

竺曉鳴



職稱： 助理教授

學院/部門： 中藥質量研究國家重點實驗室，澳門藥物及健康應用研究院

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教學科目：基礎藥理學、藥理學與毒理學、毒理學與安全用藥、中藥藥理學、中西醫結合研究進展、基因工程學、生物化學與分子生物學

研究方向：納米材料生物醫學應用、藥物篩選、抗腫瘤藥物開發

竺曉鳴博士于 2003 年畢業於浙江大學藥學院，獲藥學學士學位。2008 年畢業於北京協和醫學院藥物研究，獲得藥理學博士學位。博士期間研究方向為高通量藥物篩選以及血管活性天然藥物的發現。2009 年至 2010 年在新加坡南洋理工大學化學與生物醫學工程系進行博士後研究工作，期間建立了一種基於螢光共振能量轉移技術的生物感測器用於腫瘤血管生成抑制藥物的篩選研究。2010 年至 2013 年在香港中文大學威爾斯親王醫院從事博士後研究工作，研究方向是納米材料的生物醫學應用包括藥物輸送、細胞成像、腫瘤診斷與治療。2014 年 1 月受聘於澳門科技大學澳門科技大學澳門藥物及健康應用研究院擔任助理教授。已經發表 30 餘篇 SCI 收錄論文，並獲得 2017 年中國藥理學會施維雅青年藥理學家獎。

學歷

2003 – 2008 北京協和醫學院藥理學博士學位

1999 - 2003 浙江大學藥學學士學位

工作履歷

2014.1 – 現職 澳門科技大學助理教授

2010.7 - 2013.12 香港中文大學威爾斯親王醫院博士後

2009.5 - 2010.7 新加坡南洋理工大學化學與生物醫學工程系博士後

學術成果

近年發表的主要 SCI 期刊論文：(* Corresponding author)

1. Zhang H, Chen JL, Li NN, Jiang RB, **Zhu XM***, Wang JF*. Au nanobottles with synthetically tunable overall and opening sizes for chemo-photothermal combined therapy. *ACS Appl. Mater. Inter.* 2019, 11(5): 5353–5363.
2. Fang CH*, Ding Q, Bi T, Xu XX, Chen JL, **Zhu XM***, Geng BY*. Plasmonic band tunable (Au nanocrystal)/SnO₂ core/shell hybrids for photothermal therapy. *Particle & Particle Systems Characterization*. 2018, 1800238.
3. Li NN, Yin H, Zhuo XL, Yang BC, **Zhu XM**, Wang JF. Infrared-responsive colloidal silver nanorods for surface-enhanced infrared absorption. *Advanced Optical Materials*, 2018, 1800436.
4. Wan HY, Chen JL, Zhu XZ, Liu L, Wang JF,* **Zhu XM***. Titania-coated gold nano-bipyramids for blocking autophagy flux and sensitizing cancer cells to proteasome inhibitor-induced death. *Advanced Science*, 2018, 5: 1700585.
5. Wan HY, Chen JL, Yu XY, **Zhu XM***. Titania-coated gold nanorods as an effective carrier for gambogic acid. *RSC Advances*, 2017, 7: 49518-49525.
6. Zhu XZ, Yip HK, Zhuo XL, Jiang RB, Chen JL, **Zhu XM**, Yang Z, Wang JF. Realization of red plasmon shifts up to~ 900 nm by AgPd-tipping elongated Au

- nanocrystals. *J Am Chem Soc.* 2017, 139(39):13837-13846.
7. Zhu XZ, Jia HL, **Zhu XM**, Cheng S, Zhuo XL, Yang Z*, Wang JF*. Selective Pd deposition on Au nanobipyramids and Pd site-dependent plasmonic photocatalytic activity. *Adv Funct Mater.* 2017, 27: 1700016.
 8. Jia HL, **Zhu XM**, Jiang RB, Wang JF. Aerosol-sprayed gold/ceria photocatalyst with superior plasmonic hot electron-enabled visible-light activity. *ACS. Appl. Mater. Interfaces.* 2017, 9 (3): 2560-71.
 9. **Zhu XM***, Wan HY, Jia H, Liu L, Wang JF*. Porous Pt nanoparticles with high near-infrared photothermal conversion efficiencies for photothermal therapy. *Adv Healthc Mater* 2016, 5:3165-3172.
 10. Jia HL, Fang CH, **Zhu XM**, Ruan Q, Wang YX, Wang JF. Synthesis of absorption-dominant small gold nanorods and their plasmonic properties. *Langmuir.* 2015, 31(26): 7418-26.
 11. **Zhu XM**, Fang CH, Jia HL, Huang Y, *et al.* Cellular uptake behaviour, photothermal therapy performance, and cytotoxicity of gold nanorods with various coatings. *Nanoscale.* 2014, 6: 11462-11472.
 12. Wang YX, **Zhu XM**, Liang Q, Cheng CH, Wang W, Leung KC. In vivo chemoembolization and magnetic resonance imaging of liver tumors by using iron oxide nanoshell/doxorubicin/poly(vinyl alcohol) hybrid composites. *Angew Chem Int Ed.* 2014, 53(19): 4812-5.
 13. Shi C, **Zhu XM**, Wang JS, Long DH. Estrogen receptor α promotes non-amyloidogenic processing of platelet amyloid precursor protein via the MAPK/ERK pathway. *J Steroid Biochem Mol Biol.* 2014, 144 Pt B: 280-5.
 14. Shi C, **Zhu XM**, Wang JS, Long DH. Intramitochondrial I κ B/NF- κ B signaling pathway is involved in amyloid β peptide-induced mitochondrial dysfunction. *J Bioenerg Biomembr.* 2014, 46(5): 371-6.
 15. Shi C, **Zhu XM**, Wang JS, Long DH. Tanshinone IIA promotes non-amyloidogenic processing of amyloid precursor protein in platelets via estrogen receptor signaling to phosphatidylinositol 3-kinase/Akt. *Biomed Rep.* 2014, 2(4): 500-504.

16. You QH, Lee AW, Chan WH, Zhu XM, Leung KC. A coumarin-based fluorescent probe for recognition of Cu²⁺ and fast detection of histidine in hard-to-transfect cells by a sensing ensemble approach. *Chem Commun (Camb)*. 2014, 50(47): 6207-10.
17. Wang DW, Zhu XM (Co-first), Lee SF, *et al.* Folate-conjugated Fe₃O₄@SiO₂@gold nanorods@mesoporous SiO₂ nanocomposite: a theranostic agent for magnetic resonance imaging and photothermal therapy *J Mater Chem B*, 2013, 1: 2934-42.
18. Ho WK, Lee SF, Wong CH, Zhu XM, *et al.* Type III-B rotaxane dendrimers. *Chem Commun (Camb)*. 2013, 49(92): 10781-3.
19. Lee SF, Zhu XM, Wang YX, Xuan SH, *et al.* Ultrasound, pH, and magnetically responsive crown ether-coated core/shell nanoparticles as drug encapsulation and release systems. *ACS Appl Mater Interfaces* 2013, 5(5): 1566-74.
20. Leung KC, Chak CP, Lee SF, Lai JM, Zhu XM, *et al.* Increased efficacies in magnetofection and gene delivery to hepatocellular carcinoma cells with ternary organic-inorganic hybrid nanocomposites. *Chem Asian J*. 2013, 8(8): 1760-4.
21. Leung KC, Lee SF, Wong CH, Chak CP, Lai JM, Zhu XM, *et al.* Nanoparticle-DNA-polymer composites for hepatocellular carcinoma cell labeling, sensing, and magnetic resonance imaging. *Methods*. 2013, 64(3): 315-21.
22. Shi C, Na N, Zhu XM, Xu J. Estrogenic effect of Ginsenoside Rg1 on APP processing in post-menopausal platelets. *Platelets*. 2013, 24(1): 51-62.
23. Leung KC, Chak CP, Lee SF, Lai JM, Zhu XM, *et al.* Enhanced cellular uptake and gene delivery of glioblastoma with deferoxamine-coated nanoparticle/plasmid DNA/branched polyethylenimine composites. *Chem Commun (Camb)*. 2013, 49(6): 549-51.
24. Yang XY, Zhu XM, Chen BN, Qiang GF, Fang LH, Du GH*. Establishment of GPCR expression cell lines using SNAP-tag technology: a case example of Urotensin II receptor. *Life Sci J*. 2013, 10(4): 2519-25.
25. Zhu XM, Yuan J, Leung KC, Lee SF, *et al.* Hollow superparamagnetic iron

- oxide nanoshells as a hydrophobic anticancer drug carrier: intracellular pH-dependent drug release and enhanced cytotoxicity. *Nanoscale*. 2012, 4(18): 5744-54.
26. Zhu XM, Wang YX, Leung KC, Lee SF, *et al.* Enhanced cellular uptake of aminosilane coated superparamagnetic iron oxide nanoparticles in mammalian cell lines. *Int J Nanomedicine*. 2012, 7: 953-64.
 27. Zhu XM, Fu AF, Luo KQ. A high-throughput fluorescence resonance energy transfer (FRET)-based endothelial cell apoptosis assay and its application for screening vascular disrupting agents. *Biochem Biophys Res Commun*. 2012, 418(4): 641-646.
 28. Leung KC, Xuan SH, Zhu XM, *et al.* Gold and iron oxide hybrid nanocomposite materials. *Chem Soc Rev*. 2012, 41(5): 1911-28.
 29. Xuan SH, Lee SF, Lau JT, Zhu XM, *et al.* Photocytotoxicity and magnetic relaxivity responses of dual-porous γ -Fe₂O₃@meso-SiO₂ microspheres. *ACS Appl Mater Interfaces*. 2012, 4(4): 2033-40.
 30. Shi C, Wu F, Zhu XM, Xu J. Incorporation of β -sitosterol into the membrane increases resistance to oxidative stress and lipid peroxidation via estrogen receptor-mediated PI3K/GSK3 β signaling. *Biochim Biophys Acta*. 2012, 1830(3): 2538-2544.
 31. Jia JC, Yu JC, Zhu XM, Chan KM, Wang YX. Ultra-fast method to synthesize mesoporous magnetite nanoclusters as highly sensitive magnetic resonance probe. *J Colloid Interf Sci*. 2012, 379(1): 1-7.
 32. Deng M, Griffith JF, Zhu XM, Poon WS, *et al.* Effect of ovariectomy on contrast agent diffusion into lumbar intervertebral disc: a dynamic contrast-enhanced MRI study in female rats. *Magn Reson Imaging*. 2012, 30(5): 683-8.
 33. Wang YX, Wang DW, Zhu XM, Zhao F, Leung KC. Carbon coated superparamagnetic iron oxide nanoparticles for sentinel lymph nodes mapping. *Quant Imaging Med Surg*. 2012, 2: 53-56.
 34. Shi C, Liu J, Wu FM, Zhu XM, Yew DT, Xu J. β -sitosterol inhibits high cholesterol-induced platelet β -amyloid release. *J Bioenerg Biomembr*. 2011,

- 43(6): 691-7.
35. Yang XY, Qiang GF, Zhang L, **Zhu XM**, *et al.* Salvianolic acid A protects against vascular endothelial dysfunction in high-fat diet fed and streptozotocin-induced diabetic rats. *J Asian Nat Prod Res.* 2011, 13(10): 884-94.
 36. Tan CB, Gao M, Xu WR, Yang XY, **Zhu XM**, Du GH. Protective effects of salidroside on endothelial cell apoptosis induced by cobalt chloride. *Biol Pharm Bull.* 2009, 32(8): 1359-63.
 37. Zhang L, Cheng XR, Chen RY, **Zhu XM**, Du GH. Protective effect of effective composite of Chinese medicine prescription naodesheng against focal cerebral ischemia in rats. *Chin J Integr Med.* 2009, 15(5): 377-83.
 38. Ewart HS, Dennis D, Potvin M, Tiller C, Fang LH, Zhang R, **Zhu XM**, *et al.* Development of a salmon protein hydrolysate that lowers blood pressure. *Eur Food Res Technol.* 2009, 229(4): 561-569.
 39. **Zhu XM**, Fang LH, Li YJ, Du GH. Endothelium-dependent and -independent relaxation induced by pinocembrin in rat aortic rings. *Vascul Pharmacol.* 2007, 46(3): 160-5.

專業資格認證及獎項

1. 2017 年中國藥理學會施維雅青年藥理學家獎