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Teaching and Research Areas

Molecular pharmacology, Cancer immunotherapy

Academic Qualifications

2011-2014 PhD/Chinese Medicines/Macau University of Science and
Technology

2007-2010 MPhil / Pathogen biology / TianJin Medical University

2002-2007 BSC / Clinical Medicine / TianJin Medical University

Experiences

2014-2017 Postdoctoral training/ SKL of quality research in Chinese
Medicines / Macau University of Science and Technology

Representative Publications

Journal Articles: (*corresponding author(s); #contribution equally)

1. **Fan XX**[#], Pan HD[#], Li Y, Guo RJ, Leung EL^{*}, Liu L^{*}. Novel therapeutic strategy for cancer and autoimmune conditions: Modulating cell metabolism and redox capacity. *Pharmacol Ther.* 2018 Jun 25. pii: S0163-7258(18)30112-8.
2. Li RZ[#], **Fan XX**[#], Duan FG, Jiang ZB, Pan HD¹, Luo LX, Zhou YL, Li Y, Yao YJ, Yao XJ, Leung EL^{*}, Liu L^{*}. Proscillaridin A induces apoptosis and suppresses non-small-cell lung cancer tumor growth via calcium-induced DR4 upregulation. *Cell Death Dis.* 2018 Jun 13;9(6):696.
3. Li RZ, **Fan XX**, Shi DF, Zhu GY, Wang YW, Luo LX, Pan HD, Yao XJ, Leung EL, Liu L. Identification of a new pyruvate kinase M2 isoform (PKM2) activator for the treatment of non-small-cell lung cancer (NSCLC). *Chem Biol Drug Des.* 2018 Jun 21.
4. **Fan XX**[#], Leung EL[#], Luo LX, Jiang ZB, Zhou YL, Kam R.K. and Liu L^{*}. Suppression of lipogenesis via ROS/ AMPK signaling for treating malignancy and over proliferative diseases. *Antioxid Redox Signal.* 2017 Aug 4.
5. Honokiol Induces Apoptosis, G1 Arrest, and Autophagy in KRAS Mutant Lung Cancer Cells. Luo LX, Li Y, Liu ZQ, **Fan XX**, Duan FG, Li RZ, Yao XJ, Leung EL^{*}, Liu L^{*}. *Front Pharmacol.* 2017 Apr 11;8:199.
6. Law BYK, Gordillo-Mart ínez F, Qu YQ, Zhang N, Xu SW, Coghi PS, Mok SWF, Guo J, Zhang W, Leung ELH, **Fan XX**, Wu AG, Chan WK, Yao XJ, Wang JR, Liu L^{*}, Wong VKW^{*}. Thalidezine, a novel AMPK activator, eliminates apoptosis-resistant cancer cells through energy-mediated autophagic cell death. *Oncotarget.* 2017 May 2;8(18):30077-30091.
7. Li X[#], **Fan XX**[#], Jiang ZB, Loo WTY, Yao XJ, Leung EL^{*}, Chow LWC^{*} & Liu L^{*}. Shikonin inhibits gefitinib-resistant non-small cell lung cancer by inhibiting TrxR and activating the EGFR proteasomal degradation pathway. *Pharm Res.* 2017 Jan 15: 45-55.
8. Huang J[#], **Fan XX**[#], He JX, Pan H, Li RZ, Huang LY, Jiang ZB, Yao XJ, Liu L, Leung EL^{*} & He JX^{*}. SCD1 is associated with tumor promotion, late stage and poor

survival in lung adenocarcinoma. *Oncotarget*. 2016 Jun 28; 7 (26): 39970-39979.

9. Wang MF, Li RZ, Li Y, Cheng XQ, Yang J, Chen W, **Fan XX**, Pan HD, Yao XJ, Ren T, Qian X, Liu L, Leung EL*, Tang YJ*. Clinical statistics analysis on the characteristics of pneumoconiosis of Chinese miner population. *J Thorac Dis*. 2016 Aug;8(8):2203-11.

10. Jiang JB[#], Huang J[#], Xie C, Li X, Liu L, He J, Pan H, Huang L, **Fan XX**, Yao XJ, Xie Y, Li N, Liu L, He JX* & Leung EL*. Combined use of PI3k and MEK inhibitors synergistically inhibits lung cancer with EGFR and KRAS mutation. *Oncology Reports*. 2016 Jul; 36(1):365-75.

11. Xu SW, Law BY, Mok SW, Leung EL, **Fan XX**, Coghi PS, Zeng W, Leung CH, Ma DL, Liu L, Wong VK*. Autophagic degradation of epidermal growth factor receptor in gefitinib-resistant lung cancer by celastrol. *Int J Oncol*. 2016 Oct; 49(4):1576-88.

12. Zhang YZ[#], Chen X[#], **Fan XX**, He JX, Huang J, Xiao DK, Zhou YL, Zheng SY, Xu JH, Yao XJ, Liu L* & Leung EL*. Compound library screening identified cardiac glycoside digitoxin as effective growth inhibitor of gefitinib-resistant non-small cell lung cancer via downregulation of α -tubulin and inhibition of microtubule formation. *Molecules*. 2016 Mar 18; 21(3).

13. **Fan XX**, Yao XJ, Xu SW, Wong VKW, He JX, Ding J, Xue WW, Mujtaba T, Michelangeli F, Huang M, Huang J, Xiao DK, Jiang ZB, Zhou YL, Kam R.K., Liu L*, Leung EL*. (Z) 3, 4, 5, 4'-Trans-tetramethoxystilbene, a new analogue of resveratrol, inhibits gefitinib-resistant non-small cell lung cancer via selectively elevating intracellular calcium level. *Sci Reports*. 2015 Nov 6; 5:16348.

14. Leung EL, **Fan XX**, Wong MP, Jiang ZH, Liu ZQ, Yao XJ, Lu LL, Zhou YL, Yau LF, Tin PC, Liu L*. Targeting tyrosine kinase inhibitor resistant non-small-cell lung cancer by inducing EGFR degradation via methionine 790 oxidation. *Antioxid Redox Signal*. 2016 Feb 10;24(5):263-79.

15. Yuan ZW, Leung EL, **Fan XX**, Ma WZ, Liu L, Xie Y*. Quantitative evaluation of berberine subcellular distribution and cellular accumulation in non-small cell lung cancer cells by UPLC-MS/MS. *Talanta*. 2015 Nov 1; 144: 20-8.

16. **Fan XX**, Li N, Wu JL, Zhou YL, He JX, Liu L and Leung EL*. Celastrol Induces Apoptosis in Gefitinib-Resistant Non-Small Cell Lung Cancer Cells via Caspases-Dependent Pathways and Hsp90 Client Protein Degradation. *Molecules*. 2014 Mar 21; 19(3):3508-22.