



碧云天生物技术/Beyotime Biotechnology
订货热线: 400-1683301 或 800-8283301
订货 e-mail: order@beyotime.com
技术咨询: info@beyotime.com
网址: http://www.beyotime.com

Trizol (总RNA抽提试剂)

产品编号	产品名称	包装
R0016	Trizol (总RNA抽提试剂)	100ml

产品简介:

- 碧云天生产的Trizol是一种用于细胞或组织总RNA抽提的试剂。本产品采用和Invitrogen公司的TRIzol完全相似的原理和方法, 抽提的方法和步骤完全相同。
- Trizol的颜色和TRIzol相同, 加入氯仿后上层呈无色, 下层呈紫红色, 便于吸取上层水相。
- Trizol对动植物细胞或组织及细菌的总RNA抽提均适用。
- Trizol可以抽提长达15 kb的RNA, 也可以抽提microRNA等小RNA。抽提小RNA时宜-70°C沉淀过夜。
- Trizol抽提所得RNA无DNA和蛋白污染。一般所得RNA溶于DEPC水后的A260/280值为1.8-2.0。
- 裂解细胞或和组织共匀浆时, Trizol可以保持样品中RNA的完整性, 即可以有效抑制RNA的降解。
- 每一百万细胞用Trizol抽提可得5-15µg RNA; 每毫克组织用Trizol抽提可得1-10µg RNA。产量因细胞和组织不同而异。
- 抽提两个样品约需一小时。
- Trizol抽提所得RNA可直接用于Northern, 点杂交, 纯化mRNA, 体外翻译, RNase protection assay, cDNA克隆, 以及RT-PCR; 也可以用于基因表达芯片分析、高通量测序(deep sequencing)等对RNA质量要求较高的情况。
- 碧云天生产的Beyozol(R0011)和Trizol(R0016)的成分有细微差别, 实际抽提效果无任何显著差异。
- 每100ml Trizol可以抽提100个六孔板中的样品或100个50-80mg的组织样品。

包装清单:

产品编号	产品名称	包装
R0016	Trizol	100ml
—	说明书	1份

保存条件:

4°C保存, 一年有效。

注意事项:

- 需自备氯仿, 异丙醇, DEPC, 75%乙醇(DEPC水配制), 和DEPC水。DEPC(ST036), DEPC水(R0021)可向碧云天订购。
- 所有离心管, 枪头及相关溶液都必须无RNA酶污染。耐高温器物可150°C烘烤4小时以去除RNA酶, 其它器物去除RNA酶可考虑用0.01%的DEPC水浸泡过夜, 然后灭菌, 烘干。溶液需用DEPC水配制。加0.01%(体积比) diethylpyrocarbonate(DEPC)至重蒸水或Milli-Q级水中, 处理过夜, 灭菌即成DEPC水。
- 使用冻存的细胞或组织抽提总RNA的效果通常比新鲜的细胞或组织差一些。因为在细胞或组织冻融过程中一些细胞或组织内的RNase会被释放出来并剪切样品。如果不能及时抽提RNA, 推荐先加入适量Trizol, 并裂解样品后冻存。
- 必须戴一次性手套操作, 且尽量不要对着RNA样品呼气或说话, 以防RNA酶污染。建议戴一次性口罩操作。
- Trizol含有毒物质苯酚, 避免接触皮肤或吸入。为防止溅入眼睛, 请戴防护眼镜或使用透明保护屏。如皮肤接触Trizol, 请立即用大量去垢剂和水冲洗, 如仍有不适, 请听取医生意见。
- Trizol抽提总RNA的同时, 理论上也可抽提蛋白和DNA, 但未经测试。有兴趣者可按Invitrogen公司的TRIzol的操作步骤进行操作。
- 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:

1. 细胞裂解或组织匀浆。

a. 贴壁细胞

吸尽培养液, 每10平方厘米细胞加入1ml Trizol。一般六孔板每孔加1ml Trizol, 12孔板每孔加0.5ml Trizol。晃动3-5下, 再用枪吹打2-3下, 确保全部裂解, 然后吸至离心管中。

b. 悬浮细胞

离心收集细胞, 吸尽液体, 每五百万至一千万动植物或酵母细胞, 或一千万细菌, 加入1ml Trizol。用枪吹打或适当vortex, 确保全部裂解。某些酵母和细菌如裂解不充分, 可用匀浆器匀浆, 确保全部裂解。

c. 组织

- 先将组织剪切成小块，放入普通玻璃匀浆器内。每50mg-80mg组织加入1ml Trizol，匀浆。对于RNA完整性要求比较高的情况，推荐先液氮冷冻组织块，然后在低温下用研钵研碎组织，然后再加入Trizol进行总RNA抽提。
- 对于某些蛋白，多糖或脂含量很高的细胞或组织，Trizol裂解后可能会有不溶物或油脂状漂浮物。需12,000g 4°C离心10分钟，然后吸取澄清的Trizol裂解产物至一新的离心管中。
 - 室温放置5分钟，使样品充分裂解。
 - 每毫升 Trizol加入0.2ml氯仿，vortex混匀或猛烈晃动15秒，室温放置2-3分钟。
 - 12,000g 4°C离心15分钟，然后吸取含总RNA的上层无色水相至一新的离心管中，每毫升Trizol约可吸取0.5-0.55ml。
 - 按每毫升最初的Trizol加入0.5ml异丙醇，颠倒数次混匀，室温沉淀10分钟。如果希望提取microRNA等小RNA，推荐-70°C沉淀过夜。
 - 12,000g 4°C离心10分钟，在管底可见RNA沉淀，弃上清。
 - 每毫升最初的Trizol加入1ml 75%乙醇(DEPC水配制)，vortex或颠倒混匀，
 - 7,500g 4°C离心5分钟，弃上清。再用离心机甩一下 (>5,000rpm，离心1秒)，小心吸尽液体。
 - 待RNA略干后，加入20μl DEPC水溶解，-70°C冻存。注意：切勿让RNA过分干燥，否则将极难溶解，且测出的A260/280值会低于1.6。

使用本产品的文献：

- Xu LN, Lu BN, Hu MM, Xu YW, Han X, Qi Y, Peng JY. Mechanisms involved in the cytotoxic effects of berberine on human colon cancer HCT-8 cells. *Biocell*. 2012 Dec;36(3):113-20.
- Sun XC, Yan JY, Chen XL, Huang YP, Shen X, Ye XH. Depletion of telomerase RNA inhibits growth of gastrointestinal tumors transplanted in mice. *WORLD J GASTROENTERO*. 2013 Apr 21;19(15):2340-7.
- Han Y, Zhao H, Jiang Q, Gao H, Wang C. Chemopreventive mechanism of polypeptides from *Chlamy Farreri* (PCF) against UVB-induced malignant transformation of HaCaT cells. *Mutagenesis*. 2015 Mar;30(2):287-96.
- KoraMagazi A, Wang D, Yousef B, Guerram M, Yu F. Rhein triggers apoptosis via induction of endoplasmic reticulum stress, caspase-4 and intracellular calcium in primary human hepatic HL-7702 cells. *BIOCHEM BIOPH RES CO*. 2016 Apr 22;473(1):230-6.
- Gu X, Lu C, He D, Lu Y, Jin J, Liu D, Ma X. Notch3 negatively regulates chemoresistance in breast cancers. *TUMOR BIOL*. 2016 Oct 14. [Epub ahead of print]
- Liu S, Cao Y, Qu M, Zhang Z, Feng L, Ye Z, Xiao M, Hou ST, Zheng R, Han Z. Curcumin protects against stroke and increases levels of Notch intracellular domain. *Neurol Res*. 2016 Jun;38(6):553-9.
- Wei P, Kou W, Zhang C, Kang H, Yao H, Tang X, Wang W. Genetic variations in interleukin-12B in allergic rhinitis. *Immunol Res*. 2016 Feb;64(1):329-36.
- Tan G, Liu D, Pan F, Zhao J, Li T, Ma Y, Shen B, Lyu J. His-87 ligand in mitoNEET is crucial for the transfer of iron sulfur clusters from mitochondria to cytosolic aconitase. *BIOCHEM BIOPH RES CO*. 2016 Jan 29;470(1):226-32.
- Li Q, Gao WQ, Dai WY, Yu C, Zhu RY, Jin J. ATF2 translation is induced under chemotherapeutic drug-mediated cellular stress via an IRES-dependent mechanism in human hepatic cancer Bel7402 cells. *Oncol Lett*. 2016 Dec;12(6):4795-4802.
- Jiang Y, Gou H, Zhu J, Tian S, Yu L. Lidocaine inhibits the invasion and migration of TRPV6-expressing cancer cells by TRPV6 downregulation. *Oncol Lett*. 2016 Aug;12(2):1164-1170.
- Su M, Chao G, Liang M, Song J, Wu K. Anticytoproliferative effect of Vitamin C on rat hepatic stellate cell. *Am J Transl Res*. 2016 Jun 15;8(6):2820-5.
- Jiang Q, Han Y, Gao H, Tian R, Li P, Wang C. Ursolic acid induced anti-proliferation effects in rat primary vascular smooth muscle cells is associated with inhibition of microRNA-21 and subsequent PTEN/PI3K. *Eur J Pharmacol*. 2016 Jun 15;781:69-75.
- Yuan-Jing F, Wei W, Jian-Ping L, Yu-Xia J, Zi-Ling D. Genistein promotes the metabolic transformation of acetaminophen to glucuronic acid in human L-02, HepG2 and Hep3b cells via the Nrf2/Keap1 pathway. *Food Funct*. 2016 Nov 9;7(11):4683-4692.
- Yang J, Feng S, Yi G, Wu W, Yi R, Lu X, Xu W, Qiu H. Inhibition of RelA expression via RNA interference induces immune tolerance in a rat keratoplasty model. *Mol Immunol*. 2016 May;73:88-97.
- Yang S, Li SS, Yang XM, Yin DH, Wang L. Embelin prevents LMP1-induced TRAIL resistance via inhibition of XIAP in nasopharyngeal carcinoma cells. *Oncol Lett*. 2016 Jun;11(6):4167-4176.
- Li Y, Zheng JY, Liu JQ, Yang J, Liu Y, Wang C, Ma XN, Liu BL, Xin GZ, Liu LF. Succinate/NLRP3 Inflammasome Induces Synovial Fibroblast Activation: Therapeutic Effects of Clemastin Fumarate in Arthritis. *Front Immunol*. 2016 Dec 7;7:532.
- Yang W, Li Y, Li P, Wang L. PMA/IONO affects diffuse large B-cell lymphoma cell growth through upregulation of A20 expression. *Oncol Rep*. 2016 Aug;36(2):1069-75.
- Zhang L, Feng J, Kong S, Wu M, Xi Z, Zhang B, Fu W, Lao Y, Tan H, Xu H. Nujiangexathone A, a novel compound from *Garcinia nujiangensis*, suppresses cervical cancer growth by targeting hnRNPK. *Cancer Lett*. 2016 Oct 1;380(2):447-56.
- Lu Y, Wang B, Shi Q, Wang X, Wang D, Zhu L. Brusatol inhibits HIF-1 signaling pathway and suppresses glucose uptake under hypoxic conditions in HCT116 cells. *SCI REP-UK*. 2016 Dec 16;6:39123.
- Li D, Chen J, Ye J, Zhai X, Song J, Jiang C, Wang J, Zhang H, Jia X, Zhu F. Anti-inflammatory effect of the six compounds isolated from *Nauclea officinalis* Pierre ex Pitard, and molecular mechanism of strictosamide via suppressing the NF-κB and MAPK signaling pathway in LPS-induced RAW 264.7 macrophages. *J Ethnopharmacol*. 2017 Jan 20;196:66-74.
- Liu Y, Zhu H, Yan X, Gu H, Gu Z, Liu F. Endoplasmic reticulum stress participates in the progress of senescence and apoptosis of osteoarthritis chondrocytes. *BIOCHEM BIOPH RES CO*. 2017 Sep 16;491(2):368-373.
- Wang H, Xie Z, Hou T, Li Z, Huang K, Gong J, Zhou W, Tang K, Xu J, Dong S. MiR-125b Regulates the Osteogenic Differentiation of Human Mesenchymal Stem Cells by Targeting BMPRI1b. *CELL PHYSIOL BIOCHEM*. 2017;41(2):530-542.
- Wang ZW, Wang JJ, Zhang JZ, Xue ZJ, Miao J, Li L, Hu WX. Thrombolysis of deep vein thrombosis and inhibiting chemotaxis of macrophage by MCP-1 blockade. *EUR REV MED PHARMACO*. 2017 Apr;21(7):1695-1701.
- Ye W, Tang X, Yang Z, Liu C, Zhang X, Jin J, Lyu J. Plasma-derived exosomes contribute to inflammation via the LR9-NF-κB pathway in chronic heart failure patients. *Mol Immunol*. 2017 Jul;87:114-121.
- Zhang DQ, Zhou CK, Chen SZ, Yang Y, Shi BK. Identification of hub genes and pathways associated with bladder cancer based on co-expression network analysis. *Oncol Lett*. 2017 Jul;14(1):1115-1122.
- Song J, Li Y, Song J, Hou F, Liu B, Li A. Mangiferin protects mitochondrial function by preserving mitochondrial hexokinase-II in vessel endothelial cells. *BBA-BIOMEMBRANES*. 2017 Jul;1863(7):1829-1839.

27. Guo J, Zhao W, Cao X, Yang H, Ding J, Ding J, Tan Z, Ma X, Hao C, Wu L, Ma Z, Xie J, Wang Z. SIRT1 promotes tumor-like invasion of fibroblast-like synoviocytes in rheumatoid arthritis viatargeting TIMP1. *ONCOTARGET* 2017 Oct 6;8(51):88965-88973.
28. Hu Z, Luo D, Wang D, Ma L, Zhao Y, Li L. IL-17 Activates the IL-6/STAT3 Signal Pathway in the Proliferation of Hepatitis B Virus-RelatedHepatocellular Carcinoma. *CELL PHYSIOL BIOCHEM* 2017;43(6):2379-2390.
29. Zhang F, Wang D, Chen F. Toll-like receptor-9 in hypoxic nasopharyngeal carcinoma cells andits correlation with cellproliferation and apoptosis. *Oncol Lett* 2017 Dec;14(6):7829-7832.
30. Sun W, Zhang L, Hou L, Ju C, Zhao S, Wei Y. Isatin inhibits SH-SY5Y neuroblastoma cell invasion and metastasis through MAO/HIF-1 α /CXCR4signaling. *ANTI-CANCER DRUG* 2017 Jul;28(6):645-653.
31. Li Z, Wang Y, Zeng G, Zheng X, Wang W, Ling Y, Tang H, Zhang J. Increased miR-155 and heme oxygenase-1 expression is involved inthe protective effects of formononetin in traumatic brain injury in rats. *Am J Transl Res* 2017 Dec 15;9(12):5653-5661. eCollection 2017.
32. Wang N, Liu W, Tan T, Dong CQ, Lin DY, Zhao J, Yu C, Luo XJ. Notch signaling negatively regulates BMP9-induced osteogenic differentiation of mesenchymalprogenitor cells by inhibiting JunB expression. *ONCOTARGET* 2017 Nov 30;8(65):109661-109674.
33. Zhuo Z, Yu H. miR-205 inhibits cell growth by targeting AKT-mTOR signaling in progesterone-resistantendometrial cancer Ishikawa cells. *ONCOTARGET* 2017 Apr 25;8(17):28042-28051.
34. Li D, Chen J, Ye J, Zhai X, Song J, Jiang C, Wang J, Zhang H, Jia X, Zhu F. Anti-inflammatory effect ofthe six compounds isolated from *Nauclea officinalis* Pierr ex Pitard, and molecular mechanism of strictosamide via suppressing the NF- κ B and MAPK signaling pathway in LPS-induced RAW 264.7 macrophages. *J Ethnopharmacol* 2017 Jan 20;196:66-74.
35. Zhang W, Liu Y, Wu M, Zhu X, Wang T, He K, Li P, Wu X. PI3K inhibition protects mice from NAFLD by down-regulating CMKLR1 and NLRP3 in Kupffercells. *J Physiol Biochem* 2017 Nov;73(4):583-594.
36. Zhao Y, Chen J, Dai X, Cai H, Ji X, Sheng Y, Liu H, Yang L, Chen Y, Xi D, Sheng M, Xue Y, Shi J, Liu J, Li X, Dong J. Human glioma stem-like cells induce malignant transformation of bone marrow mesenchymalstem cells by activating TERT expression. *ONCOTARGET* 2017 Nov 6;8(61):104418-104429.
37. Li X, Wu Y, Zhang W, Gong J, Cheng Y. Pre-conditioning with tanshinone IIA attenuates the ischemia/reperfusion injury caused by livergrafts via regulation of HMGB1 in rat Kupffer cells. *Biomed Pharmacother.* 2017 May;89:1392-1400.
38. Zhang J, Wang LL, Hou MF, Xia YK, He WH, Yan A, Weng YP, Zeng LP, Chen JH. A ratiometric electrochemical biosensor for the exosomal microRNAs detection based on bipedalDNA walkers propelled by locked nucleic acid modified toehold mediate strand displacement reaction. *Biosens Bioelectron.* 2018 Apr 15;102:33-40.
39. Qiu H, Li J, Liu Q, Tang M, Wang Y. Apatinib, a novel tyrosine kinase inhibitor, suppresses tumor growth in cervical cancer and synergizes with Paclitaxel. *Cell Cycle* 2018;17(10):1235-1244.
40. Hao P, Kang B, Yao G, Hao W, Ma F. MicroRNA-211 suppresses prostate cancer proliferation by targeting SPARC. *Oncol Lett.* 2018 Apr;15(4):4323-4329.
41. Liu R, Diao J, He S, Li B, Fei Y, Li Y, Fang W. XQ-1H protects against ischemic stroke by regulating microglia polarization through PPAR γ pathway in mice. *Int Immunopharmacol* 2018 Apr;57:72-81.
42. Zhang J, Wang LL, Hou MF, Xia YK, He WH, Yan A, Weng YP, Zeng LP, Chen JH. A ratiometric electrochemical biosensor for the exosomal microRNAs detection based on bipedal DNA walkers propelled by locked nucleic acid modified toehold mediate strand displacement reaction. *Biosens Bioelectron* 2018 Apr 15;102:33-40.
43. Zhao ZW, Zhang M, Chen LY, Gong D, Xia XD, Yu XH, Wang SQ, Ou X, Dai XY, Zheng XL, Zhang DW, Tang CK. Heat shock protein 70 accelerates atherosclerosis by downregulating the expression of ABCA1 and ABCG1 through the JNK/Elk-1 pathway. *BBA-MOL CELL BIOL L* 2018 Aug;1863(8):806-822.
44. Qiao X, Lv SX, Qiao Y, Li QP, Ye B, Wang CC, Miao L. Long noncoding RNA ABHD11-AS1 predicts the prognosis of pancreatic cancer patients and serves as a promoter by activating the PI3K-AKT pathway. *EUR REV MED PHARMACO* 2018 Dec;22(24):8630-8639.
45. Xu XY, Wang Z, Ren S, Leng J, Hu JN, Liu Z, Chen C, Li W. Improved protective effects of American ginseng berry against acetaminophen-induced liver toxicity through TNF- α -mediated caspase-3/-8/-9 signaling pathways. *Phytomedicine* 2018 Dec 1;51:128-138.
46. He B, Geng S, Zhou W, Rui Y, Mu X, Zhang C, You Q, Su X. MMI-0100 ameliorates lung inflammation in a mouse model of acute respiratory distress syndrome by reducing endothelial expression of ICAM-1. *DRUG DES DEV THER* 2018 Dec 13;12:4253-4260.
47. Huang X, Gao Y, Qin J, Lu S. miR-214 Down-Regulation Promoted Hypoxia/Reoxygenation-Induced Hepatocyte Apoptosis Through TRAF1/ASK1/JNK Pathway. *DIGEST DIS SCI* 2018 Dec 17.
48. Song C, Xiong Y, Liao W, Meng L, Yang S. Long noncoding RNA ATB participates in the development of renal cell carcinoma by downregulating p53 via binding to DNMT1. *J Cell Physiol* 2018 Dec 8.
49. Cao Y, Song J, Ge J, Song Z, Chen J, Wu C. MicroRNA-100 suppresses human gastric cancer cell proliferation by targeting CXCR7. *Oncol Lett.* 2018 Jan;15(1):453-458.
50. Gao X, Zhao H, Diao C, Wang X, Xie Y, Liu Y, Han J, Zhang M. miR-455-3p serves as prognostic factor and regulates the proliferation and migration of non-small cell lung cancer through targeting HOXB5. *BIOCHEM BIOPH RES CO* 2018 Jan 1;495(1):1074-1080.
51. Wang P, Chen Y, Wang L, Wu Y, Wang L, Wu Y, Gong Z. The intervention mechanism of folic acid for benzo(a)pyrene toxic effects in vitro and in vivo. *Eur J Cancer Prev* 2018 Jul 16.
52. Song S, Yu W, Lin S, Zhang M, Wang T, Guo S, Wang H. LncRNA ADPGK-AS1 promotes pancreatic cancer progression through activating ZEB1-mediated epithelial-mesenchymal transition. *Cancer Biol Ther.* 2018 Jul 3;19(7):573-583.
53. Liu L, Lai X, Yuan C, Lv X, Yu T, He W, Liu J, Zhang H. Aberrant expression of miR-153 is associated with the poor prognosis of cervical cancer. *Oncol Lett* 2018 Jun;15(6):9183-9187.
54. Ling H, Zhu Z, Yang J, He J, Yang S, Wu D, Feng S, Liao D. Dihydropyricetin improves type 2 diabetes-induced cognitive impairment via suppressing oxidative stress and enhancing brain-derived neurotrophic factor-mediated neuroprotection in mice. *ACTA BIOCH BIOPH SIN.* 2018 Mar 1;50(3):298-306.
55. Li Y, Zhang ZZ. Sustained curcumin release from PLGA microspheres improves bone formation under diabetic conditions by inhibiting the reactive oxygen species production. *DRUG DES DEV THER* 2018 May 24;12:1453-1466.
56. Zhang S, Wang YN, Wang L, Tsang YF, Li H, Fu X. Role of electron donor in CO2 fixation of chemoautotrophic bacteria and its preconditions: Verification in *Alcaligenes hydrogenophilus*. *ENZYME MICROB TECH* 2018 Nov;118:37-43.
57. Qin WW, Xin ZL, Wang HQ, Wang KP, Li XY, Wang X. Inhibiting lncRNA ROR suppresses growth, migration and angiogenesis in microvascular endothelial cells by up-regulating miR-26. *EUR REV MED PHARMACO.* 2018 Nov;22(22):7985-7993.
58. Li XQ, Yu Q, Tan WF, Zhang ZL, Ma H. MicroRNA-125b mimic inhibits ischemia reperfusion-induced neuroinflammation and aberrant p53 apoptotic signalling activation through targeting TP53INP1. *Brain Behav Immun* 2018 Nov;74:154-165.
59. Li Z, Zeng G, Zheng X, Wang W, Ling Y, Tang H, Zhang J. Neuroprotective effect of formononetin against TBI in rats via suppressing inflammatory reaction in cortical neurons. *Biomed Pharmacother* 2018 Oct;106:349-354.
60. Li Y, Liu Y, Wang C, Xia WR, Zheng JY, Yang J, Liu B, Liu JQ, Liu LF. Succinate induces synovial angiogenesis in rheumatoid arthritis through metabolic remodeling and HIF-1 α /VEGF axis. *FREE RADICAL BIO MED.* 2018 Oct;126:1-14.
61. Yan ZC, He L, Qiu JH, Deng WT, Lu JR, Yuan Z, Liu DJ, Zheng RQ, Jiang W. LncRNA HOTAIR participates in the development and progression of adrenocortical carcinoma via regulating cell cycle. *EUR REV MED PHARMACO* 2018 Oct;22(20):6640-6649.

62. Zhou F, Zhang Y, Chen J, Hu Y, Xu Y Verapamil Ameliorates Hepatic Metaflammation by Inhibiting Thioredoxin-Interacting Protein/NLRP3 Pathways. *FRONT ENDOCRINOL* 2018 Oct 31;9:640.
63. Li XQ, Yu Q, Chen FS, Tan WF, Zhang ZL, Ma H Inhibiting aberrant p53-PUMA feedback loop activation attenuates ischaemia reperfusion-induced neuroapoptosis and neuroinflammation in rats by downregulating caspase 3 and the NF- κ B cytokine pathway. *J NEUROINFLAMM* 2018 Sep 1;15(1):250.
64. Xu H, Liu F Downregulation of FOXP1 correlates with tendon stem/progenitor cells aging. *BIOCHEM BIOPH RES CO*.2018 Sep 26;504(1):96-102.
65. Shen X, Zhang J, Zhang X, Wang Y, Hu Y, Guo J Retinoic Acid-Induced Protein 14 (RAI14) Promotes mTOR-Mediated Inflammation Under Inflammatory Stress and Chemical Hypoxia in a U87 Glioblastoma Cell Line. *Cell Mol Neurobiol* 2019 Mar;39(2):241-254.
66. Zhang C, Li J, Qiu X, Chen Y, Zhang X SUMO protease SENP1 acts as a ceRNA for TGFBR2 and thus activates TGFBR2/Smad signaling responsible for LPS-induced sepsis. *Biomed Pharmacother* 112:108620. 2019 Apr
67. Ma F, Li Z, Cao J, Kong X, Gong G A TGFBR2/SMAD2/DNMT1/miR-145 negative regulatory loop is responsible for LPS-induced sepsis. *Biomed Pharmacother* 112:108626. 2019 Apr
68. Yang CL, Zheng XL, Ye K, Sun YN, Lu YF, Ge H, Liu H Effects of microRNA-217 on proliferation, apoptosis, and autophagy of hepatocytes in rat models of CCL4-induced liver injury by targeting NAT2. *J Cell Physiol* 234(4):3410-3424. 2019 Apr
69. Wei X, Gu X, Ma M, Lou C Long noncoding RNA HCP5 suppresses skin cutaneous melanoma development by regulating RARRES3 gene expression via sponging miR-12. *ONCOTARGETS THER* 12:6323-6335. 2019 Aug 12
70. Zheng Z, Wu M, Zhang J, Fu W, Xu N, Lao Y, Lin L, Xu H The Natural Compound Neobractatin Induces Cell Cycle Arrest by Regulating E2F1 and Gadd45 α . *Front Oncol* 9:654. 2019 Jul 17
71. Gu Y, Zhang J, Zhang X, Liang G, Xu T, Niu W Three-dimensional Printed Mg-Doped β -TCP Bone Tissue Engineering Scaffolds: Effects of Magnesium Ion Concentration on Osteogenesis and Angiogenesis In Vitro. *Tissue Eng Regen Med* 16(4):415-429. 2019 Jun 17
72. Zhang J, Tao X, Sun M, Ying R, Su W, Wei W, Meng X A Rat Model of Radiation Vasculitis for the Study of Mesenchymal Stem Cell-Based Therapy. *Biomed Res Int* 2019:3727635. 2019 Mar 6
73. Deng S, Yang C, Nie K, Fan S, Zhu M, Zhu J, Chen Y, Yuan J, Zhang J, Xu H, Tian S, Chen J, Zhao M Host cell protein PSMB10 interacts with viral NS3 protein and inhibits the growth of classical swine fever virus. *Virology* 537:74-83. 2019 Nov
74. Wang J, Wu M, Zheng D, Zhang H, Lv Y, Zhang L, Tan HS, Zhou H, Lao YZ, Xu HX Garcinol inhibits esophageal cancer metastasis by suppressing the p300 and TGF- β 1 signaling pathways. *Acta Pharmacol Sin* 41(1):82-92. 2020 Jan
75. Wang D, Wang W, Liang Q, He X, Xia Y, Shen S, Wang H, Gao Q, Wang Y DHEA-induced ovarian hyperfibrosis is mediated by TGF- β signaling pathway. *J Ovarian Res* 2018 Jan 10;11(1):6.
76. Zhong L, Sun S, Yao S, Han X, Gu M, Shi J. Histone deacetylase 5 promotes the proliferation and invasion of lung cancer cells. *Oncol Rep* 40(4):2224-2232. 2018 Oct
77. Qiang Zhang, Yan Zhang, Meijun Yan, Kai Zhu, Qihang Su, Jie Pan, Mingjie Yang, Dong Zhou, Jun Tan β ig-h3 enhances chondrogenesis via promoting mesenchymal condensation in rat Achilles tendon heterotopic ossification model *AGING-US* 2020 Apr 20;12(8):7030-7041.
78. Qunhu Zhang, Jie Li, You Li, Hui Che, Ying Chen, Jianghui Dong, Cory J Xian, Dengshun Miao, Liping Wang, Yongxin Ren Bmi deficiency causes oxidative stress and intervertebral disc degeneration which can be alleviated by antioxidant treatment *J Cell Mol Med*. 2020 Aug;24(16):8950-8961.
79. Wei Wang, Zhen-Hui Guo Downregulation of lncRNA NEAT1 Ameliorates LPS-Induced Inflammatory Responses by Promoting Macrophage M2 Polarization via miR-125a-5p/TRAFF6/TAK1 Axis *Inflammation* 2020 Aug;43(4):1548-1560.
80. Zimeng Li, Yuanyu Lian, Riming Wei, Ling Jin, Houkang Cao, Tanglian Zhao, Xiaohui Ma, Mingli Zhong, Ya Gao, Kefeng Zhang Effects of taraxasterol against ethanol and high-fat diet-induced liver injury by regulating TLR4/MyD88/NF- κ B and Nrf2/HO-1 signaling pathways *Life Sci* 2020 Dec 1;262:118546.
81. Han Xie, Yuan-Mei Gao, Yong-Chang Zhang, Ming-Wang Jia, Fang Peng, Qing-He Meng, Yi-Chun Wang Low let-7d exosomes from pulmonary vascular endothelial cells drive lung pericyte fibrosis through the TGF β RI/FoxM1/Smad/ β -catenin pathway *J Cell Mol Med* 2020 Dec;24(23):13913-13926.
82. Simin Luo, Qiping Shi, Wuji Li, Wenrui Wu, Zhengang Zha ITGB1 promotes the chondrogenic differentiation of human adipose-derived mesenchymal stem cells by activating the ERK signaling *J Mol Histol* 2020 Dec;51(6):729-739.
83. Li Li, Qiaohua Zhang, Ke Lian Circular RNA circ_0000284 plays an oncogenic role in the progression of non-small cell lung cancer through the miR-377-3p-mediated PD-L1 promotion *Cancer Cell Int* 2020 Jun 16;20:247.
84. Huiping Li, Fangfang Liu, Wenjing Qin Circ_0072083 interference enhances growth-inhibiting effects of cisplatin in non-small-cell lung cancer cells via miR-545-3p/CBL1 axis *Cancer Cell Int* 2020 Mar 12;20:78.
85. Yang Wu, Yan Li, Liangqing Zheng, Pengcheng Wang, Yan Liu, Yongning Wu, ZhiYong Gong The neurotoxicity of N ϵ -(carboxymethyl)lysine in food processing by a study based on animal and organotypic cell culture *ECOTOX ENVIRON SAFE* 2020 Mar 1;190:110077.
86. Wei Chen, Zhixian Yu, Weiping Huang, Yu Yang, Feng Wang, Hang Huang LncRNA LINC00665 Promotes Prostate Cancer Progression via miR-1224-5p/SND1 Axis *ONCOTARGETS THER* 2020 Mar 26;13:2527-2535.
87. Yang Liu, Yiling Ding, Yanting Nie, Mengyuan Yang EMP1 Promotes the Proliferation and Invasion of Ovarian Cancer Cells Through Activating the MAPK Pathway *ONCOTARGETS THER* 2020 Mar 9;13:2047-2055.
88. Xinna Du, Xuan Shen, Li Dai, Fangjie Bi, Hu Zhang, Chunfeng Lu PSMD12 promotes breast cancer growth via inhibiting the expression of pro-apoptotic genes *BIOCHEM BIOPH RES CO* 2020 May 28;526(2):368-374.
89. Zhenhua Du, Lei Wang, Yu Xia Circ_0015756 promotes the progression of ovarian cancer by regulating miR-942-5p/CUL4B pathway *Cancer Cell Int* 2020 Nov 27;20(1):572.
90. Shouchao Li, Sheng Zheng Down-Regulation of Circ_0032833 Sensitizes Colorectal Cancer to 5-Fluorouracil and Oxaliplatin Partly Depending on the Regulation of miR-125-5p and MS11 *Cancer Manag Res* 2020 Nov 4;12:11257-11269.
91. Xiuxia Liu, Peifeng Zhao, Wang Ge Knockdown of circular RNA circZNF652 remits LPS-induced inflammatory damage by regulating miR-181a *Biofactors* 2020 Nov;46(6):1031-1040.
92. Wenjie Zhang, Wei Hong Upregulation of miR-519d-3p Inhibits Viability, Proliferation, and G1/S Cell Cycle Transition of Oral Squamous Cell Carcinoma Cells Through Targeting CCND1 *CANCER BIOTHER RADIO* 2020 Oct 14.
93. Xinxia Luo, Junyang Zhou, Zhixiao Wang, Yun He, Li Yu, Shinan Ma, Shan Wang, Xiaoli Wang, Yahong Yuan, Dongsheng Li, Taixing Cui, Yan Ding An inhibitor role of Nrf2 in the regulation of myocardial senescence and dysfunction after myocardial infarction *Life Sci* 2020 Oct 15;259:118199.
94. Xin Jiang, Dong Chen LncRNA FAM181A-AS1 promotes gliomagenesis by sponging miR-129-5p and upregulating ZRANB2 *AGING-US* 2020 Oct 20;12(20):20069-20084.
95. Xiulong Ma, Zhongwei Wang, Hongtao Ren, Xing Bao, Yang Zhang, Baofeng Wang, Dongli Ruan Long Non-Coding RNA GAS5 Suppresses Tumor Progression and Enhances the Radiosensitivity of Prostate Cancer Through the miR-320a/RAB21 Axis *Cancer Manag Res* 2020 Sep 22;12:8833-8845.
96. Yu Liu, Wenzhi Shen, Qi Chen, Qingxin Cao, Wencheng Di, Rongfang Lan, Zheng Chen, Jian Bai, Zhonglin Han, Wei Xu Inhibition of RAGE by FPS-ZM1 alleviates renal injury in spontaneously hypertensive rats *Eur J Pharmacol* 2020

- Sep 5;882:173228.
97. Lingling Li, Dan Luo, Yating Liao, Kailan Peng, Yanhua Zeng Mycoplasma genitalium Protein of Adhesion Induces Inflammatory Cytokines via Cyclophilin A-CD147 Activating the ERK-NF- κ B Pathway in Human Urothelial Cells Front Immunol 2020 Sep 9;11:2052.
 98. Rui Yu, Jie Yao, Yu Ren A novel circRNA, circNUP98, a potential biomarker, acted as an oncogene via the miR-567/ PRDX3 axis in renal cell carcinoma J Cell Mol Med 2020 Sep;24(17):10177-10188.
 99. Furong Song, Jun Liu, Yawei Feng, Yi Jin Propofol-induced HOXA11-AS promotes proliferation, migration and invasion, but inhibits apoptosis in hepatocellular carcinoma cells by targeting miR-4458 Int J Mol Med 2020 Sep;46(3):1135-1145.
 100. Qiang Wang, Guopan Yu, Han He, Zhongxin Zheng, Xuan Li, Ren Lin, Dan Xu Differential expression of circular RNAs in bone marrow-derived exosomes from essential thrombocythemia patients Cell Biol Int 2021 Apr;45(4):869-881.
 101. Xue-Mei Zhang, Yang Sun, Ying-Lian Zhou, Zhuo-Min Jiao, Dan Yang, Yuan-Jiao Ouyang, Mei-Yu Yu, Jin-Yue Li, Wei Li, Duo Wang, Hui Yue, Jin Fu Therapeutic effects of dental pulp stem cells on vascular dementia in rat models Neural Regen Res 2021 Aug;16(8):1645-1651.
 102. Hua Fang, Miao Yang, Qin Pan, Hon-Ling Jin, Hua-Feng Li, Ru-Rong Wang, Quan-Yun Wang, Jian-Ping Zhang MicroRNA-22-3p alleviates spinal cord ischemia/reperfusion injury by modulating M2 macrophage polarization via IRF5 J Neurochem 2021 Jan;156(1):106-120.
 103. Junli Liu, Jun Zhang, Yan Hu, Hongyan Zou, Xiuzhen Zhang, Xiaojun Hu Inhibition of lncRNA DCST1-AS1 suppresses proliferation, migration and invasion of cervical cancer cells by increasing miR-874-3p expression J Gene Med 2021 Jan;23(1):e3281.
 104. Liangping Zhao, Li Wang, Daimin Zhang, Yuqi Chen, Fulu Jin Puerarin alleviates coronary heart disease via suppressing inflammation in a rat model Gene 2021 Mar 1;771:145354.
 105. Wenfeng Zhang, Yan Liu, Mingbing Wu, Xiwen Zhu, Tao Wang, Kun He, Peizhi Li, Xiaoling Wu PI3K inhibition protects mice from NAFLD by down-regulating CMKLR1 and NLRP3 in Kupffer cells J Physiol Biochem 2017 Nov;73(4):583-594.
 106. Zhiwei Yang, Guoyin Li, Yizhen Zhao, Lei Zhang, Xiaohui Yuan, Lingjie Meng, Huadong Liu, Yong Han, Lintao Jia, Shengli Zhang Molecular Insights into the Recruiting Between UCP2 and DDX5/UBAP2L in the Metabolic Plasticity of Non-Small-Cell Lung Cancer J Chem Inf Model. 2021 Aug 23;61(8):3978-3987.
 107. Xingtao Ge, Gang Zhou Protective effects of naringin on glucocorticoid-induced osteoporosis through regulating the PI3K/Akt/mTOR signaling pathway Am J Transl Res 2021 Jun 15;13(6):6330-6341.
 108. Jia Lu, Wei Zhou, Fangfang Dou, Chenfei Wang, Zhihua Yu TRPV1 sustains microglial metabolic reprogramming in Alzheimer's disease EMBO Rep 2021 Jun 4;22(6):e52013.
 109. Guohua Gong, Jikai She, Danni Fu, Dong Zhen, Bin Zhang Circular RNA circ_0084927 regulates proliferation, apoptosis, and invasion of breast cancer cells via miR-142-3p/ERC1 pathway Am J Transl Res 2021 May 15;13(5):4120-4136.
 110. Yinsha Miao, Xiaodong Chen, Mengting Qin, Wen Zhou, Yang Wang, Yanhong Ji lncRNA GAS5, as a ceRNA, inhibits the proliferation of diffuse large B-cell lymphoma cells by regulating the miR-18a-5p/RUNX1 axis Int J Oncol 2021 Nov;59(5):94.
 111. Han Zhao, Lingyan Feng, Wei Zhong, Hongyan Zhen, Qingjia Chi, Xiang Wang Hyperphosphorylation of Tau Due to the Interference of Protein Phosphatase Methyltransferase-1 Overexpression by MiR-125b-5p in Melatonin Receptor Knockout Mice Int J Mol Sci 2021 Oct 31;22(21):11850.
 112. Defang Ren, Yu Fu, Li Wang, Jianqin Liu, Xia Zhong, Jiyuan Yuan, Chaoli Jiang, Honglian Wang, Zhi Li Tetrandrine ameliorated Alzheimer's disease through suppressing microglial inflammatory activation and neurotoxicity in the 5XFAD mouse Phytomedicine 2021 Sep;90:153627.
 113. Yu Liu, Guojun Chu, Wenzhi Shen, Yuefan Zhang, Wei Xu, Yongsheng Yu XMU-MP-1 protects heart from ischemia/reperfusion injury in mice through modulating Mst1/AMPK pathway Eur J Pharmacol. 2022 Mar 15;919:174801.
 114. Lingcai Zhao, Yingfei Li, Yongzhen Zhao, Qingzheng Liu, Yuanlu Lu, Jihui Ping SRSF3 facilitates replication of influenza A virus via binding and promoting the transport of viral mRNA Vet Microbiol 2022 Mar;266:109343.
 115. Huaji Jiang, Xuemei Lin, Wei Liang, Yiqiang Li, Xiao Yu Friedelin Alleviates the Pathogenesis of Collagenase-Induced Tendinopathy in Mice by Promoting the Selective Autophagic Degradation of p65 Nutrients.2022 Apr 18;14(8):1673.
 116. Yuwei Shou, Xiaoqian Wang, Chao Chen, Yinghao Liang, Chenbo Yang, Qiankun Xiao, Hui Li, Shuaiyuan Wang, Jiao Shu, Xiangyu Tian, Kuisheng Chen Exosomal miR-301a-3p from esophageal squamous cell carcinoma cells promotes angiogenesis by inducing M2 polarization of macrophages via the PTEN/PI3K/AKT signaling pathway Cancer Cell Int. 2022 Apr 18;22(1):153.
 117. Shuaijie Lv, Xiaojian Wang, Shuaijie Jin, Shaoning Shen, Rui Wang, Peijian Tong Quercetin mediates TSC2-RHEB-mTOR pathway to regulate chondrocytes autophagy in knee osteoarthritis Gene 2022 Apr 30;820:146209.
 118. Yu Pan, Wanzhen Li, Zhu Deng, Yihao Sun, Xianjue Ma, Ruijuan Liang, Xiaowei Guo, Ying Sun, Wenzhe Li, Renjie Jiao, Lei Xue Myc suppresses male-male courtship in Drosophila EMBO J 2022 Apr 4;41(7):e109905.
 119. Jing Liu, Moyuan Qu, Canran Wang, Yumeng Xue, Hui Huang, Qianming Chen, Wujin Sun, Xingwu Zhou, Guihua Xu, Xing Jiang A Dual-Cross-Linked Hydrogel Patch for Promoting Diabetic Wound Healing Small 2022 Apr;18(17):e2106172.
 120. Bao-Fei Yan, Xi Chen, Ya-Fang Chen, Sheng-Jin Liu, Chen-Xin Xu, Ling Chen, Wen-Bo Wang, Ting-Ting Wen, Xian Zheng, Jia Liu Aqueous extract of Paeoniae Radix Alba (Paeonia lactiflora Pall.) ameliorates DSS-induced colitis in mice by tuning the intestinal physical barrier, immune responses, and microbiota J Ethnopharmacol 2022 Aug 10;294:115365.
 121. Meng Li, Ning Yang, Li Hao, Wei Zhou, Lei Li, Lei Liu, Fang Yang, Lei Xu, Gang Yao, Chen Zhu, Wei Xu, Shiyuan Fang Melatonin Inhibits the Ferroptosis Pathway in Rat Bone Marrow Mesenchymal Stem Cells by Activating the PI3K/AKT/mTOR Signaling Axis to Attenuate Steroid-Induced Osteoporosis Oxid Med Cell Longev 2022 Aug 18:2022:8223737.
 122. Chen Guo, Yanfen Liu, Yuping Wang, Qi Wang, Siming Huo, Xuliang Zhang, Zheng Cao, Miao Song, Yanfei Li PINK1/Parkin-mediated mitophagy is activated to protect against AFB1-induced immunosuppression in mice spleen Toxicol Lett 2022 Aug 1:366:33-44.
 123. Zhifang Li, Chunmei Wang, Chen Dai, Ruizhi Hu, Li Ding, Wei Feng, Hui Huang, Yin Wang, Jianwen Bai, Yu Chen Engineering dual catalytic nanomedicine for autophagy-augmented and ferroptosis-involved cancer nanotherapy Biomaterials 2022 Aug;287:121668.
 124. Qiao-Yan Lv, Mei-Ling Han, Yi-Qun Gao, Chu-Ying Zhang, Ya-Ling Wang, Zhen-Fei Chao, Li-Yuan Zhong, Dai-Yin Chao Sec24C mediates a Golgi-independent trafficking pathway that is required for tonoplast localisation of ABCC1 and ABCC2 New Phytol 2022 Aug;235(4):1486-1500.
 125. Shuqing Zhang, Guoxia Guo Circ_FURIN promotes trophoblast cell proliferation, migration and invasion in preeclampsia by regulating miR-34a-5p and TFAP2A Hypertens Res 2022 Aug;45(8):1334-1344.
 126. Jing Xing, Songtao Fan, Hongyang Liu, Su Zhang, Nan Li CircZNF644 aggravates lipopolysaccharide-induced HK-2 cell impairment via the miR-140-5p/MLKL axis J Bioenerg Biomembr 2022 Aug;54(4):215-226.
 127. Fan Jiang, Deng-Feng Lu, Zheng Zhan, Gui-Qiang Yuan, Guang-Jie Liu, Jing-Yu Gu, Xiao-Ou Sun, Zhong Wang SARS-CoV-2 Pattern Provides a New Scoring System and Predicts the Prognosis and Immune Therapeutic Response in Glioma Cells 2022 Dec 10;11(24):3997.
 128. Shichao Zhu, Mierdilijiang Abudupataer, Shiqiang Yan, Chunsheng Wang, Li Wang, Kai Zhu Construction of a high-throughput aorta smooth muscle-on-a-chip for thoracic aortic aneurysm drug screening Biosens

- Bioelectron 2022 Dec 15;218:114747.
129. Yuanyuan Wang, Baichen Xiong, Hongzhi Lin, Qi Li, Hongyu Yang, Yuting Qiao, Qihang Li, Ziwei Xu, Weiping Lyu, Wei Qu, Wenyuan Liu, Yao Chen, Feng Feng, Haopeng Sun Design, synthesis and evaluation of fused hybrids with acetylcholinesterase inhibiting and Nrf2 activating functions for Alzheimer's disease *Eur J Med Chem* 2022 Dec 15;244:114806.
 130. Longmei Yu, Haiyang Fu, Haiyun Zhang The diagnostic value of combined detection of microRNA-155, TNF- α and IL-37 for active pulmonary tuberculosis in the elderly *Am J Transl Res* 2022 Dec 15;14(12):9018-9024.
 131. Kehan Zhang, Siyuan Wang, Tingting Chen, Zeng Tu, Xia Huang, Guangchao Zang, Chun Wu, Xinyue Fan, Jia Liu, Yunbo Tian, Yong Cheng, Nan Lu, Guangyuan Zhang ADAR1p110 promotes Enterovirus D68 replication through its deaminase domain and inhibition of PKR pathway *Virol J* 2022 Dec 22;19(1):222.
 132. Siwei Li, Guoliang Pi, Yong Zeng, Changli Ruan, Xiaosong He, Xiaoxia Xiong, Man Zhang, Jiahua Zou, Xinjun Liang Notoginsenoside R1 induces oxidative stress and modulates LPS induced immune microenvironment of nasopharyngeal carcinoma *Int Immunopharmacol* 2022 Dec;113(Pt A):109323.
 133. Yu Zhang, Xiaoxiao Tian, Yanli Bai, Xianmin Liu, Jingjing Zhu, Lamei Zhang, Jinliang Wang WTAP mediates FOXP3 mRNA stability to promote SMARCE1 expression and augment glycolysis in colon adenocarcinoma *Mamm Genome* 2022 Dec;33(4):654-671.
 134. Jiajia Gao, Xianpu Sun, Qin Zhou, Shuo Jiang, Yunfei Zhang, Honghua Ge, Ximing Qin Circadian clock disruption aggravates alcohol liver disease in an acute mouse model *Chronobiol Int* 2022 Dec;39(12):1554-1566.
 135. Xue Lei, Xiangfei Fang, Tao Chen, Chun Pu, Jindong Yang, Huan Liu LncRNA TUG1 Promoted Stabilization of BAG5 by Binding DDX3X to Exacerbate Ketamine-Induced Neurotoxicity *Neurotox Res* 2022 Dec;40(6):1989-2000.
 136. Yue Shen, Li Teng, Yuhan Qu, Jie Liu, Xudong Zhu, Shan Chen, Longfei Yang, Yuehui Huang, Qin Song, Qiang Fu Anti-proliferation and anti-inflammation effects of corilagin in rheumatoid arthritis by downregulating NF- κ B and MAPK signaling pathways *J Ethnopharmacol* 2022 Feb 10;284:114791.
 137. Mengmeng Zhao, Huawei Li, Hang Zhang, Huiyang Sha, Liangzong Huang, Ruining Wang Sequence Analysis of Macaca mulatta TRIM4 and Its Role in the Interferon Pathway *Front Vet Sci* 2022 Feb 15;9:805301.
 138. Shiyu Zhang, Huiying Yang, Xuelian Xiang, Li Liu, Huali Huang, Guodu Tang THBS2 is Closely Related to the Poor Prognosis and Immune Cell Infiltration of Gastric Cancer *Front Genet* 2022 Feb 3;13:803460.
 139. Ke Wang, Yang Lu, Zhihong Liu, Min Diao, Lin Yang Establishment and External Validation of a Hypoxia-Derived Gene Signature for Robustly Predicting Prognosis and Therapeutic Responses in Glioblastoma Multiforme *Biomed Res Int* 2022 Feb 4;2022:7858477.
 140. Mengmeng Zhao, Hang Zhang, Huiyang Sha, Huawei Li, Ruining Wang Molecular cloning and functional analysis of Macaca mulatta STING *Dev Comp Immunol* 2022 Feb;127:104296.
 141. Xiaofang Lu, Yong Wang, Ying Ma, Dong Huang, Yuying Lu, Xiang Liu, Ruijia Zhou, Ping Yu, Lei Zhang, Jianlin Chen, Rong Lu, Fuyan Wang YAP1 induces marrow derived suppressor cell recruitment in Chlamydia trachomatis infection *Immunol Lett* 2022 Feb;242:8-16.
 142. Zheng Niu, Min Fu, Yuan Li, Huanhuan Ren, Xuanyu Zhang, Li Yao Osthole alleviates pulmonary vascular remodeling by modulating microRNA-22-3p mediated lipid metabolic reprogramming *Phytomedicine* 2022 Feb;96:153840.
 143. Xiaoqiang Wu, Zhiwei Wang, Junpeng Wang, Xiangyong Tian, Guanghui Cao, Yue Gu, Fengmin Shao, Tianzhong Yan Exosomes Secreted by Mesenchymal Stem Cells Induce Immune Tolerance to Mouse Kidney Transplantation via Transporting LncRNA DANCER *Inflammation* 2022 Feb;45(1):460-475.
 144. Peng-Bo Chen, Gui-Xun Shi, Tao Liu, Bo Li, Sheng-Dan Jiang, Xin-Feng Zheng, Lei-Sheng Jiang Oxidative Stress Aggravates Apoptosis of Nucleus Pulposus Cells through m6A Modification of MAT2A Pre-mRNA by METTL16 *Oxid Med Cell Longev* 2022 Jan 11;2022:4036274.
 145. Yuan Xue, Sihan Hu, Chichi Chen, Jiachen He, Jie Sun, Yesheng Jin, Yuanshu Zhang, Guoqing Zhu, Qin Shi, Yongjun Rui Myokine Irisin promotes osteogenesis by activating BMP/SMAD signaling via α V integrin and regulates bone mass in mice *Int J Biol Sci* 2022 Jan 1;18(2):572-584.
 146. Shiyu Zhang, Huiying Yang, Xuelian Xiang, Li Liu, Huali Huang, Guodu Tang BGN May be a Potential Prognostic Biomarker and Associated With Immune Cell Enrichment of Gastric Cancer *Front Genet* 2022 Jan 26;13:765569.
 147. Xiaowen Chen, Yixin Chen, Min Zhang, Hui Cheng, Huirong Mai, Meng Yi, Huanli Xu, Xiuli Yuan, Sixi Liu, Feiqiu Wen HucMSC exosomes promoted imatinib-induced apoptosis in K562-R cells via a miR-145a-5p/USP6/GLS1 axis *Cell Death Dis* 2022 Jan 28;13(1):92.
 148. Guojie Chen, Kai Wang, Guoshu Li, Leidong Wang, Yangyang Xiao, Bo Chen Long Noncoding RNA LAMTOR5-AS1 Interference Affects MicroRNA-506-3p/E2F6-Mediated Behavior of Non-Small Cell Lung Cancer Cells *Oncol Res* 2022 Jan 31;28(9):945-959.
 149. Lichuang Wu, Chenxian Su, Chuanhua Yang, Jinxing Liu, Yiheng Ye TBX3 regulates the transcription of VEGFA to promote osteoblasts proliferation and microvascular regeneration *PeerJ* 2022 Jul 11;10:e13722.
 150. Gangcheng Liu, Donglan Xiong, Zhifei Che, Hualei Chen, Wenyi Jin A novel inflammation-associated prognostic signature for clear cell renal cell carcinoma *Oncol Lett* 2022 Jul 12;24(3):307.
 151. Baoshan Hu, Lianxin Wang, Naikun Sun, Shengrong Lin, Gang Rui MECHANISM OF MIR-25-3P CARRIED BY EXTRACELLULAR VESICLES DERIVED FROM PLATELET-RICH PLASMA IN IL-1 β -INDUCED NUCLEUS PULPOSUS CELL DEGENERATION VIA THE SOX4/CXCR7 AXIS *Shock* 2022 Jul 1;58(1):56-67.
 152. Bo Li, Yu Wang, Shiqiang Gong, Weifan Yao, Hua Gao, Mingyan Liu, Minjie Wei Puerarin improves OVX-induced osteoporosis by regulating phospholipid metabolism and biosynthesis of unsaturated fatty acids based on serum metabolomics *Phytomedicine* 2022 Jul 20;102:154198.
 153. Ruijing Liu, Boping Liu, Lingmin Tian, Xinwei Jiang, Xusheng Li, Dongbao Cai, Jianxia Sun, Weibin Bai, Yulong Jin Exposure to Bisphenol A Caused Hepatotoxicity and Intestinal Flora Disorder in Rats *Int J Mol Sci* 2022 Jul 21;23(14):8042.
 154. Xiacong Mo, Di Hu, Pingshan Yang, Yin Li, Shoaib Bashir, Aitao Nai, Feng Ma, Guoxia Jia, Meng Xu A novel cuproptosis-related prognostic lncRNA signature and lncRNA MIR31HG/miR-193a-3p/TNFRSF21 regulatory axis in lung adenocarcinoma *Front Oncol* 2022 Jul 22;12:927706.
 155. Tingting Bu, Yuting Ren, Songfeng Yu, Jiexia Zheng, Ling Liu, Peilong Sun, Jianping Wu, Kai Yang A Low-Phenylalanine-Containing Whey Protein Hydrolysate Stimulates Osteogenic Activity through the Activation of p38/Runx2 Signaling in Osteoblast Cells *Nutrients* 2022 Jul 29;14(15):3135.
 156. Yucheng Lu, Qingyun Liu, Zhiqi Huang, Xiuli Chen, Chunling Yang, Yueling Zhang, Yongzhen Zhao, Fan Wang ATP synthase subunit e is a shrimp growth-associated breeding marker *Genomics* 2022 Jul;114(4):110410.
 157. Kahaerjiang Abuduwaili, Xiaodan Zhu, Yanli Shen, Suqiong Lu, Chunling Liu circ_0008797 attenuates non-small cell lung cancer proliferation, metastasis, and aerobic glycolysis by sponging miR-301a-3p/SOCS2 *Environ Toxicol* 2022 Jul;37(7):1697-1710.
 158. Yafang Zhong, Wei Zhang, Xiaoping Hong, Zhipeng Zeng, Yumei Chen, Shengyou Liao, Wanxia Cai, Yong Xu, Gang Wang, Dongzhou Liu, Donge Tang, Yong Dai Screening Biomarkers for Systemic Lupus Erythematosus Based on Machine Learning and Exploring Their Expression Correlations With the Ratios of Various Immune Cells *Front Immunol* 2022 Jun 10;13:873787.
 159. Lingcai Zhao, Yongzhen Zhao, Qingzheng Liu, Jingjin Huang, Yuanlu Lu, Jihui Ping DDX5/METTL3-METTL14/YTHDF2 Axis Regulates Replication of Influenza A Virus *Microbiol Spectr* 2022 Jun 29;10(3):e0109822.
 160. Rundong Jiang, Jiaqi Xu, Yuezhong Zhang, Jiachen Liu, Yutong Wang, Mingliang

- Chen, Xiang Chen, Mingzhu Yin Ligustrazine alleviates psoriasis-like inflammation through inhibiting TRAF6/c-JUN/NFκB signaling pathway in keratinocyte *Biomed Pharmacother* 2022 Jun;150:113010.
161. Songlin Fang, Lezeng Wang, Chunmei Luo, Hang Yi, Xiangrui Wang, Bo Ning Curcumin inhibits the growth of xenograft-tumors in mice and the biological activities of pancreatic cancer cells by regulating the miR-21-5p/SMAD7 axis *Cell Cycle* 2022 Jun;21(12):1249-1266.
162. Shu-Lan Gao, Ying Fan, Xiao-Dan Liu, Wei Liu, Man Zhao circ_0089153 exacerbates breast cancer cells proliferation and metastasis via sponging miR-2467-3p/E2F6 *Environ Toxicol* 2022 Jun;37(6):1458-1471.
163. Libin Hu, Yang Cao, Huaijun Chen, Lei Xu, Qiguo Yang, Hang Zhou, Jianru Li, Qian Yu, Zhangqi Dou, Yin Li, Feng Yan, Fuyi Liu, Gao Chen The Novel Nrf2 Activator Omaveloxolone Regulates Microglia Phenotype and Ameliorates Secondary Brain Injury after Intracerebral Hemorrhage in Mice *Oxid Med Cell Longev* 2022 Mar 11:2022:4564471.
164. Maryam Mazhar, Guoqiang Yang, Linshen Mao, Pan Liang, Ruizhi Tan, Li Wang, Houping Xu, Luyin Yang, Wei Ren, Sijin Yang Zhilong Huoxue Tongyu Capsules Ameliorate Early Brain Inflammatory Injury Induced by Intracerebral Hemorrhage via Inhibition of Canonical NFκβ Signalling Pathway *Front Pharmacol* 2022 Mar 31:13:850060.
165. Yongfeng Ren, Dongxiao Sun-Waterhouse, Fangxin Ouyang, Xintong Tan, Dapeng Li, Longhua Xu, Bo Li, Yongli Wang, Feng Li Apple phenolic extracts ameliorate lead-induced cognitive impairment and depression- and anxiety-like behavior in mice by abating oxidative stress, inflammation and apoptosis via the miR-22-3p/SIRT1 a *Food Funct* 2022 Mar 7;13(5):2647-2661.
166. Ji Wu, Zhenhua Wang, Shanling Xu, Yang Fu, Yi Gao, Zuxiang Wu, Yun Yu, Yougen Yuan, Lin Zhou, Ping Li Analysis of the role and mechanism of EGCG in septic cardiomyopathy based on network pharmacology *PeerJ* 2022 Mar 9:10:e12994.
167. Yuanqiang Dai, Ying Sheng, Yu Deng, Heng Wang, Zhenzhen Zhao, Xiya Yu, Tao Xu Circ_0000647 promotes cell injury by modulating miR-126-5p/TRAF3 axis in oxygen-glucose deprivation and reperfusion-induced SK-N-SH cell model *Int Immunopharmacol* 2022 Mar:104:108464.
168. Jingjing Lv, Yan Wang, Jingna Xu, Tao Zhou, Zhaoxia Chen, Haoyu Yang, Tingting Di, Ping Li Protective effect of Yangxue Jiedu Soup against psoriasis-like lesions by regulating TLR4/NF-κB signaling pathway mediated by secretion of exosome HSP70 *Biomed Pharmacother* 2022 Mar:147:112604.
169. Huaqiang Tao, Yunxia Tao, Chen Yang, Wenming Li, Wei Zhang, Xueyan Li, Ye Gu, Yujing Hong, Huilin Yang, Yu Liu, Xing Yang, Dechun Geng Gut Metabolite Urolithin A Inhibits Osteoclastogenesis and Senile Osteoporosis by Enhancing the Autophagy Capacity of Bone Marrow Macrophages *Front Pharmacol* 2022 May 12:13:875611.
170. Tao Xing, Yongqiang Zhao, Jun Zhao, Zhenxing Jiang, Yingshuan Zhang, Shenghua Li Duhuo Jisheng Decoction inhibits the activity of osteoclasts in osteonecrosis of the femoral head via regulation of the RELA/AKT1 axis *Am J Transl Res* 2022 May 15;14(5):3559-3571.
171. Renyong Wang, Ruixue Li, Tieshan Li, Lei Zhu, Zongze Qi, Xiaokui Yang, Huan Wang, Baoquan Cao, Hong Zhu Bone Mesenchymal Stem Cell-Derived Exosome-Enclosed miR-181a Induces CD4+CD25+FOXP3+ Regulatory T Cells via SIRT1/Acetylation-Mediated FOXP3 Stabilization *J Oncol* 2022 May 26:2022:8890434.
172. Jiaqian Wang, Yuan Xue, Liang Zhou Comparison of immune cells and diagnostic markers between spondyloarthritis and rheumatoid arthritis by bioinformatics analysis *J Transl Med* 2022 May 4;20(1):196.
173. Keting Bao, Wenwen Liu, Zhouzhi Song, Jiali Feng, Zhifan Mao, Lingyuan Bao, Tianyue Sun, Zelan Hu, Jian Li Crodamiton derivative JM03 extends lifespan and improves oxidative and hypertonic stress resistance in *Caenorhabditis elegans* via inhibiting OSM-9/Elife *2022 May 5:11:e72410*.
174. Daiyue Yuan, Jie Chen, Qingya Hao, Peng Zhang, Zhong Chen Methyltransferase-like 3 Aggravates HCC Development via Mediating N6-Methyladenosine of Ubiquitin-Specific Protease 7 *J Oncol* 2022 May 5:2022:6167832.
175. Gonggong Lu, Yang Xu, Quanying Liu, Manyu Chen, Huan Sun, Peilei Wang, Xing Li, Yuxiang Wang, Xiang Li, Xuhui Hui, En Luo, Jun Liu, Qing Jiang, Jie Liang, Yujiang Fan, Yong Sun, Xingdong Zhang An instantly fixable and self-adaptive scaffold for skull regeneration by autologous stem cell recruitment and angiogenesis *Nat Commun* 2022 May 6;13(1):2499.
176. Jitai Zhang, Juan Bai, Qian Zhou, Yuxin Hu, Qian Wang, Lanting Yang, Huamin Chen, Hui An, Chuanzan Zhou, Yongyu Wang, Xiufang Chen, Ming Li Glutathione prevents high glucose-induced pancreatic fibrosis by suppressing pancreatic stellate cell activation via the ROS/TGFβ/SMAD pathway *Cell Death Dis* 2022 May 6;13(5):440.
177. Meng Duan, Hainan Chen, Linjie Yin, Xiao Zhu, Petr Novák, Yuncheng Lv, Guojun Zhao, Kai Yin Mitochondrial apolipoprotein A-I binding protein alleviates atherosclerosis by regulating mitophagy and macrophage polarization *Cell Commun Signal* 2022 May 7;20(1):60.
178. Zhen Chen, Jingying Yang, Yang Gao, Shanshan Jiang, Zuyou Li, Yao Wang, Zhongyin Hu, Fang Han, Ninghua Ni LncRNA MALAT1 aggravates the retinal angiogenesis via miR-320a/HIF-1α axis in diabetic retinopathy *Exp Eye Res* 2022 May:218:108984.
179. Pengli Liu, Chen Guo, Yilong Cui, Xuliang Zhang, Bonan Xiao, Menglin Liu, Miao Song, Yanfei Li Activation of PINK1/Parkin-mediated mitophagy protects against apoptosis in kidney damage caused by aluminum *J Inorg Biochem* 2022 May:230:111765.
180. Xuefeng Chen, Xinyuan Zhang, Yangyang Qian, Enhui Xia, Yu Wang, Qi Zhou Ultrasound-targeted microbubble destruction-mediated miR-144-5p overexpression enhances the anti-tumor effect of paclitaxel on thyroid carcinoma by targeting STON2 *Cell Cycle* 2022 May;21(10):1058-1076.
181. Guangbin Ye, Hongcheng Luo, Tingting Zhang, Tianshu Lan, Bo Ling, Zhongquan Qi Knockdown of RNF183 suppressed proliferation of lung adenocarcinoma cells via inactivating the STAT3 signaling pathway *Cell Cycle* 2022 May;21(9):948-960.
182. Yu Liu, Yan Zhang, Huanhuan Zhu, Wenzhi Shen, Zheng Chen, Jian Bai, Tian Shuang, Qi Chen Aucubin administration suppresses STING signaling and mitigated high-fat diet-induced atherosclerosis and steatohepatosis in LDL receptor deficient mice *Food Chem Toxicol* 2022 Nov:169:113422.
183. Siyao Shen, Ming Jiang, Wen Deng, Xiaoqiang Liu, Junhui Xiong, Zhigang Zeng, Hong Zhao, Xiaochun Zeng, Bin Fu Circ_0008717 promotes renal cell carcinoma progression by upregulating FBXO17 via targeting miR-217 *J Gene Med* 2022 Nov;24(11):e3418.
184. Chun Zhou, Tianzun Li, Qian Dong, Hong Liang, Lunshan Xu SARM suppresses glioma progression in GL261 glioma cells and regulates microglial polarization *Cell Biol Int* 2022 Nov;46(11):1927-1936.
185. Renbao Hu, Pei Wu, Jianhui Liu LncRNA MAGI2-AS3 Inhibits Prostate Cancer Progression by Targeting the miR-142-3p *Horm Metab Res* 2022 Nov;54(11):754-759.
186. Vivek Kumar, Mohit Vashishta, Lin Kong, Jiade J Lu, Xiaodong Wu, Bilikere S Dwarakanath, Chandan Guha Carbon Ion Irradiation Downregulates Notch Signaling in Glioma Cell Lines, Impacting Cell Migration and Spheroid Formation *Cells* 2022 Oct 24;11(21):3354.
187. Hui-Min Zhang, Zi-Yi Li, Zhou-Tong Dai, Jun Wang, Le-Wei Li, Qi-Bei Zong, Jia-Peng Li, Tong-Cun Zhang, Xing-Hua Liao Interaction of MRPL9 and GGCT Promotes Cell Proliferation and Migration by Activating the MAPK/ERK Pathway in Papillary Thyroid Cancer *Int J Mol Sci* 2022 Oct 9;23(19):11989.
188. Mengmeng Zhao, Huiyang Sha, Huawei Li, Hang Zhang, Liangzong Huang, Ruining Wang Interferon inducible porcine 2', 5'-oligoadenylate synthetase like-1 protein limits porcine reproductive and respiratory syndrome virus 2 infection via the MDA5-mediated interferon-signaling pathway *Int Immunopharmacol* 2022 Oct:111:109151.
189. Xifeng Hu, Xiangdong Wu, Meijia Xue, Yiting Chen, Beiyi Zhou, Tong Wan,

- Hongnan You, Huansheng Wu Chicken TAX1BP1 suppresses type I interferon production via degrading chicken MAVS and facilitates infectious bursal diseases virus replication *Dev Comp Immunol* 2022 Oct;135:104490.
190. Jinlian Wei, Xin Chen, Yongyun Li, Ruoxi Li, Keting Bao, Liang Liao, Yuqing Xie, Tiannuo Yang, Jin Zhu, Fei Mao, Shuaishuai Ni, Renbing Jia, Xiaofang Xu, Jian Li Cucurbitacin B-induced G2/M cell cycle arrest of conjunctival melanoma cells mediated by GRP78-FOXO1-KIF20A pathway *Acta Pharm Sin B* 2022 Oct;12(10):3861-3876.
191. Zhe Zhang, Chengying Sun, Yan Zheng, Yanying Gong circFCHO2 promotes gastric cancer progression by activating the JAK1/STAT3 pathway via sponging miR-194-5p *Cell Cycle* 2022 Oct;21(20):2145-2164.
192. Cairu Liu, Haiqin Feng, Lihong Song, Shuirui Li, Yiping Wu, Liping Yang Synergistic effects of thalidomide and cisplatin are mediated via the PI3K/AKT and JAK1/STAT3 signaling pathways in cervical cancer *Oncol Rep* 2022 Oct;48(4):169.
193. Wei Liu, Jiawen Wang, Huaqian Zhang, Xiaohua Qi, Chunmei Du Transcriptome analysis of the production enhancement mechanism of antimicrobial lipopeptides of *Streptomyces bikiniensis* HD-087 by co-culture with *Magnaporthe oryzae* Guy11 *Microb Cell Fact* 2022 Sep 10;21(1):187.
194. Feng Xiao, Jie Shen, Lihui Zhou, Zebin Fang, Yuxiang Weng, Chao Zhang, Luyuan Zhang, Xin Huang, Renya Zhan ZNF395 facilitates macrophage polarization and impacts the prognosis of glioma *Am J Cancer Res* 2022 Sep 15;12(9):4312-4325.
195. Yaling Zhang, Dejian Chen, Daojuan Wang, Lei Wang, Yajing Weng, Hongwei Wang, Xiaoke Wu, Yong Wang Moderate Aerobic Exercise Regulates Follicular Dysfunction by Initiating Brain-Derived Neurotrophic Factor (BDNF)-Mediated Anti-Apoptotic Signaling Pathways in Polycystic Ovary Syndrome *J Clin Med* 2022 Sep 23;11(19):5584.
196. Li-Xia Tang, Bing Wei, Lu-Yao Jiang, You-You Ying, Ke Li, Tian-Xi Chen, Ruo-Fei Huang, Miao-Jun Shi, Hang Xu Intercellular mitochondrial transfer as a means of revitalizing injured glomerular endothelial cells *World J Stem Cells* 2022 Sep 26;14(9):729-743.
197. Lingcai Zhao, Qingzheng Liu, Jingjin Huang, Yuanlu Lu, Yongzhen Zhao, Jihui Ping TREX (transcription/export)-NP complex exerts a dual effect on regulating polymerase activity and replication of influenza A virus *PLoS Pathog* 2022 Sep 9;18(9):e1010835.
198. Yerong Jiang, Dezhi Zhou, Bin Yang 3D bioprinted GelMA/GO composite induces osteoblastic differentiation *J Biomater Appl* 2022 Sep;37(3):527-537.
199. Y Li, W Cui, B Song, X Ye, Z Li, C Lu Autophagy-Sirtuin1(SIRT1) Alleviated the Coronary Atherosclerosis (AS) in Mice through Regulating the Proliferation and Migration of Endothelial Progenitor Cells (EPCs) via wnt/ β -catenin/GSK3 β Signaling *J Nutr Health Aging* 2022;26(3):297-306.
200. YuLing Xu, LingMeng Fu, Da Pan, Jie Wei, Hui Xia, ShaoKang Wang, GuiJu Sun Folic Acid Inhibited Vasculogenic Mimicry in Esophageal Cancer Cell Line Eca-109, the One Target Was EphA2 *Nutr Cancer* 2022;74(6):2235-2242.
201. Jin Ye, Fan Zhang, Bin Li, Qing Liu, Guoyong Zeng Knockdown of ATF3 suppresses the progression of ischemic stroke through inhibiting ferroptosis *Front Mol Neurosci* 2023 Jan 18:15:1079338.
202. Yajing Weng, Yaling Zhang, Daojuan Wang, Rong Wang, Zou Xiang, Shanmei Shen, Hongwei Wang, Xiaoke Wu, Yanting Wen, Yong Wang Exercise-induced irisin improves follicular dysfunction by inhibiting IRE1 α -TXNIP/ROS-NLRP3 pathway in PCOS *J Ovarian Res* 2023 Jul 31;16(1):151.
203. Jiao Liu, Han Wang, Shuqin Xiao, Siyang Zhang, Ya Qi, Min Wang Circ_0000231 promotes paclitaxel resistance in ovarian cancer by regulating miR-140/RAP1B *Am J Cancer Res* 2023 Mar 15;13(3):872-885.
204. Hang Yang, Zuo Tian Huang, Yunhai Luo, Dengliang Lei, Ping Yan, Ai Shen, Wenbin Liu, Dewei Li, Zhongjun Wu TRIM37 exacerbates hepatic ischemia/reperfusion injury by facilitating IKK γ translocation *Mol Med* 2023 May 8;29(1):62.
205. Hao-Xi Zhao, Zheng Zhang, Fang Hu, Qi-Feng Wei, Yong-Sheng Yu, Hao-Dong Zhao Swimming exercise activates peroxisome proliferator-activated receptor- α and mitigates age-related renal fibrosis in rats *Mol Cell Biochem* 2023 May;478(5):1109-1116.
206. Zheng Zhu, Ke Zhang, Ming Lou, Jichun Tong, Qiyong Wu, Jiawei Lu, Kai Yuan Circ_0060967 facilitates proliferation, migration, and invasion of non-small-cell lung cancer cells by sponging miR-660-3p/UBN2 *Mol Cell Biochem* 2023 May;478(5):1129-1140.

Version 2024.03.12