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Dr. Wenzhe Ma received his Ph.D. degree in Pharmacology at Shanghai Institute of Materia Medica, Chinese Academy of Sciences in 2005, and postdoctoral training shortly after that at the National Institutes of Health (NIH). In August 2012, he started his employment with the State Key Laboratory of Quality Research in Chinese Medicine, Macau University of Science and Technology (MUST) as Assistant Professor. Dr. Ma has been focusing on cancer metabolism and screening nature products with anti-cancer activities for more than ten years. He published papers in international top journals, including the *New England Journal of Medicine*, *Nature Communications*, *Free Radical Biology and Medicine*, *Scientific Reports*, *Pharmacological Research*, and *FEBS Letters*, either as first author or corresponding author. He co-authored one text book and has been granted 7 international patents.

Research Interests:

- Screening and mechanism study of natural products with anti-cancer activities
- Cancer metabolism

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:

- 2012-Present 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

Patents:

1. **Wenzhe Ma**, Ying Xie, Xiaolin Liao, Jiajun Huang, Wanjun Lin and Ze Long, Method for treating cancer, 2018. 01. 31, Australia, 2018100066
2. **Wenzhe Ma**, Ying Xie, Wanjun Lin, Jiajun Huang, Ze Long and Xiaolin Liao, Method of treating breast cancer, 2018. 01. 03, Australia, 2017101728
3. **Wenzhe Ma**, Senling Feng, Xiaojun Yao, Zhongwen Yuan, Liang Liu and Ying Xie, Use of nobiletin in cancer treatment, 2017. 11. 07, United States Patent, US 9,808,477 B2
4. **Wenzhe Ma**, Senling Feng, Xiaojun Yao, Zhongwen Yuan, Liang Liu and Ying Xie, Use of tangeretin in cancer treatment, 2017. 11. 07, United States Patent, US 9,808,439 B2
5. **Wenzhe Ma**, Senling Feng, Xiaojun Yao, Zhongwen Yuan, Liang Liu and Ying Xie, Use of nobiletin in cancer treatment, 2015. 10. 08, Australia, 2015101287
6. **Wenzhe Ma**, Senling Feng, Xiaojun Yao, Zhongwen Yuan, Liang Liu and Ying Xie, Use of tangeretin in cancer treatment, 2015. 10. 08, Australia, 2015101288
7. Ying Xie, **Wenzhe Ma**, Wanjun Lin, Jiajun Huang, Zhongwen Yuan and Senling Feng, Protein kinase C inhibitor for treating triple-negative breast cancer, 2016. 01. 26, Australia, 2016100022

Teaching Subjects:

Undergraduate: Microbiology and Immunology, Pharmacology of Chinese Materia Medica, Pharmacology and Toxicology, Pharmacological Experiment

Graduate: Genetic Engineering, Modern Biotechnology, Clinical Pharmacology, English for Pharmaceutical Science, English for Biomedical Science

Book Chapter

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

Publications:

1. Dong-Lan Wu, Hou-Jin Li, Duncan R. Smith, Janejira Jaratsittisin, Xia-Fu-Kai-Ti Xia-Ke-Er, **Wen-Zhe Ma**, Yong-Wei Guo, Jun Dong, Juan Shen, De-Po Yang and Wen-Jian Lan. (2018) Polyketides and Alkaloids from the Marine-Derived Fungus *Dichotomomyces cejpui* F31-1 and the Antiviral Activity of Sceduinadoline A against Dengue Virus. *Marine Drugs*, doi: 10.3390/md16070229

2. Jiajun Huang, Ze Long, Wanjun Lin, Xiaolin Liao, Ying Xie, Liang Liu and **Wenzhe Ma**. (2018) Integrative omics analysis of p53-dependent regulation of metabolism. *FEBS Letters*, 592(3):380-393, doi: 10.1002/1873-3468.12968
3. Xiaolin Liao, Jiajun Huang, Wanjun Lin, Ze Long, Ying Xie and **Wenzhe Ma**. (2017) APTM, a Thiophene Heterocyclic Compound, Inhibits Human Colon Cancer HCT116 Cell Proliferation Through p53-Dependent Induction of Apoptosis. *DNA and Cell Biology*, doi: 10.1089/dna.2017.3962
4. Li-Hong Huang, Meng-Yang Xu, Hou-Jin Li, Jin-Qian Li, Yan-Xiu Chen, **Wen-Zhe Ma**, Jun Xu, De-Po Yang, and Wen-Jian Lan (2017) Amino Acid-Directed Strategy for Inducing the Marine-Derived Fungus *Scedosporium apiospermum* F41-1 to Maximize Alkaloid Diversity. *Organic Letters*, 19(18):4888-4891
5. Yan-Xiu Chen, Meng-Yang Xu, Hou-Jin Li, Kun-Jiao Zeng, **Wen-Zhe Ma**, Guo-Bao Tian, Jun Xu, De-Po Yang and Wen-Jian Lan (2017) Diverse Secondary Metabolites from the Marine-Derived Fungus *Dichotomomyces cejpilii* F31-1. *Marine Drugs*, doi: 10.3390/md15110339
6. Li-Hong Huang, Yan-Xiu Chen, Jian-Chen Yu, Jie Yuan, Hou-Jin Li, **Wen-Zhe Ma**, Ramida Watanapokasin, Kun-Chao Hu, Shah Iram Niaz, De-Po Yang and Wen-Jian Lan (2017) Secondary Metabolites from the Marine-Derived Fungus *Dichotomomyces* sp. L-8 and Their Cytotoxic Activity. *Molecules*, doi:10.3390/molecules22030444
7. Wanjun Lin, Jiajun Huang, Zhongwen Yuan, Senling Feng, Ying Xie and **Wenzhe Ma**. (2017) Protein kinase C inhibitor chelerythrine selectively inhibits proliferation of triple-negative breast cancer cells *in vitro*. *Scientific Reports*, doi:10.1038/s41598-017-02222-0
8. Wanjun Lin, Jiajun Huang, Xiaolin Liao, Zhongwen Yuan, Senling Feng, Ying Xie and **Wenzhe Ma**. (2016) Neo-tanshinlactone selectively inhibits the proliferation of estrogen receptor positive breast cancer cells through transcriptional down-regulation of estrogen receptor alpha. *Pharmacological Research*, 111:849-858
9. Yantao Li, Wanjun Lin, Jiajun Huang, Ying Xie and **Wenzhe Ma**. (2016) Anti-cancer effects of *Gynostemma pentaphyllum* (Thunb.) Makino (Jiaogulan). *Chinese Medicine*, 11:43-58
10. Yantao Li, Jiajun Huang, Wanjun Lin, Zhongwen Yuan, Senling Feng, Ying Xie and **Wenzhe Ma**. (2016) In Vitro Anticancer Activity of a Nonpolar Fraction from *Gynostemma pentaphyllum* (Thunb.) Makino. *Evidence-Based Complementary and Alternative Medicine*, 2016 doi: 10.1155/2016/6308649
11. Senling Feng, Zhongwen Yuan, Xiaojun Yao, **Wenzhe Ma**, Liang Liu, Zhongqiu Liu and Ying Xie. (2016) Tangeretin, a citrus pentamethoxyflavone, antagonizes ABCB1-mediated multidrug resistance by inhibiting its transport function. *Pharmacological Research*, 110:193-204
12. **Wenzhe Ma**, Senling Feng, Xiaojun Yao, Zhongwen Yuan, Liang Liu, and Ying Xie. (2015) Nobiletin enhances the efficacy of chemotherapeutic agents in ABCB1 overexpression cancer cells. *Scientific Reports* 5: 18789
13. Zhongwen Yuan, Elaine Lai-Han Leung, Xingxing Fan, Hua Zhou, **Wenzhe Ma**, Liang Liu, and Ying Xie. (2015) Quantitative evaluation of berberine subcellular distribution and cellular accumulation in non-small cell lung cancer cells by

UPLC–MS/MS. *Talanta* 144: 20-28.

14. Jie Li*, **Wenzhe Ma***, Ping-yuan Wang, Paula J. Hurley, Fred Bunz, Paul M. Hwang (2014) Polo-like kinase 2 activates an antioxidant pathway to promote the survival of cells with mitochondrial dysfunction. *Free Radical Biology and Medicine* 73: 270-277. (*Co-first author)
15. Ying Xie, Zhihong Jiang, Hua Zhou, **Wenzhe Ma**, Yuenfan Wong, Zhongqiu Liu, Liang Liu (2014) The pharmacokinetic study of sinomenine, paeoniflorin and paeonol in rats after oral administration of a herbal product Qingfu Guanjesu capsule by HPLC. *Biomedical Chromatography* 28: 1294-1302
16. Ping-yuan Wang*, **Wenzhe Ma***, Joon-Young Park, Francesco S. Celi, Ross Arena, Jeong W. Choi, Qais A. Ali, Dotti J. Tripodi, Jie Zhuang, Cory U. Lago, Louise C. Strong, S. Lalith Talagala, Robert S. Balaban, Ju-Gyeong Kang, Paul M. Hwang (2013) Increased Oxidative Metabolism in the Li–Fraumeni Syndrome. *The NEW ENGLAND JOURNAL of MEDICINE*, 368(11):1027-1032 (*Co-first author)
17. Jie Zhuang, **Wenzhe Ma**, Cory U. Lago, Paul M. Hwang (2012) Metabolic regulation of oxygen and redox homeostasis by p53: Lessons from evolutionary biology? *Free Radical Biology and Medicine*, 53(6):1279-1285
18. Ho Joong Sung*, **Wenzhe Ma***, Matthew F. Starost, Cory U. Lago, Michael N.Sack, Ju-Gyeong Kang, Ping-yuan Wang, and Paul M. Hwang (2011). Ambient Oxygen as a Tumor Promoter. *PLoS ONE*, 6(5):e19785 (*Co-first author)
19. Cory U. Lago, Ho Joong Sung, **Wenzhe Ma**, Ping-yuan Wang & Paul M. Hwang (2011). p53, Aerobic Metabolism and Cancer. *Antioxidants & Redox Signaling*, doi:10.1089/ars.2010.365
20. Ho Joong Sung*, **Wenzhe Ma***, Ping-yuan Wang, James Hynes, Tomas C. O’Riordan, Christian A. Combs, J. Philip McCoy Jr., Fred Bunz, Ju-Gyeong Kang & Paul M. Hwang (2010). Mitochondrial Respiration Protects Against Oxygen-associated DNA Damage. *Nature Communications*, 1:5 doi: 10.1038/ncomms1003 (*Co-first author)
21. Takumi Matsumoto, Ping-yuan Wang, **Wenzhe Ma**, Ho Joong Sung, Satoaki Matoba, and Paul M. Hwang (2009). Polo-like kinases mediate cell survival in mitochondrial dysfunction. *PNAS*, 106(34): 14542-11546
22. Joon-Young Park, Pingyuan Wang, Takumi Matsumoto, Ho-Joong Sung, **Wenzhe Ma**, Jeong W. Choi, Stasia A. Anderson Scot C. Leary, Robert S. Balaban, Ju-Gyeong Kang, Paul M. Hwang (2009). p53 Improves Aerobic Exercise Capacity and Augments Skeletal Muscle Mitochondrial DNA Content. *Circulation Research*, 105(7):705-712
23. **W Ma**, HJ Sung, JY Park, S Matoba, and PM Hwang (2007). A pivotal role for p53: balancing aerobic respiration and glycolysis. *J Bioenerg Biomembr*, 39(3):243-246
24. **MA Wen-Zhe**, HAN Wei, QIN Wen-Xin, WAN Da-Fang, GU Jian-Ren, YANG Sheng-Li, GONG Yi (2006). Expression and purification of a putative tumor suppressor gene PP5715 in E.coli with growth inhibition to hepatocellular carcinoma cells. *Protein and Peptide Letters*, 13: 41-45
25. **MA Wen-Zhe**, SHEN Qiong, HAN Wei, LU Chen-Yi, YANG Sheng-Li, GONG

- Yi (2005). Construction, expression, purification and antiviral activity of fusing interferon-BLA (IFN-BLA). *Hereditas* (Beijing), 27 : 451-456
26. Qiong Shen, Ruiyang Tian, **Wenzhe Ma**, Qinsheng Yuan and Yi Gong (2005). Construction and expression of a new fusion protein thymosin α 1-cBLyS in E.coli. *Biotechnology Letters*, 27: 143-148
 27. Wang Lu-yan, Zhu Chun-bao, **Ma Wen-zhe**, Chen Dai-jie, and Xu Wen-si (2002). Cloning of mcrAB gene from *Streptomyces caespitosus* and study on the action of mcrAB. *Chinese Journal of Antibiotics*, 27: 748-752
 28. **MA Wen-Zhe**, WANG Lu-Yan, FENG Yan-Chun, CHEN Dai-Jie, XU Wen-Si (2002). Preparation and Mutation of Protoplasts from *Streptomyces caespitosus*. *Journal of China Pharmaceutical University*, 33: 62-65