Selected Publications Using RWD Laser Speckle

Latest update time: August 30th, 2025

We select a series of high reputed papers using RWD laser speckle imaging system. We categorize them into different research topics for you to better check.

Research topics:

Neurovascular coupling | Diabetes | Excitotoxicity | A
Cerebral ischemia & Ischemic stroke | Alzheimer's disease & Vascular Dementia | Epilepsy | Subarachnoid hemorrhage (SAH)
Traumatic Brain Injury | Arterial sympathectomy | Sepsis
Spinal cord injury | Atherosclerosis | Vasospasm
Angiogenesis | Endothelial function | Hernia surgery
Wound healing | Irritable bowel syndrome | Tumor
Flap survival | Neuroinflammation | Intestinal ischemia reperfusion & Intestinal inflammation
Thrombosis | Peripheral nerve injuries
Acute pancreatitis | Pulmonary Fibrosis | Drug discovery
Myocardial Infarction | Gut-lung | Glymphatic-lymphatic system
Hypertension | Liver | Micro and nanorobots
Limb ischemia | Optical transparency | Obesity
Bone restoration | Skin | Blood-glucose
Cardiopulmonary resuscitation (CPR) or cardiac arrest (CA)
Traditional Chinese Medicine Therapies (TCM Treatment, Non-Herb)
Chinese Herbal Medicine
DNA methylation and stem cells | Neonatal hypoxic-ischemic encephalopathy
COVID-19 | Kidney fibrosis

DNA methylation and stem cells

- Kremer LPM, Cerrizuela S, El-Sammak H, Al Shukairi ME, Ellinger T, Straub J, Korkmaz A, Volk K, Brunken J, Kleber S, Anders S, Martin-Villalba A. DNA methylation controls stemness of astrocytes in health and ischaemia. ***Nature***. 2024 Oct;634(8033):415-423.

Optical transparency

- Ou Z, Duh YS, Rommelfanger NJ, , et al. Achieving optical transparency in live animals with absorbing molecules. ***Science***. 2024 Sep 6;385(6713):eadm6869.

Neurovascular coupling

- Zhang D, Ruan J, Peng S, et al. Synaptic-like transmission between neural axons and arteriolar smooth muscle cells drives cerebral neurovascular coupling[J]. ***Nature Neuroscience***, 2024: 1-17.
- Zhang J, Ding M, Luo L, Huang D, Li S, Chen S, Fan Y, Liu L, Xie H, Liu G, Yu K, Wu J, Xiao X, Wu Y. Intermittent theta-burst stimulation promotes neurovascular unit remodeling after ischemic stroke in a mouse model. ***Neural Regen Res***. 2025 Mar 25.

Cerebral ischemia & Ischemic stroke

- Ren T, Zhu M, Jiang X, Xu L, Jin H, Zhou Y, Zhao Y, Zhuo R, Li W, Chen C, Peng L, Jin X, Li Y, Yang L. Targeting microglial PPARα ameliorates the outcome of ischemic stroke by enhancing interaction with infiltrating peripheral monocytes/macrophages. ***Cell Rep***. 2025 Jul 22;44(7):115875.
- Hang H, Xu C, Wang L, et al. Targeting PD-L1 for Ischemic Stroke Recovery: Age-Dependent Modulation of Immune and BBB Pathways. ***CNS Neurosci Ther***. 2025;31(7):e70523.
- Zhou Y, Chen F, Lin Y, et al. ROS-Response Nanoparticles for Edaravone Delivery: Pathological-Activated Neuroprotection Against Ischemic-Reperfusion Injury in Ischemic Stroke. ***Adv Healthc Mater***. 2025;14(25):e2501962.
- Yang Z, Jin L, Li L, et al. Brain targeted lipid nanoparticles with Hv1 inhibitors alleviate neuroinflammation post-ischemic stroke. ***J Nanobiotechnology***. 2025;23(1):464.
- Zhang H, Zhang Y, Sheng L, et al. Mechanically robust neuroprotective stent by sequential Mg ions release for ischemic stroke therapy. ***Nat Commun***. 2025;16(1):6557.
- Limam S, Patel A, Satav D, Miryala S, Dharap A. Widespread induction of SINE-RNA expression in the mouse brain following transient focal ischemia. ***Exp Neurol***. 2025;394:115424.
- Guo Y, Fu T, Cheng Y, et al. Mechanisms of electroacupuncture-induced neuroprotection in acute stroke rats: the role of astrocyte-mediated mitochondrial transfer. ***Cell Commun Signal.*** 2025;23(1):316.
- Yang H, Luo B, Du Y, et al. Zhongfeng Xingnao Liquid Ameliorated the Early Impairment of Intracerebral Hemorrhage by Inhibiting NF- κ B/NLRP3 Axis in Rats. ***J Inflamm Res***. 2025;18:8805-8819.
- Lai W, Nie J, Hong A, et al. Neuroprotective effects of Rosavin via HIF-1α signaling in a rat

model of ischemic stroke. ***Phytomedicine***. 2025;145:157068.

- Zhang Y, Zhang Y, Dang H, et al. TREM-1 as a potential gatekeeper of neuroinflammatory responses: therapeutic validation and mechanistic insights in experimental traumatic brain injury. ***Front Immunol***. 2025;16:1636917.
- Liu RJ, Zhao X, Zhu YZ, Fu LL, Ge G, Zhu JD. Ginsenoside Rb1 attenuates neuroflammation via activating Wnt/β-catenin signaling pathway to exert neuroprotective effect on cerebral ischemic-reperfusion injury. ***Front Aging Neurosci***. 2025;17:1555067.
- Chang S, Zhao Y, Li C, et al. Targeting revascularization via tryptophan-indole-NETs axis: the synergistic power of acupuncture and rt-PA thrombolysis in ischemic stroke. ***Front Neurol***. 2025;16:1596158.
- Liu Q, Liu J, Li S, et al. Lcn2-Induced Oligodendrocyte Ferroptosis Contributes to White Matter Damage in Chronic Cerebral Hypoperfusion. ***Glia***. 2025;73(11):2305-2321.
- Liu L, Wang XX, Wang SX, et al. Attenuation of myocardial ischemia-reperfusion injury in mice through CD80/86 deficiency: improved microvascular obstruction via reduced macrophage and T lymphocyte infiltration. ***Basic Res Cardiol***. Published online August 1, 2025.
- Shi J, Xiao X, Wang Z, et al. Gastrodin promotes Alkbh5 nuclear localization and Gclm m6A demethylation to alleviate ferroptosis in ischemic stroke. ***Phytomedicine***. 2025;147:157177.
- Bragin DE, Bragina OA, Covey DP, et al. Monoacylglycerol Lipase Inhibition Using ABX-1431 Attenuates Cerebral Ischaemia Early After Traumatic Brain Injury. ***Adv Exp Med Biol***. 2024;1463:109-112.
- Guo J, Wang G, Liu T, Zhang J, et al. Acupuncture Improves Chronic Cerebral Ischemia by Inhibiting the CKLF1/HIF-1α/VEGF/Notch1 Signaling Pathway. ***CNS Neurosci Ther***. 2025 Mar;31(3):e70246.
- Amin N, Wu F, Zhao BX, et al. Hif-1α ablation reduces the efficiency of NeuroD1 gene-based therapy and aggravates the brain damage following ischemic stroke. ***Expert Opin Drug Deliv***. 2025 Jan;22(1):121-138.
- Gao X, Zhang F, Zhang J, et al. Host-Microbial Cometabolite Ursodeoxycholic Acid Protects Against Poststroke Cognitive Impairment. ***J Am Heart Assoc***. 2025 May 6;14(9):e038862.
- Tang X, Yang X, Yu Y, et al. Carbon quantum dots of ginsenoside Rb1 for application in a mouse model of intracerebral Hemorrhage. ***J Nanobiotechnology***. 2024 Mar 22;22(1):125.
- Zong P, Li C, Feng J, et al. TRPM2 overactivation drives hyperlipidemia-induced dysfunction of myeloid cells and neurovascular units. ***Cell Rep Med***. 2025 Mar 18;6(3):101998.
- Zhang Y, Zhang H, Jiang M, et al. Neuroprotection on ischemic brain injury by Mg2+/H2 released from endovascular Mg implant. ***Bioact Mater***. 2024 Aug 30;42:124-139.
- Zhou J, Zhang L, Peng J, et al. Astrocytic LRP1 enables mitochondria transfer to neurons and mitigates brain ischemic stroke by suppressing ARF1 lactylation. ***Cell Metab***. 2024 Jun 14:S1550-4131(24)00192-X.
- Kewei Liu, Yuqin Peng, Mingheng Xu, et al. Brain-Targeted 9-Phenanthrol-Loaded Lipid

Nanoparticle Prevents Brain Edema after Cerebral Ischemia-Reperfusion Injury by Inhibiting the Trpm4 Channel in Mice. ***Adv. Funct. Mater***. 2024, 2401173.

- Zhenhua Wang, Hongrui Qing, Ran Li, et al. M2 Macrophage-Derived Exosomes Inhibiting Neutrophil Extracellular Traps for Ischemic Stroke Therapy. ***Adv. Funct. Mater***. April 2024.
- Cheng Y J, Wang F, Feng J, et al. Prolonged myelin deficits contribute to neuron loss and functional impairments after ischaemic stroke[J]. ***Brain***, 2024: awae029.
- Liu G, Huang H, Wang Y, Han Y, Wang J, Shi M, Zhou P, Chen C, Yu Y, Liu Q, Zhou J. ILC2 instructs neural stem and progenitor cells to potentiate neurorepair after stroke. ***Neuron***. 2025 Apr 8:S0896-6273(25)00186-2.
- Wan H, He M, Cheng C, et al. Clec7a Worsens Long-Term Outcomes after Ischemic Stroke by Aggravating Microglia-Mediated Synapse Elimination. ***Adv Sci (Weinh)***. 2024 Sep;11(36):e2403064.
- Xia Q, Que M, Zhan G, Zhang L, Zhang X, Zhao Y, Zhou H, Zheng L, Mao M, Li X. SENP6-Mediated deSUMOylation of Nrf2 Exacerbates Neuronal Oxidative Stress Following Cerebral Ischemia and Reperfusion Injury. ***Adv Sci (Weinh)***. 2025 Feb;12(7):e2410410.
- Fan PL, Lai HQ, Wang HY, Hu KC, Ruan Y, Ye JR, Wang SS, Peng Y, He WB, Li G, Yan X, Chu SF, Zhang Z, Chen NH. CKLF1 disrupts microglial efferocytosis following acute ischemic stroke by binding to phosphatidylserine. ***Cell Death Differ***. 2025 Mar 8.
- Xiao R, Pan J, Yang M, Liu H, Zhang A, Guo X, Zhou S. Regulating astrocyte phenotype by Lcn2 inhibition toward ischemic stroke therapy. ***Biomaterials***. 2025 Jun;317:123102.
- Zhao Y, He X, Yang X, et al. CircFndc3b Mediates Exercise-Induced Neuroprotection by Mitigating Microglial/Macrophage Pyroptosis via the ENO1/KLF2 Axis in Stroke Mice. ***Adv Sci*** (Weinh). 2024 Oct 28:e2403818.
- Xiong XY, Pan XR, Luo XX, , et al. Astrocyte-derived lactate aggravates brain injury of ischemic stroke in mice by promoting the formation of protein lactylation. ***Theranostics.*** 2024 Jul 8;14(11):4297-4317.
- Zhang Y, Jiang M, Wei M, Wu C, Huang Y, Song B, Xu Y, Zhang H, Shen Y, Wu D, Zheng Y, Li M, Ji X. MgSO4 as a novel hypothermia infusion solution promotes ischemic stroke recovery through Ca2+ regulation of neurovascular units. ***Theranostics***. 2025 Jan 2;15(5):1896-1913.
- Wang H, Li J, Wu G, et al. Activated sympathetic nerve post stroke downregulates Toll-like receptor 5 and disrupts the gut mucosal barrier. ***Cell Rep Med***. 2024 Oct 15;5(10):101754.
- Zhang Z, Ru D, Liu Z, Guo Z, Zhu L, Zhang Y, Chu M, Wang Y, Zhao J. Integrative Multiomics Profiling of Mouse Hippocampus Reveals Transcriptional Upregulation of Interferon-Stimulated Genes Through PU.1 Regulator in Microglial Activation Induced by Chronic Cerebral Hypoperfusion. ***MedComm*** (2020). 2025 Apr 15;6(5):e70157.
- Yuan L, Wang Y, Hu X, Zuo Y, Jin T, Li X, Li X, Cheng L, Zhang H, Zhang T. Time-of-Day-Dependent Effects of Rehabilitation on Motor Recovery After Experimental Focal Cerebral Ischemia. ***Stroke***. 2025 Apr 25.

- Xie J, Zhang Y, Li B, et al. Inhibition of OGFOD1 by FG4592 confers neuroprotection by activating unfolded protein response and autophagy after ischemic stroke[J]. ***Journal of Translational Medicine***, 2024, 22(1): 1-27.
- an M, Xue Z, Yu M, You N, Ren Y, Xu Z, Wu Z, He Y, Sheng Z, Liu C, Wang D, Chen J. Rapid synergistic thrombolysis of ischemic stroke guided by high-resolution and high-speed photoacoustic cerebrovascular imaging. ***Photoacoustics***. 2025 Apr 4;43:100722.
- Hu Y, Zhu L, Zhou C, Li Q, Li H, Deng S, Xia S, Yang H, Bao X, Liu P, Xu Y. Microglial CARD19 ameliorates post-stroke neuroinflammation by stabilizing mitochondrial cristae. ***Neural Regen Res***. 2025 Mar 25.
- Sun A, Huang W, Jin K, Zhong M, Yu B, Li X, Wang Y, Liu H. A multiple targeting rapamycin and SS31 conjugate enhances ischemic stroke therapy. ***Expert Opin Drug Deliv***. 2025 Jan;22(1):109-120.
- Liu Y, Li X, Cao C, Ding H, et al. Critical role of Slc22a8 in maintaining blood-brain barrier integrity after experimental cerebral ischemia-reperfusion. ***Cereb Blood Flow Metab***. 2024 Jul 28:271678X241264401.
- Xu Y, Duan Y, Xu S, , et al. Mild hypothermia therapy attenuates early BBB leakage in acute ischaemic stroke. ***Cereb Blood Flow Metab***. 2024 Aug 19:271678X241275761.
- Qiao C, Ran Y, Li N, Wang C, Li J, Xi X, Li Z, Ye L, Su W, Liu Z, Qie S. Intermittent theta burst stimulation regulates microglial polarization through Cry1 to enhance neuroplasticity for stroke recovery. ***Exp Neurol***. 2025 Jul;389:115255.
- Ma N, Luo X, Wang J, et al. Inner Mitochondrial Membrane Peptidase 2-Like Deletion Aggravates Mitochondrial Apoptosis and Inhibits Autophagy After Hyperglycemia Stroke. ***Mol Neurobiol***. 2024 Sep 14.
- Wang W, Zhao J, Li Z, et al. L-DOPA ameliorates hippocampus-based mitochondria respiratory dysfunction caused by GCI/R injury. ***Biomed Pharmacother***. 2024 Jun;175:116664.
- He JQ, Yuan RL, Jiang YT, P, et al. Esculetin facilitates post-stroke rehabilitation by inhibiting CKLF1-mediated neutrophil infiltration. ***Acta Pharmacol Sin***. 2024 Aug 7.
- Wang S, Guo Y, Cao RQ, et al. VEGFD/VEGFR3 signaling contributes to the dysfunction of the astrocyte IL-3/microglia IL-3Rα cross-talk and drives neuroinflammation in mouse ischemic stroke. ***Acta Pharmacol Sin***. 2024 Oct 30.
- Ma CS, Ma YP, Han B, et al. Apelin-13-Loaded Macrophage Membrane-Encapsulated Nanoparticles for Targeted Ischemic Stroke Therapy via Inhibiting NLRP3 Inflammasome-Mediated Pyroptosis. ***Int J Nanomedicine***. 2024 Sep 7;19:9175-9193.
- Duan Q, Liu Z, Xing Y, Huang H, Zhu L, Liu J, He P, Ma G, Zhang Y, Nie K, Gao Y, Wang L. Edaravone dexborneol alleviates pericyte-mediated fibrosis depositing extracellular matrix through TGF-β1/IL-11 in cerebral small vessel disease. ***J Transl Med***. 2025 Feb 5;23(1):161.
- Wu C Y C, Zhang Y, Xu L, et al. The role of serum/glucocorticoid-regulated kinase 1 in brain function following cerebral ischemia[J]. ***Journal of Cerebral Blood Flow & Metabolism***, 2024:

0271678X231224508.

- Li J, Zhang Y, Zhang D, et al. Ca^{2+} oscillation in vascular smooth muscle cells control myogenic spontaneous vasomotion and counteract post-ischemic no-reflow[J]. ***Communications Biology***, 2024, 7(1): 332.
- Wang Y, Li Y, Gu Y, et al. Decreased levels of phosphorylated synuclein in plasma are correlated with poststroke cognitive impairment. ***Neural Regen Res***. 2024 Jun 3.
- Xia Q, Yu Y, Zhan G, et al. The Sirtuin 5 Inhibitor MC3482 Ameliorates Microglia-induced Neuroinflammation Following Ischaemic Stroke by Upregulating the Succinylation Level of Annexin-A1. ***J Neuroimmune Pharmacol***. 2024 May 8;19(1):17.
- Zhang H, Du X, Gao T, Wang X, Zhang H, Yu M, Huang J. Microglia TRPC1 SUMOylation drives neuroinflammation after stroke by modulating NLRP3 activity via increasing TRPC1 interaction with ARRB2. ***Neurobiol Dis***. 2025 Mar;206:106833.
- Yang J, Cao C, Liu J, et al. Dystrophin 71 deficiency causes impaired aquaporin-4 polarization contributing to glymphatic dysfunction and brain edema in cerebral ischemia. ***Neurobiol Dis***. 2024 Sep;199:106586.
- Wang W, Zhang Y, Fang Y, Gao J, Thuku RC, Yang J, Na C, Lu Q, Fang M. Targeting the contact-kinin system: A cyclopeptide with anti-thromboinflammatory properties against stroke. ***Eur J Pharmacol***. 2025 Jul 5;998:177497.
- Li Y, Guan X, Lan T, Zhang ZR, Zhang Y, Jiang S, Li M, Shi FD, Jin WN. The miR-451a facilitates natural killer cell-associated immune deficiency after ischemic stroke. ***J Cereb Blood Flow Metab***. 2025 Feb 22:271678X251321641.
- Jin C, Dai H, Dai D, Zhang J. A Freely Moving Photothrombotic Stroke Model Reveals Sustained Dysfunction of GABAergic Neuron in Contralesional Cortex Using Miniaturized Two-Photon Microscopy. ***Transl Stroke Res***. 2025 Mar 10.
- Tao X, Hu Y, Mao N, et al. Echinatin alleviates inflammation and pyroptosis in hypoxic-ischemic brain damage by inhibiting TLR4/ NF-κB pathway. ***Int Immunopharmacol***. 2024 Jul 30;136:112372.
- Lv B, Fu P, Wang M, et al. DMT1 ubiquitination by Nedd4 protects against ferroptosis after intracerebral hemorrhage. ***CNS Neurosci Ther***. 2024 Apr;30(4):e14685.
- Liu X, Wang J, Jin J, et al. S100A9 deletion in microglia/macrophages ameliorates brain injury through the STAT6/PPARγ pathway in ischemic stroke. ***CNS Neurosci Ther.*** 2024 Aug;30(8):e14881.
- Ma Y, Liu C, Ren L,et al. β-1,4-Galactosyltransferase 1 protects against cerebral ischemia injury in mice by suppressing ferroptosis via the TAZ/Nrf2/HO-1 signaling pathway. ***CNS Neurosci Ther***. 2024 Sep;30(9):e70030.
- Qi H, Gao Y, Zhang Z, et al. HouShiHeiSan attenuates sarcopenia in middle cerebral artery occlusion (MCAO) rats. ***J Ethnopharmacol***. 2025 Jan 30;337(Pt 3):118917.
- Li X, Xu B, Long L, et al. Phelligridimer A enhances the expression of mitofusin 2 and protects against cerebral ischemia/reperfusion injury. ***Chem Biol Interact***. 2024 Aug

1;398:111090.

- Wang S, Yu L, Guo H, Gastrodin Ameliorates Post-Stroke Depressive-Like Behaviors Through Cannabinoid-1 Receptor-Dependent PKA/RhoA Signaling Pathway. ***Mol Neurobiol***. 2024 Jun 10.
- Zhang H, Zhu C, Zhou X, Wang L, Deng L, He B, Li J. Edaravone dexborneol protected neurological function by targeting NRF2/ARE and NF-κB/AIM2 pathways in cerebral ischemia/reperfusion injury. ***Front Pharmacol***. 2025 Apr 25;16:1581320.
- Li Z, Gao T, Wang J, Zhang X, Zhang Y, Zhang L, Yang P, Liu J. Ferroptosis mediated by TNFSF9 interferes in acute ischaemic stroke reperfusion injury with the progression of acute ischaemic stroke. [J]. ***Neurochem***. 2024 Feb 12.
- Chen J, Wu L, Xie X, Peng C. Carthamus tinctorius L. protects cerebral ischemia/reperfusion injury via arachidonic acid/p53-mediated apoptosis axis. ***Front Pharmacol***. 2024 Dec 24;15:1504109.
- Zhang H, Wang L, Wang X, et al. Mangiferin alleviated poststroke cognitive impairment by modulating lipid metabolism in cerebral ischemia/reperfusion rats. ***Eur J Pharmacol***. 2024 Aug 15;977:176724.
- Zhu M, Li X, Guo J, et al. Orexin A protects against cerebral ischemia-reperfusion injury by enhancing reperfusion in ischemic cortex via HIF-1α-ET-1/eNOS pathway. ***Brain Res Bull.*** 2024 Nov;218:111105.
- Qian H, Zhang HN, Gao T, Wang XS, Wang X, Yu MY, Li MK, Huang J. Upregulation of TRPC1 in microglia promotes neutrophil infiltration after ischemic stroke. [J]. ***Brain Res Bull.*** 2024 Mar;208:110894.
- Zhang A, Xing Y, Zheng J, et al. Constraint-Induced Movement Therapy Modulates Neuron Recruitment and Neurotransmission Homeostasis of the Contralesional Cortex to Enhance Function Recovery after Ischemic Stroke. ***ACS Omega***. 2024 May 3;9(19):21612-21625.
- Cheng F, Zhang J, Yang P, et al. Exploring the neuroprotection of the combination of astragaloside A, chlorogenic acid and scutellarin in treating chronic cerebral ischemia via network analysis and experimental validation. ***Heliyon***. 2024 Apr 3;10(8):e29162.
- Ru D, Zhang Z, Liu M, Fan X, Wang Y, Yan Y, Wang E. Downregulation of Notch Signaling-Stimulated Genes in Neurovascular Unit Alterations Induced by Chronic Cerebral Hypoperfusion. ***Immun Inflamm Dis***. 2024 Nov;12(11):e70082.
- Ma W, Yang J, Zhang J, et al. Cerebral protective effect of in situ and remote ischemic postconditioning on ischemic stroke rat via the TGFβ1-Smad2/3 signaling pathway[J]. ***Brain Research***, 2024, 1824: 148685.
- Jiang T, Liu Q, Liu H, Huang Z, Yang M, Huang P, Shen Y, Song Y, Xu W, Zhang X, Ni G. Acupuncture alleviates hemorrhagic transformation after delayed rt-PA treatment for acute ischemic stroke by regulating the mitophagy-NLRP3 inflammasome pathway. ***Front Neurol***. 2025 Apr 7;16:1533092.
- Zhang Z, Lu T, Li S et al. Acupuncture Extended the Thrombolysis Window by Suppressing

Blood-Brain Barrier Disruption and Regulating Autophagy-Apoptosis Balance after Ischemic Stroke. ***Brain Sci***. 2024 Apr 19;14(4):399.

- Cao C, Lu J, Lu P, Li L, Zhang F, Li X, Chen G, Bai L, Li H. Disruption of the Pum2 axis Aggravates neuronal damage following cerebral Ischemia-Reperfusion in mice. ***Brain Res.*** 2025 Mar 15;1851:149455.
- Tian X, Yang W, Jiang W, et al. Multi-Omics Profiling Identifies Microglial Annexin A2 as a Key Mediator of NF-κB Pro-inflammatory Signaling in Ischemic Reperfusion Injury[J]. ***Molecular & Cellular Proteomics***, 2024, 23(2).
- Sun L, Chen D, Zhao C, et al. Echinatin protects from ischemic brain injury by attenuating NLRP3-related neuroinflammation[J]. ***Neurochemistry International***, 2024: 105676.
- Zhang Y, Li D, Gao H, et al. Rapamycin Alleviates Neuronal Injury and Modulates Microglial Activation After Cerebral Ischemia[J]. ***Molecular Neurobiology***, 2024: 1-19.
- Tedeschi A, Larson M J E, Zouridakis A, et al. Harnessing cortical plasticity via gabapentinoid administration promotes recovery after stroke[J]. ***Brain***, 2022, 145(7): 2378-2393.
- Shi Y, Du Q, Li Z, et al. Multiomics profiling of the therapeutic effect of dan-deng-tong-nao capsule on cerebral ischemia-reperfusion injury[J]. ***Phytomedicine***, 2024: 155335.
- Song Z, Fang J, Wang Z, et al. Rod-Shaped Polymeric Nanoparticles Intervene Neutrophils for Efficient Ischemic Stroke Therapy[J]. ***Advanced Functional Materials***, 2023: 2212326.
- Wang H, Liu Y, Guo Z, et al. Enhancement of oligodendrocyte autophagy alleviates white matter injury and cognitive impairment induced by chronic cerebral hypoperfusion in rats[J]. ***Acta Pharmaceutica Sinica B***, 2023.
- Li D, Liu S, Yu T, et al. Photostimulation of brain lymphatics in male newborn and adult rodents f or therapy of intraventricular hemorrhage[J]. ***Nature Communications***, 2023, 14(1): 6104.
- Zhao Y, Zhu W, Wan T, et al. Vascular endothelium deploys caveolin-1 to regulate oligodendrogenesis after chronic cerebral ischemia in mice[J].***Nature Communications***,2022,13(1): 6813.
- Li T, Zhao L, Li Y, et al. PPM1K mediates metabolic disorder of branched-chain amino acid and regulates cerebral ischemia-reperfusion injury by activating ferroptosis in neurons[J]. ***Cell Death & Disease***, 2023, 14(9): 634.
- Haroon K, Ruan H, Zheng H, et al. Bio-clickable, small extracellular vesicles-COCKTAIL therapy for ischemic stroke[J]. ***Journal of Controlled Release***, 2023, 363: 585-596.
- Menozzi L, Del Águila Á, Vu T, et al. Three-dimensional non-invasive brain imaging of ischemic stroke by integrated photoacoustic, ultrasound and angiographic tomography (PAUSAT)[J]. ***Photoacoustics***, 2023, 29: 100444.
- Liu Y, Che X, Yu X, et al. Phosphorylation of STAT3 at Tyr705 contributes to TFEB-mediated autophagy-lysosomal pathway dysfunction and leads to ischemic injury in rats[J]. ***Cellular and Molecular Life Sciences***, 2023, 80(6): 160.
- Wan T, Zhu W, Zhao Y, et al. Astrocytic phagocytosis contributes to demyelination after focal cortical ischemia in mice[J].***Nature Communications***, 2022, 13(1): 1134.
- Xu K , Gao X , Xia G ,et al.Rapid gut dysbiosis induced by stroke exacerbates brain infarction in

turn[J]. *Gut*, 2021, 70(8):gutjnl-2020-323263.DOI:10.1136/gutjnl-2020-323263.

- Yu W, Yin N, Yang Y, et al. Rescuing ischemic stroke by biomimetic nanovesicles through accelerated thrombolysis and sequential ischemia-reperfusion protection[J]. *Acta Biomaterialia*, 2022, 140: 625-640.
- Liu M, Zhou X, Li Y, et al. TIGAR alleviates oxidative stress in brain with extended ischemia via a pentose phosphate pathway-independent manner[J]. *Redox Biology,* 2022, 53: 102323.
- Yu Y, Xia Q, Zhan G, et al. TRIM67 alleviates cerebral ischemia–reperfusion injury by protecting neurons and inhibiting neuroinflammation via targeting IκBα for K63-linked polyubiquitination[J]. *Cell & Bioscience*, 2023, 13(1): 99.
- Zaidi S K, Hoda M N, Tabrez S, et al. Pharmacological Inhibition of Class III Alcohol Dehydrogenase 5: Turning Remote Ischemic Conditioning Effective in a Diabetic Stroke Model[J]. *Antioxidants*, 2022, 11(10): 2051.
- Wang L, Tu W, Li X, et al. Exercise improves cardiac function and attenuates myocardial inflammation and apoptosis by regulating APJ/STAT3 in mice with stroke[J]. *Life Sciences*, 2023, 332: 122041.
- Liu J, Zhang X, Xu Y, et al. Regulation of Microglial Activation by Wnt/β-Catenin Signaling After Global Cerebral Ischemia in Mice[J]. *Molecular Neurobiology*, 2023: 1-18.
- Zhang Y, Ya D, Yang J, et al. EAAT3 impedes oligodendrocyte remyelination in chronic cerebral hypoperfusion-induced white matter injury[J]. *CNS Neuroscience & Therapeutics*, 2023.
- Wang K, Zhou W, Jin X, et al. Enhanced brain delivery of hypoxia-sensitive liposomes by hydroxyurea for rescue therapy of hyperacute ischemic stroke[J]. *Nanoscale*, 2023, 15(27): 11625-11646.
- He Y, Li Z, Shi X, et al. Metformin attenuates white matter injury and cognitive impairment induced by chronic cerebral hypoperfusion[J]. *Journal of Cerebral Blood Flow & Metabolism*, 2023: 0271678X231175189.
- Wei H, Jiang H, Zhou Y, et al. Cerebral venous congestion alters brain metabolite profiles, impairing cognitive function[J]. *Journal of Cerebral Blood Flow & Metabolism*, 2023: 0271678X231182244.
- Guan Y, Gu Y, Shao H, et al. Intermittent hypoxia protects against hypoxic-ischemic brain damage by inducing functional angiogenesis[J]. *Journal of Cerebral Blood Flow & Metabolism,* 2023, 43(10): 1656-1671.
- Xia Q, Mao M, Zhan G, et al. SENP3-mediated deSUMOylation of c-Jun facilitates microglia-induced neuroinflammation after cerebral ischemia and reperfusion injury[J]. *Iscience*, 2023, 26(6).
- Liu S, Zhang Z, He Y, et al. Inhibiting leukocyte-endothelial cell interactions by Chinese medicine Tongxinluo capsule alleviates no-reflow after arterial recanalization in ischemic stroke[J]. *CNS Neuroscience & Therapeutics*, 2023.
- Hu H, Wu S, Lee T J, et al. A novel specific aptamer targets cerebrovascular endothelial cells after ischemic stroke[J]. *Scientific Reports*, 2023, 13(1): 9990.
- Wang X, Zhang S, Lv B, et al. Circular RNA PTP4A2 regulates microglial polarization through STAT3 to promote neuroinflammation in ischemic stroke[J]. *CNS Neuroscience & Therapeutics*,

2023.

- Zhou Z, Ma Y, Xu T, et al. Deeper cerebral hypoperfusion leads to spatial cognitive impairment in mice[J]. ***Stroke and Vascular Neurology***, 2022, 7(6).
- Lu Y, Zhou W, Cui Q, et al. G Protein-Coupled Receptor 40 Agonist LY2922470 Alleviates Ischemic-Stroke-Induced Acute Brain Injury and Functional Alterations in Mice[J]. ***International Journal of Molecular Sciences***, 2023, 24(15): 12244.
- Yang D, Su L, Li X, et al. Evidence that enolase-phosphatase 1 exacerbates early cerebral ischemia injury and blood–brain barrier breakdown by enhancing extracellular matrix destruction and inhibiting the interaction between ADI1 and MT1-MMP[J]. ***Experimental Neurology***, 2023, 365: 114410.
- Li D, He T, Zhang Y, et al. Melatonin regulates microglial polarization and protects against ischemic stroke-induced brain injury in mice[J]. ***Experimental Neurology***, 2023: 114464.
- Liu J, Sun J, Song Y, et al. Prussian Blue Nanozyme Treatment of Ischemic Brain Injury via Reducing Oxidative Stress Inhibits Inflammation, Suppresses Apoptosis, and Promotes Neurological Recovery[J]. ***ACS Chemical Neuroscience***, 2023, 14(8): 1535-1546.
- Zhang H, Wang L, Zhu B, et al. A comparative study of the neuroprotective effects of dl-3-n-butylphthalide and edaravone dexborneol on cerebral ischemic stroke rats[J]. ***European Journal of Pharmacology***, 2023, 951: 175801.
- Jia Q Y, Chen H L, Qi Z, et al. Network pharmacology to explore the mechanism of scutellarin in the treatment of brain ischaemia and experimental verification of JAK2/STAT3 signalling pathway[J]. ***Scientific Reports***, 2023, 13(1): 1-11.
- Zang R, Ling F, Wu Z, et al. Ginkgo biloba extract (EGb-761) confers neuroprotection against ischemic stroke by augmenting autophagic/lysosomal signaling pathway[J]. ***Journal of Neuroimmunology***, 2023: 578101.
- Dong W, Gong T, Zhao S, et al. A Novel Extract From Ginkgo biloba Inhibits Neuroinflammation and Maintains White Matter Integrity in Experimental Stroke[J]. ***Neuroscience***, 2023, 523: 7-19.
- Gao Y, Zhang Z, Qi D, et al. Ischemic Stroke Shifts the Protein and Metabolite Profiles of Colon in Mice[J]. ***Neuroscience***, 2023, 526: 237-245.
- Zhang Z, Guo Z, Jin P, et al. Transcriptome profiling of hippocampus after cerebral hypoperfusion in mice[J]. ***Journal of Molecular Neuroscience***, 2023: 1-14.
- Dong F, Yan W, Meng Q, et al. Ebselen alleviates white matter lesions and improves cognitive deficits by attenuating oxidative stress via Keap1/Nrf2 pathway in chronic cerebral hypoperfusion mice[J]. ***Behavioural Brain Research***, 2023, 448: 114444.
- Shen G, Lou C, Li Q, et al. Edaravone dexborneol alleviates cerebral ischemia-reperfusion injury through NF-κB/NLRP3 signal pathway[J]. **The Anatomical Record**, 2023.
- Zhang T, Zhang Z, Geng J, et al. A New Approach for Exploring Reperfusion Brain Damage in Hypoxic Ischemic Encephalopathy[J]. ***Molecular Neurobiology***, 2023: 1-16.
- Guan X, Wei D, Liang Z, et al. FDCA Attenuates Neuroinflammation and Brain Injury after Cerebral Ischemic Stroke[J]. ***ACS Chemical Neuroscience***, 2023, 14(20): 3839-3854.
- Zou H, Chen X, Lu J, et al. Neurotropin alleviates cognitive impairment by inhibiting TLR4/MyD88/NF-κB inflammation signaling pathway in mice with vascular dementia[J].

Neurochemistry International, 2023, 171: 105625.

- Zhang Y, Mu Y, Ding H, et al. 1α, 25-Dihydroxyvitamin D3 promotes angiogenesis after cerebral ischemia injury in rats by upregulating the TGF-β/Smad2/3 signaling pathway[J]. *Frontiers in Cardiovascular Medicine*, 2022, 9.
- Li X, Li H, Xu Z, et al. Ischemia-induced cleavage of OPA1 at S1 site aggravates mitochondrial fragmentation and reperfusion injury in neurons[J]. *Cell Death & Disease*, 2022, 13(4): 321.
- Xu B, Xu J, Cai N, et al. Roflumilast prevents ischemic stroke-induced neuronal damage by restricting GSK3β-mediated oxidative stress and IRE1α/TRAF2/JNK pathway[J]. *Free Radical Biology and Medicine,* 2021, 163: 281-296.
- Wang X S, Yue J, Hu L N, et al. Activation of G protein-coupled receptor 30 protects neurons by regulating autophagy in astrocytes[J]. *Glia*, 2020, 68(1): 27-43.
- Guo X, Tian Y, Yang Y, et al. Pituitary adenylate cyclase-activating polypeptide protects against cognitive impairment caused by chronic cerebral hypoperfusion[J]. *Molecular Neurobiology,* 2021, 58(9): 4309-4322.
- Wu Y, Zeng J, Pluimer B, et al. Microvascular Injury in Mild Traumatic Brain Injury Accelerates Alzheimer-like Pathogenesis in Mice[J]. *bioRxiv*, 2020: 2020.04. 12.036392.
- Wang S, Lv W, Zhang H, et al. Aging exacerbates impairments of cerebral blood flow autoregulation and cognition in diabetic rats[J]. *Geroscience*, 2020, 42: 1387-1410.
- Jiang W, Zhang P, Yang P, et al. Phosphoproteome Analysis Identifies a Synaptotagmin-1-Associated Complex Involved in Ischemic Neuron Injury[J]. *Molecular & Cellular Proteomics*, 2022, 21(5).
- Xie C, Yue S, Li X, et al. A Linarin Derivative Protects against Ischemia-Induced Neuronal Injury in Mice by Promoting Cerebral Blood Flow Recovery via KDELR-Dependent CSPG4 Activation[J]. *Oxidative Medicine and Cellular Longevity*, 2022
- Zhou C, Zhu T, Ni W, et al. Gain-of-function of progesterone receptor membrane component 2 ameliorates ischemic brain injury[J]. *CNS Neuroscience & Therapeutics*, 2023.
- Yin X, Wang J, Yang S, et al. Sam50 exerts neuroprotection by maintaining the mitochondrial structure during experimental cerebral ischemia/reperfusion injury in rats[J]. *CNS Neuroscience & Therapeutics*, 2022, 28(12): 2230-2244.
- Li Z, Zhang Y, Meng X, et al. A novel DPP-4 inhibitor Gramcyclin A attenuates cognitive deficits in APP/PS1/tau triple transgenic mice via enhancing brain GLP-1-dependent glucose uptake[J]. *Phytotherapy Research*, 2022, 36(3): 1297-1309.
- Fan L, Chen Y, Liao R, et al. Antagonism of histamine H3 receptor promotes angiogenesis following focal cerebral ischemia[J]. *Acta Pharmacologica Sinica*, 2022, 43(11): 2807-2816.
- Li X, Li R, Lu L, et al. Beneficial effects of neuronal ATF6 activation in permanent ischemic stroke[J]. *Frontiers in Cellular Neuroscience*, 2022, 16: 1016391-1016391.
- Duan W, Sun Q, Wu X, et al. Cervical Vagus Nerve Stimulation Improves Neurologic Outcome After Cardiac Arrest in Mice by Attenuating Oxidative Stress and Excessive Autophagy[J]. Neuromodulation: *Technology at the Neural Interface,* 2022, 25(3): 414-423.
- Gu C, Liu J, Li Y, et al. Comparison of ketamine/xylazine and isoflurane anesthesia on the

establishment of mouse middle cerebral artery occlusion model[J]. ***Experimental animals***, 2023, 72(2): 209-217..

- Zhang Z, Guo Z, Tu Z, et al. Cortex-specific transcriptome profiling reveals upregulation of interferon-regulated genes after deeper cerebral hypoperfusion in mice[J]. ***Frontiers in Physiology***, 2023, 14: 375.
- Xing Y, Zhang A, Li C, et al. Corticostriatal Projections Relying on GABA Levels Mediate Exercise-Induced Functional Recovery in Cerebral Ischemic Mice[J]. ***Molecular Neurobiology***, 2023, 60(4): 1836-1853.
- Liu Z, Wang Z, Zhu Z, et al. Crocetin Regulates Functions of Neural Stem Cells to Generate New Neurons for Cerebral Ischemia Recovery[J]. ***Advanced Healthcare Materials***, 2023: 2203132.
- Fan Y Y, Li Y, Tian X Y, et al. Delayed Chronic Acidic Postconditioning Improves Poststroke Motor Functional Recovery and Brain Tissue Repair by Activating Proton-Sensing TDAG8[J]. ***Translational Stroke Research***, 2023: 1-16.
- Yang L, Tao Y, Luo L, et al. Dengzhan Xixin injection derived from a traditional Chinese herb Erigeron breviscapus ameliorates cerebral ischemia/reperfusion injury in rats via modulation of mitophagy and mitochondrial apoptosis[J]. ***Journal of Ethnopharmacology***, 2022, 288: 114988.
- Wang W, Li R, Miao W, et al. Development and evaluation of a novel mouse model of asphyxial cardiac arrest revealed severely impaired lymphopoiesis after resuscitation[J]. ***Journal of the American Heart Association***, 2021, 10(11): e019142.
- Moreno M, Minjarez C, Vigil J, et al. Differences in hippocampal plasticity and memory outcomes in anterior versus posterior cerebellar stroke[J]. ***Neurobiology of disease***, 2022, 168: 105701.
- Dong W, Liu X, Liu W, et al. Dual antiplatelet therapy improves functional recovery and inhibits inflammation after cerebral ischemia/reperfusion injury[J]. ***Annals of Translational Medicine,*** 2022, 10(6).
- Shi H, Li P, Zhou H, et al. Dynamic cerebral blood flow changes with FOXOs stimulation are involved in neuronal damage associated with high-altitude cerebral edema in mice[J]. ***Brain Research***, 2022, 1790: 147987.
- Fu X, Zhang T, Lin W, et al. Establishment of a hypoxia ischemia reperfusion brain damage model in neonatal rats[J]. ***bioRxiv***, 2022: 2022.01. 10.475606.
- Zhao Y, Hong Z, Lin Y, et al. Exercise pretreatment alleviates neuroinflammation and oxidative stress by TFEB-mediated autophagic flux in mice with ischemic stroke[J]. ***Experimental Neurology***, 2023, 364: 114380.
- Liu M, Luo L, Fu J, et al. Exercise-induced neuroprotection against cerebral ischemia/reperfusion injury is mediated via alleviating inflammasome-induced pyroptosis[J]. ***Experimental Neurology***, 2022, 349: 113952.
- Hayashida K, Takegawa R, Endo Y, et al. Exogenous mitochondrial transplantation improves survival and neurological outcomes after resuscitation from cardiac arrest[J]. ***BMC medicine***, 2023, 21(1): 56.
- Hu X, Pan J, Li Y, et al. Extracellular vesicles from adipose-derived stem cells promote microglia M2 polarization and neurological recovery in a mouse model of transient middle cerebral artery occlusion[J]. ***Stem Cell Research & Therapy***, 2022, 13(1): 21.

- Lin W, Zhang T, Zheng J, et al. Ferroptosis is Involved in Hypoxic-ischemic Brain Damage in Neonatal Rats[J]. ***Neuroscience***, 2022, 487: 131-142.
- Wang N Y, Li J N, Liu W L, et al. Ferulic acid ameliorates Alzheimer's disease-like pathology and repairs cognitive decline by preventing capillary hypofunction in APP/PS1 mice[J]. ***Neurotherapeutics***, 2021, 18: 1064-1080.
- Dong W, Chen Q, Zhao S, et al. IKKα contributes to ischemia-induced autophagy after acute cerebral ischemic injury[J]. ***Annals of Translational Medicine***, 2022, 10(4).
- Meng C, Chen S, He Q, et al. IKZF3 modulates cerebral ischemia/reperfusion injury by inhibiting neuroinflammation[J]. ***International Immunopharmacology***, 2023, 114: 109480.
- Luo L, Liu M, Fan Y, et al. Intermittent theta-burst stimulation improves motor function by inhibiting neuronal pyroptosis and regulating microglial polarization via TLR4/NFκB/NLRP3 signaling pathway in cerebral ischemic mice[J]. ***Journal of Neuroinflammation***, 2022, 19(1): 1-27.
- Yang Y, Tian Y, Guo X, et al. Ischemia Injury induces mPTP opening by reducing Sirt3[J]. ***Neuroscience***, 2021, 468: 68-74.
- Li N, Zhang X, Zhai J, et al. Isoflurane and Netrin-1 combination therapy enhances angiogenesis and neurological recovery by improving the expression of HIF-1α-Netrin-1-UNC5B/VEGF cascade to attenuate cerebral ischemia injury[J]. ***Experimental Neurology***, 2022, 352: 114028.
- Yin L, Yu T, Cheng L, et al. Laser speckle contrast imaging for blood flow monitoring in predicting outcomes after cerebral ischemia-reperfusion injury in mice[J]. ***BMC neuroscience***, 2022, 23(1): 1-7.
- Li C, Zhou G, Yang M, et al. Laser Speckle Flowmetry for the Prognostic Estimation Study of Permanent Focal Ischemia in Mice[J]. ***BioMed Research International***, 2022, 2022.
- Zhou Y, Huang D, Cai Y, et al. lncRNA DHFRL1- 4 knockdown attenuates cerebral ischemia/reperfusion injury by upregulating the levels of angiogenesis- related genes[J]. ***International Journal of Molecular Medicine***, 2022, 50(2): 1-10.
- Fang X, Tang C, Zhang H, et al. Longitudinal characterization of cerebral hemodynamics in the TgF344-AD rat model of Alzheimer's disease[J]. ***GeroScience***, 2023: 1-20.
- Wang F, Wang Q, Wang L, et al. Low-intensity focused ultrasound stimulation ameliorates working memory dysfunctions in vascular dementia rats via improving neuronal environment[J]. ***Frontiers in Aging Neuroscience***, 2022, 14.
- Li Y, Liu Z, Song Y, et al. M2 microglia-derived extracellular vesicles promote white matter repair and functional recovery via miR-23a-5p after cerebral ischemia in mice[J]. ***Theranostics***, 2022, 12(7): 3553.
- Wang Y, Wang J, Zhang Q, et al. Neural mechanism underlying task-specific enhancement of motor learning by concurrent transcranial direct current stimulation[J]. ***Neuroscience Bulletin***, 2023, 39(1): 69-82.
- Luan P, Xu J, Ding X, et al. Neuroprotective effect of salvianolate on cerebral ischaemia-reperfusion injury in rats by inhibiting the caspase-3 signal pathway[J]. ***European Journal of Pharmacology***, 2020, 872: 172944.
- Pan L, Tang W, Wang K, et al. Novel Caspase-1 inhibitor CZL80 improves neurological function in mice after progressive ischemic stroke within a long therapeutic time-window[J]. ***Acta***

Pharmacologica Sinica, 2022, 43(11): 2817-2827.

- Jiao-Yan Y, Qing-Qing L, Xi L, et al. Oxymatrine improves blood-brain barrier integrity after cerebral ischemia-reperfusion injury by downregulating CAV1 and MMP9 expression[J]. *Phytomedicine*, 2021, 84: 153505.
- Xiao T, Yang L, Chen P, et al. Para- hydroxybenzaldehyde against transient focal cerebral ischemia in rats via mitochondrial preservation[J]. *Experimental and Therapeutic Medicine*, 2022, 24(6): 1-12.
- Xiao T, Yang L, Chen P, et al. Para- hydroxybenzaldehyde against transient focal cerebral ischemia in rats via mitochondrial preservation[J]. *Experimental and Therapeutic Medicine*, 2022, 24(6): 1-12.
- Long C, Liu M, Tian H, et al. Potential role of platelet-activating c-type lectin-like proteins in viper envenomation induced thrombotic microangiopathy symptom[J]. *Toxins*, 2020, 12(12): 749.
- Jin Y, Shi P, Wang Y, et al. Precise control of embolic stroke with magnetized red blood cells in mice[J]. *Communications Biology*, 2022, 5(1): 136.
- Clemons G A, Silva A C, Acosta C H, et al. Protein arginine methyltransferase 4 modulates nitric oxide synthase uncoupling and cerebral blood flow in Alzheimer's disease[J]. *Journal of Cellular Physiology*, 2022.
- Guo Y Z, Ma Y M, Zhang X P, et al. Region-specific changes in aquaporin 4 induced by hyperglycemia underlie the differences in cell swelling in the cortex and striatum after cerebral ischemia-reperfusion[J]. *Neuroscience Letters*, 2021, 754: 135885.
- He Q, Ma Y, Fang C, et al. Remote ischemic conditioning attenuates blood-brain barrier disruption after recombinant tissue plasminogen activator treatment via reducing PDGF-CC[J]. *Pharmacological Research*, 2023, 187: 106641.
- Wang L, Wang Y, Chen Y J, et al. Rhynchophylline ameliorates cerebral ischemia by improving the synaptic plasticity in a middle cerebral artery occlusion induced stroke model[J]. *European Journal of Pharmacology*, 2023, 940: 175390.
- Song Z, Fang J, Wang Z, et al. Rod-Shaped Polymeric Nanoparticles Intervene Neutrophils for Efficient Ischemic Stroke Therapy[J]. *Advanced Functional Materials*, 2023: 2212326.
- Cai N, Xu B, Li X, et al. Roflumilast, a cyclic nucleotide phosphodiesterase 4 inhibitor, protects against cerebrovascular endothelial injury following cerebral ischemia/reperfusion by activating the Notch1/Hes1 pathway[J]. *European journal of pharmacology*, 2022, 926: 175027.
- Tian H, Liu M, Li J, et al. Snake c-type lectins potentially contribute to the prey immobilization in Protobothrops mucrosquamatus and Trimeresurus stejnegeri venoms[J]. *Toxins*, 2020, 12(2): 105.
- Ma Y, Chen Z, He Q, et al. Spatiotemporal lipidomics reveals key features of brain lipid dynamic changes after cerebral ischemia and reperfusion therapy[J]. *Pharmacological Research*, 2022, 185: 106482.
- Zang J, Tang X, Su X, et al. Systematic Analysis of RNA Expression Profiles in Different Ischemic Cortices in MCAO Mice[J]. *Cellular and Molecular Neurobiology*, 2023, 43(2): 859-878.
- Song M M, Chen J, Ye S M, et al. Targeted delivery of edaravone by liposomes for the treatment of ischemic stroke[J]. *Nanomedicine*, 2022, 17(11): 741-752.

- Wang C, Yang X, Jiang Y, et al. Targeted delivery of fat extract by platelet membrane-cloaked nanocarriers for the treatment of ischemic stroke[J]. *Journal of Nanobiotechnology*, 2022, 20(1): 1-20.
- Deng L D, Qi L, Suo Q, et al. Transcranial focused ultrasound stimulation reduces vasogenic edema after middle cerebral artery occlusion in mice[J]. *Neural Regeneration Research*, 2022, 17(9): 2058.
- Liu X, Du Y, Liu J, et al. Ferrostatin-1 alleviates cerebral ischemia/reperfusion injury through activation of the AKT/GSK3β signaling pathway[J]. B*rain Research Bulletin*, 2023, 193: 146-157.
- Li H, Li X, Xu Z, et al. Unbalanced regulation of Sec22b and Ykt6 blocks autophagosome axonal retrograde flux in neuronal ischemia–reperfusion injury[J]. *Journal of Neuroscience*, 2022, 42(28): 5641-5654.

Traumatic Brain Injury (TBI)

- Baucom MR, Price AD, England L, Schuster RM, Pritts TA, Goodman MD. Murine Traumatic Brain Injury Model Comparison: Closed Head Injury Versus Controlled Cortical Impact. *J Surg Res*. 2024 Apr;296:230-238.
- Zhang W, Yu X, Lin Y, Wu C, Zhu R, Jiang X, Tao J, Chen Z, He J, Zhang X, Xu J, Zhang M. Acetyl-CoA synthetase 2 alleviates brain injury following cardiac arrest by promoting autophagy in brain microvascular endothelial cells. *Cell Mol Life Sci*. 2025 Apr 17;82(1):160.
- Ren J, Yang T, Liu H, et al. Metabotropic glutamate receptor 5 promotes blood-brain barrier recovery after traumatic brain injury[J]. *Experimental Neurology*, 2024, 374: 114691.
- Yi H, Wu S, Wang X, et al. Multimodal evaluation of the effects of low-intensity ultrasound on cerebral blood flow after traumatic brain injury in mice[J]. *BMC neuroscience*, 2024, 25(1): 8.
- Zhang S, Chen Y, Chen Q, et al. Assessment of cerebrovascular alterations induced by inflammatory response and oxidative-nitrative stress after traumatic intracranial hypertension and a potential mitigation strategy. *Sci Rep*. 2024 Jun 24;14(1):14535.
- Gudenschwager Basso E K, Ju J, Soliman E, et al. Immunoregulatory and neutrophil-like monocyte subsets with distinct single-cell transcriptomic signatures emerge following brain injury[J]. *Journal of Neuroinflammation*, 2024, 21(1): 41.
- Baucom M R, Price A D, England L, et al. Murine traumatic brain injury model comparison: closed head injury versus controlled cortical impact[J]. *Journal of surgical research*, 2024, 296: 230-238.
- Zhang S, Chen Q, Xian L, et al. Acute subdural haematoma exacerbates cerebral blood flow disorder and promotes the development of intraoperative brain bulge in patients with severe traumatic brain injury[J]. *European Journal of Medical Research*, 2023, 28(1): 138.
- Zheng S, Mu S, Li J, et al. Cerebral venous hemodynamic responses in a mouse model of traumatic brain injury[J]. *Brain Research*, 2022, 1792: 148014.

- Bragin D E, Bragina O A, Trofimov A O, et al. Involvement of Endothelial Nitric Oxide Synthase in Cerebral Microcirculation and Oxygenation in Traumatic Brain Injury[M]//Oxygen Transport to Tissue XLIII. Cham: Springer International Publishing, 2022: 3-7.
- Wu Y, Wu H, Zeng J, et al. Mild traumatic brain injury induces microvascular injury and accelerates Alzheimer-like pathogenesis in mice[J]. ***Acta neuropathologica communications***, 2021, 9(1): 1-14.
- Zaidi S K, Ahmed F, Alkhatabi H, et al. Nebulization of Low-Dose S-Nitrosoglutathione in Diabetic Stroke Enhances Benefits of Reperfusion and Prevents Post-Thrombolysis Hemorrhage[J]. ***Biomolecules***, 2021, 11(11): 1587.

Spinal cord injury

- Roy D, Dion E, Sepeda JA, et al. α2δ1-mediated maladaptive sensory plasticity disrupts adipose tissue homeostasis following spinal cord injury. ***Cell Rep Med***. 2024 May 21;5(5):101525.

Angiogenesis

- Chen Z, Jia M, Liu Y, Zhou H, Wang X, Wu M. Injectable Composite Hydrogel Stents for Bone Defect Management with Enhanced Osteogenesis and Angiogenesis. ***Int J Nanomedicine***. 2025 Apr 12;20:4589-4606.
- Ge C, Meng D, Peng Y, et al. The activation of the HIF-1α-VEGFA-Notch1 signaling pathway by Hydroxysafflor yellow A promotes angiogenesis and reduces myocardial ischemia-reperfusion injury. ***Int Immunopharmacol.*** 2024 Dec 5;142(Pt A):113097.
- Wang P, Di X, Li F, Rong Z, Lian W, Li Z, Chen T, Wang W, Zhong Q, Sun G, Ni L, Liu C. Platelet Membrane-Coated HGF-PLGA Nanoparticles Promote Therapeutic Angiogenesis and Tissue Perfusion Recovery in Ischemic Hindlimbs. ***ACS Appl Bio Mater***. 2025 Jan 20;8(1):399-409.
- Wang P, Rong Z, Li F, Ma S, Qiu H, Lian W, Li Z, Chen T, Zhong Q, Wang W, Sun G, Liu C, Ni L, Di X. Optimal injection sites for therapeutic angiogenesis: HGF-mediated regulation of HIF-1α via MAPK/PI3K pathways in hypoxic endothelial cells. ***Tissue Cell***. 2025 Aug;95:102871.
- Zhang B, Jin Z, Luo P, et al. Ischemia-reperfusion injury after spinal cord decompressive surgery-An in vivo rat model. ***Animal Model Exp Med***. 2024 Sep 3.
- Wu Y, Tang X, Lee S, et al. Endothelial PPARδ facilitates the post-ischemic vascular repair through interaction with HIF1α[J]. ***Theranostics***, 2022, 12(4): 1855.
- Wu Y, Lin X, Hong H, et al. Endothelium-targeted delivery of PPARδ by adeno-associated virus

serotype 1 ameliorates vascular injury induced by hindlimb ischemia in obese mice[J]. *Biomedicine & Pharmacotherapy*, 2022, 151: 113172.

Wound healing

- Lei H, Yu X, Fan D. Nanocomposite Hydrogel for Real-Time Wound Status Monitoring and Comprehensive Treatment. Adv Sci (Weinh). 2024 Nov;11(42):e2405924.
- Xie J, Liu X, Wu B, et al. Bone transport induces the release of factors with multi-tissue regenerative potential for diabetic wound healing in rats and patients. *Cell Rep Med*. 2024 Jun 18;5(6):101588.
- Yuan Q, Zhao B, Cao Y, et al. BCR-Associated Protein 31 Regulates Macrophages Polarization and Wound Healing Function via Early Growth Response 2/C/EBPβ and IL-4Rα/C/EBPβ Pathways[J]. *The Journal of Immunology*, 2022, 209(6): 1059-1070.
- Lei H, Fan D. A Combination Therapy Using Electrical Stimulation and Adaptive, Conductive Hydrogels Loaded with Self-Assembled Nanogels Incorporating Short Interfering RNA Promotes the Repair of Diabetic Chronic Wounds[J]. *Advanced Science*, 2022, 9(30): 2201425.

Flap survival

- Liu D, Fang F, Zhuang Y. Impact of Diameter of Perforator in Pedicle and Different Managements of Intermediate Non-Pedicle Perforator on Flap Survival in Rats. *J Invest Surg*. 2022 Sep;35(9):1686-1693.
- Fang F, Liu M, Xiao J, et al. Arterial supercharging is more beneficial to flap survival due to quadruple dilation of venules[J]. *Journal of Surgical Research*, 2020, 247: 490-498.
- Wang H, Fang F, Chen S, et al. Dual efficacy of Fasudil at improvement of survival and reinnervation of flap through RhoA/ROCK/PI3K/Akt pathway[J]. *International Wound Journal,* 2022, 19(8): 2000-2011.
- Liu D, Fang F, Zhuang Y. Impact of Diameter of Perforator in Pedicle and Different Managements of Intermediate Non-Pedicle Perforator on Flap Survival in Rats[J]. *Journal of Investigative Surgery*, 2022, 35(9): 1686-1693.
- Tang X , Ren J , Wei X ,et al.Exploiting synergistic effect of CO/NO gases for soft tissue transplantation using a hydrogel patch[J].*Nature Communications*, 2023, 14(1).DOI:10.1038/s41467-023-37959-y.

Thrombosis

- Zhao Y, He J, Liu Y, et al. Ultrasound-actuated platelet mimetic nanomotors enable targeted piezocatalytic ROS storm for precision thrombolysis. ***J Nanobiotechnology***. 2025;23(1):585.
- Huang X, Tang X, He Q, et al. High-fat diet increases circulating palmitic acid produced by gut Bacteroides thetaiotaomicron to promote thrombosis. ***Cell Rep Med***. 2025;6(8):102260.
- Jiang, H., Chen, J., Zhou, Y., Zhang, W., Li, H., Ma, W., Liu, L., Wu, Y., Wu, C., Wu, D., Ji, X., & Zhou, C. (2025). The FN1-targeted delivery of low-molecular-weight heparin to venous clots revolutionizes thrombosis treatment in CVT. ***Biomaterials.*** *326*, 123653.
- Chen Q, Deng C, Huang X, Cao K, Chen H, Chen Y, Mehwish Khalid, Xu Q, Lu Q, Wang Z, Wang A, Lai R. A novel polypeptide from stony coral Goniopora columna inhibits thrombosis by interfering with the contact-kinin pathway. ***Arch Toxicol***. 2025 Jun 4.
- Liu C, Wang J, Wang Z, Fan X, Pan J, Guo X, Zhou S. Discoidal nanoparticles exploit thrombus-induced shear gradients to enhance site-specific thrombolysis in stroke. ***Acta Biomater***. 2025 Jul 1;201:471-484.
- Li L, Tian H, Wu L, Chen N, Zhang Q, Chen L, Zhu K, Lin L, Chen X, He L, Liu M, Zhao W, Su Y, Yan J, Zhao X, Zhou X, Zhou Z, Zeng W. Artificial biomarker-based feedback-regulated personalized and precise thrombolysis with lower hemorrhagic risk. ***Sci Adv***. 2025 Jan 17;11(3):eadr0377.
- Hao Z, Yan M, Tuerhong R, , et al. Pharmacological inhibition of Septins with Forchlorfenuron attenuates thrombus formation in experimental thrombotic mice models with modulating multiple signaling pathways in platelets. ***Adv Res.*** 2024 Aug 5:S2090-1232(24)00328-X.
- Yang J, Li Z, Deng X, et al. Kallikrein inhibitor derived from immunoglobulin heavy chain junction region possesses anti-thromboinflammation potential. ***Pharmacol Res***. 2024 Nov;209:107460.
- Chen J, Chen C, Wang L, et al. Identification of S100A8/A9 involved in thromboangiitis obliterans development using tandem mass tags-labeled quantitative proteomics analysis. ***Cell Signal***. 2024 Aug;120:111199.
- Heath SP, Hermanns VC, Coucha M, Abdelsaid M. SARS-CoV-2 Spike Protein Exacerbates Thromboembolic Cerebrovascular Complications in Humanized ACE2 Mouse Model. ***Transl Stroke Res***. 2024 Oct 2.
- Chu Y, Zhang X, Zuo L, Wang X, Shi Y, Liu L, Zhou L, Kang J, Li B, Cheng W, Du S, Sun Z. Establishment of a multi-strategy platform for quality control and quality markers screen of Mailuoshutong pill. [J]. ***Journal of Pharmaceutical and Biomedical Analysis.*** 2024 Jun 15;243:116070.
- Shen C, Liu M, Xu R, et al. The 14-3-3ζ–c-Src–integrin-β3 complex is vital for platelet activation[J]. ***Blood***, 2020, 136(8): 974-988.
- Song J, Kang X, Wang L, et al. Near-infrared-II photoacoustic imaging and photo-triggered synergistic treatment of thrombosis via fibrin-specific homopolymer nanoparticles[J]. ***Nature Communications***, 2023, 14(1): 6881.
- Wei X, Zhang B, Wei F, et al. Gegen Qinlian pills alleviate carrageenan-induced thrombosis in mice model by regulating the HMGB1/NF-κB/NLRP3 signaling[J]. ***Phytomedicine***, 2022, 100: 154083.

- Huang M, Zhu Y, Xin G, et al. Multi-enzyme mimetic iridium nanozymes-based thrombus microenvironment-modulated nanoplatform for enhanced thrombolytic therapy[J]. ***Chemical Engineering Journal***, 2023: 144156.

Cardiopulmonary resuscitation (CPR) or cardiac arrest (CA)

- Zhang K, Zhang Y, Li Z, Chen J, Chang Y, Li Y, Zeng S, Pan S, Pan S, Huang K. Potentiating microglial efferocytosis by MFG-E8 improves survival and neurological outcome after successful cardiopulmonary resuscitation in mice. ***Brain Pathol***. 2024 Dec 24:e13327.

Limb ischemia

- Wei, Y., Green, A., Guragain, B., Bo, B., Jiang, Y., Zhu, H., Zhang, J., & Ye, L. (2025). Human induced pluripotent stem cell-derived nanovesicles for the treatment of ischemic limb disease. ***Acta biomaterialia***, S1742-7061(25)00644-0.
- Wang C L, Wang Y, Jiang Q L, et al. DNase I and Sivelestat Ameliorate Experimental Hindlimb Ischemia-Reperfusion Injury by Eliminating Neutrophil Extracellular Traps[J]. ***Journal of Inflammation Research***, 2023: 707-721.
- Pan Y, Lin T, Shao L, et al. Lignin/Puerarin Nanoparticle-Incorporated Hydrogel Improves Angiogenesis through Puerarin-Induced Autophagy Activation[J]. ***International Journal of Nanomedicine***, 2023: 5095-5117.
- Xu J, Xu X, Ling Y, et al. Vincamine as an agonist of G-protein-coupled receptor 40 effectively ameliorates diabetic peripheral neuropathy in mice[J]. ***Acta Pharmacologica Sinica***, 2023: 1-16.
- Wong C W T, Sawhney A, Wu Y, et al. Sourcing of human peripheral blood-derived myeloid angiogenic cells under xeno-free conditions for the treatment of critical limb ischemia[J]. ***Stem Cell Research & Therapy***, 2022, 13(1): 1-19.
- Yang Y, Li Y, Pan Q, et al. Tibial cortex transverse transport accelerates wound healing via enhanced angiogenesis and immunomodulation[J]. ***Bone & Joint Research***, 2022, 11(4): 189-199.
- Wang C L, Wang Y, Jiang Q L, et al. DNase I and Sivelestat Ameliorate Experimental Hindlimb Ischemia-Reperfusion Injury by Eliminating Neutrophil Extracellular Traps[J]. ***Journal of Inflammation Research***, 2023: 707-721.

Diabetes

- Lei H, Fan D. A Combination Therapy Using Electrical Stimulation and Adaptive, Conductive

Hydrogels Loaded with Self - Assembled Nanogels Incorporating Short Interfering RNA Promotes the Repair of Diabetic Chronic Wounds[J]. ***Advanced Science***, 2022, 9(30): 2201425.

- Xie J, Liu X, Wu B, et al. Bone transport induces the release of factors with multi-tissue regenerative potential for diabetic wound healing in rats and patients. ***Cell Rep Med***. 2024 Jun 18;5(6):101588.
- Zhu X, Chen Y, Xu X, et al. SP6616 as a Kv2. 1 inhibitor efficiently ameliorates peripheral neuropathy in diabetic mice[J]. ***EBioMedicine***, 2020, 61: 103061.
- Xu J, Xu X, Ling Y, et al. Vincamine as an agonist of G-protein-coupled receptor 40 effectively ameliorates diabetic peripheral neuropathy in mice[J]. ***Acta Pharmacologica Sinica***, 2023: 1-16.
- Xu JW, Ma L, Xiang Y, Dai MQ, Li QH, Jin XY, Ruan Y, Li Y, Wang JY, Shen X. Glabridin as a selective Kv2.1 inhibitor ameliorates DPN pathology by disrupting the Aβ/Kv2.1/JNK/NF-κB/NLRP3/p-Tau pathway. ***Acta Pharmacol Sin***. 2025 Mar 20.
- Zhan M, Liu X, Xia X, et al. Promotion of neuroinflammation by the glymphatic system: a new insight into ethanol extracts from Alisma orientale in alleviating obesity-associated cognitive impairment[J]. ***Phytomedicine***, 2024, 122: 155147.
- Martín-Aragón Baudel M, Flores-Tamez V A, Hong J, et al. Spatiotemporal control of vascular Cav1. 2 by α1c S1928 phosphorylation[J]. ***Circulation Research***, 2022, 131(12): 1018-1033.
- Yang J, Wei Y, Zhao T, et al. Magnolol effectively ameliorates diabetic peripheral neuropathy in mice[J]. ***Phytomedicine***, 2022, 107: 154434.
- Li X, Yuan D, Zhang P, Luo C, Xie X, Zhang Y, Wei Z, Wang M, Cai Y, Zeng Y, Lai L, Che D, Ling H, Shi S, Zhang HF, Wang F, Li F. A neural-mast cell axis regulates skin microcirculation in diabetes. ***Diabetes***. 2024 Jun 4:db230862.
- Wei Y, Huang Y, Huang R, Ruan Y, Feng T, Zhou F, Zhang W, Lu J, Xie S, Yao Y, Wang J, Ji S, Shen X. Antihypertensive drug amlodipine besylate shows potential in alleviating diabetic peripheral neuropathy. ***Diabetes***. 2025 Feb 28:db240403.
- Xu X, Wang W, Wang Z, et al. DW14006 as a direct AMPKα activator ameliorates diabetic peripheral neuropathy in mice[J]. ***Diabetes***, 2020, 69(9): 1974-1988.
- Tian Y Q, Li J H, Li Y C, et al. Overexpression of GRK6 alleviates chronic visceral hypersensitivity through downregulation of P2Y6 receptors in anterior cingulate cortex of rats with prenatal maternal stress[J]. ***CNS Neuroscience & Therapeutics***, 2022, 28(6): 851-861.
- Zang X, Zhang L, Ma J, et al. Mechanistic Insights into Shenzhuo Formula for Diabetic Retinopathy: Integrating UPLC-Q-TOF-MS/MS, Network Pharmacology, Single-Cell RNA Sequencing Data, and Experimental Validation. ***Drug Des Devel Ther.*** 2025;19:6183-6205.
- Yen S, Wang Y, Liao LD. et al. Investigating cerebral neurovascular responses to hyperglycemia in a rat model of type 2 diabetes using multimodal assessment techniques. ***iScience***. 2024 May 24;27(6):110108.
- Wang M, Lai Z, Zhang H, et al. Diabetes Mellitus Inhibits Hair Follicle Regeneration by Inducing Macrophage Reprogramming-Mediated Pyroptosis. ***J Inflamm Res***. 2024 Sep 30;17:6781-6796.

- Wang S, Lv W, Zhang H, et al. Aging exacerbates impairments of cerebral blood flow autoregulation and cognition in diabetic rats[J]. ***Geroscience***, 2020, 42: 1387-1410.

Alzheimer's disease & Vascular Dementia

- Korte N, Barkaway A, Wells J, et al. Inhibiting Ca^{2+} channels in Alzheimer's disease model mice relaxes pericytes, improves cerebral blood flow and reduces immune cell stalling and hypoxia. ***Nat Neurosci***. 2024 Nov;27(11):2086-2100. doi: 10.1038/s41593-024-01753-w. Epub 2024 Sep 18.
- Degan S, Feng Y, Colton C, Schmidt S, Peterchev AV, Turner DA. Cerebral Blood Flow Responses to Extracranial Alternating Current Brain Stimulation in CVN Mouse Model of Alzheimer's Disease: A Pilot Study Determining Optimal Dose. ***Neuromodulation***. Published online July 18, 2025.
- Shan X, Lu Y, Luo Z, Zhao X, Pang M, Yin H, Guo X, Zhou H, Zhang J, Huang J, Shi Y, Lou J, Luo L, You J. A Long-Acting Lyotropic Liquid Crystalline Implant Promotes the Drainage of Macromolecules by Brain-Related Lymphatic System in Treating Aged Alzheimer's Disease. ***ACS Nano***. 2024 Apr 2;18(13):9688-9703.
- Yang C, He Y, Ren S, et al. Hydrogen Attenuates Cognitive Impairment in Rat Models of Vascular Dementia by Inhibiting Oxidative Stress and NLRP3 Inflammasome Activation. ***Adv Healthc Mater***. 2024 May 21:e2400400.
- Liu X, Zhang H, Xiang J, et al. Jiawei Xionggui Decoction promotes meningeal lymphatic vessels clearance of β-amyloid by inhibiting arachidonic acid pathway. ***Phytomedicine***. 2024 Sep 12;135:156041.
- Jin Feiyang, Tian Zhengming, Guan Yuying, Li Yuning, Gu Yakun, Guo Mengyuan, Shao Qianqian, Liu Yingxia, Guo Xiuhai, Quan Zhenzhen, Liu Jia, Ji Xunming. ***Neural Regeneration Research.*** January 29, 2025.
- Fang X, Border JJ, Zhang H, Challagundla L, Kaur J, Hwang SH, Hammock BD, Fan F, Roman RJ. A Soluble Epoxide Hydrolase Inhibitor Improves Cerebrovascular Dysfunction, Neuroinflammation, Amyloid Burden, and Cognitive Impairments in the hAPP/PS1 TgF344-AD Rat Model of Alzheimer's Disease. ***Int J Mol Sci***. 2025 Mar 8;26(6):2433.
- Wang F, Ren J, Cai Q, Liang R, Wang L, Yang Q, Tian Y, Zheng C, Yang J, Ming D. Theta-gamma phase-amplitude coupling as a promising neurophysiological biomarker for evaluating the efficacy of low-intensity focused ultrasound stimulation on vascular dementia treatment. ***Exp Neurol***. 2025 Jul;389:115237.
- Ma Y, Sun W, Bai J, et al. Targeting blood brain barrier—Remote ischemic conditioning alleviates cognitive impairment in female APP/PS1 rats[J]. ***CNS Neuroscience & Therapeutics***, 2024, 30(2): e14613.
- Wang N Y, Li J N, Liu W L, et al. Ferulic acid ameliorates Alzheimer's disease-like pathology and

repairs cognitive decline by preventing capillary hypofunction in APP/PS1 mice[J]. *Neurotherapeutics*, 2021, 18: 1064-1080.

- Fang X, Tang C, Zhang H, et al. Longitudinal characterization of cerebral hemodynamics in the TgF344-AD rat model of Alzheimer's disease[J]. *GeroScience*, 2023: 1-20.
- Zhu J, Ji X, Shi R, et al. Hyperglycemia Aggravates the Cerebral Ischemia Injury via Protein O-GlcNAcylation[J]. *Journal of Alzheimer's Disease*, 2023 (Preprint): 1-18.
- Wu Y, Zeng J, Pluimer B, et al. Microvascular Injury in Mild Traumatic Brain Injury Accelerates Alzheimer-like Pathogenesis in Mice[J]. *bioRxiv*, 2020: 2020.04. 12.036392.
- Wu Y, Wu H, Zeng J, et al. Mild traumatic brain injury induces microvascular injury and accelerates Alzheimer-like pathogenesis in mice[J]. *Acta neuropathologica communications*, 2021, 9(1): 1-14.
- Clemons G A, Silva A C, Acosta C H, et al. Protein arginine methyltransferase 4 modulates nitric oxide synthase uncoupling and cerebral blood flow in Alzheimer's disease[J]. *Journal of Cellular Physiology*, 2022.

Arterial sympathectomy

- Phan TX, Sahibzada N, Freichel M, et al. Arteries are finely tuned thermosensors regulating myogenic tone and blood flow. *Proc Natl Acad Sci U S A*. 2025 May 27;122(21):e2503186122.
- Xie Y, Fang F, Lin P, et al. Segmental branches emanating from saphenous nerve morphing into sympathetic trunks for innervation of saphenous artery and its clinical implication for arterial sympathectomy[J]. *International Wound Journal*, 2022, 19(2): 294-304.
- Zaidi S K, Hoda M N, Tabrez S, et al. Pharmacological Inhibition of Class III Alcohol Dehydrogenase 5: Turning Remote Ischemic Conditioning Effective in a Diabetic Stroke Model[J]. *Antioxidants*, 2022, 11(10): 2051.

Atherosclerosis

- Chu Y, Wang M, Wang X, et al. Identifying quality markers of Mailuoshutong pill against thromboangiitis obliterans based on chinmedomics strategy[J]. *Phytomedicine*, 2022, 104: 154313.
- Wang X, Wang M, Chu Y, et al. Integrated pharmacokinetics and pharmacometabolomics to reveal the synergistic mechanism of a multicomponent Chinese patent medicine, Mailuo Shutong pills against thromboangiitis obliterans[J]. *Phytomedicine*, 2023, 112: 154709.

Endothelial function

- Ho Y J, Hsu H C, Wu B H, et al. Preventing ischemia-reperfusion injury by acousto-mechanical local oxygen delivery[J]. ***Journal of Controlled Release***, 2023, 356: 481-492.
- 李帅，邓冬，谢抗，等. 高蛋氨酸饮食诱导内皮功能障碍致多器官血流灌注减少小鼠模型评价[J]. ***中国中西医结合杂志***, 43(5): 597-604.

Irritable bowel syndrome (IBS)

- Liu S, Huang Q, Huang Q, et al. The protective effects of electroacupuncture on intestinal barrier lesions in IBS and UC model[J]. ***Scientific Reports***, 2023, 13(1): 7276.
- Hu C, Yan C, Wu Y, et al. Low FODMAP Diet Relieves Visceral Hypersensitivity and Is Associated with Changes in Colonic Microcirculation in Water Avoidance Mice Model[J]. ***Nutrients***, 2023, 15(5): 1155.
- Tian Y Q, Li J H, Li Y C, et al. Overexpression of GRK6 alleviates chronic visceral hypersensitivity through downregulation of P2Y6 receptors in anterior cingulate cortex of rats with prenatal maternal stress[J]. ***CNS Neuroscience & Therapeutics***, 2022, 28(6): 851-861.

Excitotoxicity

- Lu CW, Lin TY, Chiu KM, et al. Gypenoside XVII Reduces Synaptic Glutamate Release and Protects against Excitotoxic Injury in Rats. ***Biomolecules.*** 2024 May 16;14(5):589.

Neuroinflammation

- Li S, Wang Y, Sun X, Lu L, Yong Y, Kong X, Song J. Suppressing neuroinflammation by Shenfu injection against ischemic stroke in mice via inhibiting RAGE-PI3K-Akt pathway. ***Phytomedicine***. 2025 Aug;144:156940.
- Cui Y, Hu Z, Wang L, Zhu B, Deng L, Zhang H, Wang X. DL-3-n-Butylphthalide Ameliorates Post-stroke Emotional Disorders by Suppressing Neuroinflammation and PANoptosis. ***Neurochem Res.*** 2024 Aug;49(8):2215-2227.
- Chen Y, Xing Z, Chen J, et al. SIRT1 activation by Ligustrazine ameliorates migraine via the paracrine interaction of microglia and neurons. ***Phytomedicine***. 2024 Sep 17;135:156069.
- Wang X, Mao W, Du L, Wang F, Pang Y, Li Y, Xu G, Cui G. MK5 Regulates Microglial Activation and Neuroinflammation in Experimental Stroke Models. ***CNS Neurosci Ther***. 2025

Apr;31(4):e70395.

- Zhang Y, Zhang S, Yang L, Zhang Y, Cheng Y, Jia P, Lv Y, Wang K, Fan P, Zhang P, Wei H. Lactate modulates microglial inflammatory responses through HIF-1α-mediated CCL7 signaling after cerebral ischemia in mice. ***Int Immunopharmacol***. 2025 Jan 27;146:113801.
- Liang Y, Fu W, Tang Y, et al. Selective Activation of G Protein-Coupled Estrogen Receptor 1 (GPER1) Reduces ER Stress and Pyroptosis via AMPK Signaling Pathway in Experimental Subarachnoid Hemorrhage. ***Mol Neurobiol***. 2024 Jun 27.
- Kazeem A, Ge C, Tajerian M. Peripheral inflammation is accompanied by cerebral hypoperfusion in mice. ***Front Pain Res*** (Lausanne). 2025 Apr 8;6:1492773.

Noninvasive blood-glucose

- Song L, Han Z, Lau WM, et al. Optimization of mid-infrared noninvasive blood-glucose prediction model by support vector regression coupled with different spectral features. ***Spectrochim Acta A Mol Biomol Spectrosc***. 2024 Jun 26;321:124738.
- Li S, Miao XY, Zhang JS, et al. Far-infrared therapy promotes exercise capacity and glucose metabolism in mice by modulating microbiota homeostasis and activating AMPK. ***Sci Rep.*** 2024 Jul 15;14(1):16314.

Subarachnoid hemorrhage

- Deng HJ, Xu YH, Wu K, Li YC, Zhang YJ, Yu HF, Li C, Xu D, Wang F. The sentinel against brain injury post-subarachnoid hemorrhage: efferocytosis of erythrocytes by leptomeningeal lymphatic endothelial cells. ***Theranostics***. 2025 Jan 20;15(6):2487-2509.
- Li Y, Zhu X, Xiong W, et al. Brain-targeted ursolic acid nanoparticles for anti-ferroptosis therapy in subarachnoid hemorrhage. J ***Nanobiotechnology***. 2024 Oct 18;22(1):641.
- Li Y, Zhou L, Deng H, et al. A switch in the pathway of TRPC3-mediated calcium influx into brain pericytes contributes to capillary spasms after subarachnoid hemorrhage. ***Neurotherapeutics***. 2024 Jun 4:e00380.
- Jia G, Yang X, Yu Y, Li Y, Zhang Z, Tang X, Wang Q, Zheng H, Xiao Y, Li S, Wang Y. Quercetin carbon quantum dots: dual-target therapy for intracerebral hemorrhage in mice. ***Mol Brain***. 2025 Mar 3;18(1):17.
- Yang L, Zhang S, Luo Q, Shu H, Xu W, Zhu X, Hu P, Wu Y, Shu L, Liu J, Luo M, Tu W, Liu H, Lv S, Wang L, Zhu X, Zhu W, Yan T. A pH-responsive guanidino-based covalent organic framework nanodrugs for enhanced neuroprotection against subarachnoid hemorrhage by targeting NLRP3 inflammasome. ***Biomaterials***. 2026 Jan;324:123467..

-

Epilepsy

- Lu CW, Lin TY, Pan WJ, Chiu KM, Lee MY, Wang SJ. Cynarin protects against seizures and neuronal death in a rat model of kainic acid-induced seizures. Food Funct. 2025 Apr 14;16(8):3048-3063.
- Lin TK, Pai MS, Yeh KC, Hung CF, Wang SJ. Hydrogen inhalation exerts anti-seizure effects by preventing oxidative stress and inflammation in the hippocampus in a rat model of kainic acid-induced seizures. Neurochem Int. 2025 Feb;183:105925.

Sepsis

- Xiong W, Chai J, Wu J, et al. Cathelicidin-HG Alleviates Sepsis-Induced Platelet Dysfunction by Inhibiting GPVI-Mediated Platelet Activation. ***Research*** (Wash D C). 2024 Jun 5;7:0381.
- Li J, Xiong W, Yang J, Liao W, Gao Y, Chai J, Wu J, Liu S, Xu X. Characterization of the first antimicrobial peptide from Sea Seal with potent therapeutic effect in septic mice. ***Biochem Pharmacol***. 2025 Jun;236:116891.
- Li X, Liu S, Xie J, et al. Salvianolic acid B improves the microcirculation in a mouse model of sepsis through a mechanism involving the platelet receptor CD226. ***Br J Pharmacol***. 2024 Oct 23.
- Li L, Sun H, Tan L, Guo H, , et al. Miao sour soup alleviates DSS-induced colitis in mice: modulation of gut microbiota and intestinal barrier function. ***Food Funct***. 2024 Aug 12;15(16):8370-8385.
- Bi J, Wang Y, Wang K, et al. FGF1 attenuates sepsis-induced coagulation dysfunction and hepatic injury via IL6/STAT3 pathway inhibition. ***Biochim Biophys Acta Mol Basis Dis***. 2024 Jun 11;1870(7):167281.
- Sun Y, Ye F, Li D, et al. Fibroblast growth factor 2 (FGF2) ameliorates the coagulation abnormalities in sepsis[J]. ***Toxicology and Applied Pharmacology***, 2023: 116364.

Liver

Yu H, Zhang Y, Shuai L, et al. Low hepatic artery blood flow mediates NET extravasation through the regulation of PIEZO1/SRC signaling to induce biliary complications after liver transplantation.

Theranostics. 2024 Oct 14;14(17):6783-6797.

Vasospasm

- Ma Q, Liu D, Gong R, et al. Mechanically induced vasospasm-evaluation of spasmolytic efficacy of 10 pharmaceutical agents using laser speckle contrast imaging[J]. ***Lasers in Surgery and Medicine***, 2021, 53(5): 684-694.

Hernia surgery

- Fehér D. Szövetpótlásra alkalmas poli (vinil alkohol) sérvháló in vitro és in vivo biokompatibilitási vizsgálatai[D]. , 2021.

Intestinal ischemia reperfusion & Intestinal inflammation

- Wei W, Lattau SSJ, Xin W, et al. Dynamic Brain Lipid Profiles Modulate Microglial Lipid Droplet Accumulation and Inflammation Under Ischemic Conditions in Mice. ***Adv Sci***. 2024 Nov;11(41):e2306863.
- Chen SY, Xu H, Qin Y, et al. Nicotinamide adenine dinucleotide phosphate alleviates intestinal ischemia/reperfusion injury via Nrf2/HO-1 pathway. ***Int Immunopharmacol***. 2024 Oct 28;143(Pt 2):113478.
- Turpin J, Wadolowski S, Tambo W, et al. Exploring Lysophosphatidylcholine as a Biomarker in Ischemic Stroke: The Plasma-Brain Disjunction. ***Int J Mol Sci***. 2024 Oct 3;25(19):10649.
- Cong R, Sun L, Yang J, et al. Protein O-GlcNAcylation alleviates small intestinal injury induced by ischemia-reperfusion and oxygen-glucose deprivation[J]. ***Biomedicine & Pharmacotherapy***, 2021, 138: 111477.
- Zhang J, Yang M, Tang X, et al. Intestinal delivery of ROS-scavenging carbonized polymer dots for full-course treatment of acute and chronic radiation enteritis[J]. ***Applied Materials Today***, 2022, 28: 101544.
- Chu C, Wang X, Yang C, et al. Neutrophil extracellular traps drive intestinal microvascular endothelial ferroptosis by impairing Fundc1-dependent mitophagy[J]. ***Redox Biology***, 2023, 67: 102906.
- Song H, Xiong M, Yu C, et al. Huang-Qi-Jian-Zhong-Tang accelerates healing of indomethacin-induced gastric ulceration in rats via anti-inflammatory and antioxidant mechanisms[J]. ***Journal of Ethnopharmacology***, 2024, 319: 117264.

Tumor

- Wang S, Zhang J, Liu H, et al. The effect of blood velocity in solid tumor on intratumorally accumulation and penetration of nanocarriers and drugs[J]. ***Nano Today***, 2023, 50: 101870.
- Zeng C, Hua S, Zhou J, Zeng T, Chen J, Su L, Jiang A, Zhou M, Tang Z. Oral Microalgae-Based Biosystem to Enhance Irreversible Electroporation Immunotherapy in Hepatocellular Carcinoma. ***Adv Sci (Weinh)***. 2025 Jan 28:e2409381.
- Zhou Y, Li Z, Wang G, Yu H, Zhou Y, Li Y, Chen W, Dai H, He Y, Li L. Understanding the relationship between silicone implants, tumor antigens, and breast cancer risk: An immunological study in rats. ***Int Immunopharmacol***. 2025 Feb 6;147:113991.

Acute pancreatitis

- Chai J, Wu J, Li J, et al. Novel Amphibian Bowman–Birk-Like Inhibitor with Antioxidant and Anticoagulant Effects Ameliorates Pancreatitis Symptoms in Mice[J]. ***Journal of Medicinal Chemistry***, 2023, 66(17): 11869-11880.

Pulmonary Fibrosis

- Liu Q, Bi Y, Song S, et al. Exosomal miR-17-5p from human embryonic stem cells prevents pulmonary fibrosis by targeting thrombospondin-2[J]. ***Stem Cell Research & Therapy***, 2023, 14(1): 234.

Gut-lung

- Chen-Xiao Yan, Kena Sun, Xia Zhu, et al. Oligomeric proanthocyanidins mitigate acute lung injury by inhibiting NETs and inflammation via the gut-lung axis, ***Journal of Functional Foods***, July 2024 106272.
- Krishnan A, Fawad M, Elde S, et al. Preservation of bronchial artery circulation on ex-vivo lung perfusion. ***Sci Rep***. 2025;15(1):23354.
- Pinezich MR, O'Neill JD, Guenthart BA, Kim J, Vila OF, Ma SP, Chen YW, Hozain AE, Krishnan A, Fawad M, Cunningham KM, Wobma HM, Van Hassel J, Snoeck HW, Bacchetta M, Vunjak-Novakovic G. Theranostic methodology for ex vivo donor lung rehabilitation. ***Med***. 2025 Mar 24:100644.

Myocardial Infarction

- Yang Y, Zhu Y, Liu C, et al. Taohong Siwu decoction reduces acute myocardial ischemia–reperfusion injury by promoting autophagy to inhibit pyroptosis[J]. ***Journal of Ethnopharmacology***, 2024, 321: 117515.

Hypertension

- Xu X, Wang Z, He H, Shi W, Zeng W, Zhu Z, Liu X, Wang Z, Zhang Y. Compensatory response of the radial and ulnar arteries after radial artery cannulation in hypertensive patients. ***J Clin Anesth***. 2024 Oct 8;99:111646.
- Zou G, Yu R, Zhao D, et al. Celastrol ameliorates energy metabolism dysfunction of hypertensive rats by dilating vessels to improve hemodynamics[J]. ***Journal of Natural Medicines,*** 2024, 78(1): 191-207

Bone restoration

- Cui Z, Zhou L, Huang J, et al. Dual-model biomanufacturing of porous biomimetic scaffolds with concentrated growth factors and embedded endothelial vascular channels for bone defect regeneration[J]. ***Chemical Engineering Journal***, 2024, 483: 148933.
- X. Cheng, N. Xu, H. Wu, X. Pan, Y. Zhao, X. Chen, Y. Su, Y. Wei, Q. Jiang, J. Fan, Y. Jiang, Q. Yi, P. Gu, X. Gao, L. Han, J. Li, Y. Bai, A Coordinated Cascade Therapy-Based Janus Fibrous Membrane Drives Bone Regeneration through Mediating the Transformation of Energy Metabolism Pathway. ***Adv. Funct. Mater***.

Obesity

- Zhan M, Liu X, Xia X, et al. Promotion of neuroinflammation by the glymphatic system: a new insight into ethanol extracts from Alisma orientale in alleviating obesity-associated cognitive impairment[J]. ***Phytomedicine***, 2024, 122: 155147.

Micro- and nanorobots

- Wang Q, Wang Q, Ning Z, et al. Tracking and navigation of a microswarm under laser speckle

contrast imaging for targeted delivery[J]. ***Science Robotics,*** 2024, 9(87): eadh1978.

- Wang B, Wang Q, Chan K F, et al. tPA-anchored nanorobots for in vivo arterial recanalization at submillimeter-scale segments[J]. **Science Advances**, 2024, 10(5): eadk8970.

Neonatal hypoxic-ischemic encephalopathy

- Fang F, Tang J, Geng J, Fang C, Zhang B. N-acetylserotonin derivative ameliorates hypoxic-ischemic brain damage by promoting PINK1/Parkin-dependent mitophagy to inhibit NLRP3 inflammasome-induced pyroptosis. ***Int Immunopharmacol***. 2025 Apr 24;153:114469.
- Huang Q, Tang J, Xiang Y, Shang X, Li K, Chen L, Hu J, Li H, Pi Y, Yang H, Zhang H, Tan H, Xiyang Y, Jin H, Li X, Chen M, Mao R, Wang Q. 4-Benzyl-2-methyl-1,2,4-thiadiazolidine-3,5-dione rescues oligodendrocytes ferroptosis leading to myelin loss and ameliorates neuronal injury facilitating memory in neonatal hypoxic-ischemic brain damage. ***Exp Neurol***. 2025 Apr 15;390:115262.
- He Y, Tang J, Zhang M, et al. Human placenta derived mesenchymal stem cells transplantation reducing cellular apoptosis in hypoxic-ischemic neonatal rats by down-regulating Semaphorin 3A/Neuropilin-1[J]. ***Neuroscience***, 2024, 536: 36-46.
- Li H, Sun H, Li S, Huang L, Zhang M, Wang S, Liu Q, Ying J, Zhao F, Su X, Mu D, Qu Y. Hydrogen alleviates hypoxic-ischaemic brain damage in neonatal rats by inhibiting injury of brain pericytes. ***J Cell Mol Med***. 2024 Jul;28(13):e18505.
- Zhang TL, Zhang ZW, Lin W, Lin XR, Lin KX, Fang MC, Zhu JH, Guo XL, Lin ZL. Reperfusion after hypoxia-ischemia exacerbates brain injury with compensatory activation of the anti-ferroptosis system: based on a novel rat model. ***Neural Regen Res***. 2023 Oct;18(10):2229-2236.

Peripheral nerve injuries

- Xu JW, Ma L, Xiang Y, Dai MQ, Li QH, Jin XY, Ruan Y, Li Y, Wang JY, Shen X. Glabridin as a selective Kv2.1 inhibitor ameliorates DPN pathology by disrupting the Aβ/Kv2.1/JNK/NF-κB/NLRP3/p-Tau pathway. ***Acta Pharmacol Sin***. 2025 Mar 20.
-
- Bai J, Yu B, Li C, et al. Mesenchymal Stem Cell‐Derived Mitochondria Enhance Extracellular Matrix‐Derived Grafts for the Repair of Nerve Defect[J]. ***Advanced Healthcare Materials***, 2024, 13(3): 2302128.
- Ning Y, Hu J, Li H, et al. Case Report: The application of novel imaging technologies in lower extremity peripheral artery disease: NIR-II imaging, OCTA, and LSFG. ***Front Cardiovasc Med***. 2024 Sep 18;11:1460708.
- Qin YJ, Zhang P, Zhang P, Li J, Yang Q, Sun JL, Liang YZ, Wang LL, Zhang LZ, Han Y. The

impact of endogenous N/OFQ on DPN: Insights into lower limb blood flow regulation in rats. *Neuropeptides*. 2025 Jan;109:102492.

Drug discovery

- Bian X, Yang L, Jiang D, et al. Regulation of cerebral blood flow boosts precise brain targeting of vinpocetine-derived ionizable-lipidoid nanoparticles. *Nat Commun*. 2024 May 11;15(1):3987.
- A. Wang, J. Huang, M. Ji, Y. Huang, L. Chen, Y. Peng, C. Wang, K. shi, C. Zhang, R. Yu, G. Jiang, X. Sun, H. Chen, Q. Song, X. Gao, Membrane Budding Inspired Biomimetic Nanocarrier Delivers Brain-derived Neurotrophic Factor to Improve AD Cognition. *Adv. Funct. Mater*. 2024, 2416572.
- Taledaohan A, Tuohan MM, Jia R, Wang K, Chan L, Jia Y, Wang F, Wang Y. An RGD-Conjugated Prodrug Nanoparticle with Blood-Brain-Barrier Penetrability for Neuroprotection Against Cerebral Ischemia-Reperfusion Injury. *Antioxidants (Basel)*. 2024 Nov 1;13(11):1339.

Glymphatic-lymphatic system

- Sun X, Dias L, Peng C, et al. 40 Hz light flickering facilitates the glymphatic flow via adenosine signaling in mice. *Cell Discov*. 2024 Aug 6;10(1):81.

Skin

- Li CC, Lin CC, Lee CY, et al. Therapeutic Effect of Lecigel, Cetiol®CC, Activonol-6, Activonol-M, 1,3-Propanediol, Soline, and Fucocert® (LCAA-PSF) Treatment on Imiquimod-Induced Psoriasis-like Skin in Mice. *Int J Mol Sci*. 2024 Jul 14;25(14):7720.

COVID-19

- Meier M, Becker S, Levine E, et al. Timing matters in the use of renin-angiotensin system modulators and COVID-related cognitive and cerebrovascular dysfunction. *PLoS One*. 2024 Jul 29;19(7):e0304135.

Traditional Chinese Medicine Therapies (TCM Treatment, Non-Herb)

- Fu JL, Zhang JJ, Wu Y, Wang NH, Qi Q, Yang GH, Ren N, Huang D, Li Y, Zhao LJ, Cui X, Xiao X, Xie HY. Effects of electroacupuncture per-conditioning at Huantiao on motor function recovery in acute cerebral ischemia mice. ***Physiol Behav***. 2025 Apr 1;292:114814.
- Zhang ZH, Gu Y, Huang Z, Liu XY, Xu WT, Zhang XC, Ni GX. Acupuncture regulates astrocyte neurotoxic polarization to protect blood-brain barrier integrity in delayed thrombolysis through mediating ERK1/2/Cx43 axis. ***IBRO Neurosci Rep***. 2025 Apr 11;18:604-618.

Chinese Herbal Medicine

- Luo Q, Li F, Liu X, Yan T, Yang L, Zhu W, Zheng H, Li Y, Tu J, Zhu X. Puerarin mitigates cognitive decline and white matter injury via CD36-Mediated microglial phagocytosis in chronic cerebral hypoperfusion. ***Phytomedicine***. 2025 Mar;138:156396.
- Ren M, Li Y, Yuan J, Wang J, Lu D, Xu Z, Xie Q, Ma R, Chen J, Gong D, Li J, Wang J. The mechanism of Bovis Culus Sativus protecting BBB damage in stroke: Insights from network pharmacology, bioinformatics, and experiments. ***J Ethnopharmacol.*** 2025 Feb 27;342:119390.
- Wang J, Du K, Liu C, et al. Exploring the effects of moxibustion on cognitive function in rats with multiple cerebral infarctions from the perspective of glial vascular unit repairing. ***Front Pharmacol***. 2024 Oct 22;15:1428907.
- Ye Y, Xie X, Bi Y, Liu Q, Weng X, Qiu L, Zhao H, Hei S, Yang L, Wang C, Zhu W, Zeng T. Naoqing formula alleviates acute ischaemic stroke-induced ferroptosis via activating Nrf2/xCT/GPX4 pathway. ***Front Pharmacol***. 2024 Dec 17;15:1525456.
- Li H, Li Y, Wang Y, Sheng Y. Neuronal protective effect of Artemisinin in ischemic stroke: Achieved by blocking lysine demethylase 1A-mediated demethylation of sphingosine kinase 2. ***Brain Res***. 2025 Feb 15;1849:149442.

Carotid artery

- Cheng Y, Chen B, Zhang M, Chen Z, Liu M, Zhang Z, Tang H, Wang D, Lv W, Li B, Dai Y, Shang H. Carotid Endarterectomy Ameliorates Cognitive Impairment in Clinical and Experimental Unilateral Carotid Artery Stenosis. ***J Am Heart Assoc***. 2025 Jan 21;14(2):e038388.

Kidney fibrosis

- Ren Z, Shao F, Chen S, Sun Y, Ding Z, Dong L, Zhang J, Zang Y. Contribution of alterations in

peritubular capillary density and microcirculation to the progression of tubular injury and kidney fibrosis. *J Pathol*. 2025 May;266(1):95-108.