TINGWEI MU
CURRICULUM VITAE

PERSONAL INFORMATION

Name: Mu, Tingwei

Education

School: University of Science and Technology of China
Degree: BS, Chemistry (00 class). Advisor: Qing-Xiang Guo
Dates: 1995-2000

School: California Institute of Technology
Degree: PhD, Chemistry. Advisors: Dennis A Dougherty, Henry A Lester
Dates: 2000-2005

Post-Graduate Training

Institution: The Scripps Research Institute, La Jolla, CA
Position: Postdoctoral Research Associate. Advisor: Jeffery W Kelly
Dates: 2005-2010

Ph.D. Thesis

Title: A Chemical-Scale Study on the Ligand-Binding Site of a Serotonin-Gated Ion Channel
Ph.D. Thesis Committee: Dennis A Dougherty
Henry A. Lester
Linda Hsieh-Wilson
William Goddard
Douglas Rees

Contact Information

Department: Department of Physiology and Biophysics
Office Address: Robbins Bldg, Room E513
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ACADEMIC APPOINTMENTS (list recent to oldest)

Position/Rank: Associate Professor
Institution/Department: Department of Physiology and Biophysics
Department of Neuroscience (secondary)
Case Western Reserve University School of Medicine
Dates: July 2019 to present

Position/Rank: Assistant Professor
Institution/Department: Department of Physiology and Biophysics
Department of Neuroscience (secondary)
Case Western Reserve University School of Medicine
Dates: January 2011 to June 2019

Position/Rank: Visiting Assistant Professor
Institution/Department: Department of Physiology and Biophysics
Case Western Reserve University School of Medicine
Dates: November 2010-December 2010

HONORS AND AWARDS

Invited Talks:

- ER Stress Club, Sanford Burnham Institute, February 2021
  Title: Pharmacologic ATF6 Activation Remodels the Proteostasis Network to Rescue Pathogenic Neuroreceptors
- Department of Genomic Medicine, Cleveland Clinic, November 2020
  Title: Proteostasis maintenance of Neurotransmitter-Gated Ion Channels
- Department of Chemistry, University of Kentucky, October 2019
  Title: Adapting the proteostasis network to ameliorate ion channel folding diseases
- Department of Neuroscience and Experimental Therapeutics, Albany Medical College, March 2019
  Title: Adapting the Proteostasis Network to Ameliorate $GABA_A$ Receptor Folding/Assembly Diseases
- Department of Neuroscience, Case Western Reserve University, January 2019
  Title: Proteostasis maintenance of neuroreceptors
- Federation of American Societies for Experimental Biology (FASEB) meeting, Protein Folding in the Cell, Olean, NY, July 2018
  Title: Assembly chaperones for multi-subunit neuroreceptors in the endoplasmic reticulum
- Department of Physiology, University of Pennsylvania, December 2017
  Title: Adapting the Protein Homeostasis Network to Ameliorate GABAA Receptor Folding/Assembly Diseases
- Protein folding disease initiative, University of Michigan, Ann Arbor, MI, November 2017
  Title: Adapting the Protein Homeostasis Network to Ameliorate GABAA Receptor Folding/Assembly Diseases
- Department of Pharmacology, Case Western Reserve University, October 2017
  Title: Adapting the Protein Homeostasis Network to Ameliorate GABAA Receptor Folding/Assembly Diseases
- American Society for Biochemistry and Molecular Biology (ASBMB) Annual Meeting at Experimental Biology, San Diego, CA, Apr 2016
  Title: Elucidating Endoplasmic Reticulum-Associated Degradation Pathway for GABAA Receptors
- Department of Pathology, Case Western Reserve University, Oct 2015
  Title: Adapting GABAA Receptor Protein Homeostasis to Ameliorate Idiopathic Epilepsy
- Federation of American Societies for Experimental Biology (FASEB) meeting, From Unfolded Proteins in the ER to Disease, Saxtons River, VT, Jun 2015
  Title: Using small molecules to restore GABAA receptor proteostasis
- Epilepsy Grand Rounds, Epilepsy Center, University Hospitals, Cleveland, OH, Nov 2012
  Title: Adapting GABAA Receptor Protein Homeostasis to Ameliorate Idiopathic Epilepsy
- American Society for Investigative Pathology (ASIP) Annual Meeting at Experimental Biology, San Diego, CA, Apr 2012
  Title: Manipulating the ER-associated degradation pathway to regulate GABAA receptor proteostasis
- Rammelkamp Research Conference, the MetroHealth System, Case Western Reserve University, Apr 2012
  Title: Adapting GABAA Receptor Protein Homeostasis to Ameliorate Idiopathic Epilepsy
- Cystic fibrosis Seminar, School of Medicine, Case Western Reserve University, Nov 2010
  Title: Adapting the Protein Homeostasis Network to Ameliorate Protein Folding Diseases
- Department of Chemistry, University of Nebraska Lincoln, Lincoln, NE, Feb 2010
  Title: Adapting the Protein Homeostasis Network to Ameliorate Protein Folding Diseases
- Department of Biochemistry, University of Utah, Salt Lake City, UT, Jan 2010
  Title: Adapting the Protein Homeostasis Network to Ameliorate Protein Folding Diseases
- Department of Chemistry, Boston College, Chestnut Hill, MA, Dec 2009
  Title: Adapting the Protein Homeostasis Network to Ameliorate Protein Folding Diseases
- Department of Chemistry, Emory University, Atlanta, GA, Dec 2009
  Title: Adapting the Protein Homeostasis Network to Ameliorate Protein Folding Diseases
- Department of Physiology and Biophysics, Case Western Reserve University, Cleveland, OH, Nov 2009
  Title: Adapting the Protein Homeostasis Network to Ameliorate Protein Folding Diseases
- Department of Biomedical Sciences, Florida State University, Tallahassee, FL, Nov 2009
  Title: Adapting the Protein Homeostasis Network to Ameliorate Protein Folding Diseases
- Department of Pharmacology, Baylor College of Medicine, Houston, TX, Mar 2009
  Title: Using Chemistry to Study Ion Channels and Protein Misfolding Diseases
- Department of Chemistry, University of Florida, Gainesville, FL, Jan 2009
  Title: Using Chemistry to Study Ion Channels and Protein Misfolding Diseases
- Department of Chemistry, University of Pittsburgh, Pittsburgh, PA, Nov 2008

Title: Using Chemistry to Study Ion Channels and Protein Misfolding Diseases
- Metachromatic Leukodystrophy Disease (MLD) Symposium, DeKalb, IL, Sep 2008
  Title: Restoring Protein Homeostasis to Ameliorate Lysosomal Storage Diseases
- The American Chemical Society 234th National Meeting, Boston, MA, Aug 2007
  Title: Regulation of Protein Homeostasis by Ca^{2+} Homeostasis in Lysosomal Storage Diseases

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- American Chemical Society (2001-)
- Biophysical Society (2005-)
- American Association for the Advancement of Science (2007-)
- American Society for Cell Biology (2010-)
- American Society for Biochemistry and Molecular Biology (2013-)
- Society of Neuroscience (2018-)

PROFESSIONAL SERVICES

Ad hoc Reviewer for Grants

- NIH CSF-1 (Cell Structure and Function-1) study section, Feb 2022
- NIH NCATS Rare Diseases Special Emphasis Panel study section, September 2021
- NIH NDPR (Neurodifferentiation, Plasticity, Regeneration and Rhythmicity) study section, June 2021
- NIH NTRC (Neurotransporters, Receptors, Channels and Calcium Signaling) Study Section, October 2020
- NIH TAG (Therapeutic Approaches to Genetic Diseases) Study Section, June 2020
- NIH SYN (Synapses, Cytoskeleton and Trafficking) Study Section, October 2018
- NIH BPNS (Biophysics of Neural Systems) Study Section, July 2018
- Clinical and Translational Science Collaborative, Case Western Reserve University, 2016
- Telethon (Italy), 2015
- Center for Clinical and Translational Science, Ohio State University, 2014 and 2015
- Medical Research Council (MRC) Clinical Research Grant (UK), 2013

Editorial Board Member for Journals:

Frontiers in Cellular Neuroscience

Ad hoc Reviewer for Journals:

Molecular Cell, Science Signaling, Cell Chemical Biology, Journal of Biological Chemistry, Molecular Neurobiology, Molecular Biology of the Cell, Biochemistry, ACS Chemical Biology, ACS Chemical Neuroscience, Molecular Medicine, Scientific Reports, PLoS One, Pharmacological Research, Frontiers in Cellular Neuroscience, Frontiers in Pharmacology, Frontiers in Immunology et al.

COMMITTEE SERVICE

Other Departmental Committees

- Member, Interview Committee for Medical School Students, 2019-present
- Member, Department Infrastructure Committee, 2019-present
- Faculty member, Biomedical Graduate Students Symposium, 2018-present
- Member, Department Fellowship Committee, 2017-present
- Member, Department Committee for Appointments, Promotion and Tenure (CAPT), 2013-2016
- Member, Department retreat organization committee, 2012-present
- Interviewing students for department, Medical Scientist Training Program, Biomedical Sciences Training Program
- Judge for CWRU Biomedical Graduate Student Symposium (BGGS)
- Judge for DPB Recknagel Symposium

PhD Thesis Committee member

- Jessica Dudman, BSTP, since August 2019
- Cassandra Barone, BSTP, since June 2022
- Brandon Miller, BSTP, since June 2022
- Madeleine Stauffer, BSTP, since June 2022

PhD Qualifying Exam Committee member

- Michael Glidden, MD Ph.D. student, Physiology & Biophysics, August 2014

- Yvonne Gicheru, Structural Biology and Biophysics Training Program, September 2015
- Yuan Cai, Physiology & Biophysics, September 2106
- Sheng Gong, Physiology & Biophysics, September 2017
- Raza Haidar, Physiology & Biophysics, October 2018

TEACHING ACTIVITIES

Trainees / Mentees

Postdoctoral Researchers

- Dr. Peipei Zhang, Fall 2021 to present
- Dr. Xu Fu, Summer 2020 to summer 2022
- Dr. Meng Wang, Summer 2018 to summer 2022
- Dr. Shumsuzzaman Khan, Spring 2019 to Spring 2020
- Dr. Xiaojing Di, Fall 2011 to summer 2017
- Dr. Dongyun Han, Spring 2011 to Spring 2015

Research Technicians

- Angela Whittsette, Summer 2020 to summer 2022
- Yingying Yang, Fall 2020 to Summer 2021

Ph.D. Students

- Yanlin (Kate) Fu, Spring 2012 to Spring 2019, Physiology & Biophysics
- Taylor Benske, Spring 2021 to present, BSTP

Master Student Researchers

- Brian Mcmains, entering 2013
- Haesun Souh, entering 2014
- Yingying Yang, entering 2018

Undergraduate Students

- Angela Whittsette, Fall 2018 to Spring 2020, Biology, Case Western Reserve University
- Emily Feng, Fall 2019 to Spring 2020, Biochemistry, Case Western Reserve University
- Hailey Seibert, Fall 2019 to present, Biochemistry, Case Western Reserve University
- Ryan Gilbert, Spring 2021 to present, Chemical Biology & Psychology, Case Western Reserve University
- Adrian Palumbo, Fall 2021 to present, Case Western Reserve University
- Giang Vu, Fall 2021 to present, Case Western Reserve University
- Shahyan Khan, Spring 2022 to present, Case Western Reserve University

Rotation Ph.D. Students

- Panjamaporn (Pam) Sangwung, Fall 2011 to Spring 2012, Physiology & Biophysics
- Yanlin (Kate) Fu, Spring 2012, Physiology & Biophysics
- Qiuye Li, Fall 2013, Physiology & Biophysics
- Dong Liu, Fall 2014, Physiology & Biophysics
- Xu Han, Fall 2014, Structural Biology and Biophysics Training Program
- Di Hu, Fall 2014, Physiology & Biophysics
- Yuan Cai, Fall 2015, Physiology & Biophysics
- Yutong Shang, Fall 2016, Physiology & Biophysics
- Minghua Li, Fall 2019, BSTP
- Brandon Miller, Fall 2020, BSTP
- Yeojung Koh, Fall 2020, BSTP
- Taylor Benske, Fall 2020, BSTP

Summer Undergraduate Students

- Tracy Tabib, 2011, Biology, American University
- Renae Brown, 2012, Biology, Case Western Reserve University
- Thomas Dreyer, 2014, Biology, Cedarville University
- Urieliz Cintron, 2015, Biomedical Sciences, University of Puerto Rico in Ponce
- Mohamad Saleh Alabdaljabar, 2016, Alfaisal University, Saudi Arabia
- Julisha Patten, 2016, Biology, Bowie State University
- Angela Whittsette, 2017, 2018, and 2019, Biology, Case Western Reserve University
- Talya Jeter, 2021, Biomedical Engineering and Neuroscience, Duke University

Summer High School Students

- Anjali Jawa, 2022, Hawken School

Teaching Activities

- *Sciences and Art of Medicine Integrated (SAMI)*: DKA (diabetic ketoacidosis) case. May 7, 2021.
- DPB Grant writing workshop, since 2021
- PHOL483, *Translational Physiology I*, Fall 2011, Fall 2012, Fall 2019 to present
- PHOL401B, *Physiology and Biophysics of Molecules and Cells*, since Spring 2018
- PHOL651, Thesis (master), Fall 2020-Spring 2022
- PHOL601, Lab Research
- *Medical School Team Based Learning*: Block 2 (Cell signaling), 2016-2018; Block 4 (Cardiovascular Cell Physiology), since 2016; Block 4 (Action potential simulation-computer lab), since 2018.
- *Medical School Medium Group Teaching*, Block 2 (Cell signaling) (Fall 2013, Fall 2014); Block 4 (Cardiovascular Cell Physiology) (Spring 2014, Spring 2015); Block 4 (Action potential simulation-computer lab), 2014-2017; Block 6 (Neurotransmitters) (Fall 2017, Fall 2020).
- Academic advisor for master students (8 students entering in 2018, 8 students entering in 2016, 7 students entering in 2015, 6 students entering in 2014, and 6 students entering in 2013)
- PHOL451, *Independent Study in Physiology*, summer 2016, summer 2015
- PHOL402, *Physiology Basis for Disease*, Fall 2014
- PHOL456, *Proteins and Nucleic Acids*, Fall 2012
- PHOL476, *Cell Biophysics*, Spring 2011

BIBLIOGRAPHY *(published or in press only) (should be numbered and in chronological order)*

Complete List of Published Work in My Bibliography:
http://www.ncbi.nlm.nih.gov/myncbi/tingwei.mu.1/bibliography/45121953/public/?sort=date&direction=descending

https://scholar.google.com/citations?user=1eEkO9MAAAAJ&hl=en

ORCiD: 0000-0002-6419-9296

Publications

At Case Western Reserve University

1. Wang YJ, Di XJ, **Mu TW** (2022) Quantitative interactome proteomics identifies proteostasis network for GABAA receptors. BioRxiv, doi: https://doi.org/10.1101/2022.03.08.483512
2. Whittsette AL, Wang YJ, **Mu TW** (2022) The Endoplasmic Reticulum Membrane Complex Promotes Proteostasis of $GABA_A$ Receptors. BioRxiv, doi: https://doi.org/10.1101/2022.03.03.482920. *iScience*, in press.
3. Wang M, Cotter E, Wang YJ, Fu X, Whittsette AL, Lynch JW, Wiseman RL, Kelly JW, Keramidas A, **Mu TW** (2022). Pharmacologic ATF6 Activation Remodels the Proteostasis Network to Rescue Pathogenic Neuroreceptors. *Cell & Bioscience*. https://doi.org/10.1186/s13578-022-00783-w. PMID: 35477478
4. Di XJ, Wang YJ, Cotter E, Wang M, Whittsette AL, Han DY, Sangwung P, Brown R, Lynch JW, Keramidas A, **Mu TW**, Proteostasis regulators restore function of epilepsy-associated GABAA receptors, Cell Chem Biol 2021, 28, 46-59. e7. https://doi.org/10.1016/j.chembiol.2020.08.012. PMID: 32888501.
5. Yan-Lin Fu, Bin Zhang, and **Ting-Wei Mu** (2019) LMAN1 (ERGIC-53) promotes the trafficking of neuroreceptors. *Biochemical and Biophysical Research Communications*. 511(2):356-362. PMID: 30791981.
6. Yan-Lin Fu, Dong-Yun Han, Ya-Juan Wang, Xiao-Jing Di, Hai-Bo Yu, and **Ting-Wei Mu** (2018) Remodeling the Endoplasmic Reticulum Proteostasis Network Restores Proteostasis of Pathogenic $GABA_A$ Receptors. *PLoS ONE*, 13(11):e0207948. PMID: 30481215.
7. Dawid Krokowski, Bo-Jhih Guan, Jing Wu, Yuke Zheng, Padmanabhan Pattabiraman, Raul Jobava, Xiao-Jing Di, Martin Snider, **Ting-Wei Mu**, Eric Pearlman, Anna Blumental-Perry, and Maria Hatzoglou (2017) GADD34 promotes Golgi apparatus integrity and osmoadaptation of human corneal cells. *Cell Reports*, 21(10):2895-2910. PMCID: PMC5720379.
8. Di, XJ, Wang, YJ, Han, DY, Fu, YL, Duerfeldt, AS, Blagg, BSJ, **Mu, TW** (2016) Grp94 protein delivers γ-aminobutyric acid ($GABA_A$) Receptors to Hrd1 protein-mediated Endoplasmic Reticulum-Associated Degradation. *Journal of Biological Chemistry*, 291:9526-9539. PMID: 26945068.
9. Han DY, Guan BJ, Wang YJ, Hatzoglou M, **Mu TW** (2015) L-type calcium channel blockers enhance trafficking and function of epilepsy-associated α1(D219N) subunits of $GABA_A$ receptors. *ACS Chemical Biology*, 10:2135-2148. PMID: 2616828.
10. Han DY, Di XJ, Fu YL, **Mu TW** (2015) Combining valosin-containing protein (VCP) inhibition and suberanilohydroxamic Acid (SAHA) treatment additively enhances the folding, trafficking, and function of epilepsy-associated γ-aminobutyric acid, type A (GABAA) receptors. *Journal of Biological Chemistry*, 290:325-337. PMCID: PMC4281735.
11. Wang YJ, Tayo BO, Bandyopadhyay A, Wang H, Feng T, Franceschini N, Tang H, Gao J, COGENT consortium, Williams SM, Elston RC, Cooper RS, **Mu TW**, Zhu X (2014) The association of the vanin-1

N131S variant with blood pressure is mediated by endoplasmic-reticulum-associated degradation and loss of function. *PLoS Genetics,* 10(9):e1004641. PMCID: PMC4169380

12. Di XJ, Han DY, Wang YJ, Chance MR, **Mu TW** (2013) SAHA enhances proteostasis of epilepsy-associated α1(A322D)β2γ2 $GABA_A$ receptors. *Chemistry & Biology*, 20: 1456-1468. doi: 10.1016/j.chembiol.2013.09.020. PubMed PMID: 24211135; PubMed Central PMCID: PMC3872227.
13. Wang YJ, Han DY, Tabib T, Yates JR, **Mu TW** (2013) Identification of $GABA_C$ receptor protein homeostasis network components from three tandem mass spectrometry proteomics approaches. *Journal of Proteome Research,* 12: 5570-5586. doi: 10.1021/pr400535z. PubMed PMID: 24079818; PubMed Central PMCID: PMC3864119.

Before Case Western Reserve University

14. Ong DS, Wang YJ, Tan YL, Yates JR,* **Mu TW**,* Kelly JW* (2013) FKBP10 depletion enhances glucocerebrosidase proteostasis in Gaucher's disease fibroblasts. *Chemistry & Biology*, 20: 403-415. doi: 10.1016/j.chembiol.2012.11.014. PubMed PMID: 23434032; PubMed Central PMCID: PMC3624024. * corresponding author
15. Ong DS, **Mu TW**, Palmer AE, Kelly JW (2010) Endoplasmic reticulum Ca^{2+} increases enhance glucocerebrosidase folding, trafficking and function. *Nature Chemical Biology,* 6:424-432.
16. **Mu TW**, Ong DS, Wang YJ, Balch WE, Yates JR, Segatori L, Kelly JW (2008) Chemical and biological approaches synergize to ameliorate protein-folding diseases. *Cell*, 134:769-791. Highlighted in Science.
17. **Mu TW**, Fowler DM, Kelly JW (2008) Partial restoration of mutant enzyme homeostasis in three distinct lysosomal storage disease cell lines by altering calcium homeostasis. *PLoS Biology*, 6: e26. Highlighted in ACS Chemical Biology.
18. **Mu TW**, Lester HA, Dougherty DA (2003) Different binding orientations for the same agonist at homologous receptors: A lock and key or a simple wedge? *J Am Chem Soc*, 125: 6850-6851. (
19. Feng Y, Liu L, **Mu TW**, Guo QX (2002) Influence of a hydrophobic enviromment on the structure of arginine-carboxylate salt bridge. *Chin J Chem* 20: 958-962.
20. **Mu TW**, Liu L, Li XS, Guo QX (2001) A theoretical study on the inclusion complexation of cyclodextrins with radical cations and anions. *J Phys Org Chem* 14: 559-565.
21. Zhang KC, **Mu TW**, Liu L, Guo QX (2001) A theoretical study on cucurbit[7]uril and its inclusion complexation. *Chin J Chem* 19: 558-561.
22. **Mu TW**, Liu L, Zhang KC, Guo QX (2001) A theoretical study on the stereoisomerism in the complex of cucurbit[8]uril with 2,6-bis(4, 5-dihydro-1H-imidazol-2-yl)naphthalene. *Chin Chem Lett* 12: 783-786.
23. Zhang KC, Liu L, **Mu TW**, Guo QX (2001) Ab initio calculations on the inclusion complexation of cyclobis(paraquat-p-phenylene). *Chem Phys Lett* 333: 195-198.
24. Zhang KC, Liu L, **Mu TW**, Guo QX (2001) Molecular modeling on the complexation of cyclobis(paraquat-p-phenylene) with tetrathiafulvalenes. *J Incl Phenom Macrocycl Chem* 40: 189-191.
25. Yang C, Liu L, **Mu TW**, Guo QX (2001) Improved accuracy and efficiency in the determination of association constants with the spectrophotometric method. *J Incl Phenom Macrocycl Chem* 39: 97-101.
26. **Mu TW**, Feng Y, Liu L, Guo QX (2001) On the structure of the arginine-carboxylate salt bridge: A density functional theory study. *Chin Chem Lett* 12: 219-222.
27. Liu L, Yang C, **Mu TW**, Guo QX (2001) A statistical examination on the compensation between the enthalpies and entropies obtained from the calorimetric methods. *Chin Chem Lett* 12: 167-170.
28. Zhang KC, Liu L, **Mu TW**, Guo QX (2000) A molecular modeling for the complexation of cyclobis(paraquat-p-phenylene) with substituted benzenes and biphenyls. *Chin Chem Lett* 11: 985-988.
29. Yang C, Liu L, **Mu TW**, Guo QX (2000) The performance of the Benesi-Hildebrand method in measuring the binding constants of the cyclodextrin complexation. *Anal Sci* 16: 537-539.
30. Liu L, Li XS, **Mu TW**, Guo QX, Liu YC (2000) Interplay between molecular recognition and redox properties: A theoretical study of the inclusion complexation of beta-cyclodextrin with phenothiazine and its radical cation. *J Incl Phenom Macrocycl Chem* 38: 199-206.
31. Li XS, Liu L, **Mu TW**, Guo QX, Liu YC (2000) A theoretical study on the structure and properties of phenothiazine derivatives and their radical cations. *Res Chem Intermed* 26: 375-384.
32. Li XS, Liu L, **Mu TW**, Guo QX (2000) A systematic quantum chemistry study on cyclodextrins. *Mon Chem* 131: 849-855.

Reviews and Book Chapters

At Case Western Reserve University

33. Benske T, **Mu TW**, Wang YJ (2022) Protein quality control of N-methyl-D-aspartate Receptors. *Frontiers in Cellular Neuroscience*. DOI: 10.3389/fncel.2022.907560
34. Fu X, Wang YJ, Kang JQ, **Mu TW** (2022) GABAA Receptor Variants in Epilepsy, in Epilepsy, Exon Publications, Doi: https://doi.org/10.36255/exon-publications-epilepsy-gaba-receptor. PMID: 35605087
35. Wang YJ, **Mu TW** (2019) Interactome Changes Quantified to Identify the ER Proteostasis Network to Fight Amyloid Diseases. *Cell Chem Biol* 26:909-910. PMID: 31323219.

36. Fu YL, Wang YJ, **Mu TW** (2016) Proteostasis maintenance of Cys-loop receptors. *Advances in Protein Chemistry and Structural Biology*. 103:1-23. PMID: 26920686
37. Wang YJ, Di XJ, **Mu TW** (2014) Using pharmacological chaperones to restore proteostasis (Review). *Pharmacological Research*, 83: 3-9. PMCID: PMC4070435.

Conferences, Poster presentations and Abstracts

- Cold Spring Harbor Lab meeting on Ubiquitins, Autophagy, & Disease (Virtual) April 2021
  Title: Cytosolic Hsp90β Acts Downstream of Grp94 in the Endoplasmic Reticulum to Promote Endoplasmic ReticulumAssociated Degradation of $GABA_A$ Receptors
- Cold Spring Harbor Lab meeting on Protein Homeostasis in Health & Disease (Virtual) November 2020
  Title: Proteostasis regulators restore the function of pathogenic $GABA_A$ receptors
- Society for Neuroscience Annual meeting, San Diego, CA, November 2018
  Title: Adapting the proteostasis network to restore function of epilepsy-associated $GABA_A$ receptors
- Federation of American Societies for Experimental Biology (FASEB) meeting, Protein Folding in the Cell, Olean, NJ, July 2018
  Title: Assembly chaperones for multi-subunit neuroreceptors in the endoplasmic reticulum
- Gordon Conferences: Stress Proteins in Growth, Development & Disease, Newry, ME Jul 2017
  Title: Assembly chaperones for multi-subunit neuroreceptors in the endoplasmic reticulum
- American Society for Biochemistry and Molecular Biology (ASBMB) Annual Meeting at Experimental Biology, San Diego, CA, Apr 2016
  Title: Elucidating Endoplasmic Reticulum-Associated Degradation Pathway for GABAA Receptors
- Gordon Conferences: Stress Proteins in Growth, Development & Disease, Lucca, Italy, Jul 2015
  Title: Elucidating the Endoplasmic Reticulum-Associated Degradation Pathway of GABAA Receptors
- Federation of American Societies for Experimental Biology (FASEB) From Unfolded Proteins in the ER to Disease, Saxtons River, VT, Jun 2015
  Title: L-type Calcium Channel Blockers Enhance Function of Epilepsy-associated GABAA Receptors by Promoting Subunit Assembly and Calnexin-assisted Folding
- Translational Neuroscience Meeting, Cell Symposia, Arlington, VA, Nov 2014
  Title: Restoring GABA(A) receptors proteostasis to ameliorate idiopathic epilepsy
- Membrane Protein Folding Meeting, Biophysics Society, Seoul, South Korea, May 2013
  Title: Manipulating the Endoplasmic Reticulum-Associated Degradation Pathway to Restore Epilepsy-Associated GABAA Receptor Function
- American Society for Mass Spectrometry (ASMS) Annual Meeting, Vancouver, Canada, May 2012
  Title: Manipulating the Endoplasmic Reticulum-Associated Degradation Pathway to Restore Epilepsy-Associated GABAA Receptor Function
- Gordon Research Conferences on Stress Proteins, Andover, NH, Jul 2009
  Title: Proteomic profiling of protein homeostasis regulators
- The American Chemical Society 236th National Meeting, Philadelphia, Aug 2008
  Title: Restoring protein homeostasis to ameliorate lysosomal storage diseases
- The Biophysical Society 49th Annual Meeting, Long Beach, CA, Feb 2005
  Title: Using unnatural amino acids to study the Cys-loop receptors
- Gordon Conferences: Ligand Recognition and Molecular Gating, Venture, CA, Mar 2004
  Title: The ligand-binding sites of a novel serotonin-gated chloride channel

FUNDING

ACTIVE

- R01 NS 117176 (PI: Mu) 05/01/2020-02/28/2024
  NIH/NINDS
  Title: Assembly chaperone complex for membrane proteins in the endoplasmic reticulum
  The major goals of this project are to elucidate how chaperones regulate the assembly of multi-subunit membrane proteins.
  Role: PI

- R01 NS 105789 A1 (PI: Mu). 08/01/2018-04/30/2023
  NIH/NINDS
  Title: Understanding $GABA_A$ receptor protein folding and misfolding
  The major goals of this project are to elucidate the folding and endoplasmic reticulum-associated degradation pathway of $GABA_A$ receptors and use the principle acquired to correct misfolded $GABA_A$ receptors, as a therapeutic strategy to ameliorate neurological diseases, such as epilepsy.

Role: PI

PENDING

- R01 NS 128727A1 (PIs: Mu (CWRU) and Kang (Vanderbilt)) 04/01/2023-03/31/2028
  NIH/NINDS
  Title: Modulating proteostasis to ameliorate epilepsy syndromes
  Role: MPI

COMPLETED

- R01 NS 117176 Diversity Supplement (PI: Mu) 03/01/2021-02/28/2022
  NIH/NINDS
  Title: Assembly chaperone complex for membrane proteins in the endoplasmic reticulum
  The major goals of this project are to elucidate how chaperones regulate the assembly of multi-subunit membrane proteins.
  Role: PI
- CTSC Pilot Core Utilization Grant Tingwei Mu (PI) 01/01/2015-6/30/2015

The goal of this project is to use tandem MS proteomics analysis to identify the interactome for disease-related membrane proteins.

Role: PI

- Gene Editing Rat Resource Center Grant, NIH NHLBI R24 HL114474

The goal is to utilize the Gene Editing Rat Resource Center in Medical College of Wisconsin to produce transgenic rats to evaluate the role of one specific gene in regulating blood pressure

Role: Awarded investigator in the round 3 applications, Fall 2014

- Epilepsy Foundation Research Grant Tingwei Mu (PI) 01/01/2012-12/31/2012

The goal of this project is to manipulate the endoplasmic reticulum-associated degradation pathway to enhance $GABA_A$ receptor protein homeostasis.

Role: PI

- CTSC Pilot Core Utilization Grant Tingwei Mu (PI) 03/01/2012-10/31/2012

The goal of this project is to use tandem MS proteomics analysis to identify $GABA_A$ receptor protein homeostasis network components.

Role: PI