

Prof. Bing SHEN



Position: Professor

Faculty: Dr. Neher's Biophysics Laboratory for Innovative Drug Discovery

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In 2009, Dr. Shen graduated from the Department of Physiology of the Chinese University of Hong Kong and conducted postdoctoral research in the Chinese University of Hong Kong and the University of Texas Health Science Center at Houston. He joined Macao University of Science and Technology in 2024, and his main research interests are ion channel-related pathophysiological functions, drug development and human genetic diseases. He has published more than 130 scientific research papers in international SCI journals such as Cell Research, Nature Communications, Circulation Research, and actively conducted medical translational research, and obtained several national invention patents. He has presided over several scientific research funds such as the National Natural Science Foundation Project and the Anhui Outstanding Youth Fund. He has won the Chinese Medical Science and Technology Award, the Natural Science Award of Anhui Province, the Natural Science Award of Hubei Province, and the Teaching Achievement Award of Anhui Province. He is also a member of the Standing Committee of the Collaborative Education Working Group of Basic Medical Innovation and Entrepreneurship in colleges and universities, member of the Ion Channel and Receptor Branch of the Chinese Neuroscience Society, member of the neuropsychopharmacology Professional Committee of the Chinese Pharmacological Society, member of the Biotxin Toxicology Professional Committee of the Chinese Toxicology Society, member of the Cell Calcium Signaling branch of the Chinese Biophysical Society.

Teaching Modules: Pending

Research Interest:

- Physiological and pathological functions of ion channels

- Mechanism and functions of calcium signal and crosstalk of calcium signal between organelles
- Discovering small molecules acting on ion channels in traditional Chinese medicine

Education

1993.9-1998.6 BSc (Clinical Medicine), Anhui Medical University, China

2000.9-2003.6 MSc (Pharmacology), Jinan University, China

2006.8-2009.12 PhD (Physiology), The Chinese University of Hong Kong, Hong Kong

Teaching Experience

- (1) 2024.01-present: Professor, State Key Laboratory of Quality Research in Chinese Medicine, Macao University of Science and Technology
- (2) 2015.08-2023.12: Professor, School of Basic Medical Science, Anhui Medical University
- (3) 2011.11-2013.01: Postdoctoral Researcher at the University of Texas Health Science Center at Houston, USA
- (4) 2009.09-2015.08: Associate Professor, School of Basic Medical Science, Anhui Medical University
- (5) 2009.09-2010.09: Postdoctoral Researcher, School of Biomedical Sciences, The Chinese University of Hong Kong
- (6) 2005.09-2006.05: Research Assistant, Department of Physiology, Faculty of Medicine, The Chinese University of Hong Kong
- (7) 2003.07-2005.09: Lecturer, College of Life Sciences, University of Science and Technology of China

Representative Publications

- (1) Keyan Hu[#], Lei Liu[#], Songtao Tang[#], Xin Zhang, Hongfeng Chang, Wenyang Chen, Taotao Fan, Leshan Zhang, **Bing Shen***, Qiu Zhang*. MicroRNA-221-3p inhibits the inflammatory response of keratinocytes by regulating the DYRK1A/STAT3 signaling pathway to promote wound healing in diabetes. *Communication Biology*. 2024 Feb.
- (2) Qunhua Wang[#], Yan Fang[#], Yuan Li, Huali Liu, Maoni Zhu, Xue Hu, Jinzhuo Zhou, Anqi Deng, **Bing Shen***, Hongbo Chen*. Pregnancy-specific beta-1-glycoprotein 1 increases HTR-8/SVneo cell migration through the Orai1/Akt signaling pathway. *Biomolecules*. 2024 Jan 27.
- (3) Tianyue Wang*, Hidemi Nakata*, **Bing Shen**, Ziyang Jiao, Kaori Yokota, Shinji Kuroda, Shohei Kasugai, Eriko Marukawa. Involvement of miR-199a-5p-loaded mesoporous silica nanoparticle-polyethyleneimine-KALA in osteogenic differentiation. *Journal of Dental Sciences*. 2024 Jan.
- (4) Li Ji[#], Ziyang Jiao[#], Lin Zhang, Jia Shi, Qianqian Wan, Chunzhi Qian, Han Wang, Xiaoyan Cao, **Bing Shen***, Lijuan Jiang*. Role of increased IGFBP2 in trophoblast

cell proliferation and recurrent spontaneous abortion development: A pilot study. *Physiological Reports*. 2024 Jan 27.

- (5) Chen Gong, Ji Ma, Ya Deng, Qiaoling Liu, Zixiang Zhan, Hong Gan, Xinjian Xiang, Meng Zhang, Kangli Cao, Tingting Shen, Lulu Fang, **Bing Shen***, Shichun Shen*, Shenggang Ding*. S100A9^{-/-} alleviates LPS-induced acute lung injury by regulating M1 macrophage Polarization and inhibiting pyroptosis via TLR4/MYD88/NFκB signaling axis. *Biomedicine & Pharmacotherapy*. 2024 Jan 30; (IF= 7.4996).
- (6) Zhang Chen, Liu Renhui, Chen Mengmeng, Xu Yang, Jin Xiaoqin, **Shen Bing**, Wang Jinye. Autophagy inhibitors 3-MA and BAF may attenuate hippocampal neuronal necroptosis after global cerebral ischemia-reperfusion injury in male rats by inhibiting the interaction of the RIP3/AIF/CypA complex. *Journal of Neuroscience Research*. 2024.
- (7) Yaqin Zhang, Xiangzhi Zhang, Ruofei Chen, Ziyang Jiao, **Bing Shen***, Zongwen Shuai*. HSCs-derived exosomes regulate the levels of inflammatory cytokines in HIBECs through miR-122-5p mediated p38 MAPK signaling pathway. *Genomics*. 2024 Jan 14. <https://doi.org/10.1016/j.ygeno.2024.110795>.
- (8) Fangfang Xu[#], Fan Zheng[#], Ye Chen[#], Yang Wang[#], Shaobo Ma, Weng Ding, Lesha Zhang, Jizheng Guo, Changbo Zheng*, **Bing Shen***. Role of thrombospondin-1 in high-salt-induced mesenteric artery endothelial impairment in rats. *Acta Pharmacologica Sinica*. 2023 Nov 6. doi: 10.1038/s41401-023-01181-9.
- (9) Keyan Hu[#], Xueying Liu[#], Hongfeng Chang, Yi Zhang, Hui Zhou, Lei Liu, Xin Zhang, Ziyang Jiao, **Bing Shen***, Qiu Zhang*. MicroRNA-221-3p targets THBS1 to promote wound healing in diabetes. *Diabetes, Metabolic Syndrome and Obesity*. 2023 Sep 11; 16: 2765-2777. doi: 10.2147/DMSO.S424847.
- (10) Xiaoyan Li, Bin Zhang, Wen Ding, Xianfen Jia, Zhen Han, Lin Zhang, Yifeng Hu, **Bing Shen***, Huiqin Wang*. Serum proteomic signatures in umbilical cord blood of preterm neonates delivered by women with gestational diabetes. *Diabetes, Metabolic Syndrome and Obesity*. 2023 May 26; 2023(16): 1525-1539. doi: <https://doi.org/10.2147/DMSO.S406297>.
- (11) Yue Wang, Mengru Cai, Xianliang Jiang, Guangyu Lv, Daiju Hu, Guofeng Zhang, Jinli Liu, Wei Wei, Jun Xiao, **Bing Shen**, Jay H Ryu, Xiaowen Hu. Exons 1-3 deletion in FLCN is associated with increased risk of pneumothorax in Chinese patients with Birt-Hogg-Dubé syndrome. *Orphanet Journal of Rare Diseases*. 2023 May 12; 18(1): 115. doi: 10.1186/s13023-023-02710-9.
- (12) Junhao Huang^{#,*}, Huiwen Gao[#], Dongdong Gao[#], Weiyue Yang, Mengke Zhao, **Bing Shen***, Min Hu*. Exercise reduces airway smooth muscle contraction in asthmatic rats via inhibition of IL-4 secretion and store-operated Ca²⁺ entry pathway. *Allergy Asthma & Immunology Research*. 2023 May; 15(3): 361-373. doi: 10.4168/aair.2023.15.3.361.
- (13) Zhen Wang, Wen Ding, Maosen Ruan, Yong Liu, Jing Yang, Huiqin Zhang, **Bing Shen**, Junfeng Wang, Yunyan Li. NMR and patch-clamp characterization of yeast mitochondrial pyruvate carrier complexes. *Biomolecules*. 2023 Apr 22; 13(5): 719. doi: 10.3390/biom13050719.

- (14) Qibing Wu[#], Yang Fang[#], Xiaoyu Huang, Fan Zheng, Shaobo Ma, Xinchun Zhang, Tingting Han, Huiwen Gao, **Bing Shen***. Role of Orai3-mediated store-operated calcium entry in radiation-induced brain microvascular endothelial cell injury. *International Journal of Molecular Sciences*. 2023 Apr 6; 24(7): 6818. doi: 10.3390/ijms24076818.
- (15) Ying Qin[#], Qinggang Meng[#], Qunhua Wang[#], Mingzhu Wu, Yan Fang, Chengcheng Tu, Xinyang Hu, **Bing Shen**, Hongbo Chen*, Xiaohong Xu*. Pregnancy-specific glycoprotein 9 enhances store-operated calcium entry and nitric oxide release in human umbilical vein endothelial cells. *Diagnostics (Basel)*. 2023 Mar 16; 13(6): 1134. doi: 10.3390/diagnostics13061134.
- (16) Ran Zhang[#], Meixuan Chen[#], Zhongfang Deng, Lingchao Kong, **Bing Shen***, Lesha Zhang*. Delta opioid peptide targets brain microvascular endothelial cells reducing apoptosis to relieve hypoxia-ischemic/reperfusion injury. *Pharmaceutics*. 2022 Dec 23; 15(1): 46. doi: 10.3390/pharmaceutics15010046.
- (17) Chuandi Yu, Wen Ding, Lei Zhu, Yuhang Zhou, Yingkui Dong, Ling Li, Juanjuan Liu, Yizhuo Wang, Zehua Li, Lina Zhu, FaJun Chen, Maosen Ruan, Dongming Qian, Yujuan Wang, Bo wu, Huangtao Xu, Ming Li, Yunchen Bi, Hao Wang, Weiqian Wang, Peng Chao, Lei Xing, **Bing Shen**, Han Dai, Lisha Zha, Hongxin Zhao, Junfeng Wang. Screening and characterization of inhibitory vNAR targeting nanodisc-assembled influenza M2 proteins. *iScience*. 2022 December 05, doi:https://doi.org/10.1016/j.isci.2022.105736.
- (18) Renming Li[#], Xiaomin Zhao[#], Pengcheng Liu, Dandan Wang, Chen Chen, Yu Wang, Ningning Zhang, **Bing Shen***, Dahai Zhao*. Differential expression of serum proteins in chronic obstructive pulmonary disease assessed using label-free proteomics and bioinformatics analyses. *International Journal of Chronic Obstructive Pulmonary Disease*. 2022 Nov 15; 17: 2871-2891. doi: 10.2147/COPD.S383976.
- (19) Yating Zhu, Chen Xing, Li Yang, Qian Li, Xiaofeng Wang, Jing Zhou, Cong Zhang, Cuiping Ren, Fahu Liu, Jun He, **Bing Shen**, Yinan Du*, Yan Liu*. Dual-gene detection in a single-tube system based on CRISPR-Cas12a/Cas13a for severe fever thrombocytopenia syndrome virus. *Frontiers in Microbiology*. 2022 Nov 3; 13: 977382. doi: 10.3389/fmicb.2022.977382.
- (20) Haoyang Lu, Wen Ding, Hui Xiao, Manyu Dai, Yangcheng Xue, Zhuoran Jia, Jie Guo, Mengzuo Wu, **Bing Shen***, Ren Zhao*. Association of the P441L KCNQ1 variant with severity of long QT syndrome and risk of cardiac events. *Frontiers in Cardiovascular Medicine*. 2022 Oct 31; 9: 922335. doi: 10.3389/fcvm.2022.922335.
- (21) Yansong Xu[#], Yuansong Sun[#], Ran Yin[#], Tao Dong[#], Kai Song, Yang Fang, Guodong Liu*, **Bing Shen***, He Li*. Differential expression of plasma exosomal microRNA in severe acute pancreatitis. *Frontiers in Pharmacology*. 2022 September 28; 13: 980930. doi: 10.3389/fphar.2022.980930
- (22) Xiaomin Zhao, Xiaowen Feng, Pengcheng Liu, Jing Ye, Rui Tao, Renming Li, **Bing Shen**, Xiaoming Zhang*, Xuefu Wang*, Dahai Zhao*. Abnormal expression of CD96 on natural killer cell in peripheral blood of patients with chronic

- obstructive pulmonary disease. *The Clinical Respiratory Journal*. 2022 Aug; 16(8): 546-554. doi: 10.1111/crj.13523.
- (23) He Li[#], Yansong Xu[#], Xin Zhou, Taiyang Jin, Ziru Wang, Yuansong Sun, Haiping Wang, Datong Jiang, Chunlin Yin, **Bing Shen***, Kai Song*. DIA-based proteomic analysis of plasma protein profiles in patients with severe acute pancreatitis. *Molecules*. 2022 Jun 17; 27(12): 3880. doi: 10.3390/molecules27123880.
- (24) Yaqin Zhang[#], Ziyang Jiao[#], Mingwei Chen, **Bing Shen**, Zongwen Shuai. Roles of non-coding RNAs in primary biliary cholangitis. *Frontiers in Molecular Biosciences*. 2022 July 08.
- (25) Guofeng Zhang, Jinli Liu, Yushuo Wang, Yue Wang, Xianliang Jiang, Yan Peng, Jun Xiao, Wei Wei, **Bing Shen**, Long Yi, Jay H Ryu, Xiaowen Hu. Birt-Hogg-Dubé syndrome encountered at rare lung disease clinic in Anhui province, China. *Orphanet Journal of Rare Diseases*. 2022 May 16; 17(1): 203. doi: 10.1186/s13023-022-02362-1.
- (26) Jing Ye[#], Pengcheng Liu[#], Renming Li, Hui Liu, Wenjing Pei, Changxiu Ma, **Bing Shen**, Dahai Zhao*, Xiaoyu Chen*. Biomarkers of connective tissue disease-associated interstitial lung disease in bronchoalveolar lavage fluid: a label-free mass spectrometry-based relative quantification study. *Journal of Clinical Laboratory Analysis*. 2022 May; 36(5): e24367. doi: 10.1002/jcla.24367. (IF=3.124).
- (27) Linghui Chen, Yanzhuo Chen, Wen Ding, Tao Zhan, Jie Zhu, Lesha Zhang, Han Wang, **Bing Shen*** and Yong Wang*. Oxidative stress-induced TRPV2 expression increase involves in diabetic cataract and apoptosis of lens epithelial cells in a high-glucose environment. *Cells*. 2022 Apr 2; 11(7): 1196. doi: 10.3390/cells11071196.
- (28) Lijie Xu[#], Shuhao Wang[#], Zhechen Wu, Chengcheng Xu, Xinwei Hu, Haitian Ding, Yanqiang Zhang, **Bing Shen**, Yehai Liu, Kaile Wu*. Development of a colloidal gold immunochromatographic strip for rapid detection of Cyfra 21-1 in lymph node metastasis of thyroid cancer. *Frontiers in Bioengineering and Biotechnology*. 2022 Apr 12; 10: 871285. doi: 10.3389/fbioe.2022.871285. eCollection 2022.
- (29) Shuhao Wang[#], Lijie Xu[#], Yv Wu, Hailong Shen, Zhangying Lin, Yang Fang, Lesha Zhang, **Bing Shen**, Yehai Liu*, Kaile Wu*. Parathyroid hormone promotes human umbilical vein endothelial cell migration and proliferation through Orail1-mediated calcium signaling. *Frontiers in Cardiovascular Medicine*. 2022 Mar 16; 9: 844671. doi: 10.3389/fcvm.2022.844671. eCollection 2022.
- (30) Qiqi Yu[#], Lei Liu[#], Xin Zhang, Hongfeng Chang, Shaobo Ma, Zhenhui Xie, Songtao Tang, Xinmin Ju, Huaqing Zhu*, **Bing Shen***, Qiu Zhang*. MiR-221-3p targets HIPK2 to promote diabetic wound healing. *Microvascular Research*. 2022 Mar; 140: 104306. doi: 10.1016/j.mvr.2021.104306.
- (31) Suwen Bai[#], Wenxuan Hou[#], Yanheng Yao[#], Jialin Meng[#], Yuan Wei, Fangfang Hu, Xianyu Hu, Jing Wu, Ning Zhang, Ruihuan Xu, Faqing Tian, Benguo Wang, Hailan Liao, Yinan Du, Haoshu Fang, Wei He, Yehai Liu, **Bing Shen**, Juan Du. Exocyst controls exosome biogenesis via Rab11a. *Molecular therapy. Nucleic acids*. 2021 Dec 17; 27: 535-546. doi: 10.1016/j.omtn.2021.12.023. eCollection 2022 Mar 8.
- (32) Zeguo Jia[#], Lei Liu[#], Shiqian Zhang, Xiaotong Zhao, Li Luo, Yizhong Tang, **Bing Shen**, Mingwei Chen*. Proteomics changes after negative pressure wound therapy

- in diabetic foot ulcers. *Molecular Medicine Reports*. 2021 Dec; 24(6):834. doi: 10.3892/mmr.2021.12474.
- (33) Fang Dai[#], Jizheng Guo[#], Yang Wang, Tian Jiang, Hongbo Chen, Ying Hu, Juan Du, Yan Wang, Xianming Xia, Qiu Zhang*, **Bing Shen***. Enhanced store-operated Ca²⁺ signal of small intestinal smooth muscle cells accelerates small bowel transit speed in type 1 diabetic mouse. *Frontiers in Physiology*. 2021 Oct 20; 12:691867. doi: 10.3389/fphys.2021.691867. eCollection 2021.
- (34) Xingbang Wang, Yong Xiao, Mingming Huang, Wen Ding, **Bing Shen**, Haowei Xue, Kaile Wu*. Effect of TRPM2-mediated Ca²⁺ signaling on cell proliferation and apoptosis in esophageal squamous cell carcinoma. *Technology in Cancer Research & Treatment*. 2021 Jan-Dec; 20:15330338211045213. doi: 10.1177/15330338211045213.
- (35) Suwen Bai[#], Wang Wang[#], Li Ye, Lulu Fang, Tao Dong, Rong Zhang, Xin Wang, Huiwen Gao, **Bing Shen***, Shenggang Ding*. IL-17 stimulates neutrophils to release S100A8/A9 to promote lung epithelial cell apoptosis in Mycoplasma pneumoniae-induced pneumonia in children. *Biomedicine & Pharmacotherapy*. 2021 Sep 22; 143: 112184. doi: 10.1016/j.biopha.2021.112184.
- (36) Fangfang Xu[#], Yang Wang[#], Huiwen Gao, Xinchun Zhang, Yu Hu, Tingting Han, **Bing Shen**, Lesha Zhang*, Qibing Wu*. X-ray causes mRNA transcripts change to enhance Orai2-mediated Ca²⁺ influx in rat brain microvascular endothelial cells. *Frontiers in Molecular Biosciences*. 2021 Sep 14; 8: 646730. doi: 10.3389/fmolb.2021.646730. eCollection 2021.
- (37) Yuan Wei[#], Suwen Bai^{ih}, Yanheng Yao[#], Wenxuan Hou, Junwei Zhu, Haoshu Fang, Yinan Du, Wei He, **Bing Shen**, Juan Du*. Orai-vascular endothelial cadherin signaling complex regulates high-glucose exposure-induced increased permeability of mouse aortic endothelial cells. *BMJ Open Diabetes Research & Care*. 2021 Apr; 9(1): e002085. doi: 10.1136/bmjdr-2020-002085.
- (38) Yong Wang[#], Suwen Bai[#], Ru Zhang[#], Lin Xia, Linghui Chen, Jizheng Guo, Fang Dai, Juan Du, **Bing Shen***. Orai3 exacerbates apoptosis of lens epithelial cells by disrupting Ca²⁺ homeostasis in diabetic cataract. *Clinical and Translational Medicine*. 2021 Mar 04; 11(3): 1-5. Article Number: e327, <https://doi.org/10.1002/ctm2.327>.
- (39) Meixuan Chen, Shuo Wu, **Bing Shen**, Qingquan Fan, Ran Zhang, Yu Zhou, Pingping Zhang, Liecheng Wang, Lesha Zhang. Activation of the δ opioid receptor relieves cerebral ischemic injury in rats via EGFR transactivation. *Life Sciences*. 2021 Mar 2; 273: 119292. doi: 10.1016/j.lfs.2021.119292.
- (40) Tao Dong[#], Ran Yin[#], Qingcai Yu, Wanwei Qiu, Kun Li, Lisheng Qian*, He Li, **Bing Shen***, Guodong Liu*. Sensitive detection of microRNA-21 in cancer cells and human serum with Au@Si nanocomposite and lateral flow assay. *Analytica Chimica Acta*. 2021 Feb 22; 1147: 56-63. doi: 10.1016/j.aca.2020.12.042.
- (41) Fangfang Xu[#], Jinhang Zhu[#], Ye Chen, Ke He, Jizheng Guo, Suwen Bai, Ying Hu, Ren Zhao, Juan Du, **Bing Shen***. Physical interaction of tropomyosin 3 and STIM1 regulates vascular smooth muscle contractility and contributes to hypertension. *Biomedicine & Pharmacotherapy*. 2021 Feb; 134(111126): 1-10. doi:

- 10.1016/j.biopha.2020.111126.
- (42) Xianyu Hu[#], Suwen Bai[#], Lingyi Li[#], Pengfei Tian, Sun Wang, Ning Zhang, **Bing Shen**, Juan Du^{*}, Shengxiu Liu^{*}. MiR-200c-3p increased HDMEC proliferation through the notch signaling pathway. *Experimental Biology and Medicine (Maywood)*. 2021 Apr; 246(8): 897-905. 1535370220981859. doi: 10.1177/1535370220981859.
- (43) Yadi Cao, Juan Xu, Di Cui, Lei Liu, Shiqi Zhang, **Bing Shen**, Yonggui Wu^{*}, Qiu Zhang^{*}. Protective effect of carnosine on hydrogen peroxide-induced oxidative stress of Human kidney tubular epithelial cells. *Biochemical and Biophysical Research Communications*. 2021 Jan 1; 534: 576-582. doi: 10.1016/j.bbrc.2020.11.037.
- (44) Shu Zhou^{#,*}, Maosen Ruan[#], Yunyan Li, Jing Yang, Suwen Bai, Christian Richter, Harald Schwalbe, Can Xie, **Bing Shen**^{*}, Junfeng Wang^{*}. Solution structure of the voltage-gated Tim23 channel in complex with a mitochondrial presequence peptide. *Cell Research*. 2021 Jul; 31(7): 821-824. doi: 10.1038/s41422-020-00452-y.
- (45) Junhao Huang^{#,*}, Jingwen Liao[#], Yang Fang[#], Hailin Deng, Honggang Yin, **Bing Shen**^{*}, Min Hu^{*}. Six-week exercise training with dietary restriction improves central hemodynamics associated with altered gut microbiota in adolescents with obesity. *Frontiers in Endocrinology*. 2020 Dec 07; 11: 1-10. Article ID 569085. doi: 10.3389/fendo.2020.569085.
- (46) Kun Li[#], Lei Chen[#], Zhangying Lin, Junwei Zhu, Yang Fang, Juan Du, **Bing Shen**, Kaile Wu, Yehai Liu^{*}. Role of the AMPK/ACC signaling pathway in TRPP2-mediated head and neck cancer cell proliferation. *BioMed Research International*. 2020 Nov 14; 2020: 1-9. Article ID 4375075. doi: 10.1155/2020/4375075.
- (47) Ying Qin, Tao Dong, Wan Jiang, Wen Ding, Tao Zhan, Juan Du, Ren Zhao, **Bing Shen**^{*}, Jiexia Chen^{*}. iTRAQ-based proteomics reveals serum protein changes in hypertensive rats induced by high-salt diet. *EXCLI Journal*. 2020 Nov 6; 19: 1496-1511.
- (48) Ming Li[#], Mingzhu Wu[#], Ying Qin, Huaqing Liu, Chengcheng Tu, **Bing Shen**, Xiaohong Xu^{*}, Hongbo Chen^{*}. Differentially expressed serum proteins in children with or without asthma as determined using isobaric tags for relative and absolute quantitation proteomics. *PeerJ*. 2020; 8: e9971. <https://doi.org/10.7717/peerj.9971>.
- (49) Suwen Bai[#], Yuan Wei[#], Wenxuan Hou, YanHeng Yao, Junwei Zhu, Xianyu Hu, Wei Chen, Yinan Du, Wei He, **Bing Shen**^{*}, Juan Du^{*}. Orai-IGFBP3 signaling complex regulates high-glucose exposure-induced increased proliferation, permeability, migration of human coronary artery endothelial cells. *BMJ Open Diabetes Research & Care*. 2020 Oct; 8(1): e001400. doi: 10.1136/bmjdr-2020-001400.
- (50) Suwen Bai[#], Qianqian Yin[#], Tao Dong, Fang Dai, Ying Qin, Li Ye, Juan Du, Qiu Zhang, Hongbo Chen^{*}, **Bing Shen**^{*}. Endothelial progenitor cell-derived exosomes ameliorate endothelial dysfunction in a mouse model of diabetes. *Biomedicine & Pharmacotherapy*. 2020 Nov; 131: 110756. doi.org/10.1016/j.biopha.2020.110756.
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- (53) Juan Xu#, Suwen Bai#, Yadi Cao, Lei Liu, Yang Fang, Juan Du, Li Luo, Mingmei Chen, **Bing Shen***, Qiu Zhang*. MiRNA-221-3p in endothelial progenitor cell-derived exosomes accelerates skin wound healing in diabetic mice. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*. 2020 Apr 22; 13: 1259-1270. doi: 10.2147/DMSO.S243549.
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- (55) Jizheng Guo#, Ren Zhao#, Muyao Zhou#, Jie Li#, Xiaoqiang Yao, Juan Du, Jiexia Chen* **Bing Shen***. TRPP2 and STIM1 form a microdomain to regulate store-operated Ca²⁺ entry and blood vessel tone. *Cell Communication and Signaling*. 2020 Aug 31; 18(1): 138. doi: 10.1186/s12964-020-00560-7.
- (56) Yang Wang#, Yu Hu#, Lei Chen, Jing Wu, Kaile Wu, Juan Du, Haowei Xue*, **Bing Shen***. Molecular mechanisms and prognostic markers in head and neck squamous cell carcinoma: a bioinformatic analysis. *International Journal of Clinical and Experimental Pathology*. 2020 Mar 1; 13(3): 371-381.
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- (59) Jizheng Guo#, Jie Li#, Lin Xia#, Yang Wang, Jinhang Zhu, Juan Du, Yungang Lu, Guodong Liu, Xiaoqiang Yao*, **Bing Shen***. Transient receptor potential canonical 5-scramblase signaling complex mediates neuronal phosphatidylserine externalization and apoptosis. *Cells*. 2020 Feb 26; 9(3): 1-17. Article Number: 547. doi: 10.3390/cells9030547.
- (60) Yuan-Yuan Huang, Jing Li, He-Rui Zhang, Su-Wen Bai, Hui-Yun Yang, **Bing Shen**, Juan Du*, Xian-Ming Xia*. The effect of transient receptor potential vanilloid 4 on the intestinal epithelial barrier and human colonic cells was affected by tyrosine-phosphorylated claudin-7. *Biomedicine & Pharmacotherapy*. 2020 Feb; 122: 109697. doi: 10.1016/j.biopha.2019.109697.

