

## **Yu-Chun Lin, Ph.D.**

Institute of Molecular Medicine, National Tsing Hua University  
R613, Life Science Building I, 101, Sec. 2, Kuang Fu Road, HsinChu 30013, Taiwan  
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Website: <http://yuchunlab.wix.com/ycllab-at-nthu>

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### **Education and Employment**

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|--------------|--------------------------------------------------------------------------------------------------------------|
| 2024-present | Distinguished Professor, Institute of Molecular Medicine, National Tsing Hua University (HsinChu, Taiwan)    |
| 2023-2024    | Professor, Institute of Molecular Medicine, National Tsing Hua University (HsinChu, Taiwan)                  |
| 2019-2023    | Associate Professor, Institute of Molecular Medicine, National Tsing Hua University (HsinChu, Taiwan)        |
| 2020-present | Honorary Professor, Mathematical Sciences, University of Liverpool (Liverpool, United Kingdom)               |
| 2015-2019    | Assistant Professor, Institute of Molecular Medicine, National Tsing Hua University (HsinChu, Taiwan)        |
| 2011-2015    | Research Fellow, Department of Cell Biology, Johns Hopkins University School of Medicine (Baltimore, U.S.A.) |
| 2009-2011    | Postdoctoral Fellow, Institute of Molecular Medicine, National Taiwan University (Taipei, Taiwan)            |
| 2008-2009    | Military Service                                                                                             |
| 2004-2008    | Ph.D. Life Science, TungHai University (Taichung, Taiwan)                                                    |
| 2003-2004    | Master degree student, TungHai University (Taichung, Taiwan)                                                 |
| 1999-2003    | B.S. Biology, TungHai University (Taichung, Taiwan)                                                          |

### **Membership**

|              |                                                                           |
|--------------|---------------------------------------------------------------------------|
| 2024-present | Board Member, The Taiwan Society for Biochemistry and Molecular Biology   |
| 2004-present | Member, American Society for Cell Biology                                 |
| 2005-present | Member, The Chinese Society of Cell and Molecular Biology                 |
| 2005-present | Member, The Phi Tau Phi Scholastic Honor Society of the Republic of China |
| 2018-present | Member, TienTe Lee Biomedical Foundation                                  |

### **Awards (Since 2015)**

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|------|-------------------------------------------------------------------------------------------------|
| 2025 | Outstanding Research Award, The College of Life Sciences and Medicine, NTHU<br>(國立清華大學生醫院傑出研究獎) |
| 2025 | NTHU-Novatek Distinguished Talent Chair<br>(清華-聯詠傑出人才講座)                                        |

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- 2024 Outstanding Teaching Award, NTHU  
(國立清華大學校級傑出獎)
- 2023~2027 NSTC Grant for International Outstanding Researcher  
(國科會國際年輕傑出學者研究計畫四年期)
- 2023 Outstanding Research Award, The College of Life Sciences and Medicine, NTHU  
(國立清華大學生醫院傑出研究獎)
- 2023 Spark Research Grant, NTHU  
(國立清華大學火種計畫補助)
- 2022 Outstanding Teaching Award, The College of Life Sciences and Medicine, NTHU  
(國立清華大學生醫院院級傑出教學獎)
- 2022 Monitoring the College Student Research Creativity Award, NSTC  
(指導大專生獲得國科會大專生計畫創作獎)
- 2022~2023 Potential Research Grant, NTHU  
(國立清華大學潛力型研究計畫兩年期)
- 2021 Outstanding Scholar Award, Foundation for the Advancement of Outstanding Scholarship  
(傑出人才發展基金會-年輕學者創新獎)
- 2021 Outstanding Teaching Award, NTHU  
(國立清華大學校級傑出教學獎)
- 2021 Outstanding Alumni Award, National Miaoli Senior High School  
(國立苗栗高中傑出校友)
- 2020 Outstanding publication award, College of Life Science, NTHU  
(國立清華大學生科院傑出研究論文獎)
- 2020 Outstanding teaching award, College of Life Science, NTHU  
(國立清華大學生科院院級傑出教學獎)
- 2020 58<sup>th</sup> Ten Outstanding Young Persons Award  
(第 58 屆十大傑出青年)
- 2019 MOST Young Scholar Fellowship  
(科技部年輕學者獎)
- 2019~2023 MOST Columbus Project  
(科技部哥倫布計畫五年期)
- 2018 Outstanding research award for junior faculty member, NTHU

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- (國立清華大學校級新進人員研究獎)
- 2018 TienTe Lee Young Scientist Award  
(第 14 屆永信李天德青年醫藥科技獎)
- 2018 Outstanding research award for junior faculty member, The College of Life Science, NTHU  
(國立清華大學生科院新進人員傑出研究獎)
- 2018 Outstanding Teaching Award, College of Life Science, NTHU  
(國立清華大學生科院傑出教學獎)
- 2018~2021 MOST grant for Excellent Junior Research Investigators  
(科技部優秀青年三年期計畫)
- 2018~2019 Potential Research Grant, NTHU  
(國立清華大學潛力型兩年期計畫)
- 2017 Outstanding Teaching Award, NTHU  
(國立清華大學校級傑出教學獎)
- 2016~2019 MOST grant for cultivation of outstanding young scholars  
(科技部優秀青年三年期計畫)

**Invited reviewers:**

Nature Methods, Nature Communications, Developmental Cell, Communications Biology, Brain stimulation, International Journal of Medical Sciences, Life Science, BMC Biology, Frontiers in Molecular Biosciences, iScience, Human Molecular Genetics, Journal of Cell Biology, Biomaterials, Advanced Science, 國科會醫學生化分生學門複審委員

**Publications** (Since 2015; #Corresponding author)

- 32 Chou PC, Huang YC, Hong SR, Lin YH, Chang TJB, Lin YZ, Lin IH, Yang TT, **Lin YC**, Huang JR, Wang WJ#. (2025) *Cell Reports* 44(6):115810 "Phase separation of TTBK2 and CEP164 is necessary for ciliogenesis".
- 31.# Hong SR, Chuang YC, Yang WT, Song CS, Yeh HW, Wu BH, Lin IH, Chou PC, Chen SC, Sharma L, Lu RZ, Li RY, Chang YC, Liao KJ, Cheng HC, Wang WJ, Wang LHC, **Lin YC**# (2025) *EMBO J.* 44(10): 2976-2996. "Glutamylation of centrosome ensures their functions by recruiting microtubule nucleation factors"

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30. Pao YS, Liao KJ, Shiau YC, Chao MH, Li MC, Lin LM, Chang HH, Chen YJ, Chiu YT, Pan MYC, Chang YH, Shen SY, Yeh HW, Cheng HC, **Lin YC**, Sun YJ#, Kuo CC#, Hsieh HP#, Wang LHC#. (2025) *Developmental Cell* 60, 1-17. "KIF2C mediates paclitaxel resistance by resolving polyglutamylated microtubules"
- 29.# Phan TN, Fan CH, Wang HC, Liu HL, **Lin YC**#, Yeh CK#. (2025) *Journal of Controlled release* 377: 341-353 "Modulation of GABAergic neurons in acute epilepsy using sonogenetics"
- 28.# Chen SC, Zeng NJ, Liu GY, Wang HC, Lin TY, Tai YL, Chen CY, Fang Y, Chuang YC, Kao CL, Cheng H, Wu BH, Sun PC, Bayansan O, Chiu YT, Shih CH, Chung WH, Yang JB, Wang LHC, Chiang PH, Chen CH, Wagner OI, Wang YC, **Lin YC**#. (2024). *Advanced Science* e2405568 "Precise control of intracellular trafficking and receptor-mediated endocytosis in living cells and behaving animals"
27. Yeh HW, Chen PP, Yeh TC, Lin SL, Chen YT, Lin WP, Chen T, Pang JM, Lin KT, Wang LHC, **Lin YC**, Shih O, Jeng U, Cheng HC#. (2024). *Proceedings of the National Academy of Sciences* 121(25):e2305260121. "Cep57 regulates human centrosomes through multivalent interactions"
- 26.# Lian YL#, **Lin YC**#. (2024) *Current Opinion in Cell Biology*. 88:102360. "The Emerging tools for precisely manipulating microtubules"
25. Yeh JY, Chao HC, Hong CL, Hung YC, Tzou FY, Hsiao CT, Li JL, Tsai PC, Chen WJ, Chou CT, Tsai YS, Liao YC, **Lin YC**, Lin SW, Huang SY, Kennerson M, Lee YC#, Chan CC#. (2024). *EMBO Molecular Medicine*. 16(5): 1091-1114. "A missense mutation in human INSC causes peripheral neuropathy"
- 24.# Wang HC, Phan TN, Kao CL, Yeh CK#, **Lin YC**#. (2023). *Frontiers in Cellular Neuroscience*. 17:1326279. "Genetically encoded mediators for sonogenetics and their applications in neuromodulation"
23. Su YA, Chiu HY, Chang YC, Sung CJ, Chen CW, Tei R, Huang XR, Hsu SC, Lin SS, Wang HC, **Lin YC**, Hsu JC, Bauer H, Feng Y, Baskin JM, Chang ZF#, Liu YW#. (2023). *Journal of Cell Biology* 222(10):e202301091 "NME3 binds to phosphatidic acid and mediates PLD6-induced mitochondrial tethering"
22. Ho YJ, Chen HL, Liao LD, **Lin YC**, Tsai HC#, Yeh CK#. (2023). *Biomaterials Research* 27:65. "Oxygen-loaded microbubble-mediated sonoperfusion and oxygenation for neuroprotection after ischemic stroke reperfusion"

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21. Fan CH, Tsai, HC, Tsai YS, Wang HC, Lin YC, Chiang PH, Wu N, Chou MH, Ho YJ, Lin ZH#, Yeh CK#. (2023). *ACS Nano* 17(10): 9140-9154. "Selective activation of cells by piezoelectric molybdenum disulfide nanosheets with focused ultrasound"
20. Ho YJ, Hsu HC, Wu BH, Lin, Y.C, Liao LD, Yeh KY#. (2023). *Journal of Controlled Release* 356: 481-492. "Preventing ischemia-reperfusion injury by acousto-mechanical local oxygen delivery".
- 19.# Cheng H, Kao YL, Chen T, Sharma L, Yang WT, Chuang YC, Huang SH, Lin HR, Huang YS, Kao CL, Yang LW, Bearon R, Hsia KC, Lin, Y.C#. (2022). *EMBO Reports* 24(1): e54935 "Actin filaments form a size-dependent diffusion barrier around centrosomes".
18. Tang WC, Liu YT, Yeh CH, Lu CH, Tu CH, Lin YL, Lin YC, Hsu TL, Gao L, Chang SW, Chen P#, Chen BC#. (2022). *Communications Biology* 5:879 "Optogenetic manipulation of cell migration with high spatiotemporal resolution using lattice lightsheet microscopy".
- 17.# Liu GY, Chen SC, Lee GH, Shaiv K, Chen PY, Cheng H, Hong SR, Yang WT, Huang SH, Chang YC, Wang HC, Kao CL, Sun PC, Chao MH, Lee YY, Tang MJ, Lin YC#. (2022). *EMBO Journal* 41(15): e110472 "Precise control of microtubule disassembly in living cells".
16. Phan TTT, Lin YC, Chou YT, Wu CW, Lin LY#. (2022). *Oncogenesis* 11(1): 26 "Tumor suppressor p53 restrains cancer cell dissemination by modulating mitochondrial dynamics".
- 15.# Fan CH, Wei KC, Chiu NH, Wang HC, Wu RY, Ho YJ, Chan HL, Wang TSA, Huang YZ, Hsieh TH, Lin CH, Lin YC#, Yeh CK#. (2021) *Nano Letters*, 21(14):5967-5976. "Sonogenetic activation of dopaminergic neurons ameliorates neurodegeneration and improves motor behavior in mice with Parkinson's disease".
- 14.# Huang YS, Fan CH, Yang WT, Yeh CK#, Lin, Y.C#. (2021) *Methods in Molecular Biology* "Sonogenetic modulation of cellular activities in mammalian cells".
13. Ho YJ, Chang HC, Lin CW, Fan CH, Lin YC, Wei KC, Yeh CK#. (2021) *Journal of Controlled Release*, 333:316-327. "Oscillatory behavior of microbubbles impacts efficacy of cellular drug delivery".
- 12.# Yang WT, Hong SR, He K, Ling K, Shaiv K, Hu J#, Lin YC#. (2021) *Frontiers in Cell and Developmental Biology*, 9:622302. "The emerging roles of axonemal glutamylation in regulation of cilia architecture and functions".

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11. Hsu TW, Lu YJ, Lin YJ, Huang YT, Hsieh LH, Wu BH, **Lin YC**, Chen LC, Wang HW, Chuang JC, Fan YQ, Huang CC#. (2021) *Biomaterials* 272:120765. "Transplantation of 3D MSC/HUVEC spheroids with neuroprotective and proangiogenic potentials ameliorates ischemic stroke brain injury".
- 10.# Lian YL, Chen KW, Chou YT, Ke TL, Chen BC, **Lin YC**#, Chen, L#. (2020) *Journal of Cell Science* 133: jcs240325 "PIP3 depletion rescues myoblast fusion defect in human rhabdomyosarcoma cells".
9. Wu CY, Huang RY, Liao EC, **Lin YC**, Chang CW, Chan HL, Huang YZ, Hsieh TH, Fan CH#, Yeh, CK#. (2020) *Brain Stimulation* 13(3): 786-799. "A preliminary study of Parkinson's gene therapy via sono-magnetic sensing gene vector for conquering extra/intracellular barriers in mice".
- 8.# Wu CY, Fan, CH, Chiu NH, **Lin YC**#, Yeh, CK#. (2020) *Theranostics* 10(8): 3546-3561. "Targeted delivery of engineered auditory sensing protein for ultrasound neuromodulation in the brain".
- 7.# Huang YS, Fan CH, Hsu N, Wu CY, Chiang YC, Chang YC, Hsu WC, Lin YC, Hong SR, Chang CY, Chen L, Yeh CK#, **Lin, YC**#. (2020) *Nano Letters* 20(2): 1089-1100. "Sonogenetic modulation of neurons using an engineered acoustic sensing protein".
- 6.# Hong SR, Wang CL, Huang YS, Chang YC, Chang YC, Pusapati GV, Lin CY, Hsu N, Cheng HC, Chiang YC, Huang WE, Shaner NC, Rohatgi R, Inoue T#, **Lin, YC**#. (2018) *Nature Communications* 9(1), 1732 "Spatiotemporal manipulation of ciliary glutamylation reveals its roles in intraciliary trafficking and Hedgehog signaling".
5. Nakamura H, Lee AA, Afshar AS, Watanabe S, Tho E, Razavi S, Suarez A, **Lin YC**, Tanigawa M, Huang B, DeRose R, Bobb D, Hong W, Gabelli SB, Goutsials J, Inoue T#. (2018) *Nature Materials* 17(1): 79-89 "Intracellular production of hydrogels and synthetic RNA granules by multivalent enhancers".
- 4.# Fan CH, Huang YS, Huang WE, Lee AA, Ho SY, Kao YL, Wang CL, Lian YL, Ueno T, Wang TSA, Yeh CK, **Lin YC**#. (2017) *ACS Synthetic Biology* 6: 2021-2027 "Manipulating cellular activities using an ultrasound-chemical hybrid tool".
3. Chang EL, Ting CY, Hsu PH, **Lin, YC**, Liao EC, Huang CY, Chang YC, Chan HL, Chiang CS, Liu HL, Wei KC, Fan CH#, Yeh, CK#. (2017) *Journal of Controlled Release* 255:164-175. "Angiogenesis-targeting microbubbles combined with ultrasound-mediated gene therapy in brain tumors".

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2. Fan CH, Chang EL, Ting CY, **Lin YC**, Liao EC, Huang CY, Chang YC, Chan HL, Wei KC, Yeh CK#. (2016). *Biomaterials* 106:46-57. "Folate-conjugated gene-carrying microbubbles with focused ultrasound for concurrent blood-brain barrier opening and local gene delivery".
1. Phua SC, **Lin, YC**, Inoue T#. (2015). *Cell Calcium* 58:415-422. "An intelligent nano-antenna: Primary cilium harnesses TRP channels to decode polymodal stimuli".