Light Microscopy

•ZEISS Elyra 7 Super-Resolution Microscope with Lattice SIM²



System capabilities: TIRF, Lattice SIM², Apotome SIM² and 2D and 3D single molecule localization microscopy super-resolution capabilities. The system is equipped with 405nm (50mW), 488nm (500mW), 561nm (500mW) and 640nm (500mW) diode laser lines. All super-resolution data will be archived on an (8) disk bay Synology Disk Station with a total usable 72TB in a RAID 6 configuration

•Leica SP8-X confocal microscope



Our Leica SP8-X confocal microscope, producing high-resolution 3D and 4D image data, has a full range of high-resolution optics on an inverted microscope platform. The instrument includes a resonant scanner, for imaging cell dynamics with reduced photo-damage. It is also equipped with a white light laser (with 200 laser lines), a 405 nm diode laser and an argon gas laser and five fluorescence detectors including three high quantum efficiency HyD detectors. All confocal data is archived on (4) drive RAID 5 configured Buffalo Drive with 16 Terabyte of storage capacity.

• ZEISS AxioZoom Macro Microscope



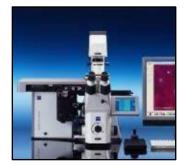
Our Zeiss AxioZoom macro microscope with Apotome 2 allows routine to advanced high-resolution multiscale fluorescence, confocal, transmitted and reflected imaging of slides, multi-well plates and intact plant specimen. This motorized system allows advanced automation to create large area maps and sophisticated multi-location and analysis routines.

Nikon NiE Widefield Epifluorescence Microscope



For wide-field fluorescence imaging, a Nikon Ni-E equipped with high-resolution objectives, 16-bit b/w digital camera (Hamamatsu Orca Flash 4.0) and color CMOS camera (Nikon Fi-3), and Z-stepper motor for 3D imaging is available. This instrument allows imaging of a brightfield, phase contrast, DIC, sensitive imaging of a variety of fluorophores including time-lapse fluorescence imaging

• Zeiss PALM Laser Microdissection Microscope



Electron Microscopy

• ThermoFisher Scientific Talos 120C G2 Transmission Electron Microscope



Our Talos L120C G2 is equipped with a Ceta 16M 4k x 4k CMOS camera, ambient tomography holder and Gatan ELSA 698.ULP cryo holder (+/- 70 degrees) and MAPS 3 software.

• Leica EM ICE High Pressure Freezer



Sample Preparation

• Leica CM 1950 Cryostat



Our CM1950 with CryoJane system is used for acquiring and transferring frozen sections to glass slides and optical microscopy and laser capture microdissection.

• Leica Ultracut UCT Ultramicrotome with Delsci Machines manipulator for array tomography



Vibratome 1500 Sectioning System



• Grid plunge freezer

Software

- ORS Dragonfly
- ZEISS ZEN Blue/Black SR and Intellesis
- ImageJ/FIJI
- ZEN Connect Correlative Microscopy Workspace
- Stereology Analyzer v4.3.3.
- Bitplane Imaris 3D Reconstruction and Huygens Deconvolution

Workstation