19-curr.	
Dr. Yuying Ma	Chemistry	06/19-05/21	Professor, Chongqing Medical University
Dr. Kai Yang	Chemistry	04/19-08/22	Left for industry
Dr. Tyler Lalonde	Chemistry	10/19-05/21	McGill University
Dr. Sukant Das	Chemistry	04/18-09/19	Aragen Life Sciences
Dr. Ge Yu	Chemistry	10/17-09/21	Westlake University
Dr. Yanyan Yang	Chemistry	10/12-12/14	Univ. of N. Carolina
Dr. Catrina Reed	Chemistry	09/12-08/14	TAMU Vet School
Dr. Yu Zeng	Chemistry	10/11-08/15	TAMU
Dr. Xinqiang Fang	Chemistry	09/11-06/12	Professor, Chinese Academy of Sciences
Dr. Yadagiri Kurra	Chemistry	07/11-12/17	Left for Wisconsin
Dr. Xiujuan Xin	Chemistry	07/10-06/11	Professor, ECUST
Dr. Zhiyong Wang	Chemistry	09/08-02/11	Professor, Troy University
Dr. Yang Wang	Chemistry	09/07-08/08	Novartis

PhD Students Mentored

NAME	PROGRAM	DATE	Curr. Employer
Penny Yi-Ju Chen	Chemistry	10/25-curr.	
Qorban Scott	Chemistry	10/25-curr.	

Alyssa Toner	Chemistry	10/25-curr.	
Natalia Soto Rodriguez	Chemistry	10/25-curr.	
Anushka Chakraborty	Chemistry	10/24-curr.	
Danye Chen	Chemistry	10/24-curr.	
Hoang-Son Le Lai	Chemistry	09/24-curr.	
Alan Pham	Chemistry	06/24-curr.	
Dorsa Rabie	Chemistry	04/24-curr.	
Abdal Khalifa	Chemistry	11/23-curr.	
Sophea Pa	Chemistry	11/23-curr.	
Rutendo Nyamadzawo	Chemistry	11/23-curr.	
Zihan Zhang	IBT	01/23-curr.	
Yusif Gyasi	Chemistry	10/22-curr.	
Yifan Shi	Chemistry	10/22-curr.	
Sebin Abraham	Chemistry	10/22-curr.	
Saibal Chanda	Biochem.	01/22-curr.	
Lauralee Sylvain	Biochem.	01/22-curr.	
Shivangi Sharma	Chemistry	11/21-curr.	
Gopal Dubey	Chemistry	11/21-curr.	
Swatadipta Chakraborty	Biochem.	12/20-06/25	
Demonta Coleman	Chemistry	10/20-curr.	
Kaustav Khatua	Chemistry	10/19-08/24	
Lauren Blankenship	Chemistry	10/19-05/24	Senior Research Analyst, ONR
Zachery Z. Geng	Chemistry	10/18-08/23	Postdoc, U. of Chicago
Trae Hampton	Chemistry	10/18-03/23	Res. Assist. Prof., TAMU
Chia-Chuan Cho	Chemistry	11/17-10/22	Demeetra AgBio Inc.
Peng-Shun Chen	Chemistry	11/17-09/22	Merck & Co.
Jered Mose	Chemistry	11/16-05/22	Merck & Co.
Kaci Kratch	Chemistry	11/16-06/21	Stern, Kessler, Goldstein & Fox PLLC
Xinyu Ma	Chemistry	11/16-08/21	Sanofi China
Yuchen Qiao	Chemistry	10/16-05/21	BGI Research
Zhipeng Wang	Chemistry	07/14-05/18	Professor, U. Miami
Erol Vatansever	Chemistry	04/14-08/21	Hayat Kimya
Wesley Wang	Chemistry	10/13-08/18	Pfizer
Xiaoshan Wang	Chemistry	11/12-05/18	Uber Technology Inc.
Jeffrey Tharp	Chemistry	11/12-05/18	Professor, Indiana U.
Vangmayee Sharma	Chemistry	11/12-05/17	Intel
Sasha Chihak	Chemistry	11/12-05/16	TAMU
Willie Hsu	Chemistry	01/12-05/17	UTMB
Xiaoyan Wang	Chemistry	10/11-08/16	UTHSC-Houston
Alfred Tuley	Chemistry	11/11-08/15	Professor, UT Austin
Keturah Odoi Adams	Chemistry	11/09-08/16	Professor, SW OSU
Yan-Jiun Lee	Chemistry	10/08-07/15	PI, New England Biolabs
Bo Wu	Chemistry	10/08-05/14	
Ying Huang	Chemistry	10/07-12/11	Sound Biopharmaceuticals
Yane-Shih Wang	Chemistry	10/07-05/12	Professor, Academia Sinica

Master Students Mentored

NAME	PROGRAM	DATE	COMMENTS
------	---------	------	----------

Meghna Muralidhar	BIOT-non-thesis	06/11-06/12	Graduated
-------------------	-----------------	-------------	-----------

Undergraduate Students Mentored

NAME	PROGRAM	Dates
Allison Dement	VMBS	01/15/25-curr.
Matthew Parcelluzi	BioBio	06/01/25-curr.
Jaydaliz Rivera	REU	06/01/25-curr.
Nathan Axtell	Chemistry	09/01/25-curr.
SreeNidhi Karnati	Chemistry	09/01/25-curr.
Jacky Victorina Wright	BIMS	09/01/24-curr.
Lexi Harrel	Forensic	09/01/24-curr.
Eleanor Stokes	Chemistry	01/01/24-curr.
Jessica Math	Biology	01/01/24-curr.
Alejandro Mejias	Chemistry	06/01/24-curr.
Sayna Moatamanhaghighi	Chemistry	01/16/24-curr.
Ryan Fallon	Chemistry	01/16/24-curr.
Linnete Arceo	Biology	01/16/24-curr.
Colby Johnson	Biochem.	01/16/24-curr.
Connor Dobie	Chemistry	06/01/23-05/31/25
Yaswanth Aravapalli	Biochem.	09/01/23-curr.
Jay West	Biochem.	01/01/23-curr.
Ama Udugamasooriya	Chemistry	06/23-05/31/25
Emma Parker	REU(Westminster)	06/23-08/23
Alyssa Toner	REU(CSUSM)	06/23-08/23
Hanul Lewis	Chemistry	03/23-curr.
Armita Paydar	Biochem.	01/22-curr.
Alexis Paredes	Biochem.	01/22-curr.
Moulay Ismael Cherif	Biochem.	01/22-curr.
Aaron Trevino	Biochem.	01/22-curr.
Yesser Lea Tawil	Biochem.	09/21-curr.
Eunhye Jeon	Biology	05/21-12/21
Katerina Gordon	Chemistry	06/21-12/21
Harith Budaraju	Biochem.	08/21-05/23
Alison Gonzalez	Biochem.	08/21-12/21
AJ Brewton	Biochem.	10/21-06/22
Ada Zheng	Biochem.	09/21-06/22
Catherine Poates	Chemistry	01/21-08/22
Luke Altnether	Chemistry	06/20-12/20
William Ellenburg	Chemistry	09/19-05/20
Hannah Ward	Chemistry	05/19-05/20
Danielle Scott	Chemistry	05/19-08/20
Jaye Wilson	Biochem.	09/18-05/20
Demonta Coleman	Medicine	09/18-05/20
Andrew Chapman	Chemistry	09/18-09/19
Oliva Shade	REU Student	06/18-08/18
Nicholas J. Palma	Chemistry	09/17-12/18
Donald G. Woodall	Chemistry	09/17-12/18
Callie M. Frank	Chemistry	06/17-12/17

Hayley Dylla	Chemistry	01/17-08/17
Jacqueline L. Trussell	Chemistry	05/16-08/16
Nora McGuffey	Chemistry	01/16-05/16
Melissa Leonhardt	Bio/Bio	05/15-06/17
Jason McCandless	Chemistry	09/14-06/15
Anastasia Lopez	Chemistry	09/14-06/15
Andrew Daugherty	REU Student	06/14-08/14
Lauren Fore	Chem Engineering	01/14-08/14
Jeannelle Stevens	Chemistry	01/14-06/15
Yuanpeng Bi	Chem Engineering	01/14-05/14
Andrew Bach	Chemistry	05/13-08/13
Josh Chen	Chemistry	05/11-09/12
Ashley Wallace	Chemistry	05/11-09/11
Willie Hsu	Chemistry	01/11-12/11
Jeff Tharp	REU Student	06/11-08/11
Kimberly Jacobs	REU Student	06/10-08/10
Yin Moe	REU Student	06/09-08/09
Lindsey Dodd	REU Student	06/09-08/09
John Oliver	Chemistry	09/08-06/10
Hiren Bhakta	Chemistry	09/07-06/08
Clayton Mercer	Chemistry	09/07-06/08

Committee Membership:

2025-curr.	Scientific Review Board, UT Austin/MDACC Accelerator
2024	Chemistry Department Head Search Committee, TAMU
2023-2025	University Research Compliance Committee
2023-2024	Executive Committee, Chemistry, TAMU
2023-2026	Member, Promotion and Tenure Committee, Department of Biochemistry and Biophysics
2021	P&T Committee chair, Chemistry, TAMU
2021	The Faculty Search Committee, College of Pharmacy, TAMU
2021-2024	Council of Principal Investigators
2020-2022	Texas A&M Emergency Management Advisory Group (TEMAG)
2020-2023	Member, Promotion and Tenure Committee, Department of Biochemistry and Biophysics
2019-2020	Member, Academic Review Committee, Department of Chemistry
2019-2022	Member, Promotion and Tenure Committee, Department of Chemistry
2018-curr.	Chair of the Texas A&M Drug Discovery Center
2018	Faculty Recruiting Committee, Department of Chemistry
2016-2018	Member, University Wide Mass Spectrometry Committee
2016	Chair, CPRIT Recruiting committee, Department of Chemistry
2015-2018	Chair, Chemistry Mass Spectrometry User Committee
2015	Chair, American Chemical Society Texas A&M Local Section
2014-2016	Member, Department of Chemistry Executive Committee
2013-2016	Member, Texas A&M Faculty Senate
2012	Member, Department of Chemistry Self Study Committee
2011-curr.	Member, Professional Program in Biotechnology Executive Committee
2009-2013	Member, Professional Program in Biotechnology Recruiting

	Committee
2007-2015	Member, Undergraduate Student Award Committee
2007-curr.	Member, Graduate Student Recruiting Committee

Graduate Committees:

Leon Li Cyun Chen, PI: Xin Yan, 2024-2029
 Nichele Desse, PI: Lauren Hagler, 2024-2029
 Jeanney Munoz, Chemistry, PI: David Barondeau, 2023-2025
 Esther Odusanwo, Biology, PI: Debora Bell-Pedersen, 2023-2028
 Allison Goetz, Chemistry, PI: Jon Szczepanski, 2021-2026
 Victoria Shearer, Chemistry, PI: Jon Szczepanski, 2021-2026
 Baiyu Zhu, Chemistry, PI: Jon Szczepanski, 2021-2026
 Wen Jiang, Nutrition, PI: Shaodong Guo, Thesis Committee, 2022-2027
 Jordi Hintzen, Physics, Chemistry and Pharmacy, University of Southern Denmark, PI: Jamin Macinovic, Thesis Committee, 2019-2022
 Joshua Diaz, Biochemistry and Biophysics, PI: Jean-Phillip Pellois, 2020-2025
 Tamika Harford, Biology, PI: Dr. Deborah Bell-Petersen, 2021-2016
 Staci Hammer, Biochemistry and Biophysics, PI: Michael Polymenis, Prelim Committee, 2021
 William McGee, Biotechnology, Master Program, Thesis Committee, 2020-2022
 Tingyuan Yang, Chemistry, PI: Xin Yan, Thesis Committee, 2019-2024
 Xuan Han, Chemistry, PI: Jonathan Szczepanski, Thesis Committee, 2019-2024
 Chen-Hsu Yu, Chemistry, PI: Jonathan Szczepanski, Thesis Committee, 2018-2023
 Yan Sheng, Chemistry, PI: Carol Fierke, Thesis Committee, 2018-2023
 He Sun, Chemistry, PI: Jonathan Szczepanski, Thesis Committee, 2018-2023
 Vishav Sharma, Chemistry, PI: Tadhg Begley, Thesis Committee, 2018-2024
 Samantha Schrecke, Chemistry, PI: Arthur Laganowsky, Thesis Committee, 2017-2022
 Wenrui Zhong, Chemistry, PI: Jonathan Szczepanski, Thesis Committee, 2017-2022
 Ran Meng, Biochemistry and Biophysics, PI: Junjie Zhang, Thesis Committee, 2016-2021
 Seth Van Andel, Chemistry, PI: David Barondeau, Thesis Committee, 2016-2021
 Charles Deckard, Chemistry, PI: Jonathan Szczepanski, Thesis Committee, 2015-2020
 Avick Ghosh, Chemistry, PI: Tadhg Begley, Thesis Committee, 2016-2024
 Indranil Samanta, Chemistry, PI: Tadhg Begley, Thesis Committee, 2016-2024
 Aunshree Mondal, Chemistry, PI: Tadhg Begley, Thesis Committee, 2016-2021
 Ruiliang Lyu, Chemistry, PI: Kevin Burgess, Thesis Committee, 2015-2020
 Adam Kabza, Chemistry, PI: Jonathan Szczepanski, Thesis Committee, 2015-2020
 Nandini Kundu, Chemistry, PI: Jonathan Szczepanski, Thesis Committee, 2015-2020
 Yi-Tsang Lee, Biotechnology, Thesis Committee, 2014-2016
 Sumedh Joshi, Chemistry, PI: Tadhg Begley, Thesis Committee, 2014-2019
 Yanyou Wang, Chemistry, PI: Tadhg Begley, Thesis Committee, 2012-2017
 Mavreen Tuvilla, Chemistry, PI: David Russell, Thesis Committee, 2011-2013
 Kenton Rauwerdink, Chemistry, PI: Karen Wooley, Thesis Committee, 2010-2015
 Sarah Lane, Chemistry, PI: Kim Dunbar, Thesis Committee, 2010-2012
 Amanda Lopez, Chemistry, PI: Kim Dunbar, Thesis Committee, 2010-2015
 Rung-Yi Lai, Chemistry, PI: Tadhg Begley, Thesis Committee, 2010-2015
 Yiquan Liu, Chemistry, PI: Tadhg Begley, Thesis Committee, 2010-2015
 Kellymar Rosar-Perez, PI: Jiong Yang, Thesis Committee, 2009-2014
 Sean Collin, Chemistry, PI: Daniel Singleton, Thesis Committee, 2009-2011
 Gunjot Rana, Biotechnology, Thesis Committee, 2008-2010

Meghana Krishna, Biotechnology, Thesis Committee, 2008-2010
Nicholas Fox, Chemistry, PI: David Barondeau, Thesis Committee, 2007-2012
Argentina Ornelas, Chemistry, PI: Frank Raushel, Thesis Committee, 2007-2012

Editorial Board Member:

Scientific Reports: 2014-curr.
Acta Pharmaceutica Sinica B: 2019-curr.

Associate Editor:

Frontiers in Chemical Biology: 2020-curr.
PLOS Pathogens Guest Associate Editor: 2022

Journal Article Review:

Accounts of Chemical Research, ACS Bio & Medicinal Chemistry Au, ACS Central Science, ACS Chemical Biology, ACS Combinatorial Chemistry, ACS Infectious Diseases, ACS Medicinal Chemistry Letters, ACS Nano, ACS Pharmacology, ACS Synthetic Biology, Acta Biochimica et Biophysica Sinica, Acta Pharmaceutica Sinica B, Advanced Biology, Advanced Science, Angewandte Chemie, Antiviral Research, Applied Biochemistry & Biotechnology, Biochemistry, Bioorganic & Medicinal Chemistry, Bioorganic & Medicinal Chemistry Letters, Bioconjugate Chemistry, Biomacromolecules, Biotechnology Journal, CCC Chemistry, Cell Chemical Biology, Cell Reports Physical Sciences, Chem, ChemBioChem, Chemical Communications, Chemical Sciences, ChemMedChem, European Journal of Medicinal Chemistry, Experimental Cell Research, FEBS, FEBS Letters, Frontiers in Bioengineering, Frontiers in Chemical Biology, Genetics, Genome Research, JACS Au, Journal of American Chemical Society, Journal of Bionic Engineering, Journal of Medicinal Chemistry, Journal of Molecular Structure, Journal of Molecular Virology, Journal of Pharmaceutical Analysis, Medical Oncology, Molecular BioSystems, Molecules, Nature Chemistry, Nature Chemical Biology, Nature Communications, Nucleic Acid Research, Nutrition & Metabolism, PLOS One, PLOS Pathogens, Proceedings of National Academy of Sciences, Protein Science, Results in Chemistry, RSC Chemical Biology, RSC Medicinal Chemistry, Science Advances, Science China Chemistry, Scientific Reports, Science, Science Translational Medicine, Nature Reviews Chemistry, Journal of Enzyme Inhibitor and Medicinal Chemistry

Grant Proposal Review:

07/2025	NIH ZRG1 CTH-V(10B) Study Section
04/2025	NIH CZA1 SRB-2(M4)B Study Section
02/2025	NSERC: John C. Polani Award Program
02/2025	NIH ZCA1 SRB-F(M2)S Study Section
01/2025	UT Austin & MD Anderson Accelerator Grant Reviewer
11/2024	UK Research and Innovation Funding Service
11/2024	NIH DMPC Study Section
07/2024	Swiss National Science Foundation
06/2024	ad hoc Reviewer, NIH Special Emphasis Panel: ZRG1 BBBT-X(57)
03/2024	Israel Science Foundation

03/2023	Reviewer for Ralph E. Powe Awards 2023
10/2022	Member and Alternative Chair, NIH Study Section: ZRG DCAI-B(82)
07/2022	The Paul G. Allen Frontiers Group, the ADI Program
12/2021	<i>ad hoc</i> Reviewer, the UK MRC-MCMB Grant Review
11/2021	Member, NIH Study Section: ZRG1 AIDC-B(82)
03/2021	Member, NIH Study Section: ZRG1 BCMB-G(10)B
02/2021	<i>ad hoc</i> Reviewer, Research Grant Council, Hongkong
10/2020	<i>ad hoc</i> Member, National Institutes of Health, Study Section: EBIT
02/2020	Panellist, National Science Foundation, Division of Chemistry
02/2020	<i>Ad hoc</i> Reviewer, Hongkong Research Grant Council
10/2019	<i>Ad hoc</i> reviewer, EU NWO Program
02/2019	<i>Ad hoc</i> reviewer, NSF Chemistry of Life Processes Program
02/2018	<i>ad hoc</i> Member, NIH Study Section: SBCB
10/2016	<i>ad hoc</i> Member, NIH Study Section: EBIT
09/2015	Panellist, National Science Foundation, Division of Chemistry
05/2015	Reviewer, French National Research Agency Science Program
09/2014	Reviewer, National Science Foundation CAREER Award Program
09/2014	Reviewer, W. M. Keck Foundation Medical Research Program
07/2014	Reviewer, UNL Biomedical Research Seed Grant Program
05/2014	Reviewer, Texas A&M-NSFC Research Grant Program
04/2014	Panellist, National Science Foundation, Division of Chemistry
02/2014	Reviewer, NIH Study Section: BCMB
05/2013	Reviewer, National Science Foundation, Division of MCB
04/2013	Reviewer, Israel Science Foundation
02/2013	Panellist, National Science Foundation, Division of Chemistry
03/2012	Panellist, National Science Foundation, Division of Chemistry
