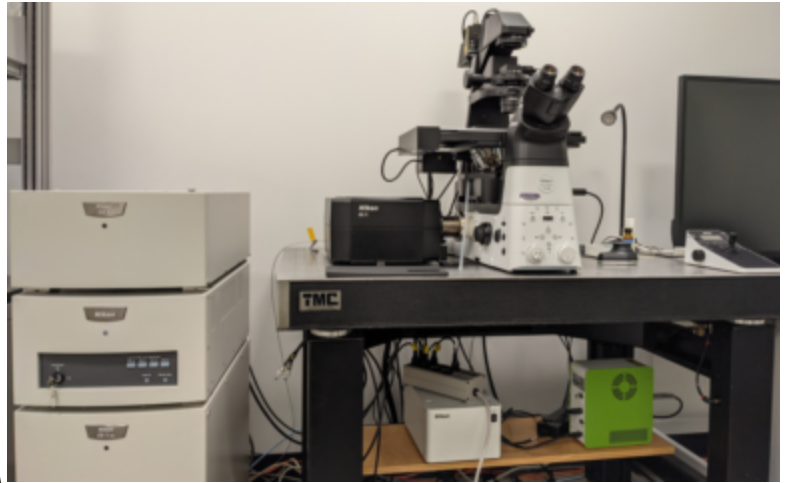


A1R: Nikon A1R HD25 laser scanning confocal microscope, LSB B202A

confocal system

- scanner
 - 2 multialkaline and 2 GaAsP detectors for fluorescence, and 1 multialkaline detector for transmitted light, 12-bit output
 - mostly software driven (NIS Elements 5.30)
 - galvano scanner: 0.7 fps at 512×512 pixels, max at 4096×4096 pixels
 - resonant scanner: 15 fps at 1024×1024 pixels max
 - simultaneous and sequential scans
 - laser power can be modulated continuously
 - Mark & Find, tiling, FRAP &
- LU-N4 laser unit (wavelength in nm): 405, 488, 561, 640
- beamsplitters (wavelength in nm)
 - 1st dichroic mirror: 405/488/561/640
 - BS 20/80: for reflective mode
- Detector configuration
 - Ch1: DM 495 LP EM 447/57 (419–476)
 - Ch2, GaAsP: DM 560 LP EM 524/42 (503–545)
 - Ch3, GaAsP: DM 652 EM 600/45 (578–623)
 - Ch4: EM 650 LP



Microscope

Nikon Ti2-E: inverted stand with Perfect Focus System, infinity optics, epifluorescence, and DIC; motorized components include objective and filter cube turrets, condenser, and XY stage

- objectives
 - Plan Apochromat Lambda 10×, NA 0.45, WD 4.0 mm
 - Plan Apochromat Lambda 20×, NA 0.75, WD 1.0 mm
 - Plan Apochromat Lambda 60× oil, NA 1.4, WD 0.13 mm
 - Plan Apochromat 60× water, NA 1.2, WD 0.22 mm, correction collar for cover glass thickness (0.15 mm to 0.18 mm)
 - Apochromat Lambda S LWD 20× water, NA 0.95, WD 0.90–0.99 mm, correction collar for cover glass thickness (0.11 mm to 0.23 mm)^{loaded on demand only}
 - Apochromat Lambda S LWD 40× water, NA 1.15, WD 0.59–0.61 mm, correction collar for cover glass thickness (0.15 mm to 0.19 mm)^{loaded on demand only}
 - Plan Fluor 40× oil, NA 1.3, WD 0.20 mm^{loaded on demand only}
- X-Cite 110LED epifluorescence light source: 375–660 nm
- filter cube turret for the X-Cite
 - EX 340–380 DM 400, EM 435–485
 - EX 465–495, DM 505, EM 515–555
 - EX 528–553, DM 565, EM 590–650
- P736 PI nano Z piezo stage with 200 µm travel, universal adapter for slides and dishes, and adapter for well plate; can accept the Tokai Hit stage top incubator
- Tokai Hit stage top incubator
 - TIZWX incubation system for dishes and well plate
 - STXF controller with analog flowmeter and STX–CO₂O₂ for hypoxia condition
 - setting range
 - CO₂: 5.0% ~ 20.0%
 - O₂: 0.1% ~ 18.0%
 - temperature: 30 °C ~ 40 °C