Yunching (Becky) Chen

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Education

Massachusetts General Hospital / Harvard Medical School	Postdoc	2013/7	Biomedical Engineering
University of North Carolina at Chapel Hill	PhD	2010/6	Pharmaceutical Sciences
National Taiwan University	MS	2004/6	Pathology
National Sun Yat-Sen University	BS	2002/6	Biology

Brief Biography

Dr. Yunching (Becky) Chen received her Ph.D. in Pharmaceutical Sciences from the University of North Carolina at Chapel Hill in May 2010, under the mentorship of Dr. Leaf Huang. She then completed her postdoctoral training at the Department of Radiation Oncology at Harvard Medical School and Massachusetts General Hospital, where she collaborated with Drs. Rakesh Jain and Dan Duda. In 2013, Dr. Chen joined the faculty of National Tsing Hua University (NTHU) as a tenure-track Assistant Professor and was promoted to Full Professor in 2020. She currently serves as Chair of the Institute of Biomedical Engineering at NTHU. Dr. Chen's research centers on the development of innovative drug delivery systems for the targeted administration of nucleic acids, proteins, chemotherapeutics, and immunotherapeutic agents. Her work addresses pressing challenges in the treatment of cancer and inflammatory diseases, including renal fibrosis and liver cirrhosis. Her research has been widely published in high-impact journals, including *Nature Reviews Bioengineering*, *Advanced Drug Delivery Reviews*, *Nature Nanotechnology*, *Nature Protocols*, *Advanced Materials*, *Advanced Functional Materials*, *ACS Nano*, *Gut*, *Hepatology*, and the *Journal of Controlled Release*. In addition to her academic achievements, Dr. Chen holds several prominent leadership roles in the scientific community. She is Chair of the International Chapter Committee of the Controlled Release Society (CRS), Associate Editor of the *Journal of Controlled Release*, Guest Editor of *Advanced Drug Delivery Reviews*, and serves on the editorial board of *ACS Nano Medicine*.

Employment

2020 - Present	**Professor** Institute of Biomedical Engineering, National Tsing Hua University
2021 - Present	**Associate Editor** Journal of Controlled Release
2022 - Present	**Director** Biomedical Science and Engineering Center, National Tsing Hua University
2016 - 2020	**Associate Professor** Institute of Biomedical Engineering, National Tsing Hua University
2013 - 2016	**Assistant Professor** Institute of Biomedical Engineering, National Tsing Hua University

Honors and Awards

2008	Young Investigator Award, 11th Liposome Research Days Conference, Japan
2009	Graduate Scholar Award, University of North Carolina, Chapel Hill, NC,
2010	AAPS Biotechnology Graduate Student Symposium Awards
2015	Distinguished Young Investigator Research Grant, Ministry of Science and Technology, Taiwan
2015	Young Investigator Award, The 5th Asian Biomaterials Congress
2016	Distinguished Young Investigator Research Grant Ministry of Science and Technology, Taiwan
2016	Biomedical Engineering Young Investigator Award
2017	Young Faculty Research Award, Engineering College of NTHU, Taiwan
2017	Young Faculty Research Award, NTHU, Taiwan
2018	Excellent Teaching Award in College of Engineering, NTHU, Taiwan
2019	Ta-You Wu Memorial Award, MOST, Taiwan
2020	Future Tech Award, Ministry of Science and Technology, Taiwan
2020	Promising Women in Science Award
2020	The 16th Young Investigator Award, TienTe Lee Biomedical Foundation
2021	Academia Sinica Early-Career Investigator Research Achievement Award
2023	Outstanding Research Award, National Science Council, Taiwan.
2023	Young Scholar Innovation Award, Foundation of the Advancement of Outstanding Scholarship

Research Funding History

2015/8 - 2018/7 **Principal Investigator**	Development of CXCR4-Targeted NPs delivering anti-angiogenic drugs and siRNAs to modulate tumor microenvironment and achieve potent anti-tumor response in liver cancer • Funding Agency: Ministry of Science and Technology (MOST) • Funding: NTD 5,936,577
2016/8 – 2019/7 **Principal Investigator**	Development of nanoparticles targeting RAF/ERK-driven cell-autonomous resistance to sorafenib for effective treatment of liver fibrosis and hepatocellular carcinoma • Funding Agency: Ministry of Science and Technology (MOST) • Funding: NTD 4,056,000
2017/1 – 2020/12 **Principal Investigator**	Career Development Grant: Dendrimer-based calcium phosphate nanoparticles as efficient vectors for cancer gene therapy • Funding Agency: National Health Research Institute (NHRI) • Funding: NTD 10,145,000
2019/8 – 2024/7 **Principal Investigator**	Development of multifunctional nitric oxide-releasing drug/gene delivery systems for cancer treatment • Funding Agency: Ministry of Science and Technology (MOST) • Funding: NTD 16,985,000
2021/1 – 2023/12 **Principal Investigator**	Development of a stroma-targeted nitric oxide delivery system to improve immunotherapy for the treatment of pancreatic cancer • Funding Agency: National Health Research Institute (NHRI) • Funding: NTD 8,016,000
2021/8 – 2025/7 **Principal Investigator**	Development of a highly potent and orally bioavailable CXCR4 inhibitor to improve immunotherapy for the treatment of pancreatic cancer • Funding Agency: Ministry of Science and Technology (MOST) • Funding: NTD 28,000,000

Journal papers（*Corresponding author）

1. Lam-Duc-Huy Nguyen, Sheng-Liang Cheng, Yu-Ting Yen, Hsin-Mei Lee, Te-Haw Wu, Jane Wang, Shu-Yi Lin, **Yunching Chen*** (2025) A Cryogel-Based Dendritic Cell Vaccine for Post-Surgical Breast Cancer Immunotherapy. ***Advanced Science*** e03238.

2. **Y. Chen**, Y. Su, S. R. Roffler* (2025) Overcoming polyethylene glycol immune hurdles for effective and safe nanomedicines. ***Nature Reviews Bioengineering,*** 1-19.

3. V. Chan, H.-M. Lee, H. Takata, S.-L. Cheng, Y.-T. Yen, L. Pfeifer, L. Rushton, P.-H. Chao, F. Zhao, C. Y. Ong, N. Al-Fayez, T. Ishida, **Y. Chen***, S.-D. Li* (2025) Imiquimod-Loaded Phospholipid-Free Small Unilamellar Vesicles Activate the Tumor Immune Microenvironment to Treat Liver Cancer and Liver Metastases. ***Advanced Healthcare Materials***, 2501691.

4. Sheng-Liang Cheng, Chien-Huang Wu, Yun-Jen Tsai, Jen-Shin Song, Hsin-Min Chen, Teng-Kuang Yeh, Chia-Tung Shen, Jou-Chien Chiang, Hsin-Mei Lee, Kuan-Wei Huang, Yuling Chen, J Timothy Qiu, Yu-Ting Yen*, Kak-Shan Shia*, **Yunching Chen*** (2025) CXCR4 antagonist-loaded nanoparticles reprogram the tumor microenvironment and enhance immunotherapy in hepatocellular carcinoma. ***J Control Release*** 379:967-981.

5. Sheng-Liang Cheng, Hsin-Mei Lee, Chung-Pin Li, Mei-Wei Lin, Min-Yuan Chou, Yu-Ting Yen, Tun-Han Wu, Yun-Chen Lian, Yu-Chuan Shih, Chi-Shiun Chiang, Ting-Wen Chen, Dehui Wan, **Yunching Chen*** (2024) Robust and Sustained STING Activation via Hydrogel-Based In-Situ Vaccination for Cancer Immunotherapy. ***ACS Nano*** 18(43):29439-29456.

6. Ya-Han Chuang, Yueh-Feng Wu, Ya-Hui Lin, Yin-Hsu Chen, Yu-Xian Zhou, Shao-Chun Hsu, Hsin-Mei Lee, Ann-Shyn Chiang, **Yunching Chen**, Shiang-Jiuun Chen, Sung-Jan Lin, Li-An Chu. (2024) Super-Resolution Imaging in Collagen-Abundant Thick Tissues. ***Small Structures*** 2400231.

7. Hui-Teng Cheng, Yen-Nhi Ngoc Ta, Tiffaney Hsia, **Yunching Chen*** (2024) A Quantitative Review of Nanotechnology-Based Therapeutics for Kidney Diseases. ***WIREs Nanomedicine & Nanobiotechnology*** 16(2):e1953.

8. Tiffaney Hsia, **Yunching Chen*** (2024) RNA-encapsulating Lipid Nanoparticles in Cancer Immunotherapy: From Pre-Clinical Studies to Clinical Trials. ***European Journal of Pharmaceutics and Biopharmaceutics*** 197:114234.

9. Hsuan-Yu Mu, Chiao-Min Lin, Li-An Chu, Ya-Hui Lin, Ji Li, Chao-Yu Liu, His-Chien Huang, Sheng-Liang Cheng, Tsung-Ying Lee, Hsin-Mei Lee, Hsin-Min Chen, Yun-Jen Tsai, **Yunching Chen***, Jen-Huang Huang* (2024) Ex Vivo Evaluation of Combination Immunotherapy Using Tumor-Microenvironment-on-Chip. ***Advanced Healthcare Materials*** 13(2), 2302268.

10. Hsuan-Yu Mu, Yen-Nhi Ngoc Ta, Max Jing Rui Tham, Fu-Fei Hsu, Yu-Chieh Lin, Hsi-Chien Huang, Yun-Chieh Sung, Chih-I Huang, Ching-Ling Wu, Chao-Hung Chang, Sheng Yang, Tsung-Ying Lee, Dehui Wan, Jane Wang, Dan G. Duda, Yves Boucher, Jen-Huang Huang*, Wee Han Ang*, **Yunching Chen*** (2024) A chemoimmunotherapy nanogel enables efficient delivery of interleukin-2 and induction of immunogenic cell death for effective cancer therapy. ***Advanced Functional Materials*** 34 (1), 2303033

11. **Yunching Chen*** (2023) Nanotechnology for next-generation cancer immunotherapy: State of the art and future perspectives. ***Journal of Controlled Release*** 28;356:14-25.

12. Tsung-Ying Lee, Hung-Hsun Lu, Hui-Teng Cheng, Hsi-Chien Huang, Yun-Jen Tsai, I-Hsiang Chang, Chao-Peng Tu, Chieh-Wei Chung, Tsai-Te Lu*, Chi-How Peng*, **Yunching Chen*** (2023) Delivery of Nitric Oxide with a pH-Responsive Nanocarrier for the Treatment of Renal Fibrosis. ***Journal of Controlled Release*** 354, 417-428

13. Bryan John Abel Magoling, Anthony Yan-Tang Wu, Yen-Ju Chen, Wendy Wan-Ting Wong, Steven Ting-Yu Chuo, Hsi-Chien Huang, Yun-Chieh Sung, Hsin Tzu Hsieh, Poya Huang, Kang-Zhang Lee, Kuan-Wei Huang, Ruey-Hwa Chen, **Yunching Chen,** Charles Pin-Kuang Lai* (2023) Membrane Protein Modification Modulates Big and Small Extracellular Vesicle Biodistribution and Tumorigenic Potential in Breast Cancers In Vivo. ***Advanced Materials***, 35(13):e2208966.

14. Hsin-Tzu Hsieh, Hsi-Chien Huang, Chieh-Wei Chung, Cheng-Chin Chiang, Tiffaney Hsia, Hsin-Fang Wu, Rui-Lin Huang, Chi-Shiun Chiang, Jane Wang, Tsai-Te Lu*, **Yunching Chen*** (2022) CXCR4-Targeted Nitric Oxide Nanoparticles Deliver PD-L1 siRNA for Immunotherapy against Glioblastoma. ***Journal of Controlled Release*** 14;352:920-930

15. Hsi-Chien Huang, Yun-Chieh Sung, Chung-Pin Li, Dehui Wan, Po-Han Chao, Bo-Wen Liao, Hui-Teng Cheng, Fu-Fei Hsu, Chieh-Cheng Huang, Yu-Hui Liao, Hsin Tzu Hsieh, Yu-Chuan Shih, I-Ju Liu, Han-Chung Wu, Tsai-Te Lu*, Jane Wang*, **Yunching Chen*** (2022) Reversal

of Pancreatic Desmoplasia by a Tumor Stroma-targeted Nitric Oxide Nanogel Overcomes TRAIL Resistance in Pancreatic Tumors. ***Gut*** 71 (9), 1843-1855

16. Hung-Hsun Lu, Hsueh Wen Liu, Trinh Kieu Dinh, Cheng-Hung Huang, Hsi-Chien Huang, Ya-Ching Tseng, Man-Hsuan Ku, Fu-Sheng Wang, **Yunching Chen*** and Chi-How Peng* (2022) pH-Responsive, two-in-one doxorubicin and Bcl-2 siRNA-loaded micelleplexes for triple-negative breast cancer therapy. ***Polym. Chem.*** 2022,13, 5568-5578

17. Jai-Shin Liu, Wei-Kai Fang, Shan-Min Yang, Meng-Chen Wu, Tsan-Jan Chen, Chih-Ming Chen, Tung-Yueh Lin, Kai-Lun Liu, Chien-Ming Wu, **Yun-Ching Chen**, Chih-Pin Chuu, Ling-Yu Wang, Hsing-Pang Hsieh, Hsing-Jien Kung, Wen-Ching Wang (2022) Natural product myricetin is a pan-KDM4 inhibitor which with poly lactic-co-glycolic acid formulation effectively targets castration-resistant prostate cancer. ***Journal of biomedical science*** 2022, 29, 29

18. Hui-Teng Cheng, Yun-Chieh Sung, Hsi-Chien Huang, Tsung-Ying Lee, Yu-Hui Liao, Yi-Hua Sheng, Pei-Ru Jin, Kuan-Wei Huang, Ling-Hsuan Chen, Yi-Ting Chen, Zi-Yan Liu, Tzu-Chieh Lin, Hsueh-Cheng Wang, Cheng-Han Chao, I Pu Juang, Chi-Ting Su, Kuo-How Huang, Shuei-Liong Lin, Jane Wang, **Yunching Chen *** (2022) Delivery of Sorafenib by Myofibroblast-targeted Nanoparticles for the Treatment of Renal Fibrosis. ***Journal of Controlled Release*** 2022, 346:169-179

19. Pei-Hsuan Hsieh, Huan-Chih Wang, Hsi-Chin Wu, Lu-Chieh Huang, Shao-Chi Chen, Ting-Yun Shiue, **Yunching Chen**, Tzu-Wei Wang* (2022) Dual-responsive Polypeptide Nanoparticles Attenuate Tumor-associated Stromal Desmoplasia through Programming Dissociation. ***Biomaterials*** 2022, 284:121469

20. Yong-Huei Hong, Manmath Narwane, Lawrence Yu-Min Liu, Yi-Da Huang, Chieh-Wei Chung, Yi-Hong Chen, Bo-Wen Liao, Yu-Hsiang Chang, Cheng-Ru Wu, Hsi-Chien Huang, I-Jui Hsu, Ling-Yun Cheng, Liang-Yi Wu, Yu-Lun Chueh, **Yunching Chen**, Chia-Her Lin, and Tsai-Te Lu* (2022) Enhanced Oral NO Delivery through Bioinorganic Engineering of Acid-Sensitive Prodrug into a Transformer-like DNIC@MOF Microrod. ***ACS Appl. Mater. Interfaces*** 2022, 14, 3, 3849–3863

21. Cheng-Yun Wu, Yu-Hsuan Hsu, **Yunching Chen**, Ling-Chu Yang, Shao-Chin Tseng, Wan-Ru Chen, Chieh-Cheng Huang, Dehui Wan (2021) Robust O 2 Supplementation from a Trimetallic Nanozyme-Based Self-Sufficient Complementary System Synergistically Enhances the Starvation/Photothermal Therapy against Hypoxic Tumors. ***ACS Appl. Mater. Interfaces,*** 13, 32, 38090-38104.

22. Venkanagouda S Goudar, Manohar Prasad Koduri, Yen-Nhi Ngoc Ta, **Yunching Chen**, Li-An Chu, Long-Sheng Lu, Fan-Gang Tseng (2021) Impact of a Desmoplastic Tumor Microenvironment for Colon Cancer Drug Sensitivity: A Study with 3D Chimeric Tumor Spheroids. ***ACS Appl. Mater. Interfaces,*** 13, 41, 48478-48491.

23. Pei-Ru Jin, Yen-Nhi Ngoc Ta, Yan-Ning Yu, Hsin Tzu Hsieh, Shang-Ying Hsieh, Tiffaney Hsia, Hao Liu, Chan-Wei Hsu, Jeng-Liang Han*, **Yunching Chen*** (2021) A Cinchona Alkaloid-Inspired Urea-Containing Autophagy Inhibitor Shows Single-agent Anticancer Efficacy. ***J. Med. Chem***., 2021, 64, 19, 14513–14525.

24. Jen-Shin Song, Chih-Chun Chang, Chien-Huang Wu, Trinh Kieu Dinh, Jiing-Jyh Jan, Kuan-Wei Huang, Ming-Chen Chou, Ting-Yun Shiue, Kai-Chia Yeh, Yi-Yu Ke, Teng-Kuang Yeh, Yen-Nhi Ngoc Ta, Chia-Jui Lee, Jing-Kai Huang, Yun-Chieh Sung, Kak-Shan Shia* and **Yunching Chen*** (2021). A Highly Selective and Potent CXCR4 Antagonist for Hepatocellular Carcinoma Treatment. ***Proc. Natl. Acad. Sci. U.S.A,*** 118 (13) e2015433118.

25. Fang-Ying Wang, **Yunching Chen**, Yi-You Huang, Chao-Min Cheng (2021) Transdermal drug delivery systems for fighting common viral infectious diseases. **Drug Delivery and Translational Research** 11 (4), 1498-1508

26. Cheng-Ru Wu, Yi-Da Huang, Yong-Huei Hong, Ya-Hsin Liu, Manmath Narwane, Yu-Hsiang Chang, Trinh Kieu Dinh, Hsin-Tzu Hsieh, Yi-Jen Hseuh, Ping-Ching Wu, Chih-Wen Pao, Ting-Shan Chan, I-Jui Hsu, **Yunching Chen**, Hung-Chi Chen, Ting-Yu Chin, Tsai-Te Lu* (2021) Endogenous Conjugation of Biomimetic Dinitrosyl Iron Complex with Protein Vehicles for Oral Delivery of Nitric Oxide to Brain and Activation of Hippocampal Neurogenesis. ***JACS Au*** 2021, 1, 7, 998–1013

27. Anthony Yan-Tang Wu, Yun-Chieh Sung, Yen-Ju Chen, Steven Ting-Yu Chou, Vanessa Guo, Jasper Che-Yung Chien, John Jun-Sheng Ko, Alan Ling Yang, Hsi-Chien Huang, Ju-Chen Chuang, Syuan Wu, Meng-Ru Ho, Maria Ericsson, Wan-Wan Lin, Chantal Hoi Yin Cheung, Hsueh-Fen Juan, Koji Ueda, **Yunching Chen**, Charles Pin-Kuang Lai* (2020). Multiresolution Imaging Using Bioluminescence Resonance Energy Transfer Identifies Distinct Biodistribution Profiles of Extracellular Vesicles and Exomeres with Redirected Tropism. ***Adv Sci***, 16;7(19):2001467.

28. Chih-Chun Chang, Trinh Kieu Dinh, Yi-An Lee, Fu-Nien Wang, Yun-Chieh Sung, Pei-Lun Yu, Shao-Chieh Chiu, Yu-Chuan Shih, Cheng-Yun Wu, Yi-Da Huang, Jane Wang, Tsai-Te Lu, Dehui Wan, **Yunching Chen*** (2020). Nanoparticle Delivery of MnO2 and Antiangiogenic Therapy to Overcome Hypoxia-Driven Tumor Escape and Suppress Hepatocellular Carcinoma. ***ACS Appl. Mater. Interfaces,*** 12, 40, 44407–44419.

29. Kuan-Wei Huang, Fu-Fei Hsu, Jiantai Timothy Qiu, Guann-Jen Chern, Yi-An Lee, Chih-Chun Chang[1], Yu-Ting Huang, Yun-Chieh Sung, Cheng-Chin Chiang, Rui-Lin Huang, Chu-Chi Lin, Trinh Kieu Dinh, Hsi-Chien Huang, Yu-Chuan Shih, Donia Alson, Chun-Yen Lin, Yung-Chang Lin, Po-Chiao Chang, Shu-Yi Lin*, **Yunching Chen*** (2020). Highly Efficient and Tumor-Selective Nanoparticles for Dual-Targeted Immunogene Therapy against Cancer. ***Science Advances***, 6(3), eaax5032.

30. Yun-Chieh Sung, Pei-Ru Jin, Li-An Chu, Fu-Fei Hsu, Mei-Ren Wang, Chih-Chun Chang, Show-Jen Chiou, Jiantai Timothy Qiu, Dong-Yu Gao, Chu-Chi Lin, Yu-Sing Chen, Yi-Chiung Hsu, Jane Wang, Fu-Nien Wang, Pei-Lun Yu, Ann-Shyn Chiang, Anthony Yan-Tang Wu, John Jun-Sheng Ko, Charles Pin-Kuang Lai, Tsai-Te Lu*, **Yunching Chen*** (2019). Delivery of Nitric Oxide with a Nanocarrier Promotes Tumour Vessel Normalization and Potentiates Anti-Cancer Therapies. ***Nature Nanotechnology,*** 14, 1160–1169.

31. Cin-Hao Lin, Hsin-Chuan Wen, Cheng-Chin Chiang, Jen-Sheng Huang, **Yunching Chen**, Sheng-Kai Wang* (2019). Polyproline Tri-Helix Macrocycles as Nanosized Scaffolds to Control Ligand Patterns for Selective Protein Oligomer Interactions. ***Small*****.** 15(20).

32. Hung-Hsun Lu, Cheng-Hung Huang, Ting-Yun Shiue, Fu-Sheng Wang, Ko-Kai Chang, **Yunching Chen**, Chi-How Peng* (2019). Highly Efficient Gene Release in Spatiotemporal Precision Approached by Light and pH Dual Responsive Copolymers. ***Chemical Science***. 10, 284-292. *(IF=9.0)*

33. Kuan-Wei Huang, Yu-Tsung Lai, Guann-Jen Chern, Shao-Feng Huang, Chia-Lung Tsai, Yun-Chieh Sung, Cheng-Chin Chiang, Pi-Bei Hwang, Ting-Lun Ho, Rui-Lin Huang, Ting-Yun Shiue, **Yunching Chen***, and Sheng-Kai Wang* (2018). Galactose Derivative-Modified Nanoparticles for Efficient siRNA Delivery to Hepatocellular Carcinoma. ***Biomacromolecules*****.** 19 (6), 2330–2339. *(IF=5.8)*

34. Chih-Chun Chang, Yang Yang, Dong-Yu Gao, Hui-Teng Cheng, Bryan Hoang, Po-Han Chao, Ling-Hsuan Chen, Joseph Bteich, Tsaiyu Chiang, Jia-Yu Liu, Shyh-Dar Li*, **Yunching Chen*** (2018). Docetaxel-carboxymethylcellulose nanoparticles ameliorate CCl4-induced hepatic fibrosis in Mice. ***Journal of Drug Targeting***. 27:1-9.

35. Yun-Chieh Sung, Ya-Chi Liu, Po-Han Chao, Chih-Chun Chang, Ts-Ting Lin, Ja-An Lin, Hui-Teng Cheng, Jane Wang, Charles P. Lai, Ling-Hsuan Chen, Peiru Jin, Anthony Y. Wu, Tsaiyu Chiang, Dong-Yu Gao, Dan G. Duda, **Yunching Chen*** (2018) Combined delivery of sorafenib and a MEK inhibitor using CXCR4-targeted nanoparticles reduces hepatic fibrosis and prevents tumor development. ***Theranostics***. 8(4):894-905.
36. Chun-Hung Liu, Guann-Gen Chern, Fu-Fei Hsu, Kuan-Wei Huang, Yun-Chieh Sung, Hsi-Chien Huang, Jiantai Timothy Qiu, Chu-Chi Lin, Chien-Hsun Wu, Han-Chung Wu, Jia-Yu Liu**, Yunching Chen*** (2018) A multifunctional nanocarrier for efficient TRAIL-based gene therapy against hepatocellular carcinoma with desmoplasia. ***Hepatology.*** 67(3):899-913.

37. **Yunching Chen***, Ya-Chi Liu, Yun-Chieh Sung, Rakesh R. Ramjiawan, Ts-Ting Lin, Chih-Chun Chang, Kuo-Shyang Jeng, Chiung-Fang Chang, Chun-Hung Liu, Dong-Yu Gao, Fu-Fei Hsu, Annique M. Duyverman, Shuji Kitahara, Peigen Huang, Simona Dima, Irinel Popescu, Keith T. Flaherty, Andrew X. Zhu, Nabeel Bardeesy, Rakesh K. Jain, Cyril H. Benes, and Dan G. Duda* (2017) Overcoming sorafenib evasion in hepatocellular carcinoma using CXCR4-targeted nanoparticles to co-deliver MEK-inhibitors. ***Sci Rep***. 7, 44123.

38. Liying Wang, **Yunching Chen**, Hsin Yao Lin, Yung-Te Hou, Ling-Chu Yang, Aileen Y. Sun, Jia-Yu Liu, Chien-Wen Chang, and Dehui Wan (2017) Near-IR-Absorbing Gold Nanoframes with Enhanced Physiological Stability and Improved Biocompatibility for In Vivo Biomedical Applications. ***ACS Appl. Mater. Interfaces.*** 9 (4), 3873–3884.

39. Ts-Ting Lin#, Dong-Yu Gao#, Ya-Chi Liu, Yun-Chieh Sung, Dehui Wan, Jia-Yu Liu, Tsaiyu Chiang, Liying Wang, **Yunching Chen*** (2016) Development and Characterization of Sorafenib-Loaded PLGA Nanoparticles for the Systemic Treatment of Liver Fibrosis. ***Journal of Controlled Release.*** 10, 211:62~70.

40. Chun-Hung Liu[#], Kun-Ming Chan[#], Tsaiyu Chiang[#], Jia-Yu Liu, Guann-Gen Chern, Fu-Fei Hsu, Yu-Hsuan Wu, Ya-Chi Liu, **Yunching Chen***(2016) Dual-functional nanoparticles targeting CXCR4 and delivering anti-angiogenic siRNA ameliorate liver fibrosis. ***Molecular Pharmaceutics.*** 13 (7), 2253–2262.

41. Chun-Jui Lin, Chen-Hsiang Kuan, Hsi-Chin Wu, **Yunching Chen**, Chien-Wen Chang, Jih-Yang Huang, Tzu-Wei Wang (2016) Dual Responsive Self-assembling Nanocarrier with Active Targeting Peptide Ligand for Orthotopic Ovarian Cancer Theranostics. ***Biomaterials.*** 90:12-26.

42. Jia-Yu Liu, Tsaiyu Chiang, Chun-Hung Liu, Guann-Gen Chern, Ts-Ting Lin, Dong-Yu Gao, **Yunching Chen*** (2015) Delivery of siRNA using CXCR4-Targeted Nanoparticles Modulates Tumor Microenvironment and Achieves a Potent Anti-Tumor Response in Liver Cancer. ***Molecular Therapy***. 23(11):1772-82.

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Prior to NTHU

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60. Ding-Yen Lin, Yen-Sung Huang, Jen-Chong Jeng, Hong-Yi Kuo, Che-Chang Chang, Ting-Ting Chao, Chun-Chen Ho, **Yun-Ching Chen**, Tong-Ping Lin, Hsin-I Fang, Chih-Chang Hung, Ching-Shu Suen, Ming-Jing Hwang, Kun-Sang Chang, Gerd G. Maul and Hsiu-Ming Shih* (2006). Role of SUMO-interacting motif in Daxx SUMO modification, subnuclear localization, and repression of sumoylated transcription factors. ***Mol Cell*** 24, 341-354.

61. Kang Lu, Cheng-Loong Liang, Han-Jung Chen, Shang-Der Chen, Huan-Chen Hsu, **Yun-Ching Chen**, Fu-Fei Hsu, and Chung-Lung Cho (2003). Nuclear factor-kappaB-regulated cyclooxygenase-2 expression in surgery-associated paraspinal muscle injury in rats**.** ***J Neurosurg*** 98, 181-187.

62. Kang Lu, Cheng-Loong Liang, Chung-Lung Cho, Han-Jung Chen, Huan-Chen Hsu, Shuenn-Jiun Yiin, Chi-Liang Chern, **Yun-Ching Chen**, and Tao-Chen Lee (2002). Oxidative stress and heat shock protein response in human paraspinal muscles during retraction. ***J Neurosurg*** 97, 75-81.

Book Chapter

Kohei Shigeta, Tai Hato, **Yunching Chen**, and Dan G. Duda (2017) Anti-VEGFR Therapy as a Partner for Immune-Based Therapy Approaches in HCC. ***Immunotherapy of Hepatocellular Carcinoma*** pp 85-102.

Conference papers and invited talk（*Corresponding author）

1. Yunching Chen* (2025) 2025 BRC-5 Taiwan (invited talk)

2. Yunching Chen* (2025) CRSingapore 2025: Connecting Continents In Delivery Science (Plenary speaker)

3. Yunching Chen* (2024) IEEE Nanomed 2024 (Plenary speaker)

4. Yunching Chen* (2024) Asia Pacific Delivery Science Conference (APDSC) 2024 - Kuala Lumpur, Malaysia (Keynote Speaker)

5. Yunching Chen* (2024) CRS 2024 Annual Meeting and Expo in Bologna (invited talk)

6. Yunching Chen* (2024) The 29 the Symposium on Recent Advances in Cellular and Molecular Biology (invited talk)

7. Yunching Chen* (2024) 2024 Joint Annual Conference of Biomedical Science (invited talk)

8. Yunching Chen* (2023) 2023 Bioorganic and Chemical Biology Conference (invited talk)

9. Yunching Chen* (2023) 2023 Annual Meeting and International Conference of the KSPST (invited talk)

10. Yunching Chen* (2023) EMBO workshop: Non-coding RNA medicine (invited talk)

11. Yunching Chen* (2022) 2022 Engineering Bioscience Symposium Challenges & Opportunities in Post-Pandemic Era (invited talk)

12. Hsin-Tzu Hsieh, Hsi-Chieh Huang, Yunching Chen* (2022) CXCR4-Targeted Nitric Oxide Nanoparticles Deliver PD-L1 siRNA for Immunotherapy against Glioblastoma. Annual Meeting of Biomaterials and Controlled Releases Society in Taiwan. (selected as The Honorable Mention Poster Presentation.)

13. Hsin-Min Chen & Yunching Chen* (2022) Development of Nanoparticles Delivering CXCR4 Antagonist for the Treatment of Liver Cancer. The International Conference on Precision Nanomedicine in Theranostics & The Annual Meeting of Taiwan Nanomedicine Society (selected as The Best Poster Award)

14. Tsung-Ying Lee & Yunching Chen* (2022) Delivery of Sorafenib by Myofibroblast-targeted Nanoparticles for the Treatment of Renal Fibrosis. The International Conference on Precision Nanomedicine in Theranostics & The Annual Meeting of Taiwan Nanomedicine Society (selected as The Best Poster Award)

15. Yunching Chen* (2022) Tumor-targeting NO Delivery for Cancer Therapy. The International Conference on Precision Nanomedicine in Theranostics & The Annual Meeting of Taiwan Nanomedicine Society (invited talk)

16. Yunching Chen* (2021) Multifunctional Nanocarriers for Efficient Cancer Immunotherapy. The 32nd World Congress of International Associations of Surgeons, Gastroenterologists, and Oncologists (IASGO 2021, invited talk)

17. Yunching Chen* (2021) Multifunctional Nanocarriers for Efficient Cancer Immunotherapy. 2021 Virtual CRS 2021 (invited talk)

18. Yen-Nhi N. Ta and Yunching Chen* (2021) Development of Highly Selective and Potent CXCR4 Antagonist for Hepatocellular Carcinoma Treatment and Beyond. Controlled Release Society 2021 Virtual Annual Meeting (oral presentation)

19. Van-Anh Thi Nguyen, Pei-Ru Jin, Yen-Nhi Ngoc Ta, Jeng-Liang Han*, Yunching Chen* (2021) A Novel Autophagy Inhibitor Shows Single-agent Anticancer Efficacy for Hepatocellular Carcinoma Treatment. 2021 Annual Meeting of Taiwanese Society of Biomedical Engineering (selected as The Best Poster Award)

20. Hsi-Chien Huang, Yun-Chieh Sung, Tsai-Te Lu, Jane Wang, Yunching Chen* (2021) Reversal of Pancreatic Desmoplasia by a Tumor Stroma-targeted Nitric Oxide Nanogel Overcomes Drug Resistance in Pancreatic Tumors. Annual Meeting of Biomaterials and Controlled Release Society in Taiwan (This paper was selected as The Best Oral Presentation.)

21. Yunching Chen* (2021) Multifunctional Nanocarriers for Efficient Cancer Immunotherapy. 2021 Virtual MRS Spring Meeting & Exhibithttps://mrs.org/meetings-events/spring-meetings-exhibits/2021-mrs-spring-meeting (invited talk)

22. Yan-Ning Yu, Yunching Chen* (2020) A Novel Cinchona-Alkaloid-Inspired Urea Autophagy

Inhibitor Has Single-agent Anticancer Efficacy in Hepatocellular Carcinoma in Mice. The 2020 Annual Meeting of Taiwan Nanomedicine Society. (selected as The Best Poster Award)

23. Kuan-Wei Huang, Yunching Chen* (2020) Co-Delivery of Dual-Specific Genes for Cancer Immunogene Therapy. The 2020 Annual Meeting of Taiwan Nanomedicine Society. (selected as The Best Poster Award)

24. Yen-Nhi Ngoc Ta, Yunching Chen* (2020) Development of highly selective and potent CXCR4 antagonists for hepatocellular carcinoma treatment and beyond. 2020 Annual meeting of Biomaterials and Controlled Release Society in Taiwan. (selected as The Best Poster Award)

25. Yi-An Lee, Kuan-Wei Huang, Yunching Chen* (2019) Dual Delivery of siRNA and Plasmid DNA by Dendrimer-Encapsulated Nanoparticles for Cancer Immunotherapy. 13th International Symposium on Nanomedicine (ISNM2019) in Japan. (selected as The Best Poster Award)

26. Kuan-Wei Huang, Yunching Chen* (2019) A Multifunctional Nanocarrier for Efficient Gene Therapy against Hepatocellular Carcinoma. 2019 Cancer Nanotechnology Gordon Research Conference.

27. Yun-Chieh Sung, Tsai-Te Lu, Yunching Chen* (2019) Delivery of Nitric Oxide Promotes Tumor Vessel Normalization. 2019 Cancer Nanotechnology Gordon Research Conference.

28. Yun-Chieh Sung, Jane Wang, Tsai-Te Lu, Yunching Chen* (2018) Nanotechnology-Enabled Delivery of Nitric Oxide Suppresses Progression of Hepatocellular Carcinoma. 2018 Global Conference on Biomedical Engineering (selected as Student Best Oral Presentation Award)

29. Chih-Chun Chang, Yunching Chen* (2018) Amelioration of CCl_4-induced Hepatic Fibrosis in Mice by Targeting Activated Hepatic Stellate Cells with a Docetaxel-carboxymethylcellulose Nanoparticle. 2018 Controlled Release Society Annual Meeting & Exposition in New York

30. Kuan-Wei Huang, Yunching Chen* (2018) Efficient siRNA Delivery by Galactoside-Decorated Nanoparticles to Treat Hepatocellular Carcinoma. 2018 Controlled Release Society Annual Meeting & Exposition in New York

31. Yun-Chieh Sung, Yunching Chen* (2018) Co-delivery Of Nitric Oxide Donor And Tyrosine Kinase Inhibitor Inhibits Tumor Progression And Overcome Drug Resistance In Hepatocellular Carcinoma. 2018 Controlled Release Society Annual Meeting & Exposition in New York

32. Yunching Chen* (2017) Nanoscale combination treatment targeting resistance mechanisms associated with cancer therapy 2017 Taiwan Biological Inorganic Chemistry Symposium. (invited talk)

33. Yun-Chieh Sung, Yunching Chen* (2017) Combined delivery of sorafenib and a MEK inhibitor using CXCR4-targeted nanoparticles ameliorates hepatic fibrosis and prevents tumor development. 2017 Cancer Nanotechnology Gordon Research Conference.

34. Guann-Gen Chern,Chun-Hung Liu, Yunching Chen* (2017) TRAIL-Induced Gene Delivery System as Treatment of Hepatocellular Carcinoma. 2017 Cancer Nanotechnology Gordon Research Conference.

35. Yunching Chen* (2017) A new way to conquer liver diseases: Development of nanoscale combination treatment targeting microenvironment. 2017 Cancer Nanotechnology Gordon

Research Conference.

36. Po-Han Chao, Yun-Chieh Sung, Tsai-Te Lu, Yunching Chen* (2017) Co-Delivery of Sorafenib and Dinitrosyl Iron Complexes with Targeted Nanoparticles Overcomes Drug Resistance for the Treatment of Liver Cancer. 2017 Cancer Nanotechnology Gordon Research Conference.

37. Kuan-Wei Huang, Chun-Hung Liu, Guann-Jen Chern, Yunching Chen* (2017) A multifunctional delivery system for TRAIL-based gene therapy against hepatocellular carcinoma with liver fibrosis. 2017ISOMRM. (selected as Student Best Poster Award)

38. Chih-Chun Chang, Yunching Chen* (2016) Overcoming Sorafenib Evasion in Hepatocellular Carcinoma Using CXCR4-targeted Nanoparticles to Co-deliver MEK-inhibitors. 3rd International Conference on Biomaterials Science in Tokyo.

39. Yun-Chieh Sung, Yunching Chen* (2016) Co-Delivery of Sorafenib and a MEK Inhibitor with Targeted Nanoparticles Overcomes Paradoxical MAPK Pathway Activation in the Treatment of Liver Fibrosis. 3rd International Conference on Biomaterials Science in Tokyo.

40. Chih-Chun Chang, Ya-Chi Liu, Ts-Ting Lin, Yun-Chieh Sung, Chun-Hung Liu, Dong-Yu Gao, Yunching Chen* (2016) Tumor-targeted nanoparticles co-deliver multi-inhibitors to overcome sorafenib-driven paradoxical activation of RAF/MEK/ERK pathway in HCC. 2016 Global Conference on Biomedical Engineering. (selected as the Best Poster Award)

41. Dong-Yu Gao, Jia-Yu Liu, Yunching Chen* (2015). CXCR4-Targeted Nanoparticles Delivering Anti-angiogenic Drugs or siRNA Modulates Tumor Microenvironment and Overcomes Evasion of Anti- angiogenic Therapy in HCC. 2015 Cancer Nanotechnology Gordon Research Conference.

42. Dong-Yu Gao and Yunching Chen* (2015). CXCR4-Targeted Lipid-Coated PLGA Nanoparticles Deliver Sorafenib and Overcome Acquired Drug Resistance in Liver Cancer. The 5th Asian Biomaterials Congress.

43. Jia-Yu Liu, Tsaiyu Chiang and Yunching Chen* (2015). Lipid-Based Nanoparticles Inhibiting SDF1-a/CXCR4 axis and Delivering Anti-angiogenicsiRNa for treating liver fibrosis. The 5th Asian Biomaterials Congress. (selected as Student Best Poster Award)

44. Jia-Yu Liu, and Yunching Chen*(2015). Delivery of VEGF siRNA using CXCR4-Targeted Nanoparticles Modulates the Tumor Microenvironment and Achieves a Potent Anti-Tumor Response in Hepatocellular Carcinoma. The 5th Asian Biomaterials Congress. (selected as Student Best Poster Award)

45. Ts-Ting Lin, Dong-Yu Gao and Yunching Chen*(2015). Systemic Treatment of Liver Fibrosis with Sorafenib-Loaded PLGA Nanoparticles. The 5th Asian Biomaterials Congress.

46. Yunching Chen*,Jia-Yu Liu, Dong-Yu Gao, Ts-Ting Lin, Tsaiyu Chiang (2015). Delivery of anti-angiogenic agents using CXCR4 Targeted Nanoparticles Modulates Tumor Microenvironment and Achieves a Potent Anti-Tumor Response in Liver Cancer. 2015 CSHL Meeting on Biology of Cancer, NY.

47. Yunching Chen*,Ts-Ting Lin, Tsaiyu Chiang, Dong-Yu Gao, Jia-Yu Liu (2015, May). A new way to conquer liver diseases: Development of nanoscale combination treatment targeting microenvironment . The 5th Asian Biomaterials Congress.

48. Yen Ting Liao, Yunching Chen, Hsien Wei Chen and Jenq Gong Duh (2015). Controllable

surface antifouling property of poly(ethylene terephthalate) via atmospheric pressure plasma surface grafting . The 2nd International Workshop on Plasma for Cancer Treatment.

Patents

1. Yunching chen, Tsai-Te Lu, Yun-Chieh Sung “Nanoparticle, preparation process and uses thereof” US 11,517,588 (2022/12/6 – 2040/7/3)

2. 陳韻晶, 魯才德, 宋雲傑 “奈米粒子及其製備方法與用途” 中華民國專利發明I772766 (2022/8/1 – 2040/3/22)

3. Yunching Chen, Chih-Chun Chang “NANOPARTICLE, PREPARATION PROCESS AND USES THEREOF” US 10,675,250 (2020/6/9/ - 2039/3/27)

4. 陳韻晶, 張智鈞 “奈米粒子及其製備方法與用途” 中華民國專利發明第TW I744584號 (2021/11/1 – 2038/12/21)

5. 陳韻晶、林姿婷及高棟禹 “包覆酪氨酸激媒抑制劑之奈米粒子在用於製備改善肝臟纖維化之醫藥組成物的用途” 中華民國專利發明第TW I590831號（2017/07/11 - 2034/12/10）

6. Yunching Chen, Jia-Yu Liu, Dong-Yu Gao “Method for treatment of liver cancer and inhibiton of metastasis with cxc-chemokine-receptor 4-targeted nanoparticle” U.S. Pat. No. 9,415,011（2016/8/16 – 2035/10/13）

7. 陳韻晶、劉家瑜及高棟禹 “以CXC趨化因子受體4為標靶之奈米粒子用於製備治療肝癌與抑制肝癌轉移之醫藥組成物的用途” 中華民國專利發明第TW I556830號（2016/11/11 - 2035/4/7）

8. 吳漢忠, 林欽塘, 陳韻晶“用於檢測第一型登革病毒的抗原”中華民國專利發明第318982號.

9. Leaf Huang, Yunching Chen, JoyeetaSen, Surendar Reddy Bathula, SumioChono, Shyh-Dar Li, Michael Hackett “Methods and compositions comprising novel cationic lipids” U.S. Pat. No. 8,389,768.