Yufeng Wei, Ph.D.

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Professional Preparation

Peking University, Beijing, China	Chemistry	B.S.
Columbia University, New York, NY	Biochemistry	Ph.D.
University of Michigan, Ann Arbor, MI	Biophysics	Postdoc

Appointments

Positions and Employment

2015 – present Assitant Professor, Department of Chemistry, New Jersey City University, Jersey City, NJ
2013 – 2015 Assistant Director, Institute of NeuroImmune Pharmacology, Seton Hall University, South Orange, NJ
2010 – 2013 Member of the Adjunct Faculty, Rockefeller University, New York, NY

Professional Memberships

- Member, American Chemical Society (ACS); **Chair** – Hudson-Bergen ACS, 2017, 2019
- Member, New York Academy of Sciences; **Bicentennial Ambassador** 2017-2019
- Member, American Society for Biochemistry and Molecular Biology

Selected Synergistic Activities

1. Association of American Colleges & Universities (AAC&U) Project Kaleidoscope (PKAL) STEM Leadership Institute, 2019
2. Founder and Faculty Advisor for ASBMB (American Society for Biochemistry and Molecular Biology) NJCU Student Chapter, 2017-present
3. Chair, American Chemical Society Hudson-Bergen Subsection, 2017 and 2019
4. Chair-Elect Candidate, American Chemical Society New York Local Section, 2019
5. Review Panel, Alliance Leadership Training program of the New York Academy of Sciences Science, 2019
6. American Chemical Society project SEED scientific mentor, North Jersey/New York ACS sections
7. Liberty Science Center Partners in Science mentor
8. Peer reviewer: Journal of the American Chemical Society, Biochemistry, Accounts of Chemical Research, Chemical Review, Journal of Physical Chemistry, Biochimica et Biophysica Acta

(BBA), Current Medicinal Chemistry, Pharmaceuticals, International Journal of Molecular Sciences, PLoS One, Food Chemistry, International Immunopharmacology

Publications

http://www.ncbi.nlm.nih.gov/sites/myncbi/yufeng.wei.1/bibliography/44976399/public/?sort=date&direction=descending

1. Wei Y, McDermott AE, Effects of Hydrogen Bonding on ^{1}H Chemical Shifts, in *Modeling Chemical Shifts: Gaining Insights into Structure and Environment*, ACS Symposium Series, **1999**, American Chemical Society: Washington, D.C., pp. 177-193.
2. Wei Y, deDios AC, McDermott AE, Solid State ^{15}N Chemical Shift Anisotropy of Histidine: Experimental and Theoretical Studies of Hydrogen Bonding, *J. Am. Chem. Soc*. **1999**; 121: 10389-10394.
3. Wei Y, Lee D-K, and Ramamoorthy A, One-Dimensional Dipolar-Shift Spectroscopy Under Magic Angle Spinning to Determine the Chemical-Shift Anisotropy Tensors, *Chem. Phys. Lett*. **2000**; 324: 20-24.
4. Lee D-K, Wei Y, and Ramamoorthy A, A Two-Dimensional Magic Angle Decoupling and Magic Angle Turning Solid-State NMR Method – An Application to Study Chemical Shift Tensors from Peptides That Are Non-Selectively Labeled with ^{15}N Isotope, *J. Phys. Chem. B* **2001**; 105: 4752-4762.
5. Wei Y, Lee D-K, and Ramamoorthy A, Solid-State ^{13}C NMR Chemical Shift Anisotropy Tensors of Polypeptides, *J. Am. Chem. Soc*. **2001**; 123: 6118-6126.
6. Wei Y and Ramamoorthy A, Two-Dimensional ^{15}N-^{15}N Isotropic Chemical Shift Correlation Established by ^{1}H Spin Diffusion in Biological Solids, *Chem. Phys. Lett*. **2001**; 342: 312-316
7. Wei Y, Lee D-K, Hallock KJ, and Ramamoorthy A, One-Dimensional ^{1}H-Detected Solid-State NMR Experiment to Determine Amide-^{1}H Chemical Shifts in Peptides, *Chem. Phys. Lett*. **2002**; 351: 42-46.
8. Wei Y, Lee D-K, McDermott AE, and Ramamoorthy A, Recovery of Dipolar and Chemical Shift Anisotropic Interactions and Sideband Enhancement under Magic Angle Spinning, *J. Magn. Reson*. **2002**; 158: 23-35.
9. Hill JH, Morisawa G, Kim T, Huang T, Wei Y, Wei Y, and Werner MH, Identification of an Expanded Binding Surface on the FADD Death Domain Responsible for Interaction with CD95/Fas, *J. Biol. Chem*. **2004**; 279: 1474-1481.
10. Ramamoorthy A, Wei Y, and Lee D-K, PISEMA Solid-State NMR Spectroscopy, *Annu. Rep. NMR Spectrosc*. **2004**; 52: 1-52.
11. Lambert LJ, Wei Y, Schirf V, Demeler B, and Werner MH, T4 AsiA blocks DNA recognition by remodeling σ^{70} region 4, *EMBO J*. **2004**; 23: 2952-2962.
12. Carrington PE, Sandu C, Wei Y, Hill JM, Morisawa G, Huang T, Gavathiotis E, Wei Y, and Werner MH, The Structural of FADD and Its Mode of Interaction with Procaspase-8, *Mol. Cell* **2006**; 22: 599-610.
13. Wei Y and Werner MH, iDC: A Comprehensive Toolkit for the Analysis of Residual Dipolar Couplings for Macromolecular Structure Determination, *J. Biomol. NMR* **2006**; 35: 17-25.

14. Wei Y, Liu S, Lausen J, Woodrell C, Cho S, Biris N, Kobayashi N, Wei Y, Yokoyama S, and Werner MH, A TAF4-homology domain from the corepressor ETO is a docking platform for positive and negative regulators of transcription, *Nat. Struct. Mol. Biol*. **2007**; 14: 653-661.
    - Protein Data Bank deposit: PDB ID 2PP4
15. Twomey EC, Wei Y*, High-Definition NMR Structure of PED/PEA-15 Death Effector Domain Reveals Details of Key Polar Side Chain Interactions, *Biochem. Biophys. Res. Commun*. **2012**; 424: 141-146, doi: 10.1016/j.bbrc.2012.06.091
    - Protein Data Bank deposit: PDB ID 2LS7 – High Definition Solution Structure of PED/PEA-15 Death Effector Domain
16. Twomey EC, Cordasco DF, Wei Y*, Profound Conformational Changes of PED/PEA-15 in ERK2 Complex Revealed by NMR Backbone Dynamics, *Biochim. Biophys. Acta – Proteins and Proteomics* **2012**; 1824: 1382-1393, DOI: 10.1016/j.bbapap.2012.07.001.
17. Twomey EC, Cordasco DF, Kozuch SD, Wei Y*, Substantial Conformational Change and Roles of Charge Triad of Death Effector Domain in Mediating Protein-Protein Interactions, *PLoS ONE* **2013**; 8(12): e83421, DOI: 10.1371/journal.pone.0083421
18. Wei Y*, Twomey EC, NMR Spectroscopic Characterization of Death Domain Superfamily Proteins: Structures, Dynamics, and Interactions, in D. K. Rao (Ed.), *Nuclear Magnetic Resonance (NMR): Theory, Applications and Technology* **2014**, 83-110, Hauppauge, NY: Nova Science Publishers
19. Chang SL, Connaghan KP, Wei Y, & Li MD. (2014). NeuroHIV and Use of Addictive Substances. *Int Rev Neurobiol* **2014**, 118: 403-440. doi: 10.1016/b978-0-12-801284-0.00013-0
20. Raymond KA, Twomey EC, Wei Y*, Characterization of temperature-sensing and PIP_2-regulation of TRPV1 ion channel at the C-terminal domain using NMR spectroscopy and Molecular Dynamics Simulations, *J. Integrated OMICS* **2014**; 4(2): 79-86, DOI: 10.5584/jiomics.v4i2.158
21. Wei Y*, On the Quest of Cellular Functions of PEA-15 and the Therapeutic Opportunities, *Pharmaceuticals* **2015**; 8: 455-473, DOI: 10.3390/ph8030455
22. Liu X, Connaghan KP, Wei Y, Yang Z, Li MD, Chang SL., Involvement of the Hippocampus in Binge Ethanol-Induced Spleen Atrophy in Adolescent Rats, *Alcoholism, clinical and experimental research* **2016**; 40(7):1489-500, DOI: 10.1111/acer.13109
23. Crespo-Flores SL, Cabezas A, Hassan S, Wei Y. PEA-15 C-Terminal Tail Allosterically Modulates Death-Effector Domain Conformation and Facilitates Protein-Protein Interactions. *International Journal of Molecular Sciences* **2019**; 20(13). doi: 10.3390/ijms20133335.

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Research Support

Ongoing Research Support

Cutting-Edge Basic Research Awards (CEBRA)
R21 DA046223 (Year 1 -2) [PI: Yufeng Wei] 09/15/2018 – 08/31/2020
NIH/National Institute on Drug Abuse $286,710
Allosteric regulation and phosphorylation homeostasis of PEA-15 in protection of brain microvascular endothelial cells against methamphetamine and HIV-1 Tat

Using advanced in vitro and in-cell NMR spectroscopic techniques, we investigate the roles of PEA-15 protein in protecting brain microvascular endothelial cells against the assault of methamphetamine (METH) and HIV-1 virial proteins, maintaining the integrity of the blood-brain barrier in HIV-1 infected METH abusers. ***(Role: Principal Investigator)***

Research Support Completed During the Recent Years

Academic Research Enhancement Awards (AREA)
R15 CA179410 (Years 1-3) [PI: Yufeng Wei] 07/16/2013 – 06/30/2017
NIH/National Cancer Institute $329,803
Conformations and Dynamics of PED/PEA-15 in Protein-Protein Interactions
Employing novel NMR experimental and computational techniques, this structural biology and biophysics research explores the interactions between PED/PEA-15 and ERK2, a MAP kinase, with a focus on the conformations and protein motions in regulation of the MAP kinase pathway that affects cell proliferation and migration. ***(Role: Principal Investigator)***

R21 AA023172 (Year 1-2) [PI: Sulie L. Chang] 09/28/2014 – 08/31/2016
NIH/National Institute of Alcohol Abuse and Alcoholism
Involvement of TRP Channels in Ethanol Concentration-Dependent Effects on Immune Responses
This exploratory grant application is to examine how TRP channels mediate ethanol effects on innate immunity in a concentration-dependent manner. The proposed research combines molecular biophysics and structural biology with animal models to tackle the mechanisms of how ethanol exerts its potent effects through molecular protein targets. (***Role: Co-Investigator***)

Awards

- The National Society of Leadership and Success Excellent in Teaching Award 2019
- ASBMB Undergraduate Faculty Travel Award 2018
- ABRCMS (Annual Biomedical Research Conference for Minority Students) Judge Travel Award 2017