Nikon A1r spectral

Point Scanning Confocal Microscopy

- Imaging live (short time-lapses <2 hours) and fixed samples
  - *any fluorescent proteins*
- Temperature, Humidity, CO2 control
  Peristaltic pum, water bath
- Optogenetic
- Colocalization, F-techniques (FRAP, FRET,...)
- 3D Z-stacks, tiled images
- Multiposition time-lapse

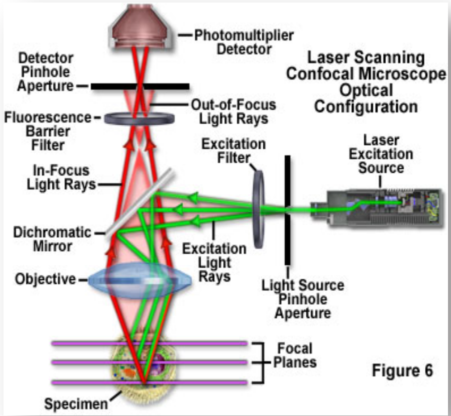
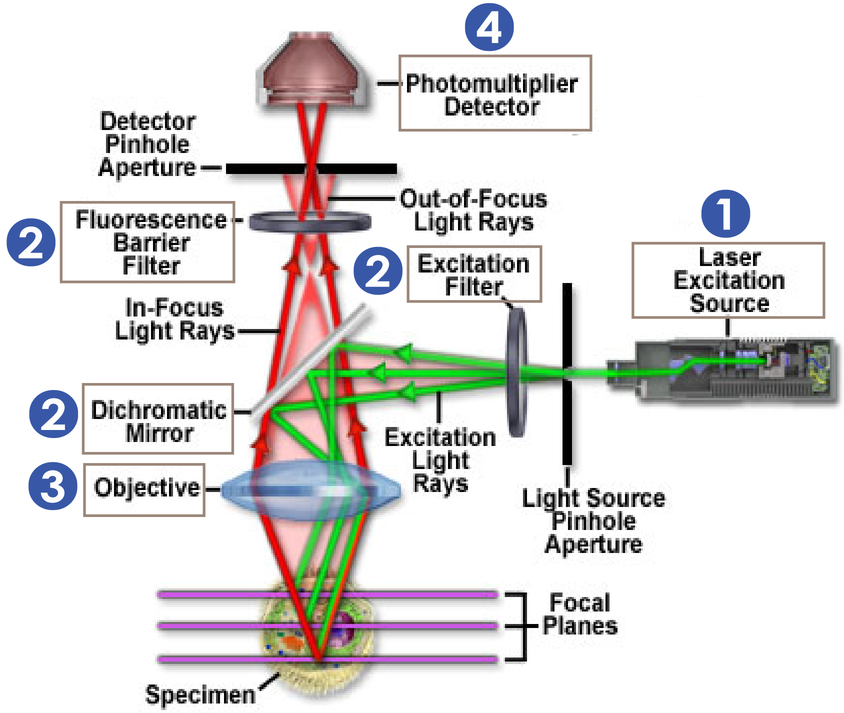


Figure 6

Bleaching	★★★★	*high*
Resolution	★★★☆	*good*
Speed acq.	★★☆☆	*medium*
Multicolor	★★★★	*4-8*
Depth (z)	★★☆☆	*<30 um*

- **Lateral** Resolution:
  $R(x,y)= 0.4\lambda/NA$
- **Axial** Resolution:
  $R(x,z)= 1.4\lambda n/NA^2$



Lasers 1

402 nm 100 mW
457 nm
471 nm
488 nm 50 mW
514 nm
561 nm
639 nm 40 mW

Mounted filters 2

Filter cubes for DAPI, CFP, eGFP, RedFP and DIC analyzer

Objectives 3

10x CFI Plan Apochromat 0.45 DT:4 mm
20x S PlanFluor ELWD 0.45 WD-8.2 -6.9
20x PlanApo VC DIC N2 NA0.8 WD=1000um
40x PlanFluor 1.3 DIC
60x Plan Apo Lambda 1.4 WD=130um

PhotoMultiplier Tubes (PMT detectors) 4

- 4 PMTs including 2 GaAsP PMTs (highly sensitive)
- 1 multispectral (spectral range from 32 channels with a sampling 2.5, 6.0 or 10.0 nm)

Microscope 5

Nikon A1r+ microscope (Ti Eclipse inverted stand)
Resonant and Galvano scanner for fast imaging (up to 30 fps) and conventional imaging (15 fps), respectively
Motorized XY stage, Piezo
Perfect Focus System 3 (PFS 3)
DIC prisme

Software 6

- Windows 7 64bits
- NIS Elements AR

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