

# 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 Live Widefield

### Widefield inverted microscope

#### Excitation sources

- Spectra III LED: 390, 440, 475, 510, 555, 575, 637, 748 nm
- Brightfield halogen lamp

#### Objectives

- 4x/0.2 (air)
- 10x/0.45 (air)
- 20x/0.45 (air) extra-long working distance
- 20x/0.75 (air)
- 60x/1.4 (oil)
- 100x/1.45 (oil)
- \*40x/0.60 (air) extra-long working distance available on request

#### Cameras

- Photometrics Prime BSI Express sCMOS, monochrome camera
- Nikon DS-Fi3 color camera

#### Capabilities

- DIC, phase-contrast, polarization, brightfield, and RGB color imaging
- Widefield fluorescent imaging up to 8 channels
- Fast 3-color (CFP/YFP/mCherry) or 5-color (Blue/Green/Red/Far-red/NIR) imaging
- Piezo stage for fast Z-stacks
- Multi-point and tile stitching acquisition
- Perfect focus system (PFS) for timelapse and/or multi-point captures

#### Recommended uses

- Fast volume imaging with much higher speeds and less bleaching than confocal
- Colocalization studies
- FISH experiments, including highly multiplexed stains
- Phase contrast imaging
- Deconvolution imaging

#### General information

Nikon Live is a versatile inverted widefield microscope. It is suited for imaging living or fixed samples in a variety of formats, including vessels containing media or buffer. Its extra-long working distance 20x and 40x objectives allow high-magnification imaging through standard plastic-bottomed vessels. It has a variety of excitation lines for the standard blue, green, red, and far-red fluorophores as well as cyan, yellow, and near infra-red. A variety of emission filters allow the flexibility to perform fast sequential multi-color imaging or to minimize fluorophore crosstalk. In addition to a high-performance fluorescence camera, Nikon Live is also equipped with a color camera for imaging colorimetric stains and dyes. The piezo stage facilitates fast and precise z movements. The Nikon microscope stand is fully motorized for advanced multidimensional experiments and includes the Perfect Focus System (PFS) to maintain focus over hours-long time courses. Nikon GPU-accelerated Deconvolution is available for deblurring and resolution improvement of all datasets.

#### LEARN MORE

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