

Curriculum Vitae



Prof. Meiwan Chen joined Institute of Chinese Medical Science as an assistant professor at the University of Macau in 2012, and was further promoted to associate professor and full professor in 2018 and 2022, respectively. Her research focuses on biomaterial and nanomedicine, especially on development of novel drug delivery systems for active ingredients from Chinese medicine. Prof. Chen has published 225 SCI papers, and serves as the first/corresponding author of 129 papers (35 papers with IF>10) published in renowned journals such as *Advanced Materials*, *ACS Nano*, *Nano Letters*, and *Biomaterials*. Her publications have been cited >15800 times, with an h-index of 69, with 7 being recognized internationally as “ESI highly cited papers”. The highest citation for single paper has reached 653 times. She has been in charge 20 projects funded by NSFC as well as the Macau Fund. She also published 6 book chapters and 12 patents. She was awarded the Excellent Young Scientist Fund by National Natural Science Foundation of China in 2019 (the first time opened for HK and Macao applicants) and ‘Qi Huang’ Youth Scholarship by the State Administration of TCM, China in 2020. She was elected as a Fellow of the Royal Society of Chemistry (FRSC) in 2022. She won the Natural Science Award (2nd/2nd/3rd/2nd Class) in 2012/2014/2018/2024 and the Science and Technology Progress Award (3rd Class) in 2022, as awarded by the Macao Science and Technology Award. She serves as the deputy editor-in-chief of *Exploration*, an editorial board member of *Current Drug Delivery*, *Chinese Chemical Letters*, *Acta Pharmaceutica Sinica B*, etc.

Selected Publications

1. SLX Yang, RE Chen, P Hua, Y Wu, **MW Chen***. Integrating Autophagy Inhibition and ROS Clearance in Biohybrid Nanoparticles for Potent Low-Temperature Photothermal Cancer Therapy. *Nano Today*, 2025, 63: 102737.
2. KH Wong, YX Wang, XW Wang, YY Yin, K Feng, **MW Chen***. Unsaturated Fatty acid-doped Liposomes Deliver Piperine to Deactivate Defensive Mechanism for Ferroptosis in Cancer Therapy. *Journal of Controlled Release*. 2025, 382: 113656.

3. RE Chen[†], LW Wen^{†*}, F Guo, JW He, KH Wong, **MW Chen***. Glutathione-scavenging Natural-derived Ferroptotic Nano-amplifiers Strengthen Tumor Therapy through Aggravating Iron Overload and Lipid Peroxidation. *Journal of Controlled Release*, 2025, 379: 866-878.
4. YY Yin[†], KH Wong[†], LW Wen, **MW Chen***. Active Iron-Drug Nanocomplexes Improve Photodynamic and Photothermal Cancer Therapy by Mitigating Tumor Hypoxia and Counteracting Tumor Heat Resistance. *Advanced Healthcare Materials*, 2025, 14(9): e2404485.
5. SLX Yang, RE Chen, Y Wu, XR Song*, XC Peng*, **MW Chen***. Fluorinated Polyethyleneimine Vectors with Serum Resistance and Adjuvant Effect to Deliver LMP2 mRNA Vaccine for Nasopharyngeal Carcinoma Therapy. *Acta Biomaterialia*, 2025, 192: 340-352.
6. RF Liang[†], YB Tu[†], P Hua, YZ Huang, **MW Chen***. ROS-responsive Micelles Co-loaded Dexamethasone and Pristimerin to Restore the Homeostasis of the Inflammatory Microenvironment for Rheumatoid Arthritis Therapy. *Chinese Chemical Letters*, 2025, 36(6): 110335.
7. P Hua, SLX Yang, L Yu, YZ Huang, **MW Chen***. Natural Product-integrated Microneedle Patch for Rheumatoid Arthritis Treatment through Anti-inflammation and Angiogenesis Suppression. *Biomaterials Science*, 2025, 13(9): 2462-2474.
8. YB Tu[†], GY Dai[†], YY Chen, LH Tan, HQ Liu, **MW Chen***. Emerging Target Discovery Strategies Drive the Decoding of Therapeutic Power of Natural Products and Further Drug Development: A Case Study of Celastrol. *Exploration*, 2025, e20240247.
9. SLX Yang[†], Y Wu[†], WZ Zhong, RE Chen, ML Wang, **MW Chen***. GSH/pH dual activatable crosslinked and fluorinated PEI for cancer gene therapy through endogenous iron De-Hijacking and *in situ* ROS amplification. *Advanced Materials*, 2024, 36(2): e2304098.
10. FM Chen[†], FX Ruan[†], XC Xie, JN Lu, W Sun, D Shao*, **MW Chen***. Gold Nanocluster: A Photoelectric Converter for X-Ray-Activated Chemotherapy. *Advanced Materials*, 2024, 36(36): e2402966.
11. P Hua, RF Liang, SLX Yang, YB Tu, **MW Chen***. Microneedle-assisted dual delivery of PUMA gene and celastrol for synergistic therapy of rheumatoid arthritis through restoring synovial homeostasis. *Bioactive Materials*, 2024, 36: 83-95.

12. SLX Yang, RE Chen, Y Wu, XR Song*, XC Peng*, **MW Chen***. Fluorinated polyethyleneimine vectors with serum resistance and adjuvant effect to deliver LMP2 mRNA vaccine for nasopharyngeal carcinoma therapy. *Acta Biomaterialia*, 2024, 192: 340-352.
13. YP Zhang[†], SH Zhai[†], H Huang[†], SG Qin[†], M Sun, YT Chen, X Lan, GH Li, ZY Huang, DG Wang, YY Luo, W Xiao, H Li, X He, **MW Chen***, XC Peng*, XR Song*. Efficient signal sequence of mRNA vaccines enhances the antigen expression to expand the immune protection against viral infection. *Journal of Nanobiotechnology*, 2024, 22(1): 295.
14. P Hua[†], RF Liang[†], YB Tu, YY Yin, MK Law, **MW Chen***. Reactive oxygen species and nitric oxide scavenging nanoparticles alleviating rheumatoid arthritis through adjusting the seeds and growing soils. *Acta Pharmaceutica Sinica B*, 2023, 13(12): 5016-5029.
15. H Wang, F Lin, Y Wu, W Guo, XS Chen, CS Xiao, **MW Chen***. Carrier-Free Nanodrug Based on Co-Assembly of Methylprednisolone Dimer and Rutin for Combined Treatment of Spinal Cord Injury. *ACS Nano*, 2023, 17(13): 12176-12187.
16. MY Zhao, HJ Zhuang, BH Li, **MW Chen***, XY Chen*. In Situ Transformable Nanoplatfoms with Supramolecular Cross-Linking Triggered Complementary Function for Enhanced Cancer Photodynamic Therapy. *Advanced Materials*, 2023, 35(20): 2209944.
17. P Hua[†], D Jiang[†], ZP Guo[†], HY Tian, XS Chen, **MW Chen***. Amplified cancer immunotherapy of PD-L1 blockade by sequential tumor microenvironment reshaping and DC maturation. *Chemical Engineering Journal*, 2023, 453: 139795.
18. KH Wong[†], ZP Guo[†], D Jiang, XZ Zhou, LZ Lin, DG Zhao, **MW Chen***. Linear-like polypeptide-based micelle with pH-sensitive detachable PEG to deliver dimeric camptothecin for cancer therapy. *Asian Journal of Pharmaceutical Sciences*, 2023, 18(1): 100773.
19. YJ Yu, JH Yan, QW Chen, JY Qiao, SY Peng, H Cheng, **MW Chen***, XZ Zhang*. Polymeric nano-system for macrophage reprogramming and intracellular MRSA eradication. *Journal of Controlled Release*, 2023, 353: 591-610.
20. MY Zhao, HJ Zhuang, HX Zhang, BH Li, J Ming, XY Chen*, **MW Chen***. A LRET Nanoplatfom Consisting of Lanthanide and Amorphous Manganese Oxide for NIR_II Luminescence Lifetime Imaging of Tumor Redox Status. *Angewandte Chemie-International Edition*, 2022, 61(47): e202209592.

Book Chapters

1. 《常見惡性腫瘤：中醫藥基礎與臨床轉化》第三章 原發性肝癌，上海交通大學出版社，2020
2. The chapter of "Novel nanoparticulate drug delivery systems for active ingredients of traditional Chinese medicine in cancer therapy" in the book "Molecular Medicines for Cancer: Concepts and Applications of Nanotechnology (First Edition)", Taylor& Francis-CRC Press Publisher, 2018
3. 《藥物制劑工程（第三版）》第一章 緒論，化學工業出版社，2018
4. The chapter of "Preparation, self-assembly, and application of amphiphilic cellulose-based graft copolymers" in the book "Cellulose-Based Graft Copolymers: Structure and Chemistry", Taylor& Francis-CRC Press Publisher, 2017
5. The chapter of "Novel formulations and drug delivery systems for phytotherapies" in the book "Phytotherapies: Efficacy, Safety and Regulation", Wiley, USA, 2015
6. 《中藥抗腫瘤現代研究技術與進展》第一篇 第四章，人民衛生出版社，2012

Patents

1. 一種微針、微針貼片及其制備方法。申請號：202111541028.2
2. 一種用於檢測呼吸氨的熒光傳感器及其制備方法和應用。申請號：202110254482.3
3. 酸性當歸多糖 ASP3、酸性當歸多糖-阿黴素共聚物納米粒以及兩者的制備方法和應用。申請號：201810900357.3
4. 基於聚氨基酸的藥物體系及其制備方法與用途。申請號：201810723852.1
5. 一種陰道用納米銀靶向溫敏噴霧凝膠及其制備方法。申請號：200810029201.9
6. 一種婦女用溫敏凝膠型納米銀泡沫氣霧劑及其制備方法。專利號：ZL200910037397.0
7. IC-4 在抗血管新生中的應用。申請號：201210100743.7