



LUO PEI

Position: Associate Professor

Faculty: State Key Laboratory of Quality Research in Chinese Medicine, Macau Institute for Applied Research in Medicine and Health

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Dr. Pei LUO received her Bachelor of Pharmacy (2003) and Ph. D in Pharmacology (2008) both from West China School of Pharmacy, Sichuan University (Chengdu, P.R. China). Then she worked as postdoctoral research fellow at School of Chinese Medicine in Hong Kong Baptist University for 3 years (from Dec, 2008 to Aug, 2011). In Sep, 2011, she joined the State Key Laboratory of Quality Research in Chinese Medicine and the Macau Institute for Applied Research in Medicine and Health, Macau University of Science and Technology as an Assistant Professor. She was promoted to be an associate professor in July 2017.

Dr. Pei LUO is particularly experienced in cardiovascular pharmacology and development of new products from Chinese medicines. Her recent research focus on crosstalk between mitochondrial dynamics and ischemia reperfusion, cardioprotective effect via mitochondrial fission regulation, novel mechanism of ginseng on mitochondrion, discovery and characterization of compound targeting on mitochondrial fusion/fission. Till now, she has obtained 4 research funding as principal investigator from the Science & Technology Development Fund (FDCT) of Macao SAR and the Macao Foundation of Macao SAR. She has published over 30 peer-reviewed papers in SCI journals including *Mitochondrion*, *Oxidative Medicine and Cellular Longevity*, *Talanta*, *Mediators of Inflammation*, *Pharmacological Research*, *PLoS One*, *Journal of Pharmacology and Experimental Therapeutics*, *Journal of Ethnopharmacology*, *Phytomedicine*,

Biological and Pharmaceutical Bulletin. 10 peer-reviewed papers in Chinese core journal, and over 50 conference abstracts or posters. Dr. LUO has obtained 4 granted international patents (US and Australia) for the works in development of a living cell image method for mitochondrial dynamics, identification of novel ginsenoside with anti-ischemia effect, and 2 China patents from the discovery of new drug for treatment of ischemia heart disease.

Academic Qualifications

- 2003,9 - 2008,6 **Ph. D in Pharmacology**
West China School of Pharmacy, Sichuan University, Chengdu, Sichuan Province, P.R. China
- 1999, 9 - 2003,6 **Bachelor of Pharmacy**
West China School of Pharmacy, Sichuan University, Chengdu, Sichuan Province, P.R. China

Teaching Experience

- 2017,7 – present **Associate Professor**
Macau Institute for Applied Research in Medicine and Health, State Key Laboratory of Quality Research in Chinese medicine, Macau University of Science and Technology, Macau, P.R. China
- 2011,9 – 2017.6 **Assistant Professor**
Macau Institute for Applied Research in Medicine and Health, State Key Laboratory of Quality Research in Chinese medicine, Macau University of Science and Technology, Macau, P.R. China
- 2008,11 - 2011,8 **Postdoctoral Research Fellow**
Teaching Division, School of Chinese Medicine, Hong Kong Baptist University (HKBU), Kowloon Tong, Hong Kong, P.R. China
- 2005,9 - 2006,1 **Research Assistant**
Cardiovascular Drug Research and Development Division, Institute of Materia Medica, Chengdu DIAO Group Chengdu, Sichuan Province, P.R.

China

Teaching and Research Areas

Teaching subjects: Pharmacology and Toxicity, Clinical Pharmacology, Methodology of Pharmacological Experiment

Research Areas: Cardiovascular Pharmacology and Mitochondrial Dynamics, Traditional Chinese Medicine Pharmacology

Representative Publications [* , corresponding author(s); †, contribution equally/sharing first authorship]

- 1) Zuo YH, Han QB, Dong GT, Yue RQ, Ren XC, Liu JX, Liu L, **Luo P***, Zhou H*. Panax ginseng Polysaccharide Protected H9c2 Cardiomyocyte From Hypoxia/Reoxygenation Injury Through Regulating Mitochondrial Metabolism and RISK Pathway. *Frontiers in Physiology*. 2018, Jun 15;9:699.
- 2) Zhang C, Zhang K, Huang F, Feng W, Chen J, Zhang H, Wang J, **Luo P**, Huang H. Exosomes, the message transporters in vascular calcification. *Journal of cellular and molecular medicine*. 2018.Review.
- 3) He L, Zhang Z, Liu Y, Chen D, Yuan M, Dong G, **Luo P***, Yan Z*. Rapid discrimination of raw and sulfur-fumigated Smilax glabra based on chemical profiles by UHPLC-QTOF-MS/MS coupled with multivariate statistical analysis. *Food Research International*. 2018, Jun;108:226-236.
- 4) Li Y, Ren X, Lio C, Sun W, Lai K, Liu Y, Zhang Z, Liang J, Zhou H, Liu L, Huang H, Ren J*, **Luo P***, A chlorogenic acid-phospholipid complex ameliorates post-myocardial infarction inflammatory response mediated by mitochondrial reactive oxygen species in SAMP8 mice. *Pharmacological Research*. 2018, Apr;130:110-122.
- 5) Xuecong Ren, Li Chen, Jing Xie, Zhifeng Zhang, Gengting Dong, Jie Liang, Liang Liu, 2, Hua Zhou*, **Pei Luo***. Resveratrol Ameliorates Mitochondrial Elongation via Drp1/Parkin/PINK1 Signaling in Senescent-like Cardiomyocytes. *Oxidative Medicine and Cellular Longevity*, 2017.
- 6) Zhou H, Liu JX, Luo JF, Cheng CS, Leung EL, Li Y, Su XH, Liu ZQ, Chen TB, Duan FG, Dong Y, Zuo YH, Li C, Lio CK, Li T, **Luo P**, Xie Y, Yao XJ, Wang PX, Liu L*.

- Suppressing mPGES-1 expression by sinomenine ameliorates inflammation and arthritis. *Biochemical Pharmacology*. 2017 Oct 15; 142:133-144.
- 7) Jin Gao, Ming Chen, Xuecong Ren, Xiaobo Zhou, Qiang Shang, WQ Lu, **Pei Luo***, ZH Jiang*. Synthesis and cardiomyocyte protection activity of crocetin diamide derivatives. *Fitoterapia*. 2017 Sep; 121:106-111.
 - 8) QianLong Wan, Jing Xie, XingDe Lia, Tao WJ, LiSheng Ding, Jian Liang, **Pei Luo***, Lin-Sen Qing*. An efficient direct competitive nano-ELISA for residual BSA determination in vaccines. *Analytical and Bioanalytical Chemistry*. 2017 Jul;409(19):4607-4614.
 - 9) QianLong Wan, Jing Xie, XingDe Lia, LiSheng Ding, Jian Liang, **Pei Luo***, Lin-Sen Qing*. Development of a nano-SiO₂ based enzyme-linked ligand binding assay for the determination of ibuprofen in human urine. *Talanta*. Volume 167, 15 May 2017, Pages 617-622.
 - 10) Huang BM, Xiao SY, Chen TB, Xie Y, **Luo P**, Liu L, Zhou H*. Purity assessment of ginsenoside Rg1 using quantitative ¹H nuclear magnetic resonance. *Journal of Pharmaceutical and Biomedical Analysis*. 2017 May 30; 139:193-204.
 - 11) Zhifeng Zhang, Yuan Liu, Xuecong Ren, Hua Zhou, KaishunWang, Hao Zhang, and **Pei Luo***. Caffeoylquinic Acid Derivatives Extract of Erigeron multiradiatus Alleviated Acute Myocardial Ischemia Reperfusion Injury in Rats through Inhibiting NF-KappaB and JNK Activations. *Mediators of Inflammation*. Volume 2016, Article ID 7961940, 11 pages
 - 12) Jing Xie, Jie Li, Jian Liang, **Pei Luo***, Lin-Sen Qing*, Li-Sheng Ding. Determination of Contents of Catechins in Oolong Teas by Quantitative Analysis of Multi-components Via a Single Marker (QAMS) Method. *Food Analytical Methods*. 2016, DOI 10.1007/s12161-016-0592-5
 - 13) Jianxin Liu, Jinshan Tang, Yihan Zuo, Yang Yu, **Pei Luo**, Xincheng Yao, Yan Dong, Peixun Wang, Liang Liu*, Hua Zhou*. Staurosides B inhibits macrophage activation by inhibiting NF-kappa B and ERK MAPK signaling. *Pharmacological Research*. (2016) 303–315
 - 14) **LUO Pei**, DONG Gengting, LIU Liang, ZHOU Hua*. The Long-Term Consumption of Ginseng Extract Reduces the Susceptibility of Intermediate-Aged Hearts to Acute Ischemia Reperfusion Injury. *PLoS One*. 2015 Dec 9; 10(12):e0144733. doi: 10.1371/journal.pone.0144733.

- 15) DONG Gengting, CHEN Tingbo, REN Xuecong, ZHANG Zhifeng, HUANG Weixue, LIU Liang, **LUO Pei***, ZHOU Hua*. Rg1 prevents myocardial hypoxia/reoxygenation injury by regulating mitochondrial dynamics imbalance via modulation of glutamate dehydrogenase and mitofusin 2. *Mitochondrion*. 2015 Nov 24; 26:7-18.
- 16) ZHANG Zhifeng, HE Lili, LU Luyang, LIU Yuan, DONG Gengting, MIAO Janhua*, **LUO Pei***. Characterization and quantification of the chemical compositions of *Scutellariae Barbatae* herba and differentiation from its substitute by combining UHPLC–PDA–QTOF–MS/MS with UHPLC–MS/MS. *Journal of Pharmaceutical and Biomedical Analysis*. 2015 May 10; 109:62-6. doi: 10.1016/j.jpba.2015.02.025.
- 17) ZHANG ZhiFeng, LIU Yuan, LU Luyang, **LUO Pei***. Hepatoprotective activity of *Gentiana veitchiorum* Hemsl. against carbon tetrachloride induced hepatotoxicity in mice. *Chinese Journal of Natural Medicines*. 2014, 12(7):0001-0007.
- 18) **LUO Pei**, HOU Shaozhen, DONG Gengting, CHEN Tingbo, LIU Liang, ZHOU Hua*. Effectiveness of *Panax ginseng* on Acute Myocardial Ischemia Reperfusion Injury Was Abolished by Flutamide via Endogenous Testosterone-Mediated Akt Pathway. *Evidence-Based Complementary and Alternative Medicine*, vol. 2013, Article ID 817826, 9 pages, 2013. doi:10.1155/2013/817826.
- 19) ZHANG Zhifeng, LU Luyang, **LUO Pei**, Qing Linsen , LIU Yuan. Two new ursolic acid saponins from *Morina nepalensis* var. *alba* Hand-Mazz. *Natural Product Research*. 2013. DOI: 10.1080/14786419.2013.824441
- 20) **LUO Pei**[†], WONG Yuanfong[†], GE Lin, ZHANG Zhifeng, LIU Yuan, LIU Liang, ZHOU Hua. Anti-inflammatory and analgesic effect of plumbagin through inhibition of nuclear factor-kappaB activation. *Journal of Pharmacology and Experimental Therapeutics*. 335, 735-742, 2010.
- 21) ZHOU Hua, HOU Shaozhen, **LUO Pei**, ZEN Bao, WANG Jingrong, WONG Yuanfong, JIANG Zhihong, LIU Liang. Ginseng protects rodent hearts from acute myocardial ischemia reperfusion injury through GR/ER-activated RISK pathway in an endothelial NOS-dependent mechanism. *Journal of Ethnopharmacology*. **135**, 287-298, 2011.
- 22) YI Xiaoqin, LI Ting, WANG Jingrong, Wong V.-K., **LUO Pei**, Wong Y.-F., JIANG Zhihong, LIU Liang, ZHOU Hua. Total ginsenosides increase coronary perfusion flow in isolated rat hearts through activation of PI3K/Akt-eNOS signaling. *Phytomedicine*. **17**,

1006-1015, 2010.

- 23) ZHANG Zhifeng, **LUO Pei**, LI Jie, ZHANG Hao*. Comparison of the antiinflammatory activities of three medicinal plants known as "meiduoluomi" in Tibetan folk medicine. *YAKUGAKU ZASSHI-JOURNAL OF THE PHARMACEUTICAL SOCIETY OF JAPAN*. **128**, 805-810, 2008.
- 24) **LUO Pei**, TAN Zhenghuai, ZHANG Zhifeng, LI Honghao, MO Zhengji*. Inhibitory effects of salvianolic acid B on the high glucose-induced mesangial proliferation via NF-kappaB-dependent pathway. *Biological and Pharmaceutical Bulletin*. **31**, 1381-1386, 2008.
- 25) **LUO Pei**, ZHANG Zhifeng, YI Tao, ZHANG Hao, MO Zhengji*. Anti-inflammatory activity of the extracts and fractions from *Erigeron multiradiatus* through bioassay-guided procedures. *Journal of Ethnopharmacology*. **119**, 232-237, 2008.
- 26) **LUO Pei**, TAN Zhenghuai, ZHANG Zhifeng, ZHANG Hao, LIU Xianfu, MO Zhengji*. Scutellarin isolated from *Erigeron multiradiatus* inhibits high glucose-mediated vascular inflammation. *YAKUGAKU ZASSHI-JOURNAL OF THE PHARMACEUTICAL SOCIETY OF JAPAN*. **128**, 1293-1299, 2008.

Research Projects (as PI):

- 1) 2012~2015 Application of living-cell imaging technique in research of cardiomyocyte mitochondrial dynamics and mechanistic study of anti-ischemia heart disease effects of protopanaxatriol-type Ginsenosides. At Macau University of Science and Technology. Science & Technology Development Fund of Macao SAR, 073/2011/A3.
- 2) 2013~2017 Role of microtubule motors in aging myocardial ischemic preconditioning and effects of piceatannol and its dimers. At Macau University of Science and Technology. Science & Technology Development Fund of Macao SAR, 052/2013/A2.
- 3) 2012~2013 Semi-quantitation of mitochondrial dynamics in H/R- induced cardiomyocytes H9c2. Macao Foundation of Macao SAR.