

PENN VET IMAGING CORE FACILITY

GE DELTAVISION OMX SIM/TIRF SUPER-RESOLUTION MICROSCOPE

Location: Hill Pavilion, room 481

Applications:

- Structured Illumination Microscopy (SIM) super-Resolution: 2D, 3D, or in combination with Total Internal Reflection Fluorescence (TIRF)
- Long-term live imaging by conventional widefield or SIM super-resolution microscopy

Microscope Stand: All hardware components, including lasers, microscope components, cameras, environmental regulation, and anti-vibration, are integrated into a single unit. Differential Interference Contrast (DIC) is available for use in conjunction with conventional widefield fluorescence.

Software: AcquireSR Acquisition control software and softWoRx image reconstruction and analysis software within a Linux CentOS operating system environment

Cameras:

- 3 PCO sCMOS cameras

Lasers:

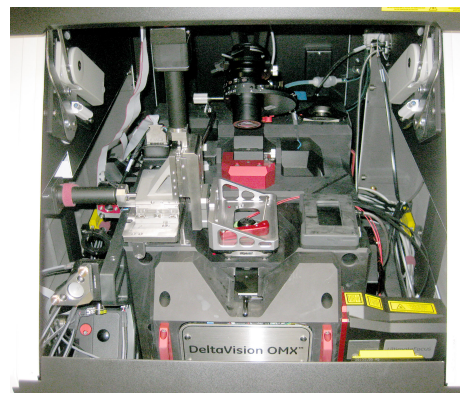
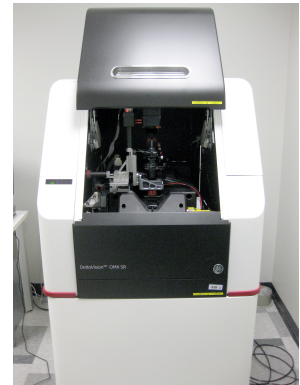
- 405 nm Diode
- 488 nm Diode
- 568 nm Diode-Pumped Solid State
- 640 nm Diode

Fluorescence Emission Filters (on Filter Wheel):

- DAPI (420-450 nm)
- GFP/AF488 (504-552 nm)
- mCherry/AF568 (591-627 nm)
- Cy5/AF647 (663-703 nm)

Objective Lens:

- 60x PLAPON (1.42 NA), oil immersion
(Choose the oil with the best refractive index to match the sample, as determined using the GE Immersion Oil Calculator app)



Formats for specimen preparation :

- Glass slide with #1.5 thickness coverglass (non-hardset mounting medium is recommended, sealed with nail polish)
- Coverglass-bottom 35 mm dishes (use with specific holder for this format)
- Chambered coverglass (use with specific holder for this format)