

Curriculum Vitae

Name: Hsuan Liu (劉軒)

Address: 259 Wen-Hwa 1st Rd, Kwei-San,
Tao-Yuan, Taiwan

Tel: +886-3-2118800 x3526

E-mail: liu-hsuan@mail.cgu.edu.tw



EDUCATION

DOCTOR OF PHILOSOPHY

1999/09-2005/01

Institute of Molecular Medicine, National Taiwan University, Taiwan, R.O.C
(台灣大學分子醫學研究所)

MASTER OF SCIENCE

1996/09-1998/07

Institute of Basic Medical Sciences, Chang Gung University, Taiwan, R.O.C
(長庚大學基礎醫學研究所)

BACHELOR OF SCIENCE

1992/10-1996/06

Department of Biology, Kaohsiung Medical University, Taiwan, R.O.C
(高雄醫學大學生物系)

PROFESSIONAL EXPERIENCE

2018/08~present

Associate Professor, Department of Biochemistry and Molecular Biology, Chang Gung University (副教授/長庚大學生化暨分子生物學科)

2014/2~2018/07

Assistant Professor, Department of Biochemistry and Molecular Biology, Chang Gung University (助理教授/長庚大學生化暨分子生物學科)

2012/1~2014/2

Assistant Research Fellow, Molecular Medicine Research Center, Chang Gung University) (助理研究員/長庚大學分子醫學中心)

2009/1~2011/12

National Science Council Distinguished Postdoctoral Fellowship, Department of Biomedical Sciences, Chang Gung University (行政院國科會補助延攬研究學者-特約博士後研究員/長庚大學生醫系)

2006/1~2008/12

NHRI Postdoctoral Fellowship Award, Department of Pharmacology, Chang Gung University (國家衛生研究院特約博士後研究學者/長庚大學藥理科)

2005/1~2005/9

Postdoctoral Fellow, Institute of Molecular Biology, Academia Sinica (中央研究院分子生物研究所/博士後研究員)

HONORS

***Recipient*, National Science Council Distinguished Postdoctoral Fellowship (行政院國家科學委員會補助延攬研究學者-特約博士後研究學者研究計劃) (2009-2011)**

***Recipient*, NHRI Postdoctoral Fellowship Award for outstanding young postdoctoral scientists conducting research work in Taiwan (held by National Health Research Institutes). (國家衛生研究院博士後研究學者獎) (1/4 persons, 2006-2008)**

The 13th International Symposium on Recent Advances in Cellular and Molecular Biology, Taiwan. (oral presentation) (徐千田博士紀念優秀論文獎 佳作獎) (2005)

STUDENTS UNDER SUPERVISION

Ph.D. Program:

1. Shao-Min Wu (Ph.D., 2015~2020)
2. Chan-Keng Yang (M.D., Ph.D, 2015~2022)
3. Yi-Li Lai (M.D., Third-year Ph.D. student, 2019~present)

4. Zhi-Wei Luan (M.D., Third-year Ph.D. student Ph.D, 2019~present)
5. En Jin (Second-year Ph.D. student, 2021~present)
6. Ying-Yu Lai (First-year Ph.D. student, 2022~)
7. Yu-Chang Chen (First-year Ph.D. student, 2022~)

Master Program:

1. Pei-Ting Hsu (Master's degree: 2016-2018)
2. Yu-Cheng Lin (Master's degree: 2018-2020)
3. Heng-Hsuan, Huang (Master's degree: 2019-2021)
4. Ying-Yu Lai (Master's degree: 2020-2022)
5. Yu-Chang Chen (Master's degree: 2020-2022)
6. Yan-Ci Zeng (Master's student: 2021~present)
7. Yun-Yu Qiu (Master's student: 2022~)
8. Xiang Dai (Master's student: 2022)

PUBLICATIONS

1. Shih-Chiang Huang, Ian Yi-Feng Chang, Chee-Jen Chang, **Hsuan Liu**, Kuang-Hua Chen, Ting-Ting Liu, Tsan-Yu Hsieh, Huei-Chieh Chuang, Chien-Cheng Chen, I-Chieh Lin, Kwai-Fong Ng, Hsuan-Ying Huang, Tse-Ching Chen. (2023 Feb). Association between hepatic angiosarcoma and end-stage renal disease: nationwide population-based evidence and enriched mutational signature of aristolochic acid exposure. *J Pathol*, doi: 10.1002/path.6072. Online ahead of print.
2. Chih-Hsiung Hsieh, Wen-Hui Kuan, Wei-Lun Chang, I-Ying Kuo, **Hsun Liu**, Dar-Bin Shieh, Hsuan Liu, Bertrand Tan, Yi-Ching Wang. (2022 Oct). Dysregulation of SOX17/NRF2 axis confers chemoradiotherapy resistance and emerges as a novel therapeutic target in esophageal squamous cell carcinoma. *J Biomed Sci*, 30;29(1):90. doi: 10.1186/s12929-022-00873-4.
3. Chan-Keng Yang, Hung-Chih Hsu, Yu-Hao Liu, Wen-Sy Tsai, Chung-Pei Ma, Yi-Tung Chen, Bertrand Chin-Ming Tan, Ying-Yu Lai, Ian Yi-Feng Chang, Chi Yang, Chia-Yu Yang, Jau-Song Yu, **Hsuan Liu*** (2022, Jul). EV-miRome-wide profiling uncovers miR-320c for detecting metastatic colorectal cancer and monitoring the therapeutic response. *Cell Oncol (Dordr)*, 45(4):621-638. doi: 10.1007/s13402-022-00688-3. (**corresponding author**)
4. Yi-Tung Chen, Chia-Hua Kan, **Hsuan Liu**, Yu-Hao Liu, Chih-Ching Wu, Yu-Ping Kuo, Ian Yi-Feng Chang, Kai-Ping Chang, Jau-Song, and Bertrand Chin-Ming Tan (2022, Jul). Modular scaffolding by lncRNA HOXA10-AS promotes oral cancer progression. *Cell Death & Disease*, 13(7):629.
5. Wei-Chen Yen, Ian Yi-Feng Chang, Kai-Ping Chang, Chun-Nan Ouyang, Chiao-Rou Liu, Ting-Lin Tsai, Yi-Cheng Zhang, Chun-I Wang, Ya-Hui Wang, Alice L Yu, **Hsuan Liu**, Chih-Ching Wu, Yu-Sun Chang, Jau-Song Yu, Chia-Yu Yang (2022, Apr). Genomic and Molecular Signatures of Successful Patient-Derived Xenografts for Oral Cavity Squamous Cell Carcinoma. *Frontiers in oncology*, <https://doi.org/10.3389/fonc.2022.792297>.

6. Yi-Tung Chen, Hung-Chih Hsu, Yun-Shien Lee, **Hsuan Liu**, Bertrand Chin-Ming Tan, Chia-Yin Chin, Ian Yi-Feng Chang, Chia-Yu Yang. (2022, Jan). Longitudinal High-Throughput Sequencing of the T-Cell Receptor Repertoire Reveals Dynamic Change and Prognostic Significance of Peripheral Blood TCR Diversity in Metastatic Colorectal Cancer During Chemotherapy. *Front Immunol*, 12;12:743448. doi: 10.3389/fimmu.2021.743448.
7. Jui-Hsiang Lin, Kang-Yung Peng, Yu-Ping Kuo, **Hsuan Liu**, Chin-Ming Bertrand Tan, Yuh-Feng Lin, Hui-Wen Chiu, Yen-Hung Lin, Yung-Ming Chen, Jeff S Chueh, Vin-Cent Wu. (2022 Jan). Aldosterone-producing nodules and CYP11B1 signaling correlate in primary aldosteronism. *Endocr Relat Cancer*, 10;29(2):59-69. doi: 10.1530/ERC-21-0287.
8. Vin-Cent Wu, Kang-Yung Peng, Yu-Ping Kuo, **Hsuan Liu**, Bertrand Chin-Ming Tan, Yen-Hung Lin, Tai-Shuan Lai, Yung-Ming Chen, Jeff S Chueh and TAIPEI (2021, Dec). Subtypes of Histopathologically Classical Aldosterone-Producing Adenomas Yield Various Transcriptomic Signaling and Outcomes. *Hypertension*, 78:1791–1800.
9. Chiang S-F, Huang HH, Tsai W-S, Chin-Ming Tan B, Yang C-Y, Huang P-J, Yi-Feng Chang I, Lin J, Lu P-S, Chin E, Liu Y-H, Yu J-S, Chiang J-M, Hung H-Y, **Liu H*** (2021, Mar). Comprehensive functional genomic analyses link APC somatic mutation and mRNA-miRNA networks to the clinical outcome of stage-III colorectal cancer patients. *Biomedical Journal*, 45(2):347-360. doi: 10.1016/j.bj.2021.03.001. (**corresponding author**)
10. Min-Hua Tseng, Wen-Lang Fan, **Hsuan Liu**, Chia-Yu Yang, Jhao-Jhuang Ding, Hwei-Jen Lee, Shih-Ming Huang, Shih-Hua Lin and Jing-Long Huang (2021, Feb). Complement Factor I Mutation May Contribute to Development of Thrombotic Microangiopathy in Lupus Nephritis. *Frontiers in Medicine*, Feb 5;7:621609.
11. Wen-Sy Tsai, Wei-Shan Hung, Tzu-Min Wang, **Hsuan Liu**, Chia-Yu Yang, Shao-Min Wu, Hsueh-Ling Hsu, Yu-Chiao Hsiao, Hui-Ju Tsai, Ching-Ping Tseng (2021, Dec). Circulating tumor cell enumeration for improved screening and disease detection of patients with colorectal cancer. *Biomedical Journal*. 44(6 Suppl 2): S190-S200.doi:10.1016/j.bj.2020.09.006.
12. Chen YT, Chang IY, Kan CH, Liu YH, Kuo YP, Tseng HH, Chen HC, **Liu H**, Chang YS, Yu JS, Chang KP, Tan BC. (2020, Aug). circRNAome Profiling in Oral Carcinoma Unveils a Novel circFLNB that Mediates Tumour Growth-Regulating Transcriptional Response. *Cells*, 10;9(8):1868.
13. Yang CY, Liu CR, Chang IY, OuYang CN, Hsieh CH, Huang YL, Wang CI, Jan FW, Wang WL, Tsai TL, **Liu H**, Tseng CP, Chang YS, Wu CC, Chang KP (2020, Jun). Cotargeting CHK1 and PI3K Synergistically Suppresses Tumor Growth of Oral Cavity Squamous Cell Carcinoma in Patient-Derived Xenografts. *Cancers (Basel)*, 29;12(7):1726.
14. Wu SM, Tsai WS, Chiang SF, Lai YH, Ma CP, Wang JH, Lin J, Lu PS5, Yang CY, Tan BC, **Liu H*** (2020, Mar). Comprehensive transcriptome profiling of Taiwanese colorectal cancer implicates an ethnic basis for pathogenesis. *Scientific Reports*, 10(1):4526. (**corresponding author**).
15. Chung AK, OuYang CN, **Liu H**, Chao M, Luo JD, Lee CY, Lu YJ, Chung IC, Chen LC, Wu SM, Tsang NM, Chang KP, Hsu CL, Li HP, Chang YS. (2019, Sep). Targeted sequencing of

cancer-related genes in nasopharyngeal carcinoma identifies mutations in the TGF- β pathway. *Cancer Medicine*, 8(11):5116-5127.

16. Kuo YP, Ma CP, Chen HW, Chen YT, Lai YH, **Liu H**, Kuo RL, Chin-Ming Tan B. (2019, Sep). A novel antisense RNA ASPACT confers multi-level suppression of PACT and associated signalling. *RNA Biology*, 16(9):1263-1274.
17. Ma CP, **Liu H**, Yi-Feng Chang, Wang WC, Chen YT, Wu SM, Chen HW, Kuo YP, Shih CT, Li CY, Tan BC. (2019, May). ADAR1 promotes robust hypoxia signaling via distinct regulation of multiple HIF-1 α -inhibiting factors. *EMBO Report*, 20(5): pii: e47107.
18. Lai CY*, **Liu H***, Tin KX, Huang Y, Yeh KH, Peng HW, Chen HD, He JY, Chiang YJ, Liu CS, Weng SY, Tao MH, Yen JJ, Yang-Yen HF. (2019, Jan). Identification of UAP1L1 as a critical factor for protein O-GlcNAcylation and cell proliferation in human hepatoma cells. *Oncogene*, 38(3):317-331. (**first author**)
19. You GR, Cheng AJ, Lee LY, Huang YC, **Liu H**, Chen YJ, Chang JT. (2019, Jan). Prognostic signature associated with radioresistance in head and neck cancer via transcriptomic and bioinformatic analyses. *BMC Cancer*, 19(1):64.
20. Huang YW, Chiang MF, Ho CS, Hung PL, Hsu MH, Lee TH, Chu JL, **Liu H**, Tang P, Ng VW, Lin DS (2018, Dec). A Transcriptome Study of Progeroid Neurocutaneous Syndrome Reveals POSTN As a New Element in Proline Metabolic Disorder. *Aging and Disease*, 9(6):1043-1057.
21. Chao A, Lin CY, Wu RC, Lee YS, Lee LY, Tsai CL, Yang LY, **Liu H**, Chen SJ, Wang TH, Lai CH (2018, Nov). The combination of everolimus and terameprocol exerts synergistic antiproliferative effects in endometrial cancer: molecular role of insulin-like growth factor binding protein 2. *J Mol Med (Berl)*, 96(11):1251-1266.
22. Chang S, Bok P, Tsai CY, Sun CP, **Liu H**, Deussing JM, Huang GJ (2018, Aug). NPTX2 is a key component in the regulation of anxiety. *Neuropsychopharmacology*, 43(9):1943-1953.
23. Chen YT, Chang IY, **Liu H**, Ma CP, Kuo YP, Shih CT, Shih YH, Kang L, Tan BC (2018, Jun). Tumor-associated intronic editing of HNRPLL generates a novel splicing variant linked to cell proliferation. *J Biol Chem*, 293(26) 10158–10171.
24. Yang CY, Yeh YM, Yu HY, Chin CY, Hsu CW, **Liu H**, Huang PJ, Hu SN, Liao CT, Chang KP, Chang YL. (2018, May). Oral Microbiota Community Dynamics Associated with Oral Squamous Cell Carcinoma Staging. *Front Microbiol*, 9:862.
25. Tsai KW, Lo YH, **Liu H**, Yeh CY, Chen YZ, Hsu CW, Chen WS, Wang JH (2018, Mar). Linc00659, a long noncoding RNA, acts as novel oncogene in regulating cancer cell growth in colorectal cancer. *Molecular Cancer*, 17(1):72.
26. Lai YH, **Liu H**, Chiang WF, Chen TW, Chu LJ, Yu JS, Chen SJ, Chen HC, Tan BC (2018, Jan). MiR-31-5p-ACOX1 Axis Enhances Tumorigenic Fitness in Oral Squamous Cell Carcinoma Via the Promigratory Prostaglandin E2. *Theranostics*, 8(2):486-504.
27. Wu SM*, **Liu H***, Huang PJ, Chang IY, Lee CC, Yang CY, Tsai WS, Tan BC. (2018, Jan).

circIncRNA.net: An integrated web-based resource for mapping functional networks of long or circular forms of non-coding RNAs. *Gigascience*. 2018 Jan 1;7(1):1-107 (1):1-10. **(first author)**.

28. Chen TW*, Lee CC*, **Liu H***, Wu CS*, Pickering CR*, Huang PJ, Wang J, Chang YF, Yeh YM, Chen CD, Li HP, Luo JD, Tan BC, Chan EH, Hsueh C, Chu LJ, Chen YT, Zhang B, Yang CY, Wu CC, Hsu CW, See LC, Tang P, Yu JS, Liao WC, Chiang KW, Rodriguez H, Myers JN., Chang KP, Chang YS (2017, Sep). APOBEC3A is an oral cancer prognostic biomarker in Taiwanese carriers of an APOBEC deletion polymorphism. *Nature Communication*, 8 (1):465. **(first author)**.
29. Yang CC, Chen YT, Chang YF, **Liu H**, Kuo YP, Shih CT, Liao WC, Chen HW, Tsai WS, Tan, BC (2017, May). ADAR1 mediated 3' UTR editing and expression control of anti-apoptosis genes fine-tunes cellular apoptosis response. *Cell Death and Disease*, 8(5): e2833.
30. Chen H, Hsiao YC, Chiang SF, Wu CC, Lin YT, **Liu H**, Zhao H, Chen JS, Chang YS, Yu JS. (2016, Aug). Quantitative analysis of wild-type and V600E mutant BRAF proteins in colorectal carcinoma using immunoenrichment and targeted mass spectrometry. *Analytica Chimica Acta*, 933:144-55.
31. Chung IH*, **Liu H***, Lin YH, Chi HC, Huang YH, Yang CC, Yeh CT, Tan BC, Lin KH. (2016, Apr). ChIP-on-chip analysis of thyroid hormone-regulated genes and their physiological significance. *Oncotarget*, 7(16), 22448-59. **(first author)**
32. Yang XZ, Chen JY, Liu CJ, Peng J, Wee YR, Han X, Wang C, Zhong X, Shen QS, **Liu H**, Cao H, Chen X, Tan BC, Li CY (2015, Dec). Selectively Constrained RNA Editing Regulation Crosstalks with piRNA Biogenesis in Primates. *Molecular Biology and Evolution*, 32(12):3143-57.
33. Chen SJ*, **Liu H***, Liao CT, Huang PJ, Huang Y, Hsu A, Tang P, Chang YS, Chen HC, Yen TC (2015, Jul). Ultra-deep targeted sequencing of advanced oral squamous cell carcinoma identifies a mutation-based prognostic gene signature. *Oncotarget*, 6(20):18066-80. **(first author)**
34. Chen WY, Shih HT, Liu KY, Shih ZS, Chen LK, Tsai TH, Chen MJ, **Liu H**, Tan BC, Chen CY, Lee HH, Loppin B, Ait-Ahmed O, Wu JT (2015, Apr). Intellectual disability-associated dBRWD3 regulates gene expression through inhibition of HIRA/YEM-mediated chromatin deposition of histone H3.3. *EMBO Reports*, 16(4):528-38.
35. Huang PJ, Lee CC, Tan BC, Yeh YM, Huang KY, Gan RC, Chen TW, Lee CY, Yang ST, Liao CS, **Liu H***, Tang P* (2015, Feb). Vanno: A Visualization-aided Variant Annotation Tool. *Human Mutation*, 36(2):167-74. **(corresponding author)**.
36. Huang PJ, Lee CC, Tan BC, Yeh YM, Chu LJ, Chen TW, Chang KP, Lee CY, Gan RC, **Liu H***, Tang P* (2015, Jan). CMPD: cancer mutant proteome database. *Nucleic Acids Research*, 43(Database issue): D849–D855. **(corresponding author)**.
37. **Liu H***, Ma CP, Chen YT, Schuyler SC, Chang KP, Tan BC (2014, Aug). Functional impact of RNA editing and ADARs on regulation of gene expression: perspectives from deep sequencing studies. *Cell & Bioscience*, 4:44. **(first author)**

38. Liu YC, Kuo RL, Lin JY, Huang PN, Huang Y, **Liu H**, Arnold JJ, Chen SJ, Wang RY, Cameron CE, Shih SR (2014, Jun). Cytoplasmic viral RNA-dependent RNA polymerase disrupts the intracellular splicing machinery by entering the nucleus and interfering with Prp8. *PLOS Pathogens*, 10(6): e1004199.
39. Hsieh CL, **Liu H**, Huang Y, Kang L, Chen HW, Chen YT, Wee YR, Chen SJ, and Tan BC (2014, May). ADAR1 deaminase contributes to scheduled skeletal myogenesis progression via stage-specific functions. *Cell death and differentiation*, 21(5):707-719.
40. Chen HW, Yang CC, Hsieh CL, **Liu H**, Lee SC, Tan BC (2013, Dec). A functional genomic approach reveals the transcriptional role of EDD in the expression and function of angiogenesis regulator ACVRL1. *Biochimica et Biophysica Acta (BBA) - Gene Regulatory Mechanisms*, 1829 (12) 1309–1319.
41. Huang PJ, Yeh YM, Gan RC, Lee CC, Chen TW, Lee CY, **Liu H**, Chen SJ, Tang P (2013, Oct). CPAP: Cancer Panel Analysis Pipeline. *Human Mutation*, 34(10):1340-1346.
42. Lo SJ, Fan LC, Tsai YF, Lin KY, Huang HL, Wang TH, **Liu H**, Chen TC, Huang SF, Chang CJ, Lin YJ, Yung BY, Hsieh SY (2013, May). A novel interaction of nucleophosmin with BCL2-associated X protein regulating death evasion and drug sensitivity in human hepatoma cells. *Hepatology*, 57(5):1893-1905.
43. Tan BC, Yang CC, Hsieh CL, Chou YH, Zhong CZ, Yung BYM, **Liu H*** (2012, Jun). Epigenetic silencing of ribosomal RNA genes by Mybbp1a. *Journal of Biomedical Science*, 19(1): 57. (**corresponding author**)
44. Yang CC*, **Liu H***, Chen SL, Wang TH, Hsieh CL, Huang Y, Chen SJ, Chen HC, Yung BYM, Tan BC (2012, Apr). Epigenetic silencing of myogenic gene program by Myb-binding protein 1a suppresses myogenesis. *The EMBO journal*, 31(7):1739-51. (SCI, 16/290, BIOCHEMISTRY & MOLECULAR BIOLOGY). (**first author**)
45. Hsieh CL, Lin CL, **Liu H**, Chang YJ, Shih CJ, Zhong CZ, Lee SC, Tan BC (2011, May). WDHD1 modulates the post-transcriptional step of the centromeric silencing pathway. *Nucleic Acids Research*, 39(10):4048-62.
46. Lin CY, Tan BC, **Liu H**, Shih CJ, Chien KY, Lin CL, Yung BY (2010, Oct). Dephosphorylation of nucleophosmin by PP1 β facilitates pRB binding and consequent E2F1-dependent DNA repair. *Molecular biology of the cell*, 21(24):4409-17.
47. Tan BC, **Liu H**, Lin CL, Lee SC (2010, Feb). Functional cooperation between FACT and MCM is coordinated with cell cycle and differential complex formation. *Journal of Biomedical Science*, 17:11 (**first author**).
48. Chen SH, Wu PS, Chou CH, Yan YT, **Liu H**, Weng SY, Yang-Yen HF (2007, Jul). A knockout mouse approach reveals that TCTP functions as an essential factor for cell proliferation and survival in a tissue- or cell type-specific manner. *Molecular Biology of the Cell*, 18(7):2525-32.
49. **Liu H***, Tan BC, Tseng KH, Chuang CP, Yeh CW, Chen KD, Lee SC, Yung BY (2007,

Apr). Nucleophosmin acts as a novel AP2alpha-binding transcriptional corepressor during cell differentiation. *EMBO Reports*, 8(4):394-400. **(first author)**.

50. **Liu H***, Peng HW, Cheng YS, Yuan HS, Yang-Yen HF (2005, Apr). Stabilization and enhancement of the antiapoptotic activity of mcl-1 by TCTP. *Molecular and cellular biology*, 25(8):3117-26. **(first author)**.