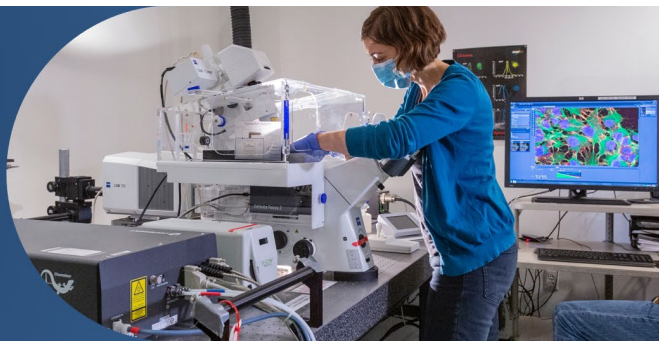


Cellular Imaging

Research Administration
Seattle, WA • 501(c)(3) Nonprofit



Fred Hutch's Shared Resources are catalysts for lifesaving discoveries. This uniquely centralized program of 15 specialized core facilities and scientific services drives advances by integrating dedicated experts and cutting-edge technologies across the entire research pipeline, from basic science to clinical trial.

Leica Stellaris 8 confocal

Laser scanning confocal microscope

Excitation sources

- Excitation Lasers: 405 nm and white light (440 to 790 nm)

Objectives

- 5x/0.15 (air)
- 10x/0.4 (air)
- 20x/0.75 (air)
- 40x/1.1 (water)
- 63x/1.4 (oil)

Detectors

- Spectral Detectors: five HyD S detectors for 410 to 850 nm emission
- Camera: Leica DFC9000 (sCMOS for use with digital lightsheet module)

Capabilities

- Confocal imaging with up to 8 simultaneous excitation lines and 5 detection windows
- Z-stack acquisition with piezo stage
- Large area acquisition image stitching
- Fluorescence recovery after photobleaching (FRAP)
- Fluorescence resonance energy transfer (FRET)
- Digital Lightsheet (DLS) imaging of clear organisms

Recommended uses

- Routine confocal imaging of live or fixed samples at all standard magnifications
- Separating spectrally overlapping dyes by lifetime, including removing tissue autofluorescence
- Imaging unconventional fluorophores
- Colocalization studies, enabling ten or more dye labels on one sample
- FRAP, photoconversion, and optogenetics assays

General information

This inverted scanning confocal microscope uses optical methods to remove out-of-focus signal, thereby providing high-contrast, optically sectioned images of thick fluorescent specimens. The Stellaris 8 is a state-of-the-art confocal microscope with outstanding versatility and sensitivity for imaging the broadest range of dyes and specimens. A white light laser allows users to freely choose up to eight excitation wavelengths. There are five independent detection channels equipped with hybrid detectors. The detectors allow tau gating for added fluorophore specificity (for example, removal of autofluorescence). The system includes Leica's Lightning deconvolution modality.

LEARN MORE

Cellular Imaging Core
206.667.4205
imaging@fredhutch.org

