



碧云天生物技术/Beyotime Biotechnology
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一氧化氮检测试剂盒

产品编号	产品名称	包装
S0021S	一氧化氮检测试剂盒	500次
S0021M	一氧化氮检测试剂盒	2500次

产品简介：

- 碧云天生产的一氧化氮检测试剂盒采用了经典的Griess Reagent，并对其测定的溶液体系进行了优化，使检测下限达到 $1\mu M$ ，在 $1-100\mu M$ 范围内有非常完美的线性关系。
- 检测速度极快，完成一条标准曲线或5-10个样品的测定只需3分钟。
- 样品范围广，可以检测细胞或组织及其培养液中的一氧化氮的含量，酚红和10%血清均对测定无明显干扰，也可以检测血清、血浆和尿液中一氧化氮的含量。

包装清单：

产品编号	产品名称	包装
S0021S-1	1M NaNO ₂	1ml
S0021S-2	Griess Reagent I	25ml
S0021S-3	Griess Reagent II	25ml
—	说明书	1份

产品编号	产品名称	包装
S0021M-1	1M NaNO ₂	1ml
S0021M-2	Griess Reagent I	125ml
S0021M-3	Griess Reagent II	125ml
—	说明书	1份

保存条件：

-20°C避光保存，一年有效。4°C避光保存，半年有效。

注意事项：

- 本产品对人体有害，操作时请小心，并注意有效防护以避免直接接触人体或吸入体内。
- 如保存不当导致溶液变色或沉淀，则说明该溶液已经失效，请购买新的试剂盒。
- 不建议使用RIPA裂解液对细胞或者组织进行裂解，使用RIPA裂解液可能在后续反应中产生沉淀，影响测试。推荐使用碧云天的细胞与组织裂解液(一氧化氮检测用)(S3090)或Western及IP细胞裂解液(P0013)。
- 对于血清样品中NO含量的测定，粗略地计算，可以直接用水稀释标准品，从而计算出血清样品中NO的浓度。比较精确地计算，如果测定的正常血清是常见血清可以从文献上查到其中NO的浓度，然后用该已知NO浓度的血清稀释标准品，这样就可以得到比较精确的NO浓度。或者使用已知浓度的人或其它动物的血清稀释标准品也同样可以达到目的。或者参照类似文献进行血清中NO浓度的测定。
- 本产品仅限于专业人员的科学研究用，不得用于临床诊断或治疗，不得用于食品或药品，不得存放于普通住宅内。
- 为了您的安全和健康，请穿实验服并戴一次性手套操作。

使用说明：

- 取出Griess Reagent I和II，使回复室温。
- 用待测样品所用溶液稀释标准品(1-100 μM)。

例如样品为细胞培养液上清，细胞培养液为DMEM+10%FBS，则用DMEM+10%FBS稀释标准品。通常标准品的浓度可取0, 1, 2, 5, 10, 20, 40, 60, 100 μM 。

- 按50 μl /孔，在96孔板中加入标准品及样品。

样品为培养液上清，可以直接取样，如果有可沉淀物则需离心后取上清。如样品为细胞或组织，可以快速冻融裂解，然后离心沉淀取上清，体积不足50 μl 可以用重蒸水或0.9% NaCl稀释(相应地标准品也需用重蒸水或0.9% NaCl稀释)。细胞或组织也可以用于Western或IP的裂解液(无需添加抑制剂)裂解，同样标准品也需相应稀释。推荐使用碧云天生产的细胞与组织裂解液(一氧化氮检

测用)(S3090)或Western及IP细胞裂解液(P0013); 不建议使用RIPA裂解液。

4. 按50 μ l /孔, 在各孔中加入室温Griess Reagent I。

5. 按50 μ l /孔, 各孔中加入室温Griess Reagent II。

6. 540nm测定吸光度。

如无540nm滤光片, 520-560nm的滤光片也可。如无酶标仪或合适的滤光片, 也可以通过目测比色, 确定样品中一氧化氮的浓度。目测比色时标准品需要更为精细的浓度梯度。

7. 根据标准品曲线计算出样品中一氧化氮的浓度。标准曲线示例参见图1, 供参考。实际测定时, 由于反应条件、试剂盒批次的不同等因素, 会导致检测结果与示例数据存在一定差异。

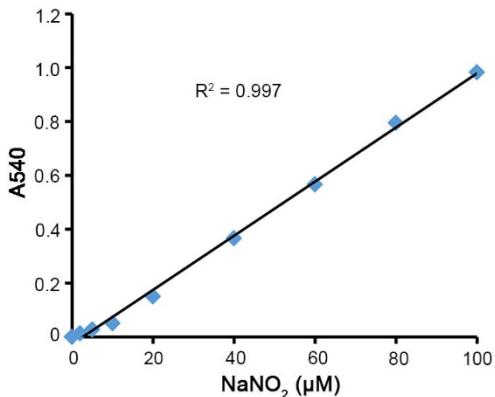


图1. 碧云天生产的一氧化氮检测试剂盒的参考标准曲线。

使用本产品的文献:

1. Lu-yang YU, Bo LIN, Zhen-lin ZHANG, Li-he GUO. Direct transfer of A20 gene into pancreas protected mice from streptozotocin-induced diabetes1. Acta Pharmacol Sin 2004 Jun; 25 (6): 721-6.
2. Bochu W, Chunhong T, Liancai Z, Qi C. Investigation on the effects of diamide on NO production in vascular endothelial cells (VEC). COLLOID SURFACE B 2004 Jun 1;35(3-4):205-8.
3. Wang Bochu, Zhu Liancai, Chen Qi. Primary study on the application of Serum Pharmacology in Chinese traditional medicine. COLLOID SURFACE B 2005;43:194-7.
4. Deng Z, Wu Y, Zeng Y, Chen L, Yu M. Expression of inducible nitric oxide synthase induced by lipid2associated membrane proteins of Ureaplasma urealyticum is regulated by nuclear factor κ B2mediated mechanism in murine macrophages. J Microbiol Immunol 2005; 3(4):260-5.
5. Liu X, Fan XL, Zhao Y, Luo GR, Li XP, Li R, Le WD. Estrogen provides neuroprotection against activated microglia-induced dopaminergic neuronal injury through both estrogen receptor-alpha and estrogen receptor-beta in microglia. J Neurosci Res 2005 Sep 1;81(5):653-65.
6. Yin X, Zhang Y, Yu J, Zhang P, Shen J, Qiu J, Wu H, Zhu X. The antioxidative effects of astragalus saponin I protect against development of early diabetic nephropathy. J Pharmacol Sci 2006 Jun;101(2):166-73.
7. Sun Z, Xi H, Chen Z, Yao H. Effect of Lutein and Zeaxanthin on Nitric Oxide Production in Mouse Peritoneal Macrophages. J FOOD SCI 2006; 27(11):505-9.
8. Yu H, Zhang HQ, Xiao FY, Xiao GF, Huang XY. Effects of asymmetrical dimethylarginine on number and activity of endothelial progenitor cells in vitro. CLIN RES CARDIOL 2007 Jun;23(6):454-6.
9. Gao S, Liu C, Qu S, Song J, Li J, Zhang P, Wang Q, Guo C, Gao F, Zhang L. Non-cell Corynebacterium parvum generated by nanotechnology: a promising immunomodulator with less side effects. Int Immunopharmacol 2007 Oct;7(10):1334-42.
10. Cai WJ, Wang MJ, Moore PK, Jin HM, Yao T, Zhu YC. The novel proangiogenic effect of hydrogen sulfide is dependent on Akt phosphorylation. Cardiovasc Res 2007 Oct 1;76(1):29-40.
11. Zhao L, Tao JY, Zhang SL, Pang R, Jin F, Dong JH, Guo YJ. Inner anti-inflammatory mechanisms of petroleum ether extract from Melilotus suaveolens Ledeb. Inflammation 2007 Dec;30(6):213-23.
12. Zhao L, Zhang SL, Tao JY, Pang R, Jin F, Guo YJ, Dong JH, Ye P, Zhao HY, Zheng GH. Preliminary exploration on anti-inflammatory mechanism of Corilagin (β -beta-1-O-galloyl-3,6- (R)-hexahydroxydiphenoyl-D-glucose) in vitro. Int Immunopharmacol 2008 Jul;8(7):1059-64.
13. Qian H, Chen W, Li J, Wang J, Zhou Z, Liu W, Fu Z. The effect of exogenous nitric oxide on alleviating herbicide damage in Chlorella vulgaris. Aquat Toxicol 2009 May 17;92(4):250-7.
14. Chen HP, Liao ZP, Huang QR, He M. Sodium ferulate attenuates anoxia/reoxygenation-induced calcium overload in neonatal rat cardiomyocytes by NO/cGMP/PKG pathway. Eur J Pharmacol 2009 Jan 28;603(1-3):86-92.
15. Zou CG, Zhao YS, Gao SY, Li SD, Cao XZ, Zhang M, Zhang KQ. Homocysteine promotes proliferation and activation of microglia. Neurobiol Aging 2010 Dec;31(12):2069-79.
16. Ding XL, Wang YH, Ning LP, Zhang Y, Ge HY, Jiang H, Wang R, Yue SW. Involvement of TRPV4-NO-cGMP-PKG pathways in the development of thermal hyperalgesia following chronic compression of the dorsal root ganglion in rats. Behav Brain Res 2010;208(1):194-201.
17. Wang S, Zhang Z, Lin X, Xu DS, Feng Y, Ding K. A polysaccharide, MDG-1, induces S1P1 and bFGF expression and augments survival and angiogenesis in the ischemic heart. Glycobiology 2010;20(4):473-84.
18. Wang J, Du JR, Wang Y, Kuang X, Wang CY. Z-ligustilide attenuates lipopolysaccharide-induced proinflammatory response via inhibiting NF- κ B pathway in primary rat microglia. Acta Pharmacol Sin 2010;31(7):791-7.
19. Lin Q, Ding X, Qiu F, Song X, Fu G, Ji J. In situ endothelialization of intravascular stents coated with an anti-CD34 antibody functionalized heparin-collagen multilayer. Biomaterials 2010;31(14):4017-25.
20. Huang JZ, Chen YZ, Su M, Zheng HF, Yang YP, Chen J, Liu CF. dl-3-n-Butylphthalide prevents oxidative damage and reduces mitochondrial dysfunction in an MPP(+) -induced cellular model of Parkinson's disease. Neurosci Lett 2010;475(2):89-94.
21. Yan TT, Li Q, Zhang XH, Wu WK, Sun J, Li L, Zhang Q, Tan HM. Homocysteine impaired endothelial function through compromised vascular endothelial growthfactor/Akt/endothelial nitric oxide synthase signalling. CLIN EXP PHARMACOL P 2010 Nov;37(11):1071-7.
22. Zhang Q, Zhou H, Yan B. Reducing nanotube cytotoxicity using a nano-combinatorial library approach. MOL THER-METH CLIN D

2010;625:95-107.

23. Zhao CQ, Zhang YH, Jiang SD, Li H, Jiang LS, Dai LY. ADAMTS-5 and intervertebral disc degeneration: the results of tissue immunohistochemistry and in vitro cell culture. *J Orthop Res* 2011 May;29(5):718-25.
24. Zhang H, Zhao X, Yang J, Yin H, Wang W, Lu H, Du Y. Nitric oxide production and its functional link with OIPK in tobacco defense response elicited by chitooligosaccharide. *Plant Cell Rep* 2011 Jun;30(6):1153-62.
25. Gong L, Liu FQ, Wang J, Wang XP, Hou XG, Sun Y, Qin WD, Wei SJ, Zhang Y, Chen L, Zhang MX. Hyperglycemia induces apoptosis of pancreatic islet endothelial cells via reactive nitrogen species-mediated Jun N-terminal kinase activation. *BBA-BIOMEMBRANES* 2011 Jun;1813(6):1211-9.
26. Liu FQ, Zhang XL, Gong L, Wang XP, Wang J, Hou XG, Sun Y, Qin WD, Wei SJ, Zhang Y, Chen L, Zhang MX. Glucagon-like peptide 1 protects microvascular endothelial cells by inactivating the PARP-1/iNOS/NO pathway. *Mol Cell Endocrinol* 2011 Jun 6;339(1-2):25-33.
27. Xu XL, Huang YJ, Chen XF, Lin DY, Zhang W. 2,3,4',5-Tetrahydroxystilbene-2-O- β -d-glucoside Inhibits Proliferation of Vascular Smooth Muscle Cells: Involvement of NO/cGMP/PKG Pathway. *Phytother Res* 2012 Jul;26(7):1068-74.
28. Ji Y, Wei Y, Liu X, Wang J, Ren K, Ji J. Zwitterionic polycarboxybetaine coating functionalized with REDV peptide to improve selectivity for endothelial cells. *J Biomed Mater Res A* 2012 Jun;100(6):1387-97.
29. Zhao JH, Shen T, Yang X, Zhao H, Li X, Xie WD. Sesquiterpenoids from Farfugium japonicum and their inhibitory activity on NO production in RAW264.7 cells. *Arch Pharm Res* 2012 Jul;35(7):1153-8.
30. Shen W, Cai K, Yang Z, Yan Y, Yang W, Liu P. Improved endothelialization of NiTi alloy by VEGF functionalized nanocoating. *COLLOID SURFACE B* 2012 Jun 1;94:347-53.
31. Jia Y, Ji L, Zhang S, Xu L, Yin L, Li L, Zhao Y, Peng J. Total flavonoids from Rosa Laevigata Michx fruit attenuates hydrogen peroxide induced injury in human umbilical vein endothelial cells. *Food Chem Toxicol* 2012 Jul;45(9):3133-41.
32. Chen HP, He M, Mei ZJ, Huang QR, Huang M. Sasanquasaponin up-regulates anion exchanger 3 expression and elicits cardioprotection via NO/RAS/ERK1/2 pathway. *CAN J PHYSIOL PHARM* 2012 Jul;90(7):873-80.
33. Yu Y, Fan SM, Yuan SJ, Tashiro SI, Onodera S, Ikejima T. Nitric oxide (·NO) generation but not ROS plays a major role in silibinin-induced autophagic and apoptotic death in human epidermoid carcinoma A431 cells. *FREE RADICAL RES* 2012 Nov;46(11):1346-60.
34. Han Y, Li X, Zhou S, Meng G, Xiao Y, Zhang W, Wang Z, Xie L, Liu Z, Lu H, Ji Y. 17 β -estradiol antagonizes the down-regulation of ER α /NOS-3 signaling in vascular endothelial dysfunction offemale diabetic rats. *PLoS ONE* 2012;7(11):e50402.
35. Li X, Liu D, Liu X, Jiang W, Zhou W, Yan W, Cen Y, Li B, Cao G, Ding G, Pang X, Sun J, Zheng J, Zhou H. CpG ODN107 potentiates radiosensitivity of human glioma cells via TLR9-mediated NF- κ B activation and NO production. *TUMOR BIOL* 2012 Oct;33(5):1607-18.
36. Wang Y, Zhu Y, Gao L, Yin H, Xie Z, Wang D, Zhu Z, Han X. Formononetin attenuates IL-1 β -induced apoptosis and NF- κ B activation in INS-1 cells. *Molecules* 2012 Aug 24;17(9):10052-64.
37. Di S, Tian Z, Qian A, Li J, Wu J, Wang Z, Zhang D, Yin D, Brandi ML, Shang P. Large gradient high magnetic field affects FLG29.1 cells differentiation to form osteoclast-like cells. *Int J Radiat Biol* 2012 Nov;88(11):806-13.
38. Tie L, An Y, Han J, Xiao Y, Xiaokaiti Y, Fan S, Liu S, Chen AF, Li X. Genistein accelerates refractory wound healing by suppressing superoxide and FoxO1/iNOS pathway in type 1 diabetes. *J Nutr Biochem* 2013 Jan;24(1):88-96.
39. Yuan H, Zhang W, Li H, Chen C, Liu H, Li Z. Neuroprotective effects of resveratrol on embryonic dorsal root ganglion neurons with neurotoxicity induced by ethanol. *Food Chem Toxicol* 2013 May;55:192-201.
40. Yang X, Sun L, Wu X, Wang X, Fan Y. Effect of simulated microgravity on osteocytes responding to fluid shear stress. *Acta Astronautica* 2013 Mar-Apr;84:237-43.
41. Kang H, Fan Y, Sun A, Jia X, Deng X. Simulated microgravity exposure modulates the phenotype of cultured vascular smooth muscle cells. *Cell Biochem Biophys* 2013 May;66(1):121-30.
42. Wei Y, Ji Y, Xiao LL, Lin QK, Xu JP, Ren KF, Ji J. Surface engineering of cardiovascular stent with endothelial cell selectivity for in vivo re-endothelialisation. *Biomaterials* 2013 Apr;34(11):2588-99.
43. Chen X, Gu M, Zhao X, Zheng X, Qin Y, You X. Deterioration of cardiac function after acute myocardial infarction is prevented by transplantation of modified endothelial progenitor cells overexpressing endothelial NO synthases. *CELL PHYSIOL BIOCHEM* 2013;31(2-3):355-65.
44. Yuan P, Wu WH, Gao L, Zheng ZQ, Liu D, Mei HY, Zhang ZL, Jing ZC. Oestradiol ameliorates monocrotaline pulmonary hypertension via NO, prostacyclin and endothelin-1 pathways. *Eur Respir J* 2013 May;41(5):1116-25.
45. Wu J, Li M, Liu L, An Q, Zhang J, Zhang J, Li M, Duan W, Liu D, Li Z, Luo C. Nitric Oxide and Interleukins are Involved in Cell Proliferation of RAW264.7 Macrophages Activated by ViiliExopolysaccharides. *Inflammation* 2013 Aug;36(4):954-61.
46. Fan YF, Zhang R, Jiang X, Wen L, Wu DC, Liu D, Yuan P, Wang YL, Jing ZC. The phosphodiesterase-5 inhibitor vardenafil reduces oxidative stress while reversing pulmonary arterial hypertension. *Cardiovasc Res* 2013 Aug 1;99(3):395-403.
47. Xiang Q, Liu Z, Wang Y, Xiao H, Wu W, Xiao C, Liu X. Carnosic acid attenuates lipopolysaccharide-induced liver injury in rats via fortifying cellular antioxidant defense system. *Food Chem Toxicol* 2013 Mar;53:1-9.
48. Wang Y, Gao H, Zhang W, Fang L. Thymoquinone inhibits lipopolysaccharide-induced inflammatory mediators in BV2 microglial cells. *Int Immunopharmacol* 2015 May;26(1):169-73.
49. Fu YR, Gao KS, Ji R, Yi ZJ. Differential transcriptional response in macrophages infected with cell wall deficient versus normal Mycobacterium Tuberculosis. *Int J Biol Sci* 2015 Jan 1;11(1):22-30.
50. Zhou LT, Wang KJ, Li L, Li H, Geng M. Pinocembrin inhibits lipopolysaccharide-induced inflammatory mediators production in BV2 microglial cells through suppression of PI3K/Akt/NF- κ B pathway. *Eur J Pharmacol* 2015 Aug 15;761:211-6.
51. Qin T, Yin Y, Yu Q, Yang Q. Bursopentin (BP5) protects dendritic cells from lipopolysaccharide-induced oxidative stress for immunosuppression. *PLoS One* 2015 Feb 6;10(2):e0117477.
52. Yu Z, Tang L, Chen L, Li J, Wu W, Hu C. Capillarisin Suppresses Lipopolysaccharide-Induced Inflammatory Mediators in BV2 Microglial Cells by Suppressing TLR4-Mediated NF- κ B and MAPKs Signaling Pathway. *Neurochem Res* 2015 Jun;40(6):1095-101.
53. Wang Y, Yang L, Yang D. Tanshinone IIA Rescued the Impairments of Primary Hippocampal Neurons Induced by BV2 Microglial Over-Activation. *Neurochem Res* 2015 Jul;40(7):1497-508.
54. Zhang H, Yan J, Zhuang Y, Han G. Anti-inflammatory effects of farrerol on IL-1 β -stimulated human osteoarthritis chondrocytes. *Eur J Pharmacol* 2015 Oct 5;764:443-7.
55. Wu C, Zhao W, Zhang X, Chen X. Neocryptotanshinone inhibits lipopolysaccharide-induced inflammation in RAW264.7 macrophages by suppression of NF- κ B and iNOS signaling pathways. *Acta Pharm Sin B* 2015 Jul;5(4):323-9.
56. Huang Z, Gao C, Chi X, Hu YW, Zheng L, Zeng T, Wang Q. IL-37 Expression is Upregulated in Patients with Tuberculosis and Induces Macrophages Towards an M2-like Phenotype. *Scand J Immunol* 2015 Oct;82(4):370-9.
57. Zhu F, Li X, Jiang Y, Zhu H, Zhang C, Zhao Y, Luo F. GdCl₃ suppresses the malignant potential of hepatocellular carcinoma by inhibiting the

- expression of CD206 in tumor associated macrophages. *Oncol Rep* 2015 Nov;34(5):2643-55.
58. Liu B, Xu C, Wu X, Liu F, Du Y, Sun J, Tao J, Dong J. Icariin exerts an antidepressant effect in an unpredictable chronic mild stress model of depression in rats and is associated with the regulation of hippocampal neuroinflammation. *Neuroscience* 2015 May;21:294:193-205.
 59. Gao Z, Liu K, Tian W, Wang H, Liu Z, Li Y, Li E, Liu C, Li X, Hou R, Yue C, Wang D, Hu Y. Effects of selenizing angelica polysaccharide and selenizing garlic polysaccharide on immune function of murine peritoneal macrophage. *Int Immunopharmacol* 2015 Jul;27(1):104-9.
 60. Yu H, Lu Y, Qiao X, Wei L, Fu T, Cai S, Wang C, Liu X, Zhong S, Wang Y. Novel Cathelicidins from Pigeon Highlights Evolutionary Convergence in Avian Cathelicidins and Functions in Modulation of Innate Immunity. *SCI REP-UK* 2015 Jul;21:5:11082.
 61. Liu HB, Zhang J, Sun YY, Li XY, Jiang S, Liu MY, Shi J, Song BL, Zhao D, Ma HP, Zhang ZR. Dietary salt regulates epithelial sodium channels in rat endothelial cells: adaptation of vasculature to salt. *BRIT J PHARMACOL* 2015 Dec;172(23):5634-46.
 62. Li CY, Li X, Liu SF, Qu WS, Wang W, Tian DS. Inhibition of mTOR pathway restrains astrocyte proliferation, migration and production of inflammatory mediators after oxygen-glucose deprivation and reoxygenation. *Neurochem Int* 2015 Apr-May;83:84:9-18.
 63. He JM, Chen SC, Li RP, Yuan LX, Bao JM, Guo ML. Suppression of nuclear factor-kappa B and mitogen-activated protein kinase signalling pathways by goshonoside-F5 extracted from Rubi Fructus. *Int Immunopharmacol* 2015 Feb;24(2):182-90.
 64. Zhang X, Wang J, Qian W, Zhao J, Sun L, Qian Y, Xiao H. Dexmedetomidine inhibits inducible nitric oxide synthase in lipopolysaccharide-stimulated microglia by suppression of extracellular signal-regulated kinase. *Neurol Res* 2015 Mar;37(3):238-45.
 65. Shan Y, Lu X, Han Y, Li X, Wang X, Shao C, Wang L, Liu Z, Tang W, Sun Y, Jia J. Helicobacter pylori Outer Membrane Protein 18 (Hp1125) Is Involved in Persistent Colonization by Evading Interferon- γ Signaling. *Biomed Res Int* 2015;2015:571280.
 66. Lou T, Jiang W, Xu D, Chen T, Fu Y. Inhibitory Effects of Polydatin on Lipopolysaccharide-Stimulated RAW 264.7 Cells. *Inflammation* 2015;38(3):1213-20.
 67. Cai X, Li X, Li L, Huang XZ, Liu YS, Chen L, Zhang K, Wang L, Li X, Song J, Li S, Zhang Y, Zhang M. Adiponectin reduces carotid atherosclerotic plaque formation in ApoE-/- mice: roles of oxidative and nitrosative stress and inducible nitric oxide synthase. *Mol Med Rep* 2015 Mar;11(3):1715-21.
 68. Bo R, Ma X, Feng Y, Zhu Q, Huang Y, Liu Z, Liu C, Gao Z, Hu Y, Wang D. Optimization on conditions of Lycium barbarum polysaccharides liposome by RSM and its effects on the peritoneal macrophages function. *CARBOHYD POLYM* 2015 Mar 6;117:215-22.
 69. Wei L, Gao J, Zhang S, Wu S, Xie Z, Ling G, Kuang YQ, Yang Y, Yu H, Wang Y. Identification and Characterization of the First Cathelicidin from Sea Snakes with Potent Antimicrobial and Anti-inflammatory Activity and Special Mechanism. *J Biol Chem* 2015 Jul 3;290(27):16633-52.
 70. Zhao H, Zhao M, Wang Y, Li F, Zhang Z. Glycyrrhetic Acid Prevents Sepsis-Induced Acute Lung Injury and Mortality in Rats. *J Histochem Cytochem* 2016 Feb;64(2):125-37.
 71. Wu ZT, Ren CZ, Yang YH, Zhang RW, Sun JC, Wang YK, Su DF, Wang WZ. The PI3K signaling-mediated nitric oxide contributes to cardiovascular effects of angiotensin-(1-7) in the nucleus tractus solitarius of rats. *NITRIC OXIDE-BIOL CH* 2016 Jan 30;52:56-65.
 72. Wang K, Fu XY, Fu XT, Hou YJ, Fang J, Zhang S, Yang MF, Li DW, Mao LL, Sun JY, Yuan H, Yang XY, Fan CD, Zhang ZY, Sun BL. DSePA Antagonizes High Glucose-Induced Neurotoxicity: Evidences for DNA Damage-Mediated p53Phosphorylation and MAPKs and AKT Pathways. *Mol Neurobiol* 2016 Sep;53(7):4363-74.
 73. Wang K, Fu XT, Li Y, Hou YJ, Yang MF, Sun JY, Yi SY, Fan CD, Fu XY, Zhai J, Sun BL. Induction of S-Phase Arrest in Human Glioma Cells by Selenocysteine, a Natural Selenium- Neurochem Res 2016 Jun;41(6):1439-47.
 74. Liu D, Cao G, Han L, Ye Y, SiMa Y, Ge W. Flavonoids from Radix Tetrastigme inhibit TLR4/MD-2 mediated JNK and NF- κ B pathway with anti-inflammatory properties. *Cytokine* 2016 Aug;84:29-36.
 75. Ishag HZ, Wu YZ, Liu MJ, Xiong QY, Feng ZX, Yang RS, Shao GQ. In vitro protective efficacy of Lithium chloride against Mycoplasma hyopneumoniae infection. *Res Vet Sci* 2016 Jun;106:93-6.
 76. Yang W, Yan A, Zhang T, Shao J, Liu T, Yang X, Xia W, Fu Y. Thromboxane A2 Receptor Stimulation Enhances Microglial Interleukin-1 β and NO Front Aging Neurosci 2016 Jan 29;8:8.
 77. Xu L, He S, Yin P, Li D, Mei C, Yu X, Shi Y, Jiang L, Liu F. Punicalagin induces Nrf2 translocation and HO-1 expression via PI3K/Akt, protecting rat intestinal epithelialcells from oxidative stress. *INT J HYPERTHER* 2016 Aug;32(5):465-73.
 78. Shen X, Wang M, Bi X, Zhang J, Wen S, Fu G, Xia L. Resveratrol prevents endothelial progenitor cells from senescence and reduces the oxidative Mol Med Rep 2016 Dec;14(6):5528-5534.
 79. Li R, Liu Y, Chen N, Zhang Y, Song G, Zhang Z. Valproate Attenuates Nitroglycerin-Induced Trigeminovascular Activation by Preserving MitochondrialFunction in a Rat Model of Migraine. *MED SCI MONITOR* 2016 Sep 12;22:3229-37.
 80. Song LJ, Luo H, Fan WH, Wang GP, Yin XR, Shen S, Wang J, Jin Y, Zhang W, Gao H, Liu Q, Wang WL, Feng B, Yu CX. Oxadiazole-2-oxides may have other functional targets, in addition to SjTGR, through which they cause mortality in Schistosoma japonicum. *PARASITE VECTOR* 2016 Jan 20;9:26.
 81. Chen S, Zhang L, Xu R, Ti Y, Zhao Y, Zhou L, Zhao J. BDKRB2 +9/-9 bp polymorphisms influence BDKRB2 expression levels and NO production in kneeosteoarthritis. *EXP BIOL MED* 2017 Feb;242(4):422-428.
 82. Yan H, Li Y, Yang Y, Zhang Z, Zhang G, Sun Y, Yu P, Wang Y, Xu L. Protective effects of andrographolide derivative AL-1 on high glucose-induced oxidative stress in RIN-mcells. *CURR PHARM DESIGN* 2016;22(4):499-505.
 83. Zhang M, Wang Y, Qian F, Li P, Xu X. Hypericin inhibits oligomeric amyloid β 42-induced inflammation response in microglia and amelioratescognitive deficits in an amyloid β injection mouse model of Alzheimer's *BIOCHEM BIOPH RES CO* 2016 Dec 2;481(1-2):71-76.
 84. Li C, Wang J, Wang Q, Zhang Y, Zhang N, Lu L, Wu Y, Zhang Q, Wang W, Wang Y, Tu P. Qishen granules inhibit myocardial inflammation injury through regulating arachidonic acid metabolism. *SCI REP-UK* 2016 Nov 11;6:36949.
 85. Luo Z, Zhu W, Guo Q, Luo W, Zhang J, Xu W, Xu J. Weaning Induced Hepatic Oxidative Stress, Apoptosis, and Aminotransferases through Oxid Med Cell Longev 2016;2016:4768541.
 86. Xin Y, Wei J, Chunhua M, Danhong Y, Jianguo Z, Zongqi C, Jian-An B. Protective effects of Ginsenoside Rg1 against carbon tetrachloride-induced liver injury in mice throughsuppression of inflammation. *Phytomedicine* 2016 Jun 1;23(6):583-8.
 87. Zhai T, Sun Y, Li H, Zhang J, Huo R, Li H, Shen B, Li N. Unique immunomodulatory effect of paoniflorin on type I and II macrophages activities. *J Pharmacol Sci* 2016 Mar;130(3):143-50.
 88. Ma W, Zhang Y, Ding YY, Liu F, Li N. Cytotoxic and anti-inflammatory activities of phenanthrenes from the medullae of Juncus effusus L. *Arch Pharm Res* 2016 Feb;39(2):154-60.
 89. Shang Q, Bao L, Guo H, Hao F, Luo Q, Chen J, Guo C. Contribution of glutaredoxin-1 to S-glutathionylation of endothelial nitric oxide synthase for mesentericnitric oxide generation in experimental necrotizing enterocolitis. *Transl Res* 2016 Jan 18. pii: S1931-5244(16)00023-2.
 90. Chen W, Xia J, Hu P, Zhou F, Chen Y, Wu J, Lei W, Shen Z. Follistatin-like 1 protects cardiomyoblasts from injury induced by sodium nitroprusside through

- modulatingAkt and Smad1/5/9 signaling. *BIOCHEM BIOPH RES CO* 2016 Jan 15;469(3):418-23.
91. Lv X, Chen D, Yang L, Zhu N, Li J, Zhao J, Hu Z, Wang FJ, Zhang LW. Comparative studies on the immunoregulatory effects of three polysaccharides *Int J Biol Macromol* 2016 May;86:28-42.
92. Wu J, Liu K, Shi X. The anti-inflammatory activity of several flavonoids isolated from *Murraya paniculata* on *Pharm Biol* 2016;54(5):868-81.
93. Huang K, Li Y, Tao S, Wei G, Huang Y, Chen D, Wu C. Purification, Characterization and Biological Activity of Polysaccharides from *Dendrobium officinale*. *Molecules* 2016 May 30;21(6). pii: E701.
94. Li Y, Xiao Y, Yin Z. Enhanced Anti-Inflammatory Efficacy Through Targeting to Macrophages: Synthesis and In Vitro Evaluation of Folate-Glycine-Celecoxib. *AAPS PharmSciTech* 2016 May 25. [Epub ahead of print]
95. Huang Q, Wang T, Wang HY. Ginsenoside Rb2 enhances the anti-inflammatory effect of ω -3 fatty acid in LPS-stimulated RAW264.7 macrophages by upregulating GPR120 expression. *Acta Pharmacol Sin* 2017 Feb;38(2):192-200.
96. Yang X, Huo F, Liu B, Liu J, Chen T, Li J, Zhu Z, Lv B. Crocin Inhibits Oxidative Stress and Pro-inflammatory Response of Microglial Cells Associated with Diabetic Retinopathy Through the Activation of PI3K/Akt Signaling Pathway. *J Mol Neurosci* 2017 Apr;61(4):581-589.
97. Liu M, Du G, Liu B, Hu Y, Liu J, Jia Y, Minion FC, Shao G, Zhao R. Cholesterol exacerbates *Mycoplasma hyopneumoniae*-induced apoptosis via stimulating proliferation and adhesion to porcine alveolar macrophages. *Vet Microbiol* 2017 Nov;211:112-118.
98. Liu F, Zhang X, Ling P, Liao J, Zhao M, Mei L, Shao H, Jiang P, Song Z, Chen Q, Wang F. Immunomodulatory effects of xanthan gum in LPS-stimulated RAW 264.7 macrophages. *CARBOHYD POLYM* 2017 Aug 1;169:65-74.
99. He HQ, Wu YX, Nie YJ, Wang J, Ge M, Qian F. LYRM03, an ubenimex derivative, attenuates LPS-induced acute lung injury in mice by suppressing the TLR4 signaling pathway. *Acta Pharmacol Sin* 2017 Mar;38(3):342-350.
100. Weng P, Zhang XT, Sheng Q, Tian WF, Chen JL, Yuan JJ, Zhang JR, Pang QF. Caveolin-1 scaffolding domain peptides enhance anti-inflammatory effect of heme oxygenase-1 through interrupting its interaction with caveolin-1. *ONCOTARGET* 2017 Jun 20;8(25):40104-40114.
101. Deng Q, Zhang J, Gao Y, She X, Wang Y, Wang Y, Ge X. MLN4924 protects against bleomycin-induced pulmonary fibrosis by inhibiting the early inflammatory process. *Am J Transl Res* 2017 Apr 15;9(4):1810-1821. eCollection 2017.
102. Zhou ZY, Xu JQ, Zhao WR, Chen XL, Jin Y, Tang N, Tang JY. Ferulic acid relaxed rat aortic, small mesenteric and coronary arteries by blocking voltage-gated calcium channel and calcium desensitization via dephosphorylation of ERK1/2 and MYPT1. *Eur J Pharmacol* 2017 Nov 15;815:26-32.
103. Xu B, Zhang P, Li W, Liu R, Tang J, Fan H. hsdS, Belonging to the Type I Restriction-Modification System, Contributes to the *Streptococcus suis* Serotype 2 Survival Ability in Phagocytes. *Front Microbiol* 2017 Aug 9;8:1524.
104. Han D, Chen W, Gu X, Shan R, Zou J, Liu G, Shahid M, Gao J, Han B. Cytoprotective effect of chlorogenic acid against hydrogen peroxide-induced oxidative stress in MC3T3-E1 cells through PI3K/Akt-mediated Nrf2/HO-1 signaling pathway. *ONCOTARGET* 2017 Feb 28;8(9):14680-14692.
105. Qiu M, Ke L, Zhang S, Zeng X, Fang Z, Liu J. JS-K, a GST-activated nitric oxide donor prodrug, enhances chemo-sensitivity in renal carcinoma cells and prevents cardiac myocytes toxicity induced by Doxorubicin. *CANCER CHEMOTH PHARM* 2017 Aug;80(2):275-286.
106. Pan H, Xie Y, Zhang Z, Li K, Hu D, Zheng X, Tang T. Immunomodulation effect of a hierarchical macropore/nanosurface on osteogenesis and angiogenesis. *Biomed Mater* 2017 Jul 4;12(4):045006.
107. Xue J, Yu C, Sheng W, Zhu W, Luo J, Zhang Q, Yang H, Cao H, Wang W, Zhou J, Wu J, Cao P, Chen M, Ding WQ, Cao J, Zhang S. The Nrf2/GCH1/BH4 Axis Ameliorates Radiation-Induced Skin Injury by Modulating the ROS Cascade. *J Invest Dermatol* 2017 Oct;137(10):2059-2068.
108. Wu W, Hou CL, Mu XP, Sun C, Zhu YC, Wang MJ, Lv QZ. H2S Donor NaHS Changes the Production of Endogenous H2S and NO in D-Galactose-Induced Accelerated Ageing. *Oxid Med Cell Longev* 2017;2017:5707830.
109. Wang S, Zhang Z, Wang Y, Gadah JA, Xie Q, Xu L, Yan R, Song X, Li X. Toxoplasma gondii excretory/secretory antigens (TgESAs) suppress pro-inflammatory cytokine secretion by inhibiting TLR-induced NF- κ B activation in LPS-stimulated murine macrophages. *ONCOTARGET* 2017 Jul 18;8(51):88351-88359.
110. Deng W, Zhu Y, Lin J, Zheng L, Zhang C, Luo M. Inhibition of soluble epoxide hydrolase lowers portal hypertension in cirrhotic rats by ameliorating endothelial dysfunction and liver fibrosis. *PROSTAGLANTIN LIPID M* 2017 Jul;131:67-74.
111. Wang Y, Wen Y, Wang S, Ehsan M, Yan R, Song X, Xu L, Li X. Modulation of goat monocyte function by HCcyt-2, a secreted cystatin from *Haemonchus contortus*. *ONCOTARGET* 2017 Jul 4;8(27):44108-44120.
112. Wang Y, Lu M, Wang S, Ehsan M, Yan R, Song X, Xu L, Li X. Characterization of a secreted macrophage migration inhibitory factor homologue of the parasitic nematode *Haemonchus contortus* acting at the parasite-host cell interface. *ONCOTARGET* 2017 Jun 20;8(25):40052-40064.
113. Dang D, Zhang C, Zhang R, Wu W, Chen S, Ren J, Zhang P, Zhou G, Feng D, Sun T, Li Y, Liu Q, Li M, Xi Y, Jin Y, Duan G. Involvement of inducible nitric oxide synthase and mitochondrial dysfunction in the pathogenesis of enterovirus 71 infection. *ONCOTARGET* 2017 Sep 23;8(46):81014-81026.
114. Wang Y, Wu L, Liu X, Wang S, Ehsan M, Yan R, Song X, Xu L, Li X. Characterization of a secreted cystatin of the parasitic nematode *Haemonchus contortus* and its immune-modulatory effect on goat monocytes. *PARASITE VECTOR* 2017 Sep 18;10(1):425.
115. Liu Y, Wang Y, Hu Y, Ge S, Li K, Wang S, Li L. The apoptotic inducible effects of salicylic acid on hepatoma cell line: relationship with nitric oxide signaling. *J Cell Commun Signal* 2017 Sep;11(3):245-253.
116. Chen R, Gong P, Tao T, Gao Y, Shen J, Yan Y, Duan C, Wang J, Liu X. O-GlcNAc Glycosylation of nNOS Promotes Neuronal Apoptosis Following Glutamate Excitotoxicity. *Cell Mol Neurobiol* 2017 Nov;37(8):1465-1475.
117. Zhou Q, Sun Y, Tan W, Liu X, Qian Y, Ma X, Wang T, Wang X, Gao X. Effect of Shenmai injection on preventing the development of nitroglycerin-induced tolerance in rats. *PLoS One* 2017 Apr 28;12(4):e0176777.
118. Zhao Y, Wang L, He S, Wang X, Shi W. Nitric oxide synthesis-promoting effects of valsartan in human umbilical vein endothelial cells via the Akt/adenosine monophosphate-activated protein kinase/endothelial nitric oxide synthase pathway. *BOSNIAN J BASIC MED* 2017 May 20;17(2):132-137.
119. Liu RT, Zhang M, Yang CL, Zhang P, Zhang N, Du T, Ge MR, Yue LT, Li XL, Li H, Duan RS. Enhanced glycolysis contributes to the pathogenesis of experimental autoimmune neuritis. *J NEUROINFLAMM* 2018 Feb 21;15(1):51.
120. Wu YX, He HQ, Nie YJ, Ding YH, Sun L, Qian F. Protostemoneine effectively attenuates lipopolysaccharide-induced acute lung injury in mice. *Acta Pharmacol Sin* 2018 Jan;39(1):85-96.
121. Li Y, Yuan J, Wang Q, Sun L, Sha Y, Li Y, Wang L, Wang Z, Ma Y, Cao H. The collective influence of 1, 25-dihydroxyvitamin D3 with physiological fluid shear stress on osteoblasts. *Steroids* 2018 Jan;129:9-16.
122. He D, Zhao M, Wu C, Zhang W, Niu C, Yu B, Jin J, Ji L, Willard B, Mathew AV, Chen YE, Pennathur S, Yin H, He Y, Pan B, Zheng L. Apolipoprotein A-1 mimetic peptide 4F promotes endothelial repairing and compromises reendothelialization impaired by oxidized HDL through SR-B1. *Redox Biol* 2018 May;15:228-242.
123. Gong G, Dang T, Deng Y, Han J, Zou Z, Jing S, Zhang Y, Liu Q, Huang L, Wang Z. Physicochemical properties and biological activities of polysaccharides from *Lycium barbarum* prepared by fractional precipitation. *Int J Biol Macromol* 2018 Apr 1;109:611-618.
124. Wang M, Duan F, Wu J, Min Q, Huang Q, Luo M, He Z. Effect of cyclooxygenase-2 inhibition on the development of post-traumatic stress disorder in rats. *Mol*

125. Pan Q, Zheng J, Du D, Liao X, Ma C, Yang Y, Chen Y, Zhong W, Ma X MicroRNA-126 Priming Enhances Functions of Endothelial Progenitor Cells under Physiological and Hypoxic Conditions and Their Therapeutic Efficacy in Cerebral Ischemic Damage. *Stem Cells Int* 2018 Apr 11;2018:2912347.
126. Zhang D, Li X, Hu Y, Jiang H, Wu Y, Ding Y, Yu K, He H, Xu J, Sun L, Qian F Tabersonine attenuates lipopolysaccharide-induced acute lung injury via suppressing TRAF6 ubiquitination. *Biochem Pharmacol* 2018 Aug;154:183-192.
127. Lin Y, Tang G, Jiao Y, Yuan Y, Zheng Y, Chen Y, Xiao J, Li C, Chen Z, Cao P Propionibacterium acnes Induces Intervertebral Disc Degeneration by Promoting iNOS/NO and COX-2/PGE2 Activation via the ROS-Dependent NF- κ B Pathway. *Oxid Med Cell Longev* 2018 Aug 19;2018:3692752.
128. Wu H, Pang H, Chen Y, Huang L, Liu H, Zheng Y, Sun C, Zhang G, Wang G Anti-Inflammatory Effect of a Polyphenol-Enriched Fraction from Acalypha wilkesiana on Lipopolysaccharide-Stimulated RAW 264.7 Macrophages and Acetaminophen-Induced Liver Injury in Mice. *Oxid Med Cell Longev* 2018 Aug 7;2018:7858094.
129. Wang Z, Zhou Y, Yu Y, He K, Cheng LM Lipopolysaccharide preconditioning increased the level of regulatory B cells in the spleen after acute ischaemia/reperfusion in mice. *Brain Res* 2018 Dec 15;1701:46-57.
130. Chen R, Liu D, Guo P, Lin W Varicouthiols A and B, New Fungal Metabolites from Aspergillus versicolor with Anti-Inflammatory Activities. *Chem Biodivers* 2018 Jan;15(1).
131. Hu Q, Du H, Ma G, Pei F, Ma N, Yuan B, Nakata PA, Yang W Purification, identification and functional characterization of an immunomodulatory protein from Pleurotus eryngii. *Food Funct* 2018 Jul 17;9(7):3764-3775.
132. Shi Y, Wang H, Yan Y, Cao H, Liu X, Lin F, Lu J Glycerol-3-Phosphate Shuttle Is Involved in Development and Virulence in the Rice Blast Fungus Pyricularia oryzae. *Front Plant Sci* 2018 May 23;9:687.
133. Luo J, Wei D, Li D, Wang L Nitric oxide functions in stromal cell-derived factor-1-induced cytoskeleton changes and the migration of Jurkat cells. *Oncol Lett* 2018 Nov;16(5):6685-6690.
134. Jin LG, Zeng S, Sun XQ, Wu C, Chen JL, Cui M, Pang QF Deletion 101 residue at caveolin-1 scaffolding domain peptides impairs the ability of increasing heme oxygenase-1 activity. *Int Immunopharmacol* 2018 Oct;63:137-144.
135. Li M, Li B, Hou Y, Tian Y, Chen L, Liu S, Zhang N, Dong J Anti-inflammatory effects of chemical components from Ginkgo biloba L. male flowers on lipopolysaccharide-stimulated RAW264.7 macrophages. *Phytother Res* 2018;33(4):989-997. 2019 Apr
136. Zhu H, Ding X, Hou Y, Li Y, Wang M Structure elucidation and bioactivities of a new polysaccharide from Xiaojin Boletus speciosus Frost. *Int J Biol Macromol* 2018;126:697-716. 2019 Apr 1
137. Meng Q, Peng X, Zhao S, Xu T, Wang S, Liu Q, Cai R, Fan Y Hypoxic storage of erythrocytes slows down storage lesions and prolongs shelf-life. *J Cell Physiol* 2018;234(12):22833-22844. 2019 Dec
138. Zhang C, Howlader P, Liu T, Sun X, Jia X, Zhao X, Shen P, Qin Y, Wang W, Yin H Alginate Oligosaccharide (AOS) induced resistance to Pst DC3000 via salicylic acid-mediated signaling pathway in *Arabidopsis thaliana*. *CARBOHYD POLYM* 2019;225:115221. 2019 Dec 1
139. Han B, Dai Y, Wu H, Zhang Y, Wan L, Zhao J, Liu Y, Xu S, Zhou L Cimifugin Inhibits Inflammatory Responses of RAW264.7 Cells Induced by Lipopolysaccharide. *MED SCI MONITOR* 2019;25:409-417. 2019 Jan 14
140. Yang N, Tang Q, Qin W, Li Z, Wang D, Zhang W, Cao X, Lu Y, Ge X, Sun H, Shen P Treatment of obesity-related inflammation with a novel synthetic pentacyclic oleanane triterpenoids via modulation of macrophage polarization. *EBioMedicine* 2019;45:473-486. 2019 Jul
141. Liang C, Hao F, Yao X, Qiu Y, Liu L, Wang S, Yu C, Song Z, Bao Y, Yi J, Huang Y, Wu Y, Zheng L, Sun Y, Wang G, Yang X, Yang S, Sun L, Li Y Hypericin maintains PDX1 expression via the Erk pathway and protects islet β -cells against glucotoxicity and lipotoxicity. *Int J Biol Sci* 2019;15(7):1472-1487. 2019 Jun 2
142. Wang Z, Zhang J, Chen L, Li J, Zhang H, Guo X Glycine Suppresses AGE/RAGE Signaling Pathway and Subsequent Oxidative Stress by Restoring GLO1 Function in the Aorta of Diabetic Rats and in HUVECs. *Oxid Med Cell Longev* 2019;4628962. 2019 Mar 3
143. Cao Y, Chen J, Ren G, Zhang Y, Tan X, Yang L Punicalagin Prevents Inflammation in LPS-Induced RAW264.7 Macrophages by Inhibiting FoxO3a/Autophagy Signaling Pathway. *Nutrients* 2019;11(11): pii: E2794. 2019 Nov 15
144. Lou K, Huang P, Ma H, Wang X, Xu H, Wang W Orlistat increases arsenite tolerance in THP-1 derived macrophages through the up-regulation of ABCA1. *Drug Chem Toxicol* 2019 Oct 31:1-9
145. Yan Y, Wang H, Zhu S, Wang J, Liu X, Lin F, Lu J The Methylcitrate Cycle is Required for Development and Virulence in the Rice Blast Fungus Pyricularia oryzae. *MOL PLANT MICROBE IN* 2019;32(9):1148-1161. 2019 Sep
146. Luo F, Wu L, Zhang Z, Zhu Z, Liu Z, Guo B, Li N, Ju J, Zhou Q, Li S, Yang X, Mak S, Han Y, Sun Y, Wang Y, Zhang G, Zhang Z The dual-functional memantine nitrate MN-08 alleviates cerebral vasospasm and brain injury in experimental subarachnoid haemorrhage models. *BRIT J PHARMACOL* 2019;176(17):3318-3335. 2019 Sep
147. Geng J, Liu J, Yuan X, Liu W, Guo W Andrographolide triggers autophagy-mediated inflammation inhibition and attenuates chronic unpredictable mild stress (CUMS)-induced depressive-like behavior in mice. *TOXICOL APPL PHARM* 2019;379:114688. 2019 Sep 15
148. Zheng Y, Deng Y, Gao JM, Lv C, Lang LH, Shi JS, Yu CY, Gong QH Icariside II inhibits lipopolysaccharide-induced inflammation and amyloid production in rat astrocytes by regulating IKK/IkB/NF- κ B/BACE1 signaling pathway. *Acta Pharmacol Sin* 2020;41(2):154-162. 2020 Feb
149. Tianlei Sun, Cheryl H T Kwong, Cheng Gao, Jianwen Wei, Ludan Yue, Jianxiang Zhang, Richard Dequan Ye, Ruibing Wang Amelioration of ulcerative colitis via inflammatory regulation by macrophage-biomimetic nanomedicine *Theranostics* 2020 Aug 8;10(22):10106-10119.
150. Baobao Zhang, Xiaolong Hu, Huijie Wang, Rong Wang, Zhongxuan Sun, Xiaomei Tan, Shumeng Liu, Hao Wang Effects of a dammarane-type saponin, ginsenoside Rd, in nicotine-induced vascular endothelial injury *Phytomedicine* 2020 Dec;79:153325.
151. Yixin Han, Ximeng Li, Xiaoyu Zhang, Yuan Gao, Ruijuan Qi, Runlan Cai, Yun Qi Isodeoxyelephantopin, a sesquiterpene lactone from *Elephantopus scaber* Linn., inhibits pro-inflammatory mediators' production through both NF- κ B and AP-1 pathways in LPS-activated macrophages *Int Immunopharmacol* 2020 Jul;84:106528.
152. Xiao-Mei Zeng, De-Hong Liu, Yong Han, Zhi-Qiang Huang, Ji-Wen Zhang, Qun Huang Assessment of inflammatory markers and mitochondrial factors in a rat model of sepsis-induced myocardial dysfunction *Am J Transl Res* 2020 Mar 15;12(3):901-911.
153. Chenglong Yu, Meiyi Xing, Lu Wang, Guoping Guan Effects of aligned electrospun fibers with different diameters on hemocompatibility, cell behaviors and inflammation in vitro *Biomed Mater* 2020 Mar 4;15(3):035005.
154. Jinxi Huang, Zhenhui Qi MiR-21 mediates the protection of kaempferol against hypoxia/reoxygenation-induced cardiomyocyte injury via promoting Notch1/PTEN/AKT signaling pathway *PLoS One* 2020 Nov 5;15(11):e0241007.
155. Zi-Sheng Huang, Da-Qi Xie, Li-Jun Xu, Chang-Shun Huang, Min Zheng, Yi-Jun Chen, Yin Cao Tetramethylpyrazine Ameliorates Lipopolysaccharide-Induced Sepsis in Rats via Protecting Blood-Brain Barrier, Impairing Inflammation and Nitrous Oxide Systems *Front Pharmacol* 2020 Oct 2;11:562084.
156. Sen-Ju Ma, Hai-Bo Li, Jun-Ran Shao, Qian-Qian Pang, Ting Li, Xin-Sheng Yao, Yang Yu Two new chemical constituents from the rhizomes of *Actaea dahurica* *Nat Prod Res* 2020 Sep 11;1-8.
157. Jiyu Chen, Yanli Huang, Xiaochuan Hu, Xiaohong Bian, Sihui Nian Gastrodin prevents homocysteine-induced human umbilical vein endothelial cells injury via PI3K/Akt/eNOS and Nrf2/ARE pathway *J Cell Mol Med* 2021

Jan;25(1):345-357.

158. Abdulkhaleg Ali Albashari, Yan He, Mohammed A Albaadani, Yangfan Xiang, Jihe Ali, Fengting Hu, Yuan Zhang, Keke Zhang, Lihua Luo, Jianming Wang, Qingsong Ye Titanium Nanotube Modified With Silver Cross-Linked Basic Fibroblast Growth Factor Improves Osteoblastic Activities of Dental Pulp Stem Cells and Antibacterial Effect Front Cell Dev Biol 2021 Apr 1;9:654654.
159. Yanqin Liu, Meirong Du, Hai-Yan Lin Histone deacetylase 9 deficiency exaggerates uterine M2 macrophage polarization J Cell Mol Med 2021 Aug;25(16):7690-7708.
160. Shanshan Jiang, Rong Wang, Lu Han, Kudelaidi Kuerban, Li Ye, Shu Pan, Shengnan Li, Yongfang Yuan Activation of autophagy reverses gemcitabine-induced immune inhibition of RAW264.7 macrophages by promoting TNF- α , IL-6 and MHC-II expression Immunol Res 2021 Aug;69(4):352-362.
161. Yizi Zhang, Lingli Sun, Xingfei Lai, Xingjia Peng, Shuai Wen, Zhenbiao Zhang, Yinzheng Xie, Qiuhua Li, Ruohong Chen, Xi Zheng, Kun Zhang, Shili Sun, Dongli Li Gastroprotective effects of extract of Jasminum grandiflorum L. flower in HCl/EtOH-induced gastric mucosal ulceration mice Biomed Pharmacother 2021 Dec;144:112268.
162. Ya-Xian Wu, Ying-Ying Wang, Zhi-Qi Gao, Dan Chen, Gang Liu, Bin-Bin Wan, Feng-Juan Jiang, Ming-Xia Wei, Jing Zuo, Jun Zhu, Yong-Quan Chen, Feng Qian, Qing-Feng Pang Ethyl ferulate protects against lipopolysaccharide-induced acute lung injury by activating AMPK/Nrf2 signaling pathway Acta Pharmacol Sin 2021 Dec;42(12):2069-2081.
163. Meng Yuan, Yue Zhang, Tong Hua, Xiang-Li Liu, Tong Liu, Ru-Yu Yuan, Guang-Ping Li, Yi Zhu, Xu Zhang Omega-3 polyunsaturated fatty acid supplementation improves lipid metabolism and endothelial function by providing a beneficial eicosanoid-pattern in patients with acute myocardial infarction: A random Clin Nutr 2021 Feb;40(2):445-459.
164. Biao Yang, Jingyu Wang, Hongye Jiang, Huixian Lin, Zihao Ou, Amir Ullah, Yuneng Hua, Juanjiang Chen, Xiaomin Lin, Xiumei Hu, Lei Zheng, Qian Wang Extracellular Vesicles Derived From Talaromyces marneffei Yeasts Mediate Inflammatory Response in Macrophage Cells by Bioactive Protein Components Front Microbiol 2021 Jan 8;11:603183.
165. Lun Wang, Yan Jiang, Aftab Yaseen, Fu Li, Bin Chen, Xiao-Fei Shen, Chuan Zheng, Guo-Lin Zhang, Ming-Kui Wang Steroidal alkaloids from the bulbs of Fritillaria pallidiflora Schrenk and their anti-inflammatory activity Bioorg Chem 2021 Jul;112:104845.
166. Ruijuan Li, Hongbo Shi, Xiaoyu Zhao, Xianqi Liu, Qiong Duan, Chaoyi Song, Hanna Chen, Wentao Zheng, Qiyao Shen, Maoqin Wang, Xue Wang, Kai Gong, Jia Yin, Youming Zhang, Aiying Li, Jun Fu Development and application of an efficient recombineering system for Burkholderia glumae and Burkholderia plantarii Microb Biotechnol 2021 Jul;14(4):1809-1826.
167. Xin-Xian Xu, Gang Zheng, Shang-Kun Tang, Hai-Xiao Liu, Yue-Zheng Hu, Ping Shang Theaflavin protects chondrocytes against apoptosis and senescence via regulating Nrf2 and ameliorates murine osteoarthritis Food Funct 2021 Mar 1;12(4):1590-1602.
168. Rui Chen, Ting Chen, Tianqi Wang, Xiangdong Dai, Shuying Zhang, Di Jiang, Ke Meng, Yanyan Wang, Tong Geng, Jinpeng Xu, Kun Zhou, Yi Wang Tongmai Yangxin pill reduces myocardial No-reflow via endothelium-dependent NO-cGMP signaling by activation of the cAMP/PKA pathway J Ethnopharmacol 2021 Mar 1;267:113462.
169. Danfeng Zhang, Jingcao Huang, Fangfang Wang, Hong Ding, Yushan Cui, Yan Yang, Juan Xu, Hongmei Luo, Yuhan Gao, Ling Pan, Yu Wu, Yuping Gong, Liping Xie, Zhigang Liu, Ying Qu, Li Zhang, Weiping Liu, Wenyan Zhang, Sha Zhao, Qing Yi, Ting Niu, Yuhuan Zheng BMI1 regulates multiple myeloma-associated macrophage's pro-myeloma functions Cell Death Dis 2021 May 15;12(5):495.
170. Liangliang Wang, Qing Wang, Wei Wang, Gaoran Ge, Nanwei Xu, Dong Zheng, Shijie Jiang, Gongyin Zhao, Yaozeng Xu, Yuji Wang, Ruixia Zhu, Dechun Geng
- Harmine Alleviates Titanium Particle-Induced Inflammatory Bone Destruction by Immunomodulatory Effect on the Macrophage Polarization and Subsequent Osteogenic Differentiation Front Immunol 2021 May 17;12:657687.
171. Jiayan Chen, Liping Lu, Chunlong Zhang, Xiaoming Zhu, Shulin Zhuang Endothelial dysfunction and transcriptome aberration in mouse aortas induced by black phosphorus quantum dots and nanosheets Nanoscale 2021 May 20;13(19):9018-9030.
172. Yongyan Deng, Yupeng Wang, Fan Jia, Weifeng Liu, Dongfang Zhou, Qiao Jin, Jian Ji Tailoring Supramolecular Prodrug Nanoassemblies for Reactive Nitrogen Species-Potentiated Chemotherapy of Liver Cancer ACS Nano 2021 May 25;15(5):8663-8675.
173. Yin Zhang, Zhixiong Wang, Jiehong Yang, Yu He, Haitong Wan, Chang Li Analogs of imine resveratrol alleviate oxidative stress-induced neurotoxicity in PC12 cells via activation of Nrf2/FEBS Open Bio 2021 May 31;11(8):2127-2138.
174. Yajie Wei, Huimin Chen, Qingzhuo Chi, Ying He, Lizhong Mu, Chao Liu, Yunxia Lu Synchronized research on endothelial dysfunction and microcirculation structure in dorsal skin of rats with type 2 diabetes mellitus Med Biol Eng Comput 2021 May;59(5):1151-1166.
175. Yi Yan, Cheng-Han Wang, Shi-He Cui, Lin Zhai, Jing Sun, Xiao-Yu Liu, Xin Chen, Yi Sun, Hong-Gang Qian, Xiang Gao, Yi-Da Tang, Yuan-Jun Zhu, Yu-Jie Shi, Qiang Zhang, Jian-Cheng Wang Enhanced cancer therapeutic efficiency of NO combined with siRNA by caspase-3 responsive polymers J Control Release 2021 Nov 10;339:506-520.
176. Qiyao Shen, Guangzhi Dai, Aiying Li, Yang Liu, Guannan Zhong, Xiaoju Li, Xiangmei Ren, Haiyan Sui, Jun Fu, Nianzhi Jiao, Youming Zhang, Xiaoying Bian, Haibo Zhou Genome-Guided Discovery of Highly Oxygenated Aromatic Polyketides, Saccharothrixins D-M, from the Rare Marine Actinomycete Saccharothrix sp. D09 J Nat Prod 2021 Nov 26;84(11):2875-2884.
177. Zhu Xu, Zhong-Hai Shen, Bin Wu, Sui-Liang Gong, Bin Chen Small molecule natural compound targets the NF- κ B signaling and ameliorates the development of osteoarthritis J Cell Physiol 2021 Nov;236(11):7298-7307.
178. Qian-Qian Pang, Yu-Dan Mei, Yuan-Chu Zhang, Ling-Xian Liu, Dan-Feng Shi, Da-Bo Pan, Xin-Sheng Yao, Hai-Bo Li, Yang Yu Three new cycloart-7-ene triterpenoid glycosides from Cimicifuga dahurica and their anti-inflammatory effects Nat Prod Res 2021 Nov;35(21):3634-3643.
179. Wen-Heng Ji, Dan-Dan Li, Dan-Ping Wei, Ai-Qin Gu, Ying Yang, Jing-Pian Peng Cytochrome P450 26A1 Modulates the Polarization of Uterine Macrophages During the Peri-Implantation Period Front Immunol 2021 Oct 12;12:763067.
180. Zhigang Zhang, Chenghui Yang, Lili Li, Ying Zhu, Ke Su, Lingyun Zhai, Zhen Wang, Jian Huang " γ T Cell-IL17A-Neutrophil" Axis Drives Immunosuppression and Confers Breast Cancer Resistance to High-Dose Anti-VEGFR2 Therapy Front Immunol 2021 Oct 15;12:699478.
181. Aili Li, Ying Li, Xin Zhang, Congwei Zhang, Tongtong Li, Jingjing Zhang, Chun Li The human milk oligosaccharide 2'-fucosyllactose attenuates β -lactoglobulin-induced food allergy through the miR-146a-mediated toll-like receptor 4/nuclear factor- κ B signaling pathway J Dairy Sci 2021 Oct;104(10):10473-10484.
182. Zi-Ling Zou, Ming-Hui Sun, Wei-Feng Yin, Lei Yang, Ling-Yi Kong Avicularin suppresses cartilage extracellular matrix degradation and inflammation via TRAF6/MAPK activation Phytomedicine 2021 Oct;91:153657.
183. Miao Wang, Xinxin Zhang, Mingfei Qi, Dandan Guo, Yannian Wang, Huiyuan Gao New cassane- and norcassane-type diterpenoids from the seed kernels of Caesalpinia sinensis and their anti-inflammatory activity in vitro Fitoterapia 2021 Sep;153:104978.
184. Hao Zhang, Shengduo Xu, Jishen Zhang, Zifeng Wang, Dingxin Liu, Li Guo, Cheng Cheng, Yilong Cheng, Dehui Xu, Michael G Kong, Mingzhe Rong, Paul K Chu Plasma-activated thermosensitive biogel as an exogenous ROS carrier for post-surgical treatment of cancer Biomaterials 2021 Sep;276:121057.
185. Zhuo Gao, Xin Zhong, Ying-Xia Tan, Dong Liu Apelin-13 alleviates diabetic

- nephropathy by enhancing nitric oxide production and suppressing kidney tissue fibrosis Int J Mol Med 2021 Sep;48(3):175.
186. Jun-Ran Shao, Sen-Ju Ma, Ting Li, Xiao-Qing He, Zhen-Zhong Wang, Wei Xiao, Xin-Sheng Yao, Hai-Bo Li, Yang Yu Two new chemical constituents from the leaves of *Illicium dunnianum* Nat Prod Res 2022 Jan 25;1-8.
187. Xin Yun, Xiu-Mei Chen, Jia-Yun Wang, Wang Lu, Zi-Han Zhang, Young Ho Kim, Shi-Chun Zong, Chun-Huan Li, Jin-Ming Gao Cassane diterpenoids from *Caesalpinia pulcherrima* and their anti-inflammatory and α -glycosidase inhibitory activities Nat Prod Res 2022 Sep;36(18):4636-4644.
188. Chunmei Chen, Xue Ren, Huaming Tao, Wenteng Cai, Yuchi Chen, Xiaowei Luo, Peng Guo, Yonghong Liu Anti-Inflammatory Polyketides from an Alga-Derived Fungus *Aspergillus ochraceopetaliformis* SCSIO 41020 Mar Drugs 2022 Apr 27;20(5):295.
189. Hao-Wen Zhao, Yan Yi, Jia-Qi Li, Jin-Hui Wang Two new mohangic acid derivatives from the deep-sea bacteria *Alcanivorax dieselolei* BC-5 Nat Prod Res 2022 Aug 17:1-5.
190. Yeyan Zhu, Yufeng Tao, Chunying Wu, Yuting Zeng, Huiting Du, Qunkun Xiang, Yang Chen, Qing Zhu, Lei Wang Renal Farnesoid X Receptor improves high fructose-induced salt-sensitive hypertension in mice by inhibiting DNMT3 to promote nitro oxide production J Hypertens 2022 Aug 1;40(8):1577-1588.
191. Xue Ren, Chunmei Chen, Yuxiu Ye, Ziyi Xu, Qingliang Zhao, Xiaowei Luo, Yonghong Liu, Peng Guo Anti-inflammatory compounds from the mangrove endophytic fungus *Amorosia* sp. SCSIO 41026 Front Microbiol 2022 Aug 29:13:976399.
192. Chunyue Wang, Shanshan Chen, Hangyu Guo, Hongbo Jiang, Honghan Liu, Haoran Fu, Di Wang Forsythoside A Mitigates Alzheimer's-like Pathology by Inhibiting Ferroptosis-mediated Neuroinflammation via Nrf2/GPX4 Axis Activation Int J Biol Sci 2022 Feb 28;18(5):2075-2090.
193. Ximeng Liu, Yixing Yang, Jiawei Song, Dongjie Li, Xiaoyan Liu, Chuang Li, Zheng Ma, Jiuchang Zhong, Lefeng Wang Knockdown of forkhead box protein P1 alleviates hypoxia reoxygenation injury in H9c2 cells through regulating Pik3ip1/Akt/eNOS and ROS/mPTP pathway Bioengineered 2022 Jan;13(1):1320-1334.
194. Huanwu Hong, Siyue Lou, Fanli Zheng, Hang Gao, Nina Wang, Shasha Tian, Guozheng Huang, Huajun Zhao Hydnocarpin D attenuates lipopolysaccharide-induced acute lung injury via MAPK/NF- κ B and Keap1/Nrf2/HO-1 pathway Phytomedicine 2022 Jul;101:154143.
195. Liang Shi, Xuan Zhao, Kecheng Zhong, Qiyuan Jia, Zhenguo Shen, Jianwen Zou, Yahua Chen Physiological mechanism of the response to Cr(VI) in the aerobic denitrifying ectomycorrhizal fungus *Pisolithus* sp.1 J Hazard Mater 2022 May 5:429:128318.
196. Junjian Luo, Wenjun Wei, Pan Wang, Tao Guo, Suiqing Chen, Liping Zhang, Shuying Feng (\pm)-Cryptamides A-D, Four Pairs of Novel Dopamine Enantiomer Trimmers from the *Periostracum Cicadae* Molecules 2022 Oct 9;27(19):6707.
197. Han Wu, Xiaofan Yin, Xibao Zhao, Zherui Wu, Yue Xiao, Qianqian Di, Ping Sun, Haimei Tang, Jiazhen Quan, Weilin Chen HDAC11 negatively regulates antifungal immunity by inhibiting Nos2 expression via binding with transcriptional repressor STAT3 Redox Biol 2022 Oct:56:102461.
198. Miao Qi, Xinyi Zhao, Runze Fan, Xinying Zhang, Sansan Peng, Dehui Xu, Yanjie Yang Cold Atmospheric Plasma Suppressed MM In Vivo Engraftment by Increasing ROS and Inhibiting the Notch Signaling Pathway Molecules 2022 Sep 8;27(18):5832.
199. De-Xian Li, Xia Cheng, Fo-Pei Ma, Jie-Yu Chen, Yi-Ping Chen, Xiao-Shan Zhao, Qi Luo Identification of metabolites from edible mushroom *Morchella sextelata* and their biological evaluation Nat Prod Res 2023 Jun;37(11):1774-1781.
200. Haoyan Huang, Meng Qian, Yue Liu, Shang Chen, Huifang Li, Zhibo Han, Zhong-Chao Han, Xiang-Mei Chen, Qiang Zhao, Zongjin Li Genetically engineered mesenchymal stem cells as a nitric oxide reservoir for acute kidney injury therapy Elife 2023 Sep 11:12:e84820.

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