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Dr. Ma Wenzhe received his Ph.D. in Pharmacology from the Shanghai Institute of Materia Medica, Chinese Academy of Sciences, in 2005. He completed his postdoctoral training at the National Institutes of Health (NIH) shortly thereafter. In 2012, Dr. Ma joined the State Key Laboratory of Quality Research in Chinese Medicine at Macau University of Science and Technology as an Assistant Professor. He was promoted to Associate Professor in 2018 and Professor in 2025. Dr. Ma has published papers in top journals, including the *New England Journal of Medicine, Nature Communications, Free Radical Biology and Medicine, Pharmacological Research, EBioMedicine, Phytomedicine, Acta Pharmacologica Sinica, Drug Discovery Today*, *Antioxidants*, and *British Journal of Pharmacology*, either as the first author or corresponding author. He has led seven projects funded by the Macau Science and Technology Development Fund. Dr. Ma is the first inventor on four Australian patents, two US patents, and three Chinese patents. He also contributed to the National Health and Family Planning Commission's "13th Five-Year Plan" textbook, "Molecular Toxicology."

Research Interests:

- Mitochondrial Metabolism in Tumorigenesis and Cancer Therapy
- Anti-Cancer Natural Products

Education:

2002-2005	Ph.D.	Shanghai Institute of Materia Medica, Chinese Academy of Sciences, China
1999-2002	M.S.	China Pharmaceutical University, China
1995-1999	B.E.	China Pharmaceutical University, China

Professional Chronology:

2025-Present	Professor, State Key Laboratory of Quality Research in Chinese Medicine, Macau University of Science and Technology
2018-2025	Associate Professor, State Key Laboratory of Quality Research in

	Chinese Medicine, Macau University of Science and Technology
2012-2018	Assistant Professor, State Key Laboratory of Quality Research in Chinese Medicine, Macau University of Science and Technology
2007-2012	Research Fellow, Center for Molecular Medicine, National Heart, Lung and Blood Institute, National Institutes of Health
2006-2007	Postdoctoral Fellow, Center for Molecular Medicine, National Heart, Lung and Blood Institute, National Institutes of Health

Research Funds (PI):

1. 2025/03-2028/03, Science and Technology Development Fund (FDCT) of Macau, 0075/2024/RIB2, Development of CRISPR-based on-site nucleic acid detection platforms for traditional Chinese medicine
2. 2023/01-2026/01, Science and Technology Development Fund (FDCT) of Macau, 0105/2022/A2, 7-azaindole derivative DA-5 induces ferroptosis in triple-negative breast cancer
3. 2021/01-2023/12, Hong Kong-Macao Joint Research and Development Fund of Wuyi University, 2019WGALH12, Investigating the Effects and Mechanisms of PARP Inhibitors in Parkinson's Disease
4. 2020/09-2023/09, Science and Technology Development Fund (FDCT) of Macau, 0036/2020/A1, The role and mechanism of action of statins in cancer prevention of Li-Fraumeni syndrome
5. 2020/04-2021/08, Science and Technology Development Fund (FDCT) of Macau, 0039/2020/A, Development and application of COVID-19 virus point-of-care testing reagent
6. 2019/06-2022/06, Science and Technology Development Fund (FDCT) of Macau, 0013/2019/A1, Antiglioma effects and mechanisms of action of novel mutant IDH1 inhibitors WM17 and APTM
7. 2016/02-2019/02, Science and Technology Development Fund (FDCT) of Macau, 034/2015/A1, Screening for glucose metabolism modulators with anticancer activities
8. 2013/11-2016/05, Science and Technology Development Fund (FDCT) of Macau, 088/2012/A3, Application of PCR array in mechanism of action study of neo-tanshinlactone aginst breast cancer and drug screening with similar mechanism
9. 2012/11-2013/11, Faculty Research Grants, Macau University of Science and Technology, 0270, Construction and application of PCR array in mechanism of action study of TCM with anticancer activities

Patents (Lead Inventor)：

1. 川貝母和平貝母的檢測區分方法、裝置及終端設備，2024.07.30，CN118406796 A
2. 一種丁烯內酯類化合物及其製備方法和應用，2024.01.02，CN117327036 A
3. 表小檗碱的新用途，2023.09.26，CN 116803390 A

4. 3,5-二取代-7氮雜吲哚衍生物及其合成方法與應用，2024. 04. 02，CN 115057856 B
5. 一種聯二厚樸脂素及其製備方法和應用，2024. 04. 02，CN 115466237 B
6. 茵梔黃製劑在製備治療腫瘤的藥物中的應用，2024. 05. 31，CN 116370535 B
7. Method for treating cancer, 2018. 01. 31, Australia, 2018100066
8. Method of treating breast cancer, 2018. 01. 03, Australia, 2017101728
9. Use of nobiletin in cancer treatment, 2017. 11. 07, United States Patent，US 9,808,477 B2
10. Use of tangeretin in cancer treatment, 2017. 11. 07, United States Patent，US 9,808,439 B2
11. Use of nobiletin in cancer treatment, 2015. 10. 08, Australia，2015101287
12. Use of tangeretin in cancer treatment, 2015. 10. 08, Australia, 2015101288

Book Chapter:

1. *Molecular Toxicology*（分子毒理學）, The National Health and Planning Commission's "Thirteenth Five-Year Plan" Planning material, People's Health Publishing House, 1st edition, 2017, 2nd edition, 2021

Publications (First or Corresponding Author):

1. Whether aristolochic acid directly drives hepatocarcinogenesis: comprehensive investigations from mutational signatures to animal models, *Arch Toxicol*, 2025. 10.1007/s00204-025-04087-z
2. Discovery of Bi-magnolignan as a Novel BRD4 Inhibitor Inducing Apoptosis and DNA Damage for Cancer Therapy, *Biochem Pharmacol*, 2025. 10.1016/j.bcp.2025.116843: 116843.
3. Low-dose statins restore innate immune response in breast cancer cells via suppression of mutant p53, *Front Pharmacol*, 2025. 16: 1492305.
4. Kaixuan Qibi granules attenuate myocardial fibrosis through BRD4 blockade regulated by the NF-κB/NLRP3 signaling pathway. *J Tradit Complement Med*, 2025. 10.1016/j.jtcme.2025.03.001.
5. Xanthocillin X Dimethyl Ether Exhibits Anti-Proliferative Effect on Triple-Negative Breast Cancer by Depletion of Mitochondrial Heme. *Marine Drugs*, 2025. 23(4): 146.
6. Construction of a prognostic risk model for clear cell renal cell carcinomas based on centrosome amplification-related genes. *Mol Genet Genomics*, 2025. 300(1): 30.
7. Dental pulp stem cells derived exosomes inhibit ferroptosis via regulating the Nrf2-keap1/GPX4 signaling pathway to ameliorate chronic kidney disease injury. *Tissue Cell*, 2025. 93: 102670.

8. Tanshinlactone triggers methuosis in breast cancer cells via NRF2 activation, *Front Pharmacol*, 2025. 15: 1534217.
9. NGR1 Mitigates Neuronal Apoptosis Mediated by ITGA11 Following Subarachnoid Hemorrhage, *Mol Med Rep*, 2025. 31(3) : 67
10. Yunnan Baiyao exerts anti-glioma activity by inducing autophagy-dependent necroptosis. *J Ethnopharmacol*, 2024. 10.1016/j.jep.2024.118658: 118658.
11. Species discrimination of Fritillaria Bulbus using PCR-CRISPR/ Cas12a-based nucleic acid detection. *J Appl Res Med Aromat Plants*, 2024. 43.
12. Comparison of (68)Ga-FAP-2286 and (18)F-FDG PET/CT in the diagnosis of advanced lung cancer. *Front Oncol*, 2024. 14: 1413771.
13. A chalcone derivative SBD-2 exerts anticancer effects in human colorectal cancer cells. *Futur J Pharm Sci*, 2024. 10(1).
14. A bibliometric analysis based on hotspots and frontier trends of positron emission tomography/computed tomography utility in bone and soft tissue sarcoma. *Front Oncol*, *2024*. 14: 1344643.
15. Coptisine exerts anti-tumour effects in triple-negative breast cancer by targeting mitochondrial complex I. *Br J Pharmacol*, 2024. 10.1111/bph.16489.
16. Prospective comparison of (68)Ga-DOTA-ibandronate and bone scans for detecting bone metastases in breast cancer. *Front Oncol*, 2024. 14: 1428498.
17. Notopterygium Incisum Extract Promotes Apoptosis by Preventing the Degradation of BIM in Colorectal Cancer. *Curr Med Sci*, 2024. 10.1007/s11596-024-2883-1.
18. Lactic acid: a narrative review of a promoter of the liver cancer microenvironment. *J Gastrointest Oncol*, 2024. 15(3): 1282-1296.
19. Transcriptome sequencing and metabolome analysis reveal the molecular mechanism of Salvia miltiorrhiza in response to drought stress. *BMC Plant Biol*, 2024. 24(1): 446.
20. Single-cell profiling reveals the metastasis-associated immune signature of hepatocellular carcinoma. *Immun Inflamm Dis*, 2024. 12(5): e1264.
21. Four sulfur-containing compounds with effect from marine-derived fungus aspergillus terreus. *Fitoterapia*, 2024. 10.1016/j.fitote.2024.105967: 105967.
22. Epiberberine inhibits bone metastatic breast cancer-induced osteolysis. *J Ethnopharmacol*, 2024. 10.1016/j.jep.2024.118039: 118039.
23. Clinical efficacy of probiotics in the treatment of alcoholic liver disease: a systematic review and meta-analysis. *Front Cell Infect Microbiol*, 2024. 14: 1358063.
24. Involucrasin B Inhibits the Proliferation of Caco-2 Cells by Regulating the TGFβ/SMAD2-3-4 Pathway. *Molecules*, 2024. 29(3).
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26. Targeting furin, a cellular proprotein convertase, for COVID-19 prevention and therapeutics. *Drug Discov Today*, 2024. 10.1016/j.drudis.2024.104026: 104026.
27. Lovastatin-Induced Mitochondrial Oxidative Stress Leads to the Release of mtDNA to Promote Apoptosis by Activating cGAS-STING Pathway in Human Colorectal Cancer Cells. *Antioxidants (Basel)*, 2024. 13(6).
28. Berberine targets the electron transport chain complex I and reveals the landscape of OXPHOS dependency in acute myeloid leukemia with IDH1 mutation. *Chin J Nat Med*, 2023. 21(2): 136-145.
29. Anticancer effect of involucrasin A on colorectal cancer cells by modulating the Akt/MDM2/p53 pathway. *Oncol Lett*, 2023. 25(6): 218.
30. Yinzhihuang injection induces apoptosis and suppresses tumor growth in acute myeloid leukemia cells. *PLoS One*, 2023. 18(10): e0289697.
31. Progress on Denosumab Use in Giant Cell Tumor of Bone: Dose and Duration of Therapy. *Cancers*, 2022, 14(23): 5758
32. Network pharmacology-based investigation and experimental validation of the mechanism of scutellarin in the treatment of acute myeloid leukemia. *Front Pharmacol*, 2022, 13: 952677
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34. Mitochondrial toxicity evaluation of traditional Chinese medicine injections with a dual in vitro approach. *Front Pharmacol*, 2022, 13: 1039235
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Apoptosis in Human Colon Cancer HCT116 Cells. *Latin American Journal of Pharmacy*, 2019, 38(4):663-667

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47. Protein kinase C inhibitor chelerythrine selectively inhibits proliferation of triple-negative breast cancer cells in vitro. *Scientific Reports*, 2017, doi:10.1038/s41598-017-02222-0
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56. A pivotal role for p53: balancing aerobic respiration and glycolysis. *J Bioenerg Biomembr*, 2007, 39(3): 243-246
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59. 頭狀鏈黴菌原生質體的製備及其誘變. 中國藥科大學學報, 2002(01): 64-67.
60. 頭狀鏈黴菌中絲裂黴素C抗性基因mcrAB的克隆及其作用研究. 中國抗生素雜志, 2002(12): 748-752.