

CURRICULUM VITAE

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PROFESSIONAL POSITION AND TRAINING

- 2019.9~present Distinguished Research Fellow, Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan.
- 2021.8~present Joint Appointment Professor, Department of Biochemical Science and Technology, National Chiayi University, Chiayi, Taiwan.
- 2012.1~present Joint Appointment Professor, Graduate Institute of Life Sciences, National Defense Medical Center, Taipei, Taiwan
- 2021.1~2022.3 & Deputy Director, Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan.
2014.2~2015.2
- 2010.3~2019.9 Research Fellow, Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan.
- 2005.3~2010.3 Associate Research Fellow, Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan.
- 2000.10~2005.2 Assistant Research Fellow, Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan.
- 1996.2~2000.7 Postdoctoral Research Fellow, Howard Hughes Medical Institute and Dept. of Neurobiology, Massachusetts General Hospital and Harvard Medical School, Boston, MA.
Supervisor: Dr. Morgan Sheng
- 1995.7~1995.9 Postdoctoral Research Fellow, Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan.
Supervisor: Dr. Ming-Zong Lai
- 1987.9~1989.6 Biology Teacher, Municipal Wu-Chan Junior High School, Taipei, Taiwan.

EDUCATION

- 1989.9~1995.6 Ph.D. in Immunology, Graduate Institute of Microbiology and Immunology, National Yang-Ming University, Taipei, Taiwan.
Thesis advisor: Dr. Ming-Zong Lai
- 1983.9~1987.6 B.S. in Biology, National Taiwan Normal University, Taipei, Taiwan.

HONORS AND AWARDS

- 2022 Academia Sinica Investigator Award (2022-2026).
- 2021 65th Academic Award of Ministry of Education (教育部學術獎).
- 2019 The 15th TienTe Lee Award–Outstanding, TienTe Lee Biomedical Foundation (李天德獎).
- 2019 Distinguished Scholars Research Project, Ministry of Science and Technology (108 年度科技部特約研究計畫).
- 2017 Academia Sinica Investigator Award (2017-2021).
- 2016 Distinguished Scholars Research Award, Ministry of Science and Technology (105 年度科技部傑出研究獎).

- 2016 Explorer Award, Simons Foundation Autism Research Initiative, USA.
2015 Frontier Science Research Grant, Ministry of Science and Technology (尖端計畫).
2013 Distinguished Scholars Research Award, Ministry of Science and Technology (102 年度科技部傑出研究獎).
2010 Frontier Science Research Grant, National Science Council (尖端計畫).
2009 Distinguished Scholars Research Project, National Science Council.
2008 The 4rd TienTe Lee Award-Young Scientists, TienTe Lee Biomedical Foundation (李天德獎).
2007 Distinguished Scholars Research Award, National Science Council (96 年度國科會傑出研究獎).
2005 Frontier Science Research Grant, National Science Council (尖端計畫).
2005 Academia Sinica Research Award for Young Investigators (年輕學者研究著作獎).
2001 Li Foundation Heritage Prize for Scholarly Development in recognition of research contribution in the field of molecular neurobiology.
1999 Young Investigator Award, National Neurofibromatosis Foundation, New York, New York.
1995 Wang Ming-Ning Award for Medical Ph.D. Thesis.
1991 Scholarship of Chinese Society for Microbiology and Immunology for outstanding graduate student in Immunology.
1986 Tung Di-Gung Award, Ministry of Education (for the student who ranks first at the School of Science, National Taiwan Normal University, Taipei).

SCIENTIFIC SOCIETY

- The International College of Neuropsychopharmacology (member)
Society of Chinese Bioscientists in America (member)
Taiwanese Society of Developmental Biology (member)
The American Society of Cell Biology
Neuroscience Society of Taiwan (Secretary-general)
The Society of Neuroscience, USA. (**Review committee of Trainee Professional Development Awards, 2015-2017; Global Membership Committee, Nov 16, 2021- Oct 8, 2024**)

COMMITTEE SERVICE

- 2022 In-depth Evaluation Panel for Associate Director Recruitment of The Institute of Biological Science (IBS), **South Korea**
2021-2014 Global Membership Committee, The Society of Neuroscience, USA
2018-2023 Evaluation Committee for Research Center of University, Ministry of Education, Taiwan.
2015-2017 Review Committee of Trainee Professional Developmental Awards, the Society of Neuroscience, USA.

REVIEW FOR SCIENTIFIC JOURNALS

Editor or Editorial Board

- Brain Research (Editorial Board since 2017)
Cell and Bioscience (Editor, since November, 2020)
Developmental Neurobiology (Editorial Board, since 2020; Guest Editor for a special issue published in 2019)
Frontiers in Molecular Neuroscience (Associate Editor since April, 2018)
Neurosignals (Editorial Board since July, 2010)
PLoS Biology (Editorial Board, i.e. Academic Editor, since June, 2019)

Reviewer

Acta Neuropathologica, BBA-Molecular Basis of Disease, **Biological Psychiatry**, **Brain**, Brain Behavior and Immunity, Brain Communications, Brain Research, Cell Biochemistry and function, **Cell Reports**, Cellular and Molecular Life Sciences, Dermatology, Developmental Neurobiology, **eLife**, FEBS Journal, Frontiers in Cellular Neuroscience (Topic Editor for special Research Topic “Autism Signaling Pathway” and Review Editor since 2019), Frontiers in Molecular Neuroscience (Review Editor July, 2008-April, 2018), **Genome Biology**, Innate Immunity, **iScience**, Journal of Biomedical Science, **Journal of Cell Biology**, Journal of Cell Science, **Journal of Clinical Investigation**, Journal of Comparative Neurology, Journal of Molecular Biology, Journal of Molecular Endocrinology, Journal of Neurochemistry, Journal of Neurological Sciences, Journal of Neuroscience, Journal of Neuroscience Research, Journal of Physiology, Life Science Alliance, Molecular Autism, Molecular and Cellular Neuroscience, Molecular Neurobiology, **Molecular Psychiatry**, Muscle and Nerve, Molecular Vision, **Nature Communications**, Neoplasia, Neural Development, Neurobiology of Disease, Neuroscience, Neuroscience and Behavioral Reviews, Neuroscience Bulletin, PLoS One, **Progress in Neurobiology**, Schizophrenia Bulletin, Scientific Reports, **Science Signaling**, **Schizophrenia Bulletin**, Translational Psychiatry.

REVIEW FOR RESEARCH INSTITUTIONS OR CENTERS

- 2019-2022 Ministry of Education (Evaluation for Research Center of Universities 高等教育深耕計畫-特色領域研究中心成果考核)
- 2018 Ministry of Education (Application for Research Center of Universities 高等教育深耕計畫-特色領域研究中心)
- 2016 Ministry of Education (「邁向頂尖大學計畫」補助學校經審議通過重點領域或研究中心之考評)

PATENT APPLICATIONS

1. “Increase of protein synthesis ameliorates synaptopathy-related neurological disorders”, **Taiwan** patent No. I561235, granted in October 2016; **USA** patent No. US 10,034,848 B2, granted on July 31, 2018, expired on November 21, 2035.

PUBLICATIONS (* corresponding author)

Total of 107 published papers are available in the following databases:

ORCID: [0000-0002-0866-6275](https://orcid.org/0000-0002-0866-6275)

Publons: [ABH-5052-2020](https://publons.com/author/publons/50522020)

Google Scholar: <https://scholar.google.com.tw/citations?user=QLEGxyUAAAAJ&hl=zh-TW&oi=ao>

- SELECTED PEER-REVIEWED ARTICLES

(Graduate Study, 1989-1995)

1. **Hsueh, Y.-P.** and Lai, M.-Z.* (1995). Overexpression of activation transcriptional factor-1 in lymphomas and in activated lymphocytes. *Journal of Immunology* 154: 5675-5683.
2. **Hsueh, Y.-P.** and Lai, M.-Z.* (1995). JNK but not MAP kinase is sensitive to cAMP inhibition in T Lymphocytes. *Journal of Biological Chemistry* 270: 18094-18098.
3. **Hsueh, Y.-P.**, Liang, H.-E., Ng, S.-Y., and Lai, M.-Z.* (1997). CD28-Costimulation activates cyclic AMP-responsive element-binding protein in T lymphocytes. *Journal of Immunology* 158: 85-93.
4. **Hsueh, Y.-P.**, Kim, E., and Sheng, M.* (1997). Disulfide-linked head-to-head multimerization in the mechanism of ion channel clustering by PSD-95. *Neuron* 18: 803-814.

5. **Hsueh, Y.-P.**, Yang, F.-C., Kharazia, V., Naisbitt, S., Cohen, J. M., Weinberg, R. J., and Sheng, M.* (1998). Direct interaction of CASK/LIN-2 and syndecan heparan sulfate proteoglycan and their overlapping distribution in neuronal synapses. *Journal of Cell Biology* 142:139-151.
6. **Hsueh, Y.-P.** and Sheng, M.* (1998). Eph receptors, ephrins, and PDZs gather in neuronal synapses. *Neuron* 21:1227-1229. (Preview)
7. **Hsueh, Y.-P.**, Wang, T.-F., Yang, F.-C., Sheng M.* (2000) Nuclear translocation and transcription regulation by the membrane-associated guanylate kinase CASK/LIN-2. *Nature* 404:298-302.
8. Wang, G.-S., Hong, C.-J., Yen T.-Y., Huang H.-Y., Ou, Y., Huang, T.-N., Jung, W.-G., Kuo, T.-Y., Sheng, M., Wang, T.-F., and **Hsueh, Y.-P.*** (2004) Transcriptional Modification by a CASK interacting nucleosome assembly protein. *Neuron* 42:113-128.
9. Lin, Y.-L., Lei, Y.-T., Hong, C.-J., and **Hsueh, Y.-P.*** (2007) Syndecan-2 induces filopodia and dendritic spine formation via the neurofibromin-PKA-Ena/VASP pathway. *Journal of Cell Biology* 177:829-841.
10. Chao, H.-W., Hong, C.-J., Huang, T.-N., Lin, Y.-L., and **Hsueh, Y.-P.*** (2008) SUMOylation of the MAGUK protein CASK regulates dendritic spinogenesis. *Journal of Cell Biology* 182:141-155. # **Selected for early release** # **Highlighted by Faculty of 1000 Biology**
11. **Hsueh, Y.-P.*** (2009) Calcium/Calmodulin-Dependent Serine Protein Kinase and Mental Retardation. *Annals of Neurology* 66:438-443. (invited review) (IF=11.910, 2013)
12. Chen, C.-Y., Lin, C.-W., Chang, C.-Y., Jiang, S.-T., and **Hsueh, Y.-P.*** (2011) Sarm1, a negative regulator of innate immunity, interacts with syndecan-2 and regulates neuronal morphology. *Journal of Cell Biology* 193:769-784.(IF=10.264, 2011) # **Selected for early release** # **Ranked up to #24 of the most-read articles in JCB**
13. #Wang, H.-F., #Shih, Y.-T., #Chen, C.-Y., Chao, H.-W., Lee, M.-J.*, and **Hsueh, Y.-P.*** (2011) Valosin-containing protein and neurofibromin interact to regulate dendritic spine density. *Journal of Clinical Investigation* 121:4820-4837. (# co-first authors; * co-corresponding authors) (IF=13.215, 2014, 3/123) **Highlighted by a commentary in the same issue of JCI**
14. Chen, Y.-K. and **Hsueh, Y.-P.*** (2012) Cortactin-binding protein 2 modulates the mobility of cortactin and regulates dendritic spine formation and maintenance. *Journal of Neuroscience* 32:1043-1055. (IF=5.988, 2016, 29/256) (The official journal of the Society for Neuroscience, USA) ***highlighted by cover image and "This week in the Journal" of JN.**
15. Liu, H.-Y., Hong, Y.-F., Huang, C.-M., Chen, C.-Y., Huang, T.-N., and **Hsueh, Y.-P.*** (2013) TLR7 negatively regulates dendrite outgrowth through the Myd88-c-Fos-IL-6 pathway. *Journal of Neuroscience* 33:11479-11493. (IF=5.924, 2015, 26/256) (The official journal of the Society for Neuroscience, USA)
16. Huang, T.-N., Chuang, H.-C., Chou, W.-H., Chen, C.-Y., Wang, H.-F., Chou, S.-J., and **Hsueh, Y.-P.*** (2014) *Tbr1* haploinsufficiency impairs amygdalar axonal projections and results in cognitive abnormality. *Nature Neuroscience* 17:240-247. (PMID: 24441682) (IF=17.839, 2016, 2/256) **Highlighted by SFARI**
17. Lin, C.-W. and **Hsueh, Y.-P.*** (2014) Sarm1, a neuronal inflammatory regulator, controls social interaction, associative memory and cognitive flexibility in mice. *Brain, Behavior, and Immunity* 37:142-151. (IF=5.964, 2016, 30/258) (The official journal of Psychoneuroimmunology Research Society)
18. Shih, P.-Y., Lee, S.-P., Chen, Y.-K., and **Hsueh, Y.-P.*** (2014) Cortactin binding protein 2 increases microtubule stability and regulates dendritic arborization. *Journal of Cell Science* 127:3521-3534. (IF=5.285, 2020) **Highlighted by cover image and "In this issue" of JCS.**
19. Lee, E.-J., Lee, H., Huang, T.-N., Chung, C., Shin, W., Kim, K., Koh, J.-Y., **Hsueh, Y.-P.*** and Kim, E.* (2015) Trans-synaptic Zinc mobilization improves social interaction in two mouse

- models of autism through NMDAR activation. *Nature Communications* 6:7168 (* co-corresponding author) (IF=14.919, 2020)
20. Liu, H.-Y., Hung, Y.-F., Huang, C.-M., and **Hsueh, Y.-P.*** (July, 2015) The microRNAs *Let7c* and *miR21* are recognized by neuronal Toll-like receptor 7 to restrict dendritic growth of neurons. *Experimental Neurology* 269:202-212. (IF=5.33, 2020)
 21. Shih, Y.-T. and **Hsueh, Y.-P.*** (2016, March) VCP and ATL1 regulate endoplasmic reticulum and control protein synthesis for dendritic spine formation. *Nature Communications* 7:11020. (PMID: 26984393) (IF=14.919, 2020)
 22. Wu, P.-J., Liu, H.-Y., T.-N. Huang and **Hsueh, Y.-P.*** (Aug, 2016) AIM 2 inflammasomes regulate neuronal morphology and influence anxiety and memory in mice. *Scientific Reports* 6:32405. (IF=5.228, 2015, 7/63, Multidisciplinary sciences)
 23. Hu, H.-T., Umemori, H., and **Hsueh, Y.-P.*** (Sept, 2016) Postsynaptic SDC2 induces transsynaptic signaling via FGF22 for bidirectional synaptic formation. *Scientific Reports* 6:33592 (IF=5.228, 2015, 7/63, Multidisciplinary sciences)
 24. Chen, C.-Y., Liu, H.-Y., and **Hsueh, Y.-P.*** (2017) TLR3 downregulates expression of schizophrenia gene *Disc1* via MYD88 to control neuronal morphology. *EMBO Reports* 18:169-183. (IF=8.568, 2016, 22/286)
 25. Huang, T.-N. and **Hsueh, Y.-P.*** (2017) Calcium/calmodulin-dependent serine protein kinase (CASK), a protein implicated in mental retardation and autism spectrum disorders, interacts with T-Brain-1 (TBR1) to control extinction of associative memory in male mice. *Journal of Psychiatry and Neuroscience* 42:37-47 (released on June 23, 2016) (IF=5.570, 2015, 15/140 psychiatry, the Official journal of the Canadian College of Neuropsychopharmacology)
 26. Hung, Y.-F., Chen, C.-Y., Shih, Y.-C., Liu, H.-Y., Huang, C.-M., and **Hsueh, Y.-P.*** (Aug, 2018) Endosomal TLR3, TLR7, and TLR8 control neuronal morphology through different transcriptional programs. *Journal of Cell Biology* 217:2727-2742.
 27. Hung, Y.-F., Chen, C.-Y., Li, W.-C., Wang, T.-F. and **Hsueh, Y.-P.*** (Aug, 2018) Tlr7 deletion alters expression profiles of genes related to neural function and regulates mouse behaviors and contextual memory. *Brain, Behavior and Immunity* 72:101-113. (IF=7.217, 2020)
 28. **Hsueh, Y.-P.*** (2019) Synaptic formation, neural circuits and neurodevelopmental disorders controlled by signaling, translation and epigenetic regulation. *Developmental Neurobiology* 79 (1): 2-7. (Editorial overview for the special issue on “Diseases of Synapse Development and Function”)
 29. Huang, T.-N.#, Yen, T.-L.#, Chuang, H.-C. and **Hsueh, Y.-P.*** (2019) Haploinsufficiency of autism high confidence risk gene *Tbr1* impairs olfactory discrimination and neuronal activation of the olfactory system in mice. *Molecular Autism* 10:5. (# equal contribution) (IF=7.509, 2020)
 30. Huang, T.-N.#, Hsu, T.-T.#, Hu, H.-T., Chuang, H.-C., Sun, T.-F., Tao, M.-H., Lin, J.Y., and **Hsueh, Y.-P.*** (2019) Interhemispheric connectivity potentiates the basolateral amygdalae and regulates social interaction and memory. *Cell Reports* 29:34-48. (PMID: 31910261)(# equal contribution) (IF=9.995, 2021)
 31. Shih, P.-Y., Hsieh, B.-Y., Lin, M.-H., Huang, T.-N., Tsai, C.-Y., Pong, W.-L., Lee, S.-P., and **Hsueh, Y.-P.*** (2020) CTTNBP2 controls synaptic expression of zinc-related autism-associated proteins and regulates synapse formation and autism-like behaviors. *Cell Reports* 31: 107700. (PMID: 32492416) (IF=9.995, 2021)
 32. Shih, Y.-T.#, Huang, T.-N.#, Hu, H.-T.#, Yen, T.-L., and **Hsueh, Y.-P.*** (2020) *Vcp* overexpression and leucine supplementation increase protein synthesis and improve fear

- memory and social interaction of *Nf1* mutant mice. *Cell Reports* 31:107835. (PMID: 32610136) (IF=9.995, 2021)
33. Shih, P.-Y., Hsieh, B.-Y., Tsai, C.-Y., Lo, C.-A., Chen, B. E. and **Hsueh Y.-P.*** (2020) Autism-linked mutations of CTTNBP2 reduce social interaction and impair dendritic spine formation via diverse mechanisms. *Acta Neuropathologica Communications* 8:185. (PMID: 33168105) (IF=7.578, 2021)
 34. Huang, T.-N.#, Shih, Y.-T.#, Lin, S.-C.#, and **Hsueh, Y.-P.*** (2021) Social behaviors and contextual memory of *Vcp* mutant mice are sensitive to nutrition and can be ameliorated by amino acid supplementation. *iScience* 24:101949. (PMID: 3343793) (IF=6.107, 2021)
 35. Hung, Y.-F. and **Hsueh, Y.-P.*** (2021) TLR7 and IL-6 differentially regulate the effects of rotarod exercise on the transcriptomic profile and neurogenesis to influence anxiety and memory. *iScience* 24:102384. (IF=6.107, 2021)
 36. Chen, C.-Y., Hung, Y.-F., Shih, Y.-C., Tsai, C.-Y., Chou, T.-F., Lai, M.-Z., Wang, T.-F., and **Hsueh, Y.-P.*** (2021) Transcriptomic analysis and C-terminal epitope tagging reveal differential processing and signaling of endogenous TLR3 and TLR7. *Frontiers in Immunology* 12:686060. (IF=7.561, 2020)
 37. **Hsueh, Y.-P.*** and Lin, Y.-C. (2021) Editorial: Autism Signaling Pathways. *Frontiers in Cellular Neuroscience* 15:760994. (IF=5.505, 2020)
 38. Lu, M.-H. and **Hsueh, Y.-P.*** (2022) Protein synthesis as a modifiable target for autism-related dendritic spine pathophysiology. *FEBS Journal* 289:2282-2300. doi:10.1111/FEBS.15733 (invited "State-of-the-Art" review)(PMID: 3351176) (IF=5.62, 2021)
 39. Shih, P.-Y.#, Fang, Y.-L.#, Shankar, S., Lee, S.-P., Chen, H., Wang, T.-F., Hsia, K.-C.*, **Hsueh, Y.-P.*** (2022) Phase separation and zinc-induced transition modulate synaptic distribution and association of autism-linked CTTNBP2 and SHANK3. *Nature Communications* 13:2664 **Featured by Nature Communications Editor's Highlights webpage** (<https://www.nature.com/collections/hhfigaahch>) **and invited to contribute a blog in "Behind the paper" of Nature Portfolio Communities** (<https://healthcommunity.nature.com/posts/cttnbp2-zinc-and-liquid-liquid-phase-separation-two-dancers-and-one-tango>).
 40. Yen, T.-L., Lin, M.-H., Lu, M.-H., Hsu, T.-T., Huang, T.-N. Shih, P.-Y., Ellegood, J., Jason Lerch, J. and Yi-Ping **Hsueh, Y.-P.*** Sex bias in social deficits, activation of brain regions and nutrient demand in *Cttnbp2* autism models. (Under review)