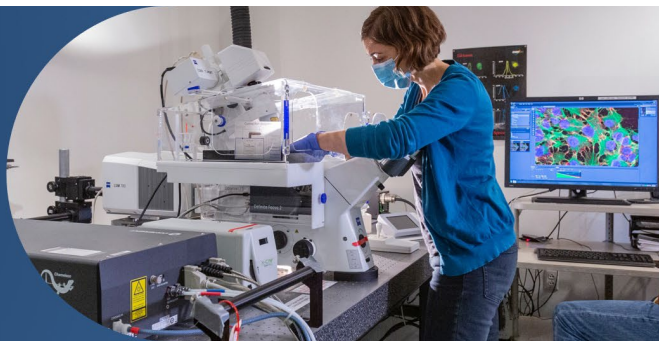


Cellular Imaging

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.

Nikon iLas2 Ring TIRF

TIRF microscope

Excitation sources

- Excitation Lasers: 488, 561, 640 nm
- FRAP/ablation Laser: 405 nm

Objectives

- 10x/0.45 (air)
- 60x/1.49 TIRF (oil)
- 100x/1.49 TIRF (oil)

Cameras

- Hamamatsu Orca-Fusion BT sCMOS
- Andor iXon-L-897 EMCCD

Capabilities

- 3-color fluorescence TIRF imaging
- Ring, Arc, or Point TIRF illumination
- Fast frame rate
- Oko-bold live cell incubator, with active humidity control
- Ablation or wounding using 405 nm laser

Recommended uses

- Single molecule imaging
- High-speed, high-SNR imaging at coverslip surface
- FRAP, photoconversion, and optogenetics assays
- Ablation and wounding assays

General information

The Nikon iLas2 Total Internal Reflection Fluorescence (TIRF) microscope selectively illuminates the bottom-most ~100nm of a sample at the glass-sample interface. It is useful for imaging signals at or near the coverglass, eliminating fluorescence from deeper within the sample. The iLas2 module scans the excitation beam in a circle, which results in a TIRF image with minimal interference fringes. Images can be acquired using a fast, high resolution sCMOS or a sensitive EMCCD camera. The microscope is also equipped with a high-power 405 nm laser that can be used for FRAP, photoablation, or wounding experiments. The Nikon Perfect Focus System (PFS) keeps the TIRF plane continuously in focus during timelapse or multi-position experiments.

LEARN MORE

Cellular Imaging Core

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