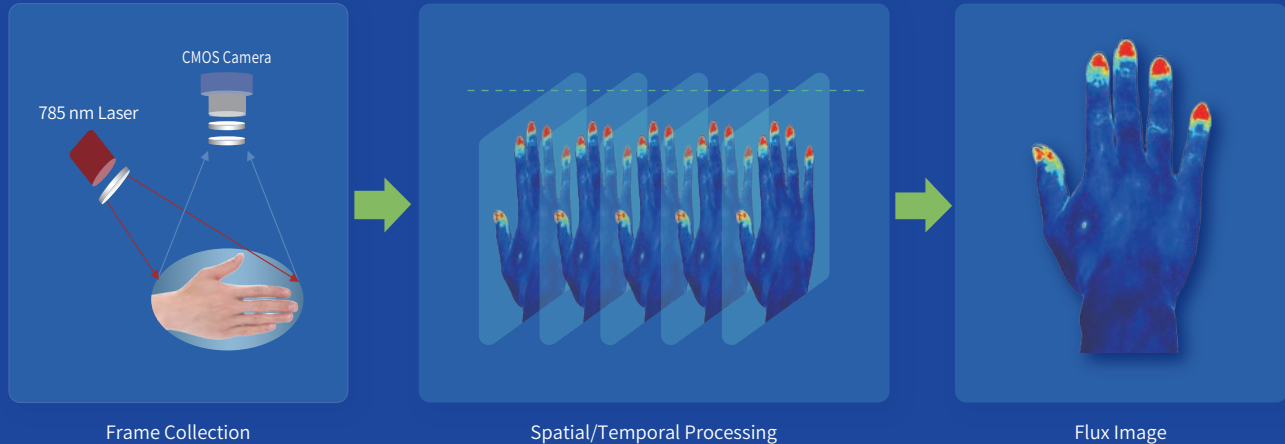


Laser Speckle Imaging System

RWD LIFE SCIENCE CO.,LTD

Laser Speckle Imaging System

RFLSI ZW laser speckle imaging system is an even better tool for microcirculation research based on laser speckle contrast imaging technology (LSCI). With the advanced optical design and improved image processing algorithm, RFLSI ZW shows greater performance in imaging field size, image quality, full-field frame rate and optical resolution, and provides a powerful and efficient means for tissue microcirculation measurement.





☞ Cerebral Cortex Blood Perfusion Monitoring

☞ Organ Microcirculation Observation

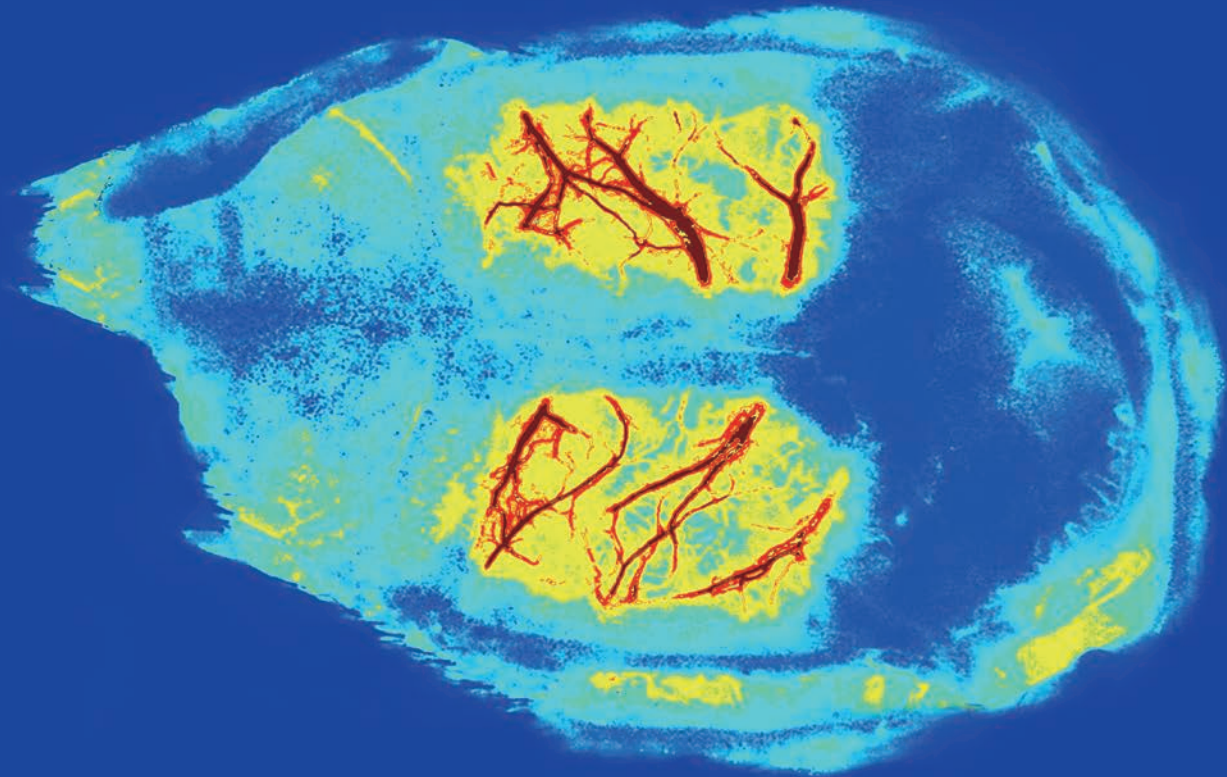
☞ Cortical Spreading Depression Observation

☞ Skin Burn/Skin Flap Transplantation Research

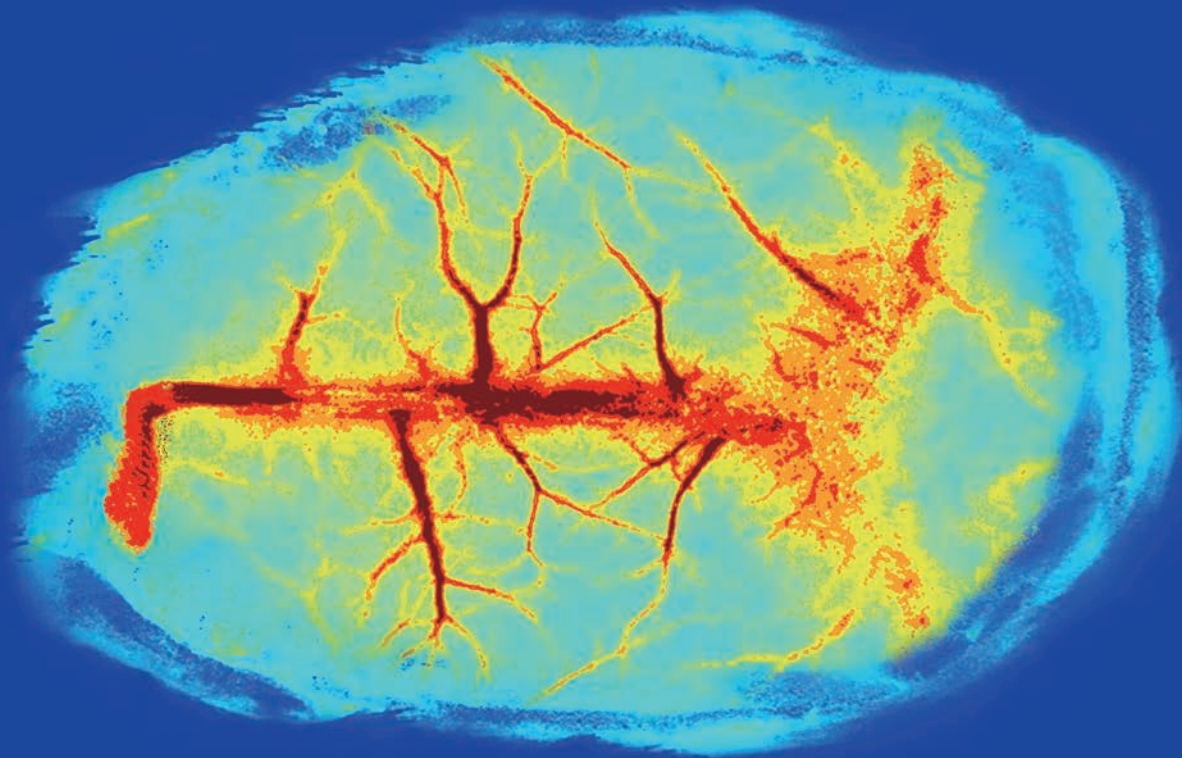
☞ Hindlimb Ischaemia Research

☞ Middle Cerebral Artery Occlusion Assessment

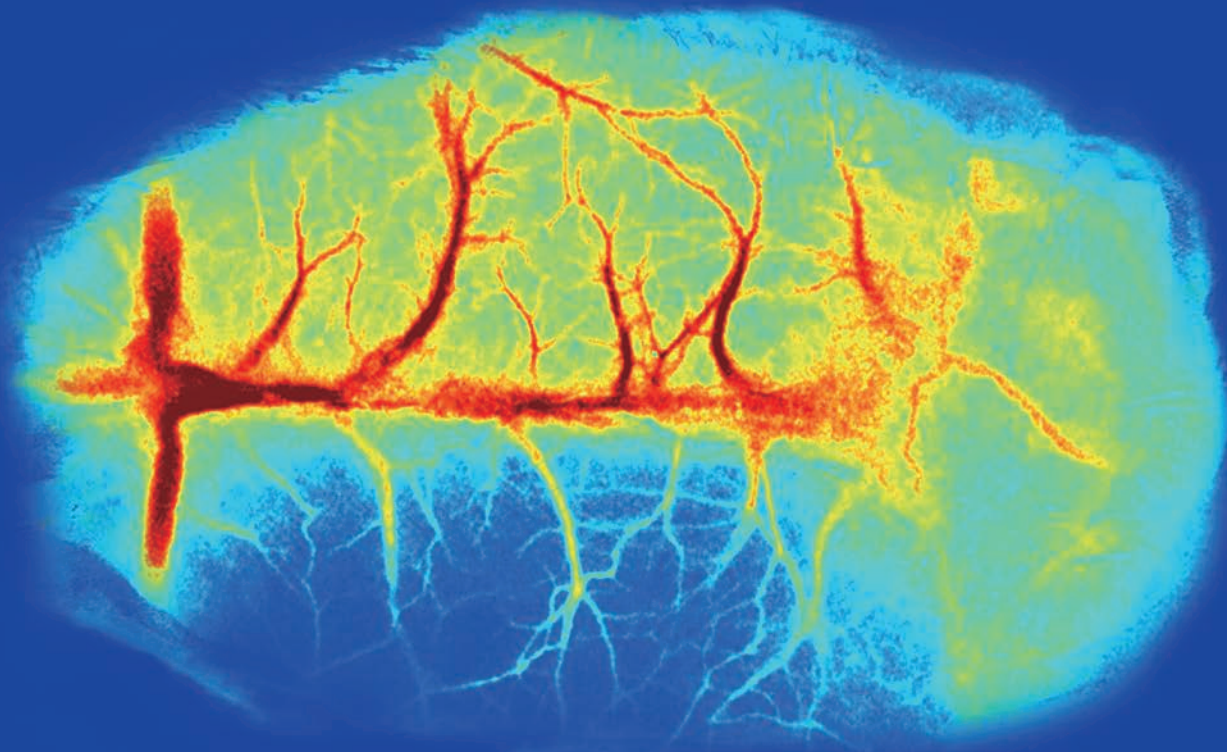
Cerebral Blood Flow in Rats



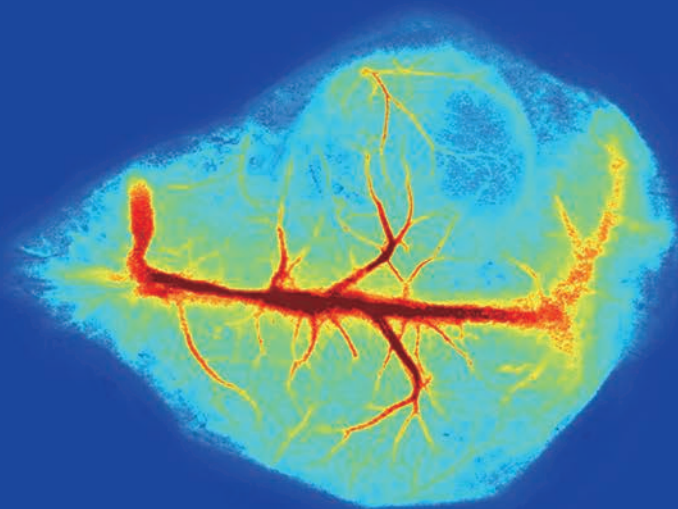
Cerebral Blood Flow in Mice



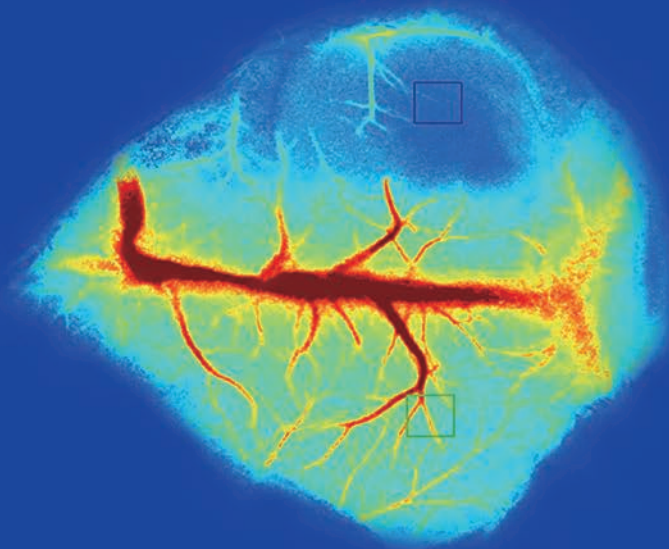
Middle Cerebral Artery Occlusion (MCAO) in Mice



Traumatic Brain Injury (TBI) in Mice

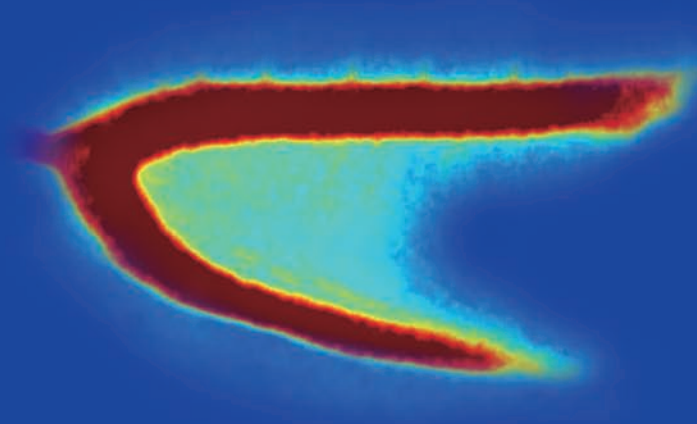


Baseline

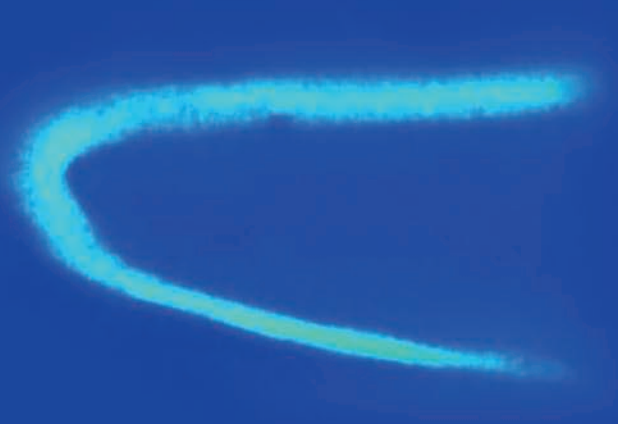


Post-modeling-0.5h

Spinal Cord Injury(SCI) in Mice

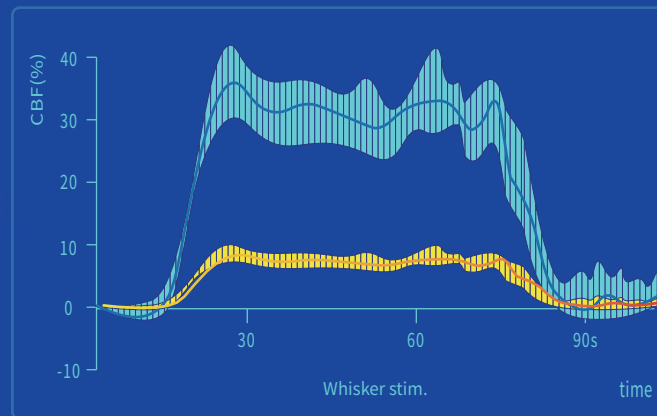
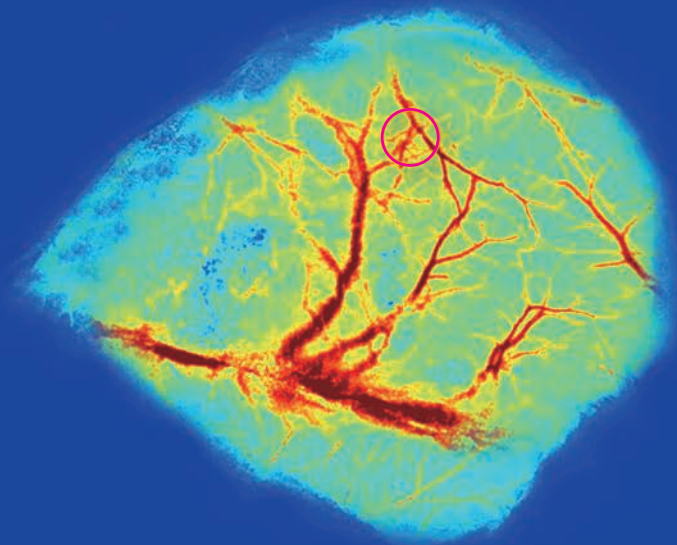


Baseline

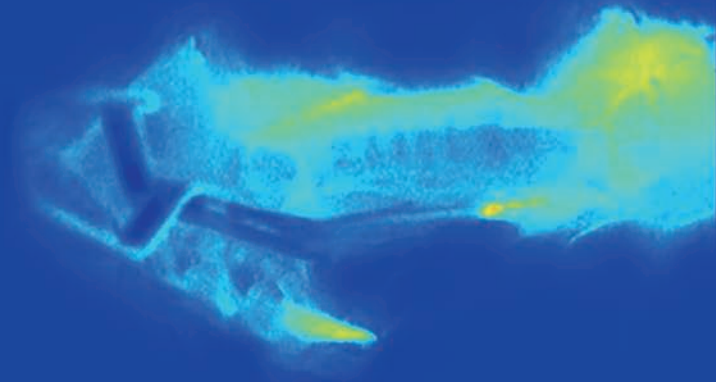


Post-modeling

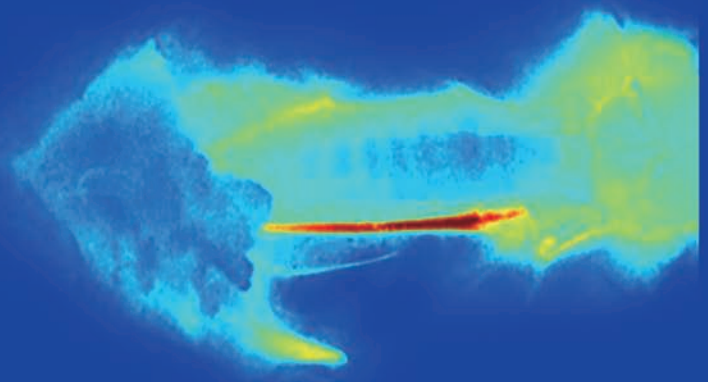
Blood Flow in Cortex of Mice during Whisker Stimulation



Common Carotid Artery (CCA) in Mice

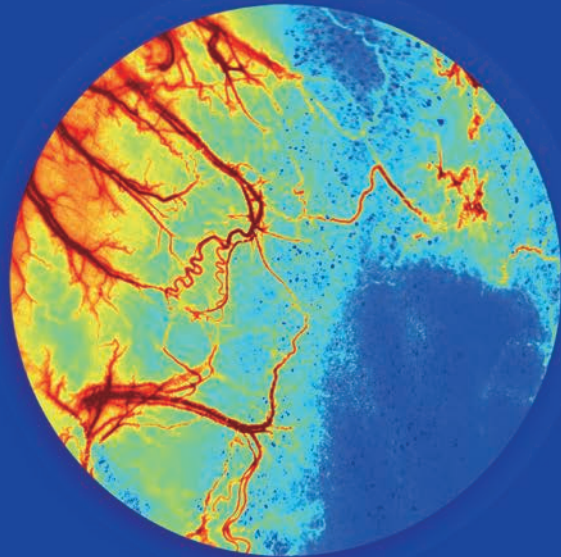
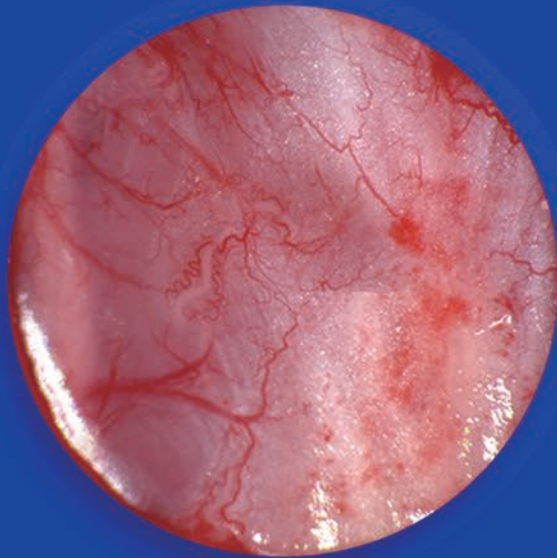


Ischemia

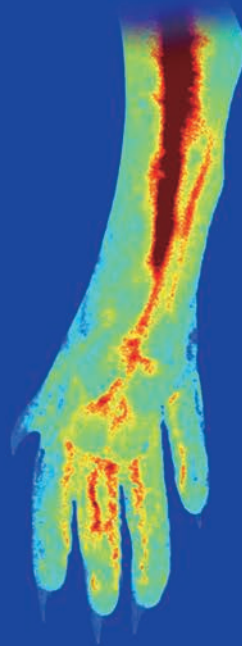
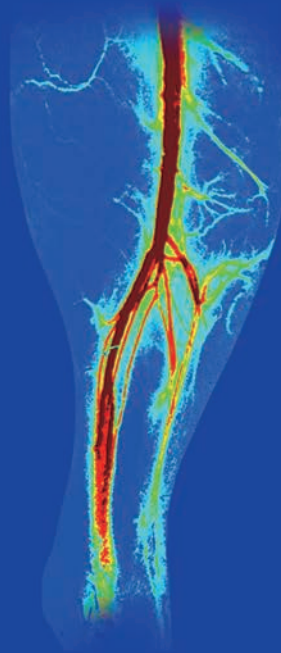
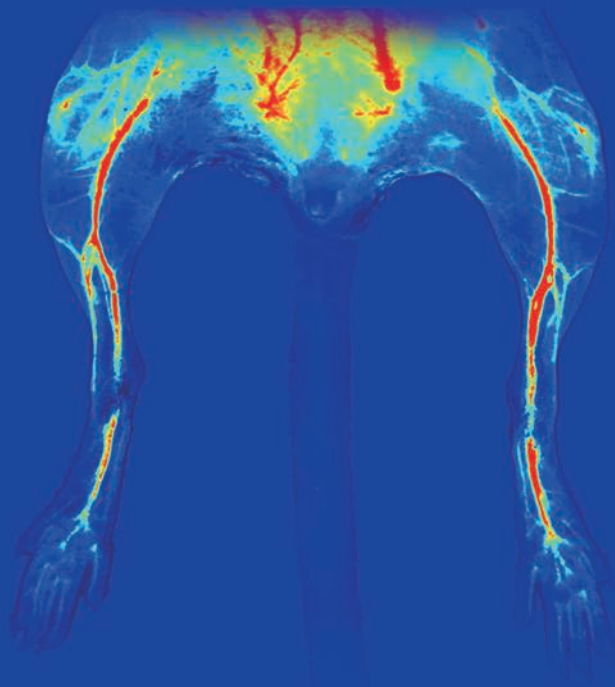


Reperfusion

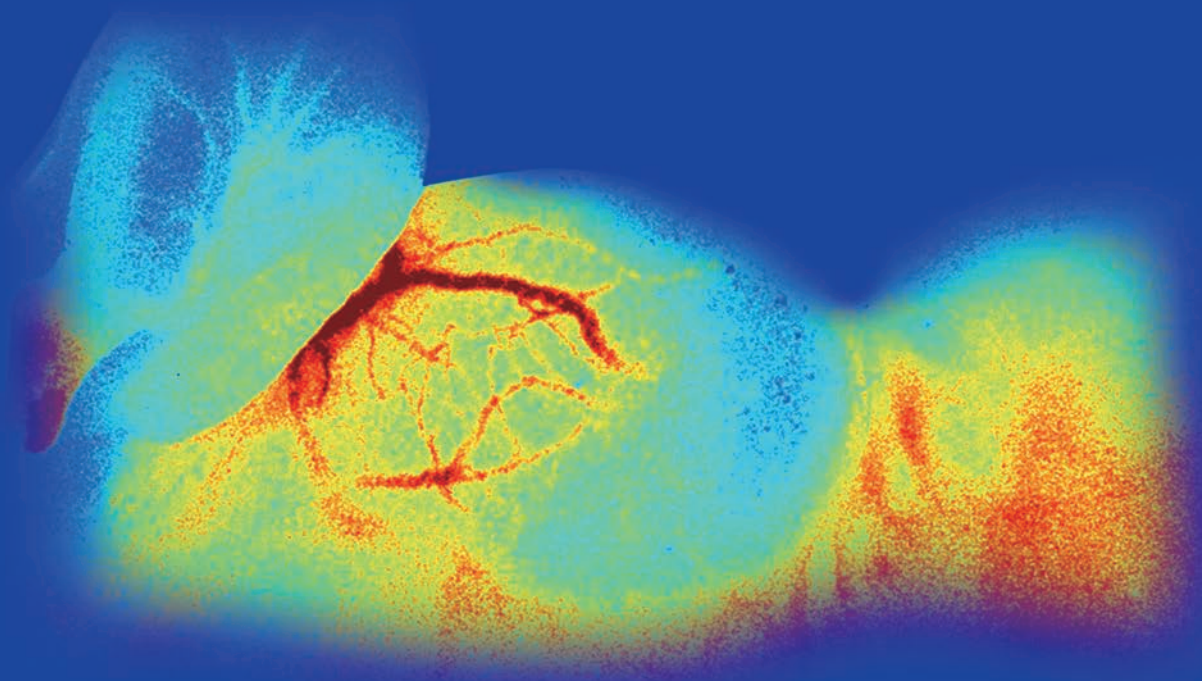
Wound Healing in Mice



Lower Limb in Mice

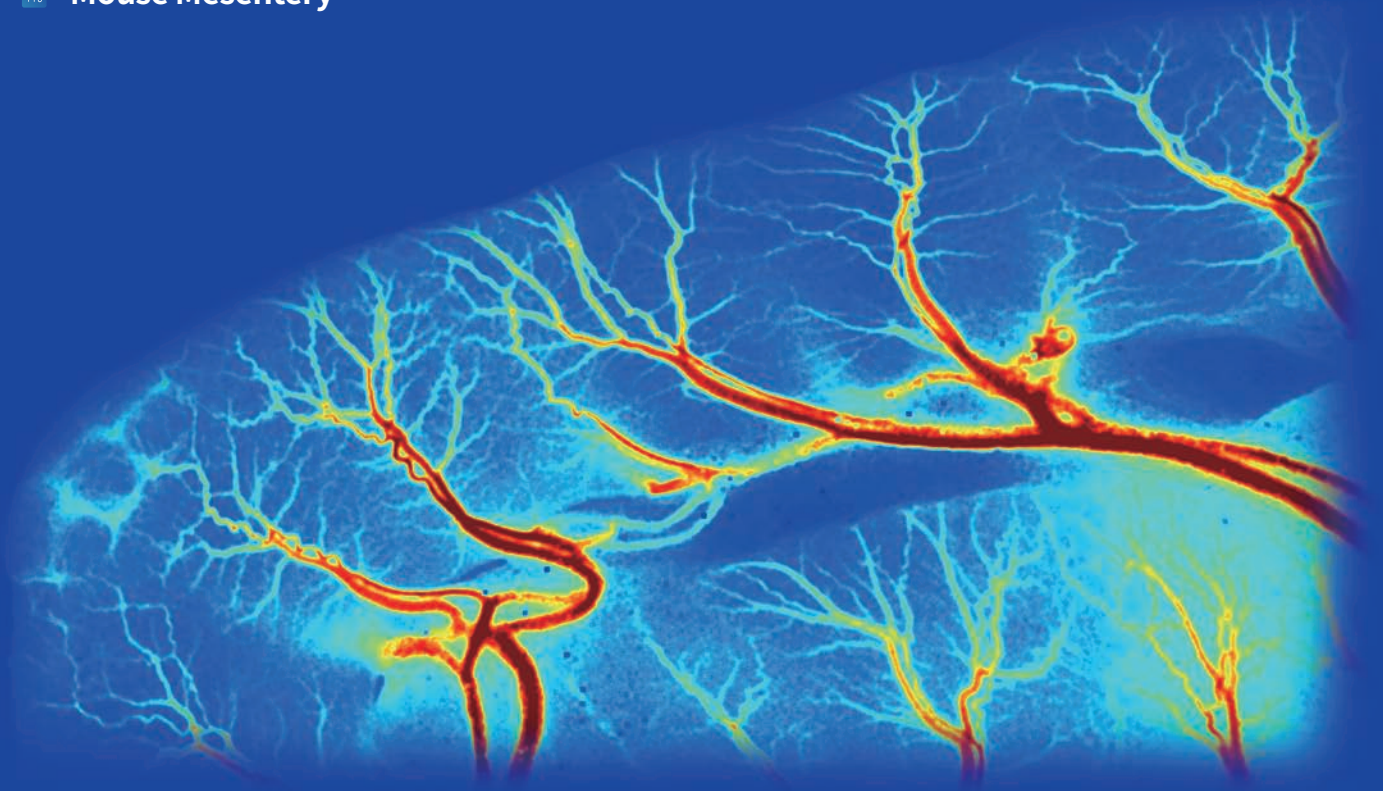


Bone Tumours in Nude Mice

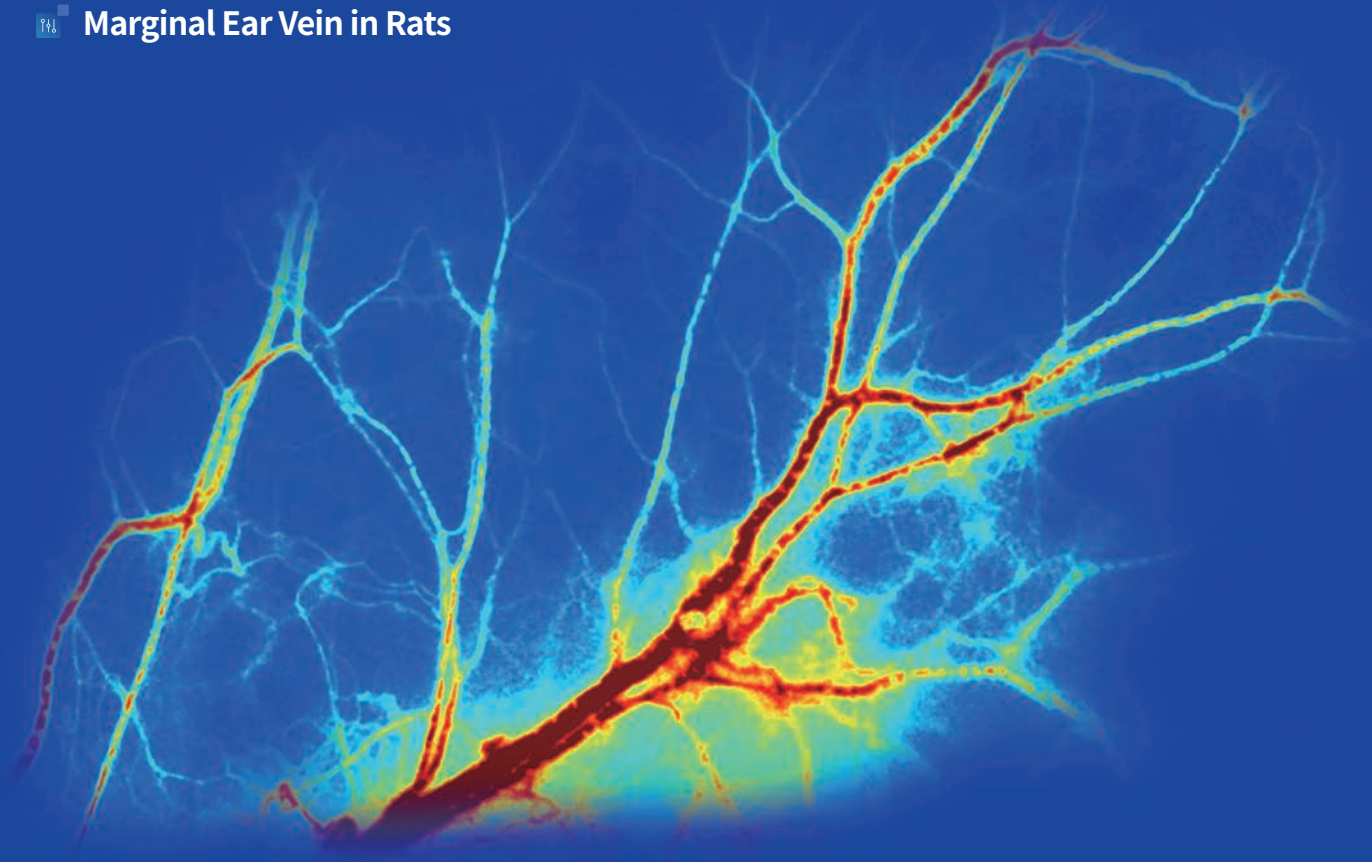




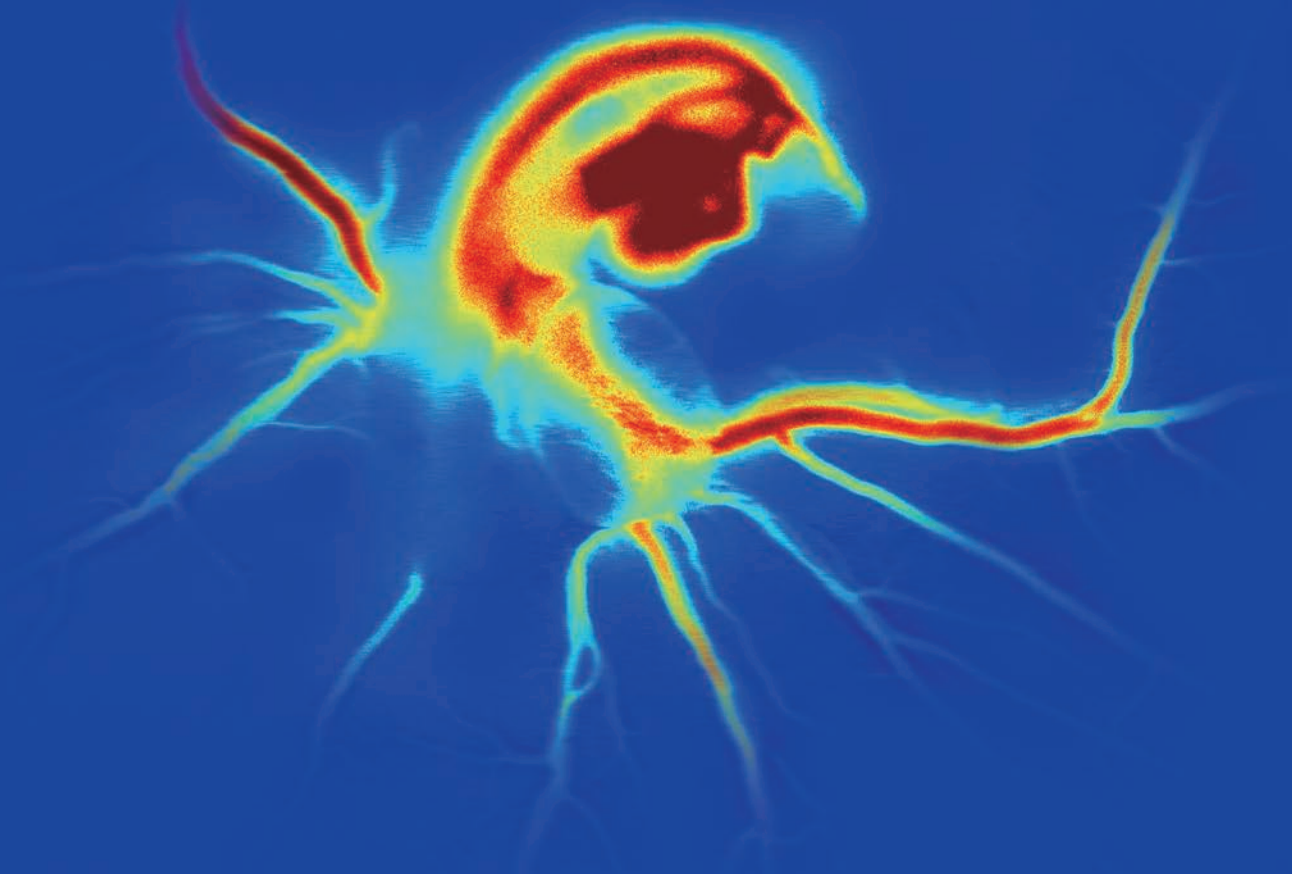
Mouse Mesentery



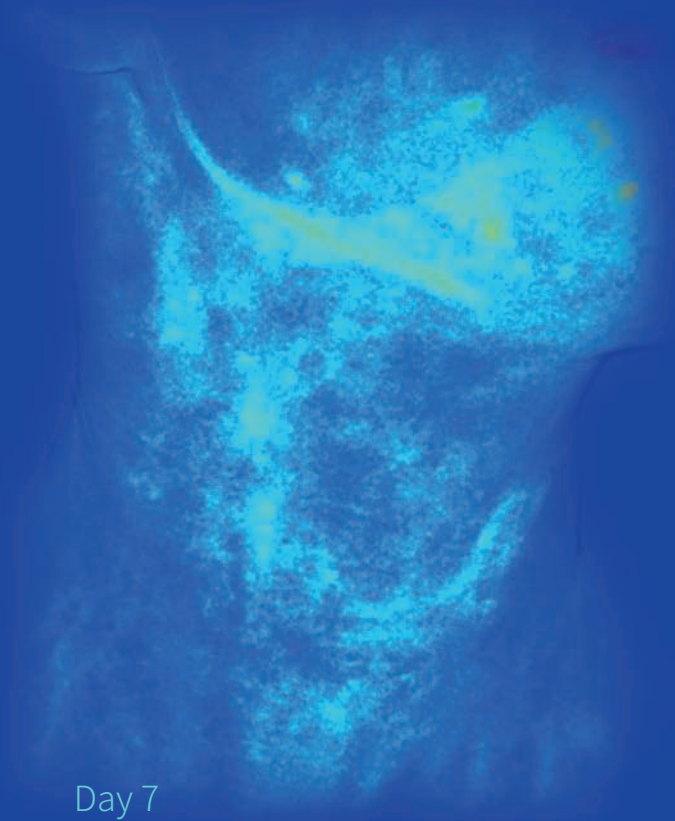
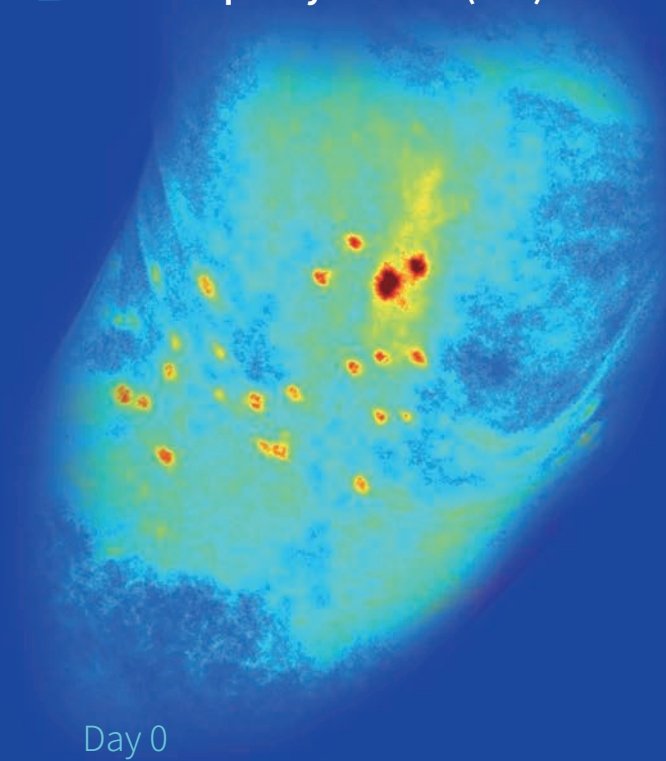
Marginal Ear Vein in Rats



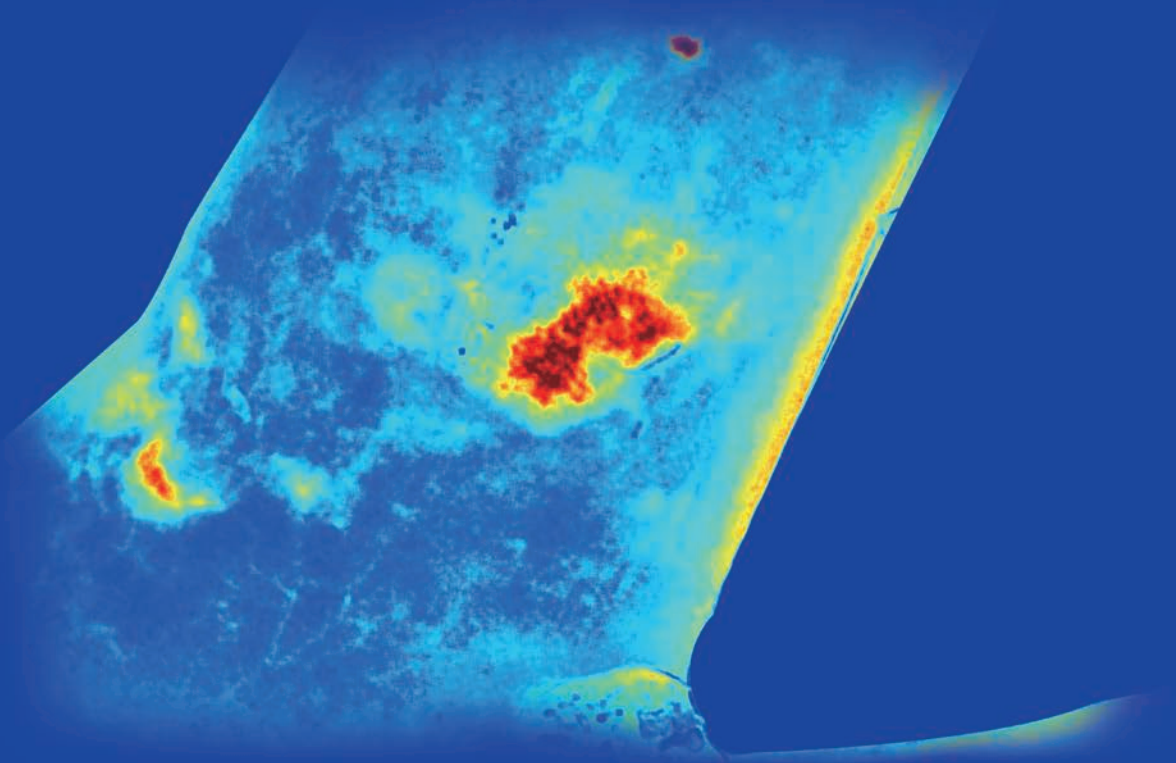
Chick Embryo Chorioallantoic Membrane (CAM)



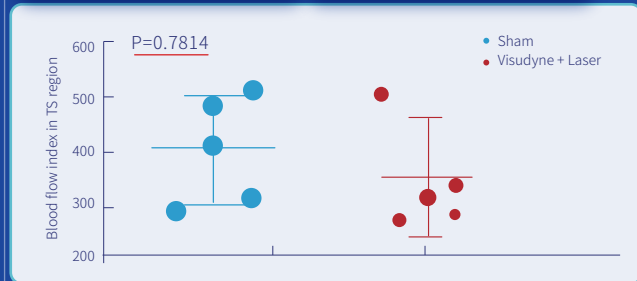
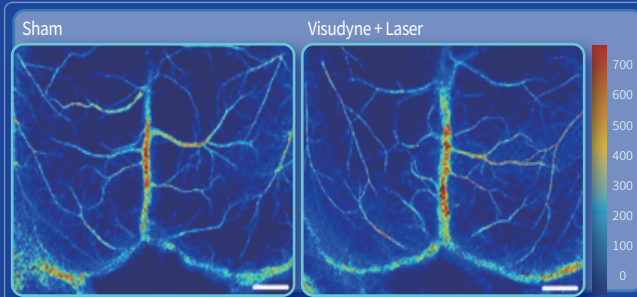
Radiofrequency Ablation (RFA)



Burn Wound Healing

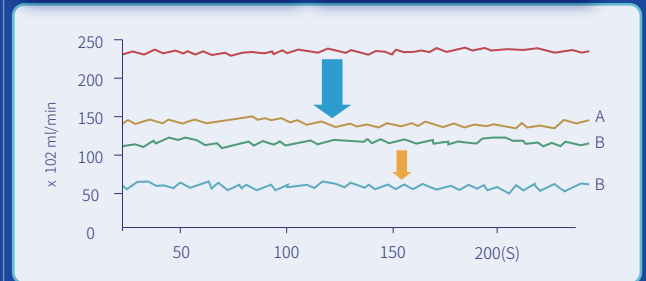
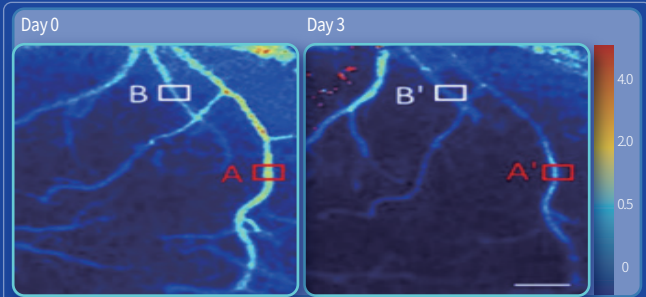


Stroke



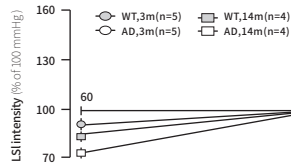
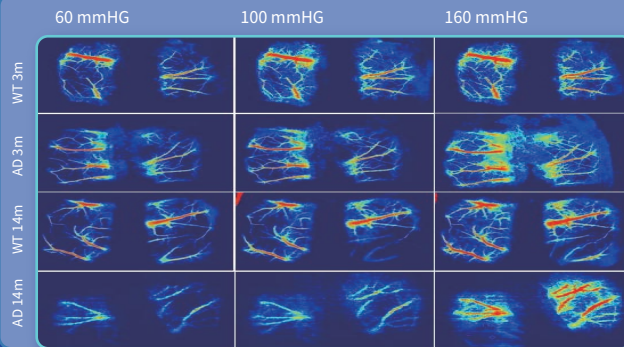
- The changes in the sham group and after photodynamic ablation of MLVs in the Visudyne+Laser group in the CBF.
- Figures are cited from Dan Zhu' s Lab, *et al.* Huazhong University of Science and Technology, China.
- Dongyu Li, *et al.* *Nature Communications*, 2023, 14(1): 6104.

Traumatic Brain Injury (TBI)



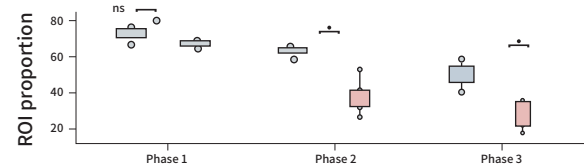
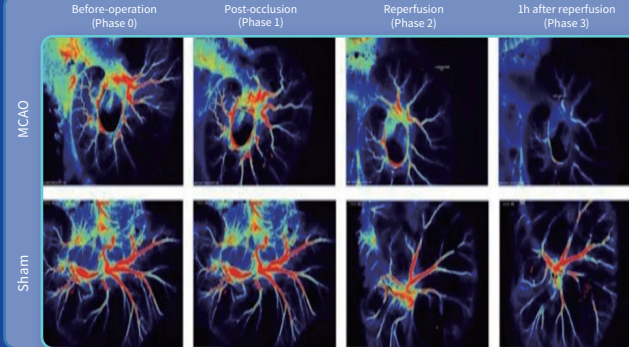
- Perfusion images of monitoring and quantifying the cerebral blood flow 3 days after mTBI in the mice.
- Figures are cited from Zhen Zhao' s lab, *et al.* University of Southern California, USA.
- Yingxi Wu, *et al.* *Acta neuropathologica communications*, 2021, 9(1): 1-14.

Alzheimer's Disease



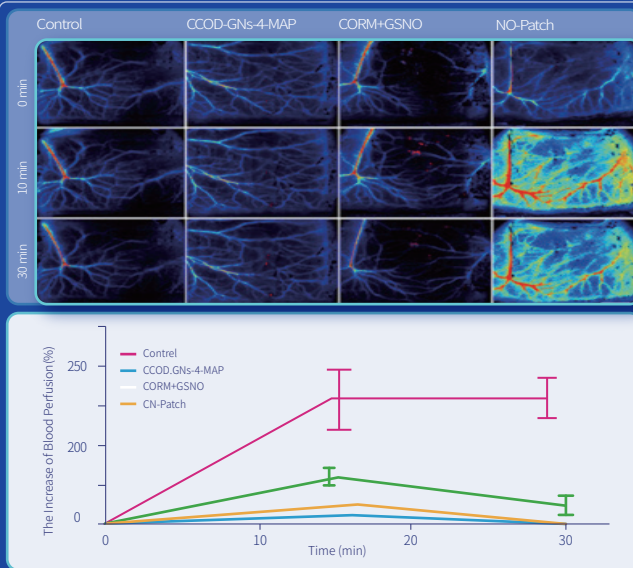
- Compare the surface of brain perfusion in 3 and 14 months old wildtype (WT; F344) and TgF344-AD (AD) rats by using laser speckle imaging system at different pressure.
- Figures are cited from Fan Fan's lab, *et al.* University of Mississippi Medical Center, USA.
- Xing Fang, *et al. Geroscience*, 2023 Jun;45(3):1471-1490.

Brain-gut interaction



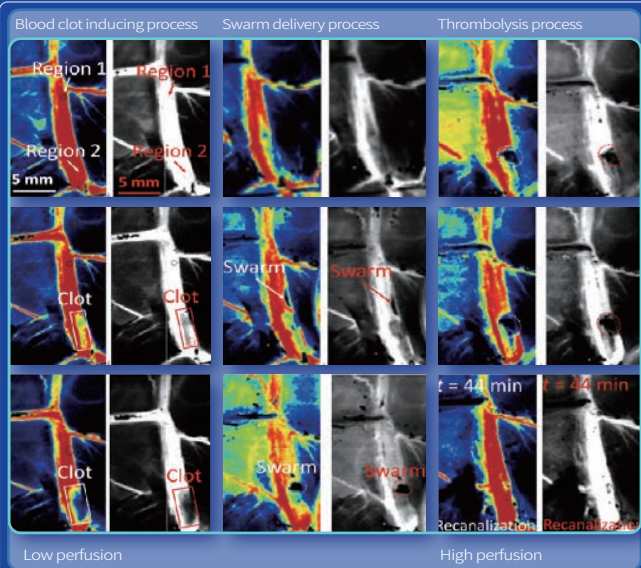
- Related ROI proportions of mouse cecum blood flow between the sham group and MCAO group during sham and MCAO operations.
- Figures are cited from professor Jia Yin, *et al.* Zhujiang Hospital, Southern Medical University, China.
- Kaiyu Xu, *et al. Gut*. 2021, Feb 8;gutjnl-2020-323263.

Flap survival



- The team developed a hydrogel patch (CN-Patch) capable of releasing CO/NO gas on demand, which can provide a blood supply to flap grafts during surgery. The images above show the blood perfusion in different treatments.
- Figures are cited from Junhu Zhang's lab, *et al.* Jilin University, China.
- Xiaoduo Tang, *et al.* *Nature Communications*, 2023, 14(1).

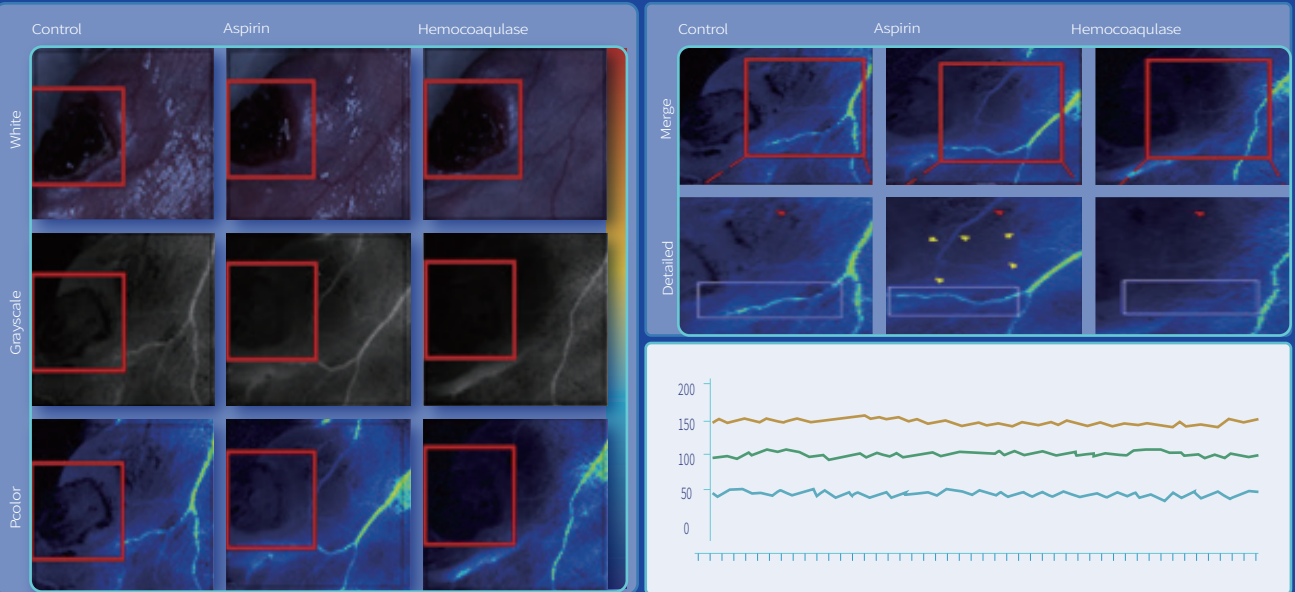
Thrombosis



- The imaging of whole treatment process, including blood clot inducing process, swarm delivery process, and thrombolysis, which was captured by LSCL.
- Figures are cited from Li Zhang's lab, *et al.* Chinese University of Hong Kong, China.
- Ben Wang, *et al.* *Sci Adv.* 2024 Feb 2;10(5):eadk8970.

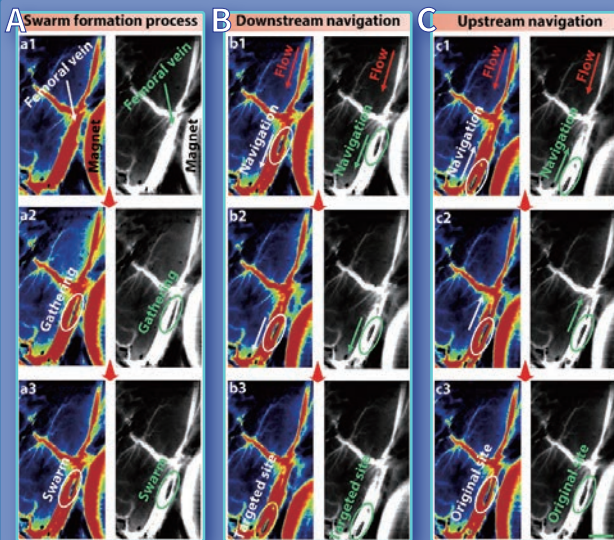


Tumor



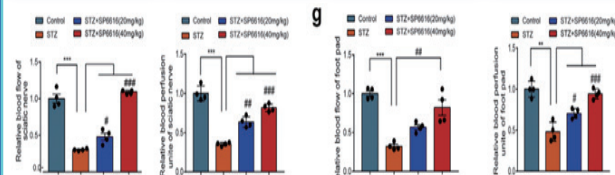
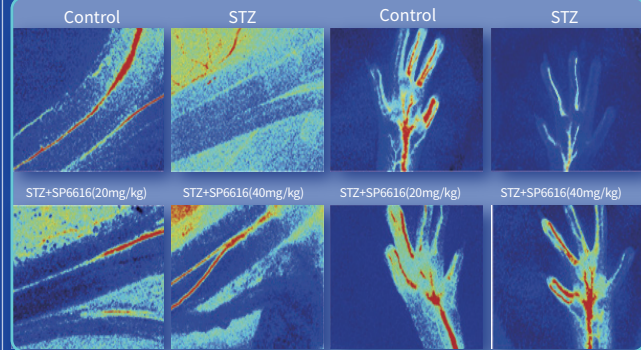
- Perfusion images of tumor blood perfusion and tumor vessels blood perfusion in LLC tumor-bearing nude mice after intratumoral injection of aspirin solution or hemocoagulase solution.
- Figures are cited from Jian You' s lab, *et al.* Zhejiang University, China.
- Sijie Wang, *et al.* *Nano Today*, 2023, 50: 101870.

Micro/Nanorobots



- Photographs of real-time tracking and navigation of a microswarm in the femoral vein of the rat guided by LSCI.
- Figures are cited from Li Zhang's lab, *et al.* Chinese University of Hong Kong, China.
- Qinglong Wang, *et al. Sci. Robot.* 2024 Feb 21;9(87):eadh1978.

Diabetes



- Representative images of regional blood perfusion in sciatic nerve and foot pad tissues of Control, STZ and SP6616.
- Figures are cited from Xu Shen's lab, *et al.* Nanjing University of Chinese Medicine, China.
- XiaLin Zhu, *et al. EBioMedicine*, 2020, 61: 103061.

Technical Parameters

Resolution	Max Camera Resolution: 2064x1544 pixels Best Resolution: 3.9 um/pixel
Image	Flux/Gray/Intensity/Color/Overlay
Measurement Laser	785 nm
Indicating Laser	650 nmx2
FoCuS	Auto/Manual (fine focus)
Trigger	2xBNC
Image Size	0.57x 0.75-22.5x 30 cm ²
Max Frame Rate	100 fps(full field)
Zoom	10x
Working Distance	10-40 cm,continuous
System Calibration	Calibration Box
Software	Acquisition Software and Analysis Software



Equipped with Trigger In/Out BNC interface, which can be linked with external devices.



Equipped with a calibration box and a calibration program. Self-service calibration can be performed at regular intervals.



Cross Arm Support



Universal Arm Support

nature neuroscience

NsMJ transmission drives NVC and open up a new avenue for studying stroke

BRAIN

Prolonged myelin deficits contribute to neuron loss and functional impairments after ischaemic stroke

ADVANCED SCIENCE

Open Access

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

Gut

Rapid gut dysbiosis induced by stroke exacerbates brain infarction in turn



14-3-3 ζ -c-Src-integrin- β 3 complex is vital for platelet activation

Science Advances

tpA-anchored nanorobots for in vivo arterial recanalization at submillimeter-scale segments

Science Robotics

Tracking and navigation of a microswarm under laser speckle contrast imaging for targeted delivery

Circulation Research



Spatiotemporal Control of Vascular CaV1.2 by a 1C S1928 Phosphorylation

BMC Medicine

Exogenous mitochondrial transplantation improves survival and neurological outcomes after resuscitation from cardiac arrest



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