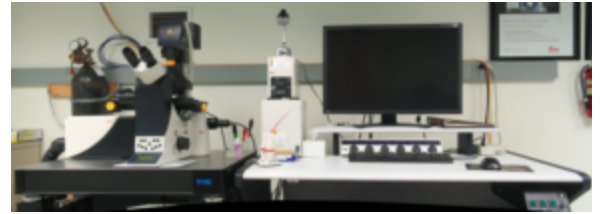


# SP5: Leica TCS SP5 II laser scanning confocal microscope on an inverted stand, PAA A033



## Confocal system

- scanner
  - with 4 spectral detectors for fluorescence and 1 detector for transmitted light, 12-bit output
  - mostly software driven (LAS AF 2.7)
  - conventional scanner: 5 fps at 512×512 pixels, max at 8192×8192 pixels
  - resonant scanner: 28 fps at 512×512 pixels, max at 1024×1024 pixels
  - can do 4 simultaneous confocal scans and up to 16 between line or 32 between frame sequential scans
  - laser power can be modulated continuously
  - ROI scan, Mark & Find, tiling, FRAP & FRET Wizards
- lasers (wavelength in nm)
  - diode: 405
  - Ar: 458, 476, 488, 514
  - DPSS: 561
  - HeNe: 633
- beamsplitters (wavelength in nm)
  - RT 30/70: for reflective mode
  - substrate: plain glass
  - TD 488/561/633: 505–540, 570–615, 655–720 triple band pass
  - DD 458/514: 470–505, 530–570 double band pass
  - RSP 500: reflection shortpass 500
  - DD 488/561: 505–545, 580–740 double band pass
- analyser/blocking filters (wavelength in nm)
  - 488/561/633
  - 458/514
  - polarizer

## Microscope

Leica DMI6000: inverted, motorized XYZ stage with galvo insert (500  $\mu\text{m}$  travel), infinity optics with epifluorescence (120 W mercury short-arc reflector lamp) and DIC, motorized objective and condenser turrets

- objectives
  - PL S-APO 5 $\times$ , NA 0.15, WD 12.1 mm (can be installed on demand, DIC not available)
  - HC plan apo CS 10 $\times$ , NA 0.4, WD 2.2 mm (DIC not installed but available on demand)
  - HC plan apo CS 20 $\times$ , NA 0.7, WD 0.59 mm
  - HC plan apo CS 20 $\times$  multi IMMersion, NA 0.7, WD 0.26 mm, correction collar for oil, glycerol, water, with or without coverglass
  - HC plan apo CS 40 $\times$  oil, NA 1.25, WD 0.10 mm, aperture collar
  - HC plan apo CS 63 $\times$  oil, NA 1.40, WD 0.10 mm, aperture collar
  - HC plan apo CS 63 $\times$  water, NA 1.2, WD 0.22 mm, correction collar for cover glass thickness (0.14 mm to 0.18 mm)
- filter cubes for epifluorescent attachment
  - A: EX 340–380, DM 400, BA LP485
  - GFP ET: EX 450–490, DM 495, BA 500–550
  - DsR: EX 541–552, DM 560, BA 568–640
  - I3 (not installed): EX 450–490, DM 510, BA LP515
  - N21 (not installed): EX 515–560, DM 580, BA LP590