

Leica TCS SP8 Confocal

Good for live and fixed cells/ tissues.

Equipped with live cell imaging chamber. Intuitive and ideal for semi-automated image acquisition from large sample areas, including brain slices. Excitation lasers: 405, 488, 552, 638nm.

UltraMicroscope Blaze II

Best for 3D imaging of intact tissues.

Fully automated light sheet microscope for imaging large or multiple cleared samples at subcellular resolution. Can image an entire, intact mouse or rat brain. Excitation lasers: 488, 561, 640, 785nm.

Leica Thunder (Prado Lab)

Good for fixed samples and high throughput.

Suited for fixed material including cells on coverslips or fixed tissue. The microscope is configured for high content imaging with up to 8 slides. Uses digital clearing. Inferior quality images to a confocal microscope. Excitation filters: 390, GFP, Y3, Y5.

STELLARIS STED (Confocal + STED Super-resolution)

STED and STELLARIS as a single system offer you brilliant confocal imaging with unique super-resolution capabilities to study multiple events simultaneously and molecular interactions at the nanoscale and across the entire light spectrum. Unique combination of white light lasers for multiple wavelengths, an optimized beam path, fast Power HyD detectors, and up to 2 STED laser lines.

Zeiss Imager M2 ApoTome2 with MBF Stereology

Brightfield and fluorescence imaging.

Configured for bright field and multi-channel fluorescent imaging. ApoTome system for structured illumination optical sectioning. Stereo investigator system provides accurate, unbiased estimates of number, length, area, and volume of cells, subcellular and macro structures in your tissue specimens. Quality for thin sections approaching confocal microscopy.

STELLARIS 5 Lightning Confocal

Good for fixed samples and high throughput.

Suited for fixed material including cells on coverslips or fixed tissue. The microscope is configured for high content imaging in confocal modes (up to 8 slides) and has high-resolution capabilities with Lightning. Good for thicker samples. Excitation lasers: 405, 488, 561, 638nm.

IMARIS Analysis

Primarily for light sheet data and large z-stack images.

Software for viewing and analyzing imaging data. Particularly good for stitching multi-tile images, viewing images in 3D, highlighting surfaces, and counting cells or plaques.

Leica AM TIRF

Good for live cell and calcium imaging.

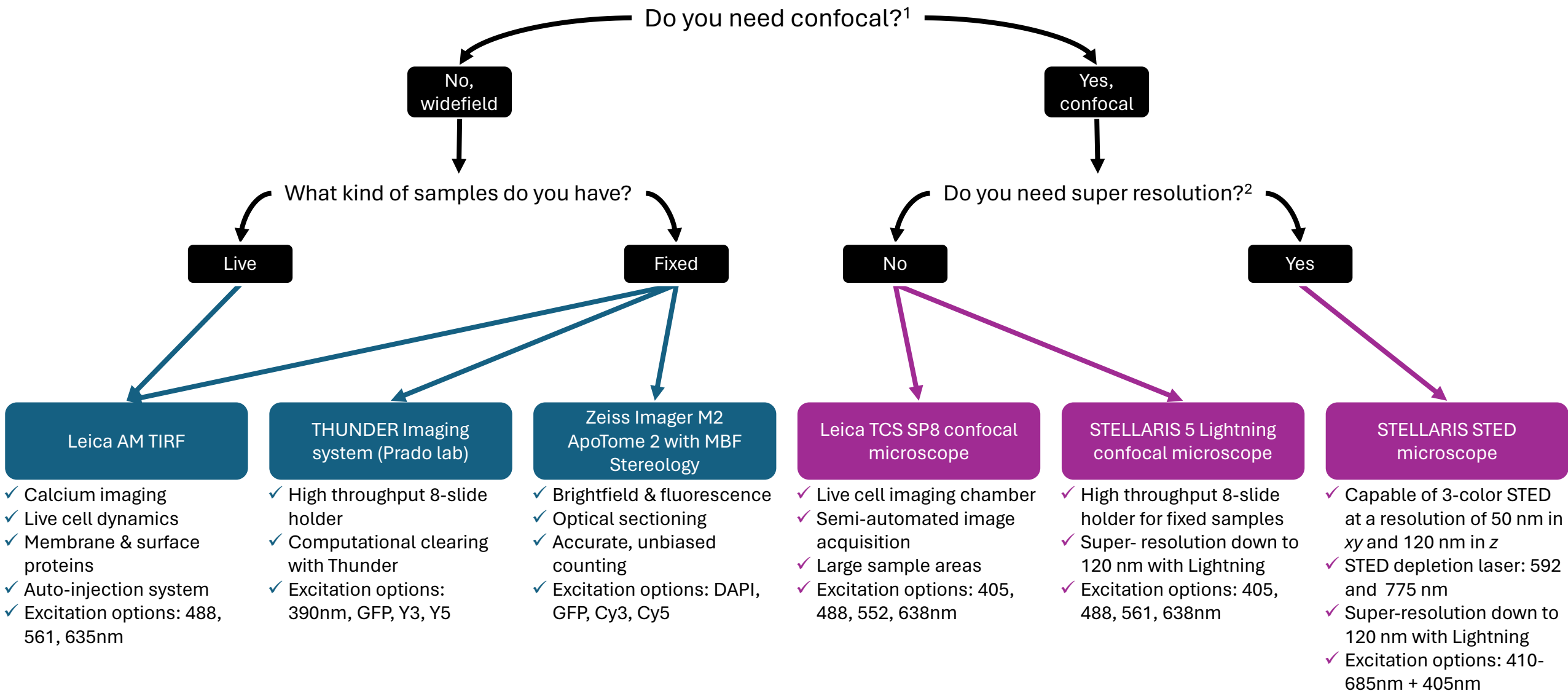
Can be used for real-time visualization of live cell dynamics. System particularly useful for exploring membrane and cell surface proteins. Equipped with an injection system. Filters: 488, 561, 635nm.

confocal microscopes

widefield microscopes

light sheet microscope and data analysis software

How to Choose the Best Microscope



¹ Typically needed for high resolution images for publication or for thick sections (> 30 μm). ² Typically needed for sub-organelle resolution to resolve structures of ≤ 150 nm.

If you are unsure if you need confocal or super resolution, or have other questions, please contact Claudia (cseah@uwo.ca) or Kelly (kelly.summers@uwo.ca).