GONG-HER WU
CURRICULUM VITAE

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OBJECTIVE

My research is focused on deciphering the intricate mechanisms underlying the formation of mutated huntingtin (mHTT) aggregates, which contribute to pathological neuronal death. Employing cryogenic electron microscopy (cryo-EM), I've uncovered early biological markers for Huntington's disease. My proficiency in molecular and neuronal biology was cultivated during my doctoral studies under the guidance of Dr. Oliver Wagner at the National Tsing-Hua University, where I investigated abnormal aggregations of neuronal motor proteins. As a postdoctoral scholar under Dr. Yeu-Kuang Hwu at Academia Sinica, I delved into neuronal networks within Drosophila brains and conducted imaging of mouse brain tissues. Presently at Stanford University, I am at the forefront of pioneering cryo-EM workflows for investigating Huntington's disease. Identifying early biomarkers and integrating cryo-ET findings with proteomics, I aspire to elevate our comprehension of neurodegenerative diseases and unveil novel therapeutic prospects.

CURRENT POSITION

Research Scientist, Department of Bio-engineering, Stanford University, Stanford, CA

EDUCATION

Doctor of Philosophy in Molecular and Cellular Biology
Institute of Molecular and Cellular Biology, National Tsing-Hua University, Hsinchu, Taiwan — Sep 2006-Aug 2015

Dissertation Title: Mechanistic insights on the effects of LIN-2, SYD-2 and MAP1-A on kinesin-3 UNC-104 motility in the nervous system of *C. elegans*
Advisor: Oliver Wagner, Ph.D. (Advisor)

Master of Science in Molecular and Cellular Biology — Aug 2004 - Aug 2006
Institute of Molecular and Cellular Biology, National Tsing-Hua University, Hsinchu, Taiwan
Thesis: Glutamate receptor duplication gene expression of zebrafish embryo and adult brain
Advisor: Wei-Yuan Chow, Ph.D.

Bachelor of Science — Sep 2000 - June 2004
Department of Life Sciences, National Chung-Hsing University, Taichung, Taiwan

EMPLOYMENT HISTORY

2007 – 2015 Graduate Research Assistant, National Tsing-Hua University, Hsinchu

2015 – 2016 Postdoctoral Fellow, Institute of Physics, Academia Sinica, Taipei
2016 - 2017 Postdoctoral Associates, National Center for Macro-molecular Imaging, Baylor College of Medicine, Houston, TX
2017 - 2021 Postdoctoral Scholar, Department of Bio-engineering, Stanford University, Stanford, CA
2022-present Research Scientist, Department of Bio-engineering, Stanford University, Stanford, CA

CRYO-EM EXPERIENCE

2017 – present Cryo-Electron Tomography Researcher
Department of Bio-engineering, Stanford University, Stanford, CA

- Utilized cryo-ET techniques to investigate cellular structures, with multiple research experiences on microbiology, virology, and oncology, and with extensive experiences focusing on neuronal disease.
- Developed and optimized various cryo-ET sample preparation protocols, including vitrification, lamella creating (cryo-FIB/SEM), and imaging.
- Collected cryo-ET data using transmission electron microscopes (TEM, Thermal Fisher, Talos and Krios) equipped with energy filters and direct electron detectors (Falcon4 and K3).
- Processed and analyzed CLEM (Cryo-light electron microscopy) and cryo-FIB/SEM datasets, generated artificial intelligence (AI) base 3D reconstructions of cellular structures
- Processed and analyzed cryo-ET datasets, performed subtomogram averaging, and generated AI base 3D reconstructions of cellular structures.
- Collaborated with multidisciplinary teams to interpret cryo-ET results and integrate them with other structural and functional data

SKILL

- Extensive knowledge of cryo-electron tomography principles, techniques, and instrumentation.
- Expert in cryo-sample preparation (Equipment: Gatan CP3, Lecia GP2, Thermal Fisher Vitrobot, Lecia ICE high-pressure freezing and CryoCapcell HPM)
- Expert in cryo-confocal microscopy (Equipment: Zeiss 800 and Zeiss 880 with Linkam cryo stage)
- Expert in data collection and lamella formation using cryo-FIB/SEM (Equipment: Thermal Fisher: Helios, Scios, Aqulios and Hydra; Zeiss: Cross beam 550).
- Experience in data collection using cryo-transmission electron microscopes (cryo-TEM; JEOL 2100, JEOL 2200, JEOL 3200, Thermal Fisher 200 KV Talos and Thermal Fisher 300 KV Krios).
- Strong expertise in CLEM and Cryo-FIB/SEM data processing and 3D reconstruction using software such as Image J, Dragonfly, Zen blue, and Armia.
- Strong expertise in cryo-ET data processing, subtomogram averaging, and 3D reconstruction using software such as IMOD, Eman2, and Chimera.
- Proficient in structural analysis and interpretation of cryo-ET data.
- Excellent problem-solving abilities and attention to detail.

- Strong communication and collaboration skills, demonstrated through successful teamwork in research projects.

CONTRIBUTION TO SCIENCE

1. **Regulation of motor protein kinesin-3 KIF1A/UNC-104 motility and clustering in neurons.**

In this project, I focused on the mechanisms of protein kinase LIN-2 mediated kinesin motor protein UNC-104 activity regulation in *C. elegans.* I created LIN-2 mutants for UNC-104 interaction domain mapping using bimolecular fluorescence complementation assays. I discovered that the absence of the motor-activating function of LIN-2 results in increased motor clustering along axons by using fluorescence confocal microscopy, thus retaining cargos in neuron cell bodies. I also contributed in projects that focused on UNC-104 regulations mediated by different kinesin adaptor proteins such as Tau and SYD-2. These studies reveal that Tau and SYD-2 are also essential for UNC-104 motility regulations in neuronal cells.

a. **Wu GH**, Muthaiyan Shanmugam M, Bhan P, Huang YH, Wagner OI. Identification and Characterization of LIN-2(CASK) as a Regulator of Kinesin-3 UNC-104(KIF1A) Motility and Clustering in Neurons. Traffic. 2016 Aug;17(8):891-907. PubMed PMID: 27172328.

b. Tien NW, **Wu GH**, Hsu CC, Chang CY, Wagner OI. Tau/PTL-1 associates with kinesin-3 KIF1A/UNC-104 and affects the motor's motility characteristics in C. elegans neurons. Neurobiol Dis. 2011 Aug;43(2):495-506. PubMed PMID: 21569846.

c. Wagner OI, Esposito A, Köhler B, Chen CW, Shen CP, **Wu GH**, Butkevich E, Mandalapu S, Wenzel D, Wouters FS, Klopfenstein DR. Synaptic scaffolding protein SYD-2 clusters and activates kinesin-3 UNC-104 in C. elegans. Proc Natl Acad Sci U S A. 2009 Nov 17;106(46):19605-10. PubMed PMID: 19880746; PubMed Central PMCID: PMC2780759.

2. **Negative effects of nanoparticles in neuronal development.**

During my Ph.D. training, I initiated and actively involved in collaboration projects with Dr. Ta-Jen Yen's lab in Department of Materials Science and Engineering, National Tsing Hua University. We used *C. elegans* as model organism to investigate the toxicity of titanium dioxide (TiO2) nanoparticles in neuron development. Our results revel that TiO2 will be uptake by neuron, and results in decreasing axonal growth and thus impedes locomotion behavior of *C. elegans*. Furthermore, we confirmed this development interruption is due to abnormal gene expression by using DNA array chip. Beside TiO2, we also found nano gold particles have toxicity effects in *C. elegans* development. These studies indicates that using nanoparticles in imaging neuronal cells may artificially interfere biological functions and behaviors of neurons.

a. Hu CC, **Wu GH**, Lai SF, Muthaiyan Shanmugam M, Hwu Y, Wagner OI, Yen TJ. Toxic Effects of Size-tunable Gold Nanoparticles on Caenorhabditis elegans

Development and Gene Regulation. Sci Rep. 2018 Oct 15;8(1):15245. PubMed PMID: 30323250; PubMed Central PMCID: PMC6189128.

b. Hu CC, **Wu GH**, Hua TE, Wagner OI, Yen TJ. Uptake of TiO_2 Nanoparticles into C. elegans Neurons Negatively Affects Axonal Growth and Worm Locomotion Behavior. ACS Appl Mater Interfaces. 2018 Mar 14;10(10):8485-8495. PubMed PMID: 29464946.

3. Application of Cryo-EM in investigating structure and sub-cellar locations of Hungtintin protein aggregation.

I found a novel structure and its unique spatial distribution pattern of mutated Huntingtin (mHTT) protein in neuronal cells developed from HD patients' induced pluripotent stem cells (iPSC). I also found aberrant mitochondria structures in these disease neurons but not in iPSC neurons derived from healthy donors. I used cryo-ET, proteomic bioinformatic analysis, and artificial intelligence-based automated annotation to identify early state biomarkers: mitochondrial RNA granules and double membrane-bound sheet-like aggregates in Huntington's disease iPSC-derived neurons in *Nat Commun* (2023). In order to observe the HD cellular structure in the cell body, I established a workflow orchestrating cryo-confocal microscope, cryo-focus ion beam-scanning electron microscope, and cryo-transmission electron microscope together to identify the precise location of subject proteins in the cell. This workflow dramatically improves the successful rate of imaging rare proteins in precious patient samples. We published this novel imaging procedure in *Structure* (2020).

I currently focus on developing the tissue level cryo-FIB/SEM and cryo-ET workflow for HD disease biomarkers discovery in HD brain organoid and R6/1 (HD) mouse brain. Furthermore, my cooperators and I found drug candidates to rescue the mouse HD brain tissue disorder and mitochondria phenomena (unpublished data).

a. Wu GH, Mitchell PG, Galaz-Montoya JG, Hecksel CW, Sontag EM, Gangadharan V, Marshman J, Mankus D, Bisher ME, Lytton-Jean AKR, Frydman J, Czymmek K, Chiu W. Multi-scale 3D Cryo-Correlative Microscopy for Vitrified Cells. Structure. 2020 Aug 15;PubMed PMID: 32814034.

b. Wu GH, Smith-Geater C, Galaz-Montoya JG, Gu Y, Gupte SR, Aviner R, Mitchell PG, Hsu J, Miramontes R, Wang KQ, Geller NR, Hou C, Danita C, Joubert LM, Schmid MF, Yeung S, Frydman J, Mobley W, Wu C, Thompson LM, Chiu W. CryoET reveals organelle phenotypes in huntington disease patient iPSC-derived and mouse primary neurons. Nat Commun. 2023 Feb 8;14(1):692. doi: 10.1038/s41467-023-36096-w. PMID: 36754966; PMCID: PMC9908936.

4. Application of Cryo-ET to investigate novel rectangular bacteria in dolphin mouth.

In collaboration with a team of researchers, we employed a combination of cryo-electron tomography (cryo-ET), molecular labeling techniques, and single-cell sequencing to identify and elucidate the intricate cellular structure of a novel rectangular bacteria species. This unique species, never before observed in the world, was discovered within the oral cavity of a dolphin. Our comprehensive approach enabled us to visualize and analyze the cellular architecture of this bacteria at high resolution, shedding light on its

distinctive features and potential biological significance. This groundbreaking discovery contributes to our understanding of microbial diversity and highlights the remarkable ecosystems that exist within the oral microbiome of marine mammals.

a. Dudek NK, Galaz-Montoya JG, Shi H, Mayer M, Danita C, Celis AI, Viehboeck T, **Wu GH**, Behr B, Bulgheresi S, Huang KC, Chiu W, Relman DA. Previously uncharacterized rectangular bacterial structures in the dolphin mouth. Nat Commun. 2023 Apr 13;14(1):2098. doi: 10.1038/s41467-023-37638-y. PMID: 37055390; PMCID: PMC10102025.

5. **Application of Cryo-ET in investigating mitochondria structure in optic disc drusen (ongoing project)**

   I have discovered that fibroblast cells treated with calcium calcification medium exhibit the presence of significant granules within their mitochondria. Additionally, I have successfully developed a cryo-electron energy loss spectroscopy (cryo-EELS) technique to identify these large granules within the mitochondria that contain calcium components. My current research is primarily centered around utilizing cryo-electron tomography (cryo-ET) and cryo-EELS to investigate and detect various phenomena and components associated with mitochondria, particularly focusing on the observed granules. (unpublish data)

6. **Application of Cryo-ET to investigate cell-cell interaction and cellular structure in eye organoids. (ongoing project)**

   In this study, I have successfully established a comprehensive workflow encompassing cryo-confocal microscopy, cryo-focused ion beam/scanning electron microscopy (cryo-FIB/SEM), and cryo-electron tomography (cryo-ET) for the investigation of eye organoids. Through this workflow, I have made a significant discovery concerning the presence of rod cells within the eye organoids and have elucidated the rod cell disc's three-dimensional (3D) structure. This finding holds great potential for advancing our understanding of the underlying mechanisms governing rod cell development during eye formation. (unpublish data)

7. **Application of Cryo-ET to investigate the potential therapy drug of SARS-CoV-2 (ongoing project)**

   I have collaborated in the development of a comprehensive workflow aimed at investigating the mechanism of potential small molecular and peptide drugs in altering the morphology of SARS-CoV-2 and preventing infection. This workflow encompasses various experimental techniques and analyses to assess these drugs' efficacy and underlying mechanisms. By employing this workflow, we aim to gain insights into how these compounds can modify the structure of SARS-CoV-2 and hinder its ability to infect host cells. (unpublish data)

8. **Investigating the Relationship between STING (STimulator of INterferon Genes) Activation and Cellular Organelles using Cryo-Electron Tomography and Cryo-Light and Electron Microscopy (CLEM) (ongoing project)**

In this study, we aim to investigate the relationship between STING activation and cellular organelles using a combined approach of Cryo-Electron Tomography (Cryo-ET) and Cryo-Light and Electron Microscopy (CLEM). We employ these advanced imaging techniques to elucidate the structural and functional interplay between STING and specific organelles within the cellular context. Our findings hold promise for unraveling key insights into the molecular underpinnings of STING activation and its intricate relationship with cellular organelles, thereby paving the way for the development of targeted therapies for diseases associated with STING dysregulation. (unpublish data)

PUBLICATIONS AND PRESENTATIONS

Journal Publications

1: Dudek NK, Galaz-Montoya JG, Shi H, Mayer M, Danita C, Celis AI, Viehboeck T, **Wu GH**, Behr B, Bulgheresi S, Huang KC, Chiu W, Relman DA. Previously uncharacterized rectangular bacterial structures in the dolphin mouth. Nat Commun. 2023 Apr 13;14(1):2098. doi: 10.1038/s41467-023-37638-y. PMID: 37055390; PMCID: PMC10102025.

2: **Wu GH**, Smith-Geater C, Galaz-Montoya JG, Gu Y, Gupte SR, Aviner R, Mitchell PG, Hsu J, Miramontes R, Wang KQ, Geller NR, Hou C, Danita C, Joubert LM, Schmid MF, Yeung S, Frydman J, Mobley W, Wu C, Thompson LM, Chiu W. CryoET reveals organelle phenotypes in huntington disease patient iPSC-derived and mouse primary neurons. Nat Commun. 2023 Feb 8;14(1):692. doi: 10.1038/s41467-023-36096-w. PMID: 36754966; PMCID: PMC9908936.

3: Barmaver SN, Muthaiyan Shanmugam M, Chang Y, Bayansan O, Bhan P, **Wu GH**, Wagner OI. Loss of intermediate filament IFB-1 reduces mobility, density, and physiological function of mitochondria in Caenorhabditis elegans sensory neurons. Traffic. 2022 May;23(5):270-286. doi: 10.1111/tra.12838. Epub 2022 Mar 16. PMID: 35261124.

4: **Wu GH**, Mitchell PG, Galaz-Montoya JG, Hecksel CW, Sontag EM, Gangadharan V, Marshman J, Mankus D, Bisher ME, Lytton-Jean AKR, Frydman J, Czymmek K, Chiu W. Multi-scale 3D Cryo-Correlative Microscopy for Vitrified Cells. Structure. 2020 Nov 3;28(11):1231-1237.e3. doi: 10.1016/j.str.2020.07.017. Epub 2020 Aug 18. PMID: 32814034; PMCID: PMC7642057.

5: Li Y, Zhou W, Li Y, Huang W, Zhang Z, Chen G, Wang H, **Wu GH**, Rolston N, Vila R, Chiu W, Cui Y. Unravelling Atomic Structure and Degradation Mechanisms of Organic-Inorganic Halide Perovskites by Cryo-EM. Joule. 2019 Nov 20;3(11):2854-2866. doi: 10.1016/j.joule.2019.08.016. Epub 2019 Aug 28. PMID: 34109301; PMCID: PMC8186345.

6: Li Y, Wang K, Zhou W, Li Y, Vila R, Huang W, Wang H, Chen G, **Wu GH**, Tsao Y, Wang H, Sinclair R, Chiu W, Cui Y. Cryo-EM structures of atomic surfaces and

host-guest chemistry in metal-organic frameworks. Matter. 2019 Aug 7;1(2):428-438. doi: 10.1016/j.matt.2019.06.001. Epub 2020 Mar 24. PMID: 34104881; PMCID: PMC8184120.

7: Hu CC, **Wu GH**, Lai SF, Muthaiyan Shanmugam M, Hwu Y, Wagner OI, Yen TJ. Toxic
Effects of Size-tunable Gold Nanoparticles on Caenorhabditis elegans Development and Gene Regulation. Sci Rep. 2018 Oct 15;8(1):15245. doi: 10.1038/s41598-018-33585-7. PMID: 30323250; PMCID: PMC6189128.

8: Muthaiyan Shanmugam M, Bhan P, Huang HY, Hsieh J, Hua TE, **Wu GH**, Punjabi H, Lee Aplícano VD, Chen CW, Wagner OI. Cilium Length and Intraflagellar Transport Regulation by Kinases PKG-1 and GCK-2 in Caenorhabditis elegans Sensory Neurons. Mol Cell Biol. 2018 Mar 15;38(7):e00612-17. doi: 10.1128/MCB.00612-17. PMID: 29378827; PMCID: PMC5854826.

9: Hu CC, **Wu GH**, Hua TE, Wagner OI, Yen TJ. Uptake of TiO₂ Nanoparticles into C. elegans Neurons Negatively Affects Axonal Growth and Worm Locomotion Behavior. ACS Appl Mater Interfaces. 2018 Mar 14;10(10):8485-8495. doi: 10.1021/acsami.7b18818. Epub 2018 Mar 5. PMID: 29464946.

10: **Wu GH**, Muthaiyan Shanmugam M, Bhan P, Huang YH, Wagner OI. Identification and Characterization of LIN-2(CASK) as a Regulator of Kinesin-3 UNC-104(KIF1A) Motility and Clustering in Neurons. Traffic. 2016 Aug;17(8):891-907. doi: 10.1111/tra.12413. Epub 2016 Jun 3. PMID: 27172328.

11: Tien NW, **Wu GH**, Hsu CC, Chang CY, Wagner OI. Tau/PTL-1 associates with kinesin-3 KIF1A/UNC-104 and affects the motor's motility characteristics in C. elegans neurons. Neurobiol Dis. 2011 Aug;43(2):495-506. doi: 10.1016/j.nbd.2011.04.023. Epub 2011 May 4. PMID: 21569846.

12: Wagner OI, Esposito A, Köhler B, Chen CW, Shen CP, **Wu GH**, Butkevich E, Mandalapu S, Wenzel D, Wouters FS, Klopfenstein DR. Synaptic scaffolding protein SYD-2 clusters and activates kinesin-3 UNC-104 in C. elegans. Proc Natl Acad Sci U S A. 2009 Nov 17;106(46):19605-10. doi: 10.1073/pnas.0902949106. Epub 2009 Oct 30. PMID: 19880746; PMCID: PMC2780759.

Conference Presentations

Lecture / Oral Presentation

HD2022: Milton Wexler Biennial Symposium, Augst 2022, Boston, USA, “CryoET Reveals Organelle Phenotypes in Huntington Disease Patient iPSC-Derived and Mouse Primary Neurons” **Wu GH**, Smith-Geater C, Galaz-Montoya JG, Gu Y, Gupte SR, Aviner R, Mitchell PG, Hsu J, Miramontes R, Wang KQ, Geller NR, Hou C, Danita C, Joubert LM, Schmid MF, Yeung S, Frydman J, Mobley W, Wu C, Thompson LM, Chiu W.

5th East Asia C. elegans Meeting (EAWM 2012), June 2012, Taipei, Taiwan "LIN-2(CASK) interacts with and activates kinesin-3 UNC-104 in the nervous system of C. elegans". **Wu GH**, Huang YH and Wagner OI.

2007 NHRI-NTHU Joint Research Conference, November 2007, Zhunan, Taiwan "Regulation of molecular motors in the nervous system of C. elegans. " **Wu GH**, Shen CP, Chen CW , Chien LS, Klopfenstein DR and Wagner OI.

Poster Presentation

The Stanford Center for Optic Disc Drusen 4th Annual Hybrid Conference, April 2023, Stanford, USA, "Visualizing Fibroblasts Under Various Biochemical Conditions with Cryogenic Electron Tomography" Hou C, **Wu GH**, Hirenkumar Rajendra Patel, Liao YJ, Chiu W.

Stanford Bio-X Interdisciplinary Initiatives Seed Gr7ants Symposium, August 2022, Stanford, USA, "Structure Signatures in Mitochondria of iPSC-derived Neurons from Patients with Huntington's Disease" Hou C, **Wu GH**, Chiu W.

HD2022: Milton Wexler Biennial Symposium, Augst 2022, Boston, USA, "CryoET Reveals Organelle Phenotypes in Huntington Disease Patient iPSC-Derived and Mouse Primary Neurons" **Wu GH**, Smith-Geater C, Galaz-Montoya JG, Gu Y, Gupte SR, Aviner R, Mitchell PG, Hsu J, Miramontes R, Wang KQ, Geller NR, Hou C, Danita C, Joubert LM, Schmid MF, Yeung S, Frydman J, Mobley W, Wu C, Thompson LM, Chiu

2020 SSRL advisory committee meeting, March, 2020 "Cryo-Electron Microscopy, Tomography and Multi-Scale Imaging Modalities at SLAC-Stanford" **Wu GH**, Mitchell PG, Galaz-Montoya JG, Hecksel CW, Sontag EM, Gangadharan V, Marshman J, Mankus D, Bisher ME, Lytton-Jean AKR, Frydman J, Czymmek K, Chiu W

HD2018: Milton Wexler Biennial Symposium, Augst 2018, Boston, USA, "Cryo-Electron Tomography of Huntington's Disease Model Cells" **Wu GH**, Smith-Geater C, Galaz-Montoya JG, Gu Y, Mitchell PG, Mobley W, Wu C, Thompson LM, Chiu

Taiwan Society for Biochemistry and Molecular Biology (TSBMB), December 2012, Taichung, Taiwan,"LIN-2(CASK) interacts with and activates kinesin-3 UNC-104 in the nervous system of C. elegans". **Wu GH**, Huang YH, Mahendra P and Wagner OI.

5th East Asia C. elegans Meeting (EAWM 2012), June 2012, Taipei, Taiwan "The environmental toxicity of anatase TiO2 on the nematode C. elegans". Hu CC, **Wu GH**, Wagner OI, and Yen TJ.

4th East Asia C. elegans Meeting, Tokyo Medical and Dental University, July 2010, Tokyo, Japan," LIN-2(CASK) interacts with and activates kinesin-3 UNC-104 in C. elegans nervous system." Huang YH, **Wu GH** and Wagner OI

Francis Crick Symposium on Neuroscience, Cold Spring Harbor Conferences Asia, April 2010, Suzhou, China," Regulation of kinesin-3 UNC-104 by the MAGUK-protein LIN-2." **Wu GH**, Huang Y H and Wagner OI.

Workshop

S^2C^2 High Resolution CryoET Image Processing Workshop (Virtual Workshop), March, 2022, Menlo Park, USA

SSRL/LCLS Users' Meeting: CryoEM of MacroMolecules and Cells Workshop (Virtual Workshop), September, 2021, Menlo Park, USA

CryoEM In-Residence Training and Public Lecture: Tomography and Volta Phase Plate (Virtual Workshop), December, 2020, Menlo Park, USA

EMAN CryoET Workshop, December, 2019, Menlo Park, USA

S^2C^2 Image Processing Workshop: SCIPION, November, 2019, Menlo Park, USA

S^2C^2 Cryo-EM Image Processing Workshop, March, 2019, Menlo Park, USA

Bay Area Cryo-EM Meeting, May, 2018, Menlo Park, USA

Advanced Workshop of Cryo Cellular Electron Microscopy, September, 2015, Beiing, china.

NCMI Workshop on Single Particle Reconstruction, Structural Variability and Modeling, October, 2015, Huston, USA

FELLOWSHIPS AND SCHOLARSHIPS

2017 - 2018 Recipient of Ministry of Science and Technology Overseas Project for Post-Graduate Research, Ministry of Science and Technology, Taiwan

2019 - 2023 Hereditary Disease Foundation Post-Doctoral Fellowship, Hereditary Disease Foundation, USA

HONORS AND AWARDS

2006 - 2007 Out-standing Ph.D. Student Scholarship, National Tsing-Hua University, Taiwan

2011 - 2011 Student Travel Award, National Tsing-Hua University, Taiwan

2012 – 2012 Excellent Award, Student Poster Competition of Life Science, National Tsing-Hua University, Taiwan

RESEARCH SUPPORT (ONGOING AND COMPLETED)

Ongoing Research Support

Completed Research Support

SPO #150254, Hereditary Disease Foundation Post-Doctoral Fellowship
Gong-Her Wu (PI)
08/01/19-07/31/21
Deciphering mutated huntingtin aggregates and cellular architecture in Huntington disease neuron by cryogenic electron microscopy
Goal: Deciphering mutated huntingtin aggregates and cellular architecture in both mouse primary and iPSC Huntington disease neurons by cryogenic electron microscopy.
Role: PI

P01NS092525-05, National Institutes of Health
Wah Chiu (PI)
07/01/17-03/31/21
From structure to therapy: the TRiC Chaperonin network in Huntington's disease
Goal: Perform cryo-electron microscopy and tomography for protein aggregates, cells and neurons in the context of Huntington's Disease
Role: Trainee

106-2917-I-564-075, Ministry of Science and Technology, Taiwan
Gong-Her Wu (PI)
08/01/17-11/29/18
Biological Effects of T-complex Protein 1 Ring Complex on Mutated Huntingtin Aggregation in ex vivo and in vitro Huntington's Disease Model
Role: PI

PROFESSIONAL SERVICES AND MEMBERSHIPS

Member, American Association for the Advancement of Science 2015 - Present

REFERENCES

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