Zhu Guo Yuan

Position: Assistant Professor
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Dr. Zhu achieved his M. Phil. degree at the Nanjing University of Chinese Medicine in 2002. He earned Ph.D. degree from Hong Kong Baptist University in 2011. Dr. Zhu has been working as a junior pharmacist at the Second People's Hospital of Wuyi County (Zhejiang province), Research Assistant in Shenzhen Jinshan Natural Phytomedicine Research Institute, Science Director in Shenzhen applied R&D centers (Biotech & Health Center) of City University Hong Kong, and Research Assistant in Hong Kong Baptist University during 1991 to 2011. After postdoctoral training in the School of Chinese Medicine, Hong Kong Baptist University, and in State Key Laboratory of Quality Research in Chinese Medicine, Macau University of Science and Technology from 2011 to 2014, he joined State Key Laboratory of Quality Research in Chinese Medicine, Macau Institute for Applied Research in Medicine and Health, Macau University of Science and Technology as an assistant professor in May 2014.

Dr. Zhu's research fields include natural products chemistry and chemical biology. He mainly focused on the isolation and structure elucidation of bioactive natural products, and their biological effects and molecular mechanisms on anticancer, anti-inflammatory and anti- neurodegenerative disease. He has published more than 35 papers in SCI journals.

Teaching and Research Areas:

Teaching subjects: Prospect and Progress in Chinese Medicine Research, Advanced Natural Products Chemistry

Research Areas: Bioorganic and Medicinal Chemistry, Natural Products Chemistry

Academic Qualifications

2011.6 Ph.D., Hong Kong Baptist University, Hong Kong

2002.6 M. Sc., Nanjing University of Chinese Medicine, Nanjing, China

Teaching Experience

2014.5 - Present Assistant Professor, State Key Laboratory of Quality Research in Chinese Medicine, Macau Institute for Applied Research in Medicine and Health, Macau University of Science and Technology

2012.3-2014.4: Postdoctoral Research Fellow, State Key Laboratory of Quality Research in Chinese Medicine, Macau Institute for Applied Research in Medicine and Health, Macau University of Science and Technology

2011.8-2012.2: Postdoctoral Research Fellow, the School of Chinese Medicine, Hong Kong Baptist University

2010.4-2011.7: Research Assistant, the School of Chinese Medicine, Hong Kong Baptist University

2003.4-2007.3: Science Director, Shenzhen applied R&D centers (Biotech & Health Center) of City University Hong Kong

2002.8-2003.3: Research Assistant, Shenzhen Jinshan Natural Phytomedicine Research Institute

1991.8-1999.8: Pharmacist in Chinese Medicine, The Second People's Hospital of Wuyi County

Representative Publications

1) Parhira S, **Zhu GY**, Jiang RW, Liu L, Bai LP, Jiang ZH. 2'-Epi-uscharin from the Latex of Calotropis gigantea with HIF-1 Inhibitory Activity. ***Sci Rep.*** 2014, 4:4748.
2) **Zhu GY**, Chen G, Liu L, Bai LP, Jiang ZH. C-17 Lactam-bearing Limonoids from the Twigs and Leaves of *Amoora tsangii*. ***J Nat Prod***. 2014, 77 (4): 983-989.
3) **Zhu GY**, Yao XJ, Liu L, Bai LP, Jiang ZH. Alistonitrine A, a Caged Monoterpene Indole Alkaloid from *Alstonia scholaris*. ***Org Lett***. 2014, 16 (4): 1080-1083.
4) Tse AK, Chow KY, Cao HH, Cheng CY, Kwan HY, Yu H, Zhu GY, Wu YC, Fong WF, Yu ZL. The Herbal Compound Cryptotanshinone Restores Sensitivity in Cancer Cells that are Resistant to the Tumor Necrosis Factor-Related Apoptosis-Inducing Ligand. J Biol Chem. 2013, 288 (41): 29923-29933.
5) Zhu GY, Wong BC, Lu A, Bian ZX, Zhang G, Chen HB, Wong YF, Fong WF, Yang Z. Alkylphenols from the Roots of Ardisia brevicaulis Induce G1 Arrest and

Apoptosis through Endoplasmic Reticulum Stress Pathway in Human Non-small-cell Lung Cancer Cells. Chem Pharm Bull. 2012; 60(8):1029-1036.

6) Shen X, Chen G, Zhu G, Cai J, Wang L, Hu Y, Fong WF. 3'-O, 4'-O-aromatic acyl substituted 7, 8-pyranocoumarins: a new class of P-glycoprotein modulators. J Pharm Pharmacol. 2012, 64(1): 90-100.
7) Zhu GY, Li YW, Tse AK, Hau DK, Leung CH, Yu ZL, Fong WF. 20(S)-Protopanaxadiol, a metabolite of ginsenosides, induced cell apoptosis through endoplasmic reticulum stress in human hepatocarcinoma HepG2 cells. Eur J Pharmacol. 2011, 668(1-2): 88-98.
8) Zhu GY, Li YW, Hau DKP, Jiang ZH, Yu ZL, Fong WF. Protopanaxatriol-Type Ginsenosides from the Root of Panax ginseng. J Agric Food Chem. 2011, 59(1): 200-5.
9) Zhu GY, Li YW, Hau DK, Jiang ZH, Yu ZL, Fong WF. Acylated protopanaxadiol-type ginsenosides from the root of Panax ginseng. Chem Biodivers. 2011, 8(10): 1853-63.
10) Li YW, Zhu GY, Shen XL, Chu JH, Yu ZL, Fong WF. Furanodienone induces cell cycle arrest and apoptosis by suppressing EGFR/HER2 signaling in HER2-overexpressing human breast cancer cells. Cancer Chemother Pharmacol. 2011, 68(5): 1315-23.
11) Li YW, Zhu GY, Shen XL, Chu JH, Yu ZL, Fong WF. Furanodienone inhibits cell proliferation and survival by suppressing ERalpha signaling in human breast cancer MCF-7 cells. J Cell Biochem. 2011; 112(1): 217-24.
12) Hu Y, Yu Z, Yang ZJ, Zhu G, Fong W. Comprehensive chemical analysis of Venenum Bufonis by using liquid chromatography/electrospray ionization tandem mass spectrometry. J Pharm Biomed Anal. 2011, 56(2): 210-220.
13) Leung CH, Chan DS, Yang H, Abagyan R, Lee SM, Zhu GY, Fong WF, Ma DL.A natural product-like inhibitor of NEDD8-activating enzyme. Chem Commun. 2011; 47(9): 2511-3.
14) Tse AK, Zhu GY, Wan CK, Shen XL, Yu ZL, Fong WF. 1alpha, 25-Dihydroxyvitamin D3 inhibits transcriptional potential of nuclear factor kappa B in breast cancer cells. Mol Immunol 2010; 47: 1728-38.
15) Hau DK, Zhu GY, Leung AK, Wong RS, Cheng GY, Lai PB, et al. In vivo anti-tumour activity of corilagin on Hep3B hepatocellular carcinoma. Phytomedicine 2010; 18: 11-5.

16) Chen GY, Zhu GY, Han C-R, Zhao J, Song XP, Fong WF. A new pyranoxanthone from the stems of Calophyllum membranaceum. ARKIVOC (Gainesville, FL, U S) 2008: 249-54.
17) Fong WF, Wang C, Zhu GY, Leung CH, Yang MS, Cheung HY. Reversal of multidrug resistance in cancer cells by Rhizoma Alismatis extract. Phytomedicine 2007; 14: 160-5.
18) Fong WF, Wan CK, Zhu GY, Chattopadhyay A, Dey S, Zhao Z, et al. Schisandrol A from Schisandra chinensis reverses P-glycoprotein-mediated multidrug resistance by affecting Pgp-substrate complexes. Planta Med 2007; 73: 212-20.
19) Tse AK, Wan CK, Zhu GY, Shen XL, Cheung HY, Yang M, et al. Magnolol suppresses NF-kappaB activation and NF-kappaB regulated gene expression through inhibition of IkappaB kinase activation. Mol Immunol 2007; 44: 2647-58.
20) Gao JC, Zhang JC, Zhu GY, Yang MS, Xiao PG. Chromones and indolinone alkaloids from Actaea asiatica Hara. Biochem Syst Ecol 2007; 35: 467-9.
21) Wan CK, Zhu GY, Shen XL, Chattopadhyay A, Dey S, Fong WF. Gomisin A alters substrate interaction and reverses P-glycoprotein-mediated multidrug resistance in HepG2-DR cells. Biochem Pharmacol 2006; 72: 824-37.
22) Shen X, Chen G, Zhu G, Fong WF. (+/-)-3'-O, 4'-O-dicynnamoyl-cis- khellactone, a derivative of (+/-)-praeruptorin A, reverses P-glycoprotein mediated multidrug resistance in cancer cells. Bioorg Med Chem 2006; 14: 7138-45.

Membership of Academic Associations and community service

Professional Qualifications and Awards

The grand prize of Hainan province science and technology award, Hainan, China, 2011