

# SLICE

## Revolutionary Light-Sheet Microscopy System

Introducing SLICE - a groundbreaking, cost-effective solution for high-resolution 3D imaging of biological samples. Developed by leading microscopy researchers at Columbia University, SLICE brings advanced light-sheet microscopy capabilities to labs of all sizes.

### Why Choose SLICE?

SLICE offers the power of advanced light-sheet microscopy at a fraction of the cost of conventional systems. Its compact design and user-friendly interface make it ideal for labs of all sizes, democratizing access to cutting-edge imaging technology.

### Key Features

- High-resolution imaging suitable for quantitative image analysis
- Cost-effective: comparable to a typical widefield fluorescence microscope
- Compact design, benchtop ready
- 3 illumination wavelengths

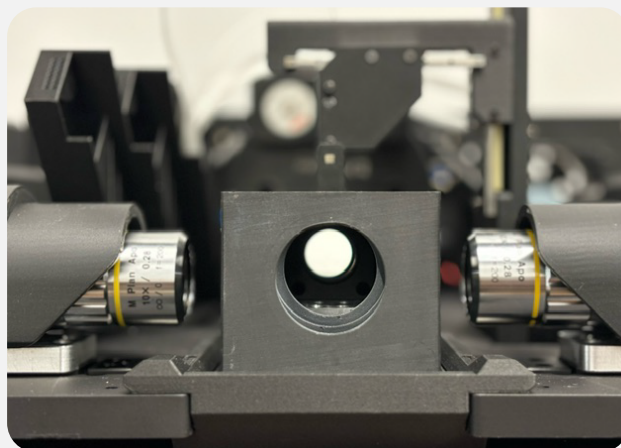
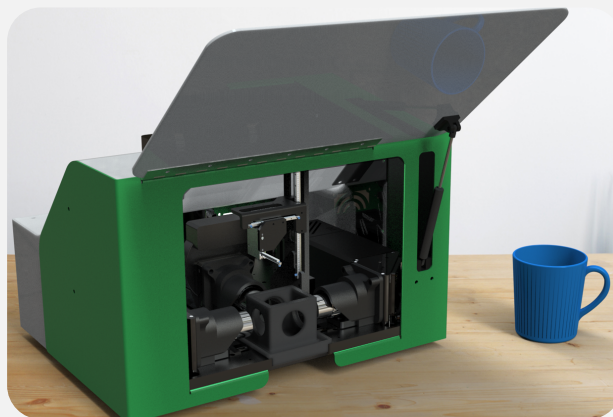
### Versatile Applications

- Whole-brain imaging and mapping
- Vascular system imaging
- Neurodegenerative disease research
- Developmental biology studies
- General biological research requiring 3D imaging

### Unparalleled Performance

SLICE offers exceptional imaging capabilities:

- Easy to operate and align
- Software-driven light-sheet for fast scan or high resolution mode
- Minimal photobleaching for extended imaging sessions



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### Advanced Features

- Software-Driven Light-Sheet Modulation: Adjustable light-sheet thickness for optimized imaging
- Linearly Adaptive Light-Sheet Offset Correction: Compensates for optical misalignments throughout large extended samples
- Multi-View Imaging: Dual opposing light sheets for uniform illumination
- Automated Multi-Channel Acquisition: Seamless switching between illumination wavelengths
- Acquisition Software: Streamlines image collection, stitching, post-processing, 3D visualization with add-ons available for atlas registration, neuron quantification, cell counting, deconvolution, etc.

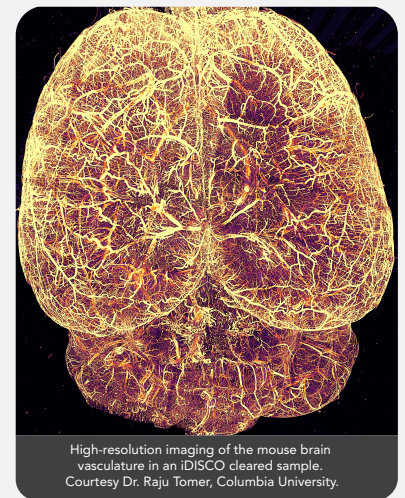
### Sample Preparation and Compatibility

The SLICE system is designed to work with a variety of sample preparation techniques:

- Clearing Methods: Compatible with iDISCO, CLARITY, SHANEL, BINAREE and other optical clearing techniques
- Sample Mounting: Custom-designed oil chamber with RI-matching oil ( $n=1.454$ )
- Multi-Color Imaging: Compatible with commonly used fluorescent proteins and dyes
- Sample Types: Whole mouse brains, human brain samples, organoids, bacterial biofilms

### Specifications

- Lateral Resolution:  $\sim 1\mu\text{m}$  (with 10x objective)
- Axial Resolution:  $\sim 5\mu\text{m}$  at light sheet waist
- Light-Sheet Field of View (FOV): Software controllable;  $>640\mu\text{m}$
- Imaging Speed: Up to 40 frames per second
- Multi-Color Imaging: Blue (440-460 nm), Green (515-530 nm), Red (632-642 nm)
- Dimensions: L 457mm x W 368mm x H 304mm
- Software-driven multi-resolution imaging



High-resolution imaging of the mouse brain vasculature in an iDISCO cleared sample. Courtesy Dr. Raju Tomer, Columbia University.

### New to light sheet microscopy? We have you covered.

Our "everything but the brain" package provides you with the hardware and software to clear, image, and analyze samples – all for an affordable price.

### Get in Touch

Ready to revolutionize your imaging capabilities?

Contact us today to learn more about SLICE or to schedule a demo.



[Learn More](#)