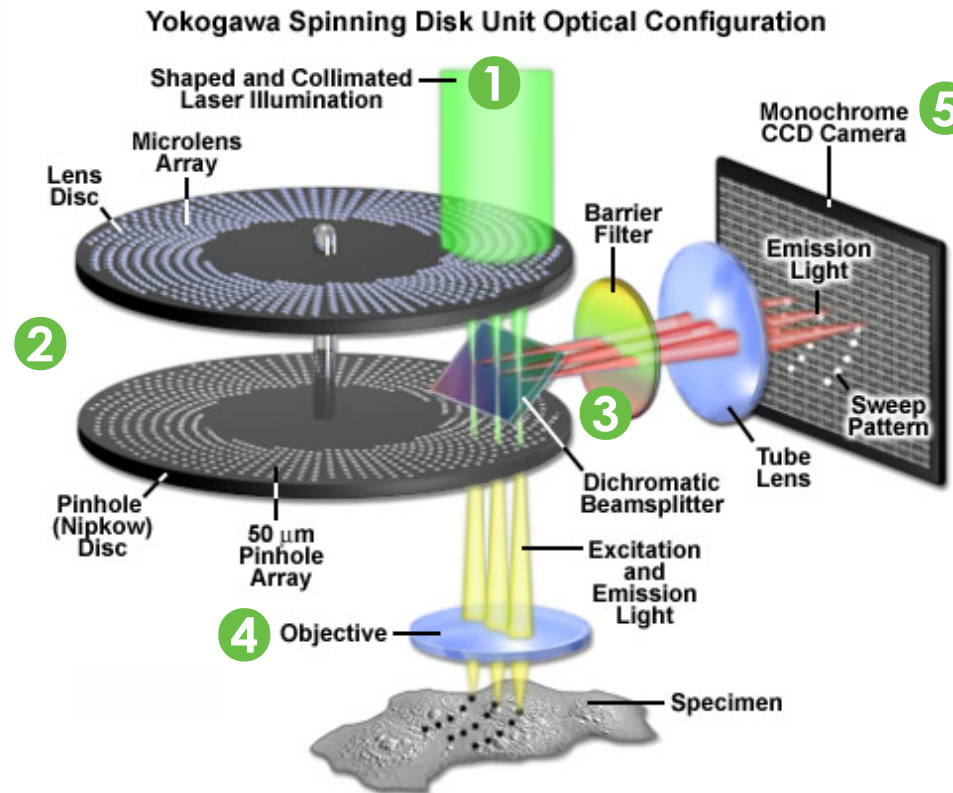


Nipkow

Spinning Disk Confocal Microscopy

- **Fast live imaging**
- CFP, YFP, GFP/FITC, Rhodamine
- **Temperature, Humidity, CO2 control**
Peristaltic pump, water bath
- **Optogenetic**

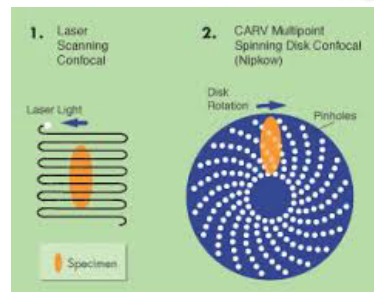
- **Colocalization, FRET**
- **3D Z-stacks**
- **Multiposition time-lapse**



Bleaching	★ ★ ★ ★ ★	low
Resolution	★ ★ ★ ★ ★	good
Speed acq.	★ ★ ★ ★ ★	excellent
Multicolor	★ ★ ★ ★ ★	3
Depth (z)	★ ★ ★ ★ ★	<30 μm

■ **Lateral Resolution:**
 $R(x,y) = 0.4\lambda/NA$

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



+ DV2 Split view system (Ratio/ FRET) !

- DV2 Split view system
- 1) CFP - YFP filter T505 / pxr
ET 470 / 24 and ET 535 / 30
 - 2) GFP - Cy3 filter 01-22-EM
ET 525 / 50 and ET 630 / 75

Lasers 1

447 nm
488 nm
561 nm

Cool LED 470 nm (optogenetic)

Yokogawa scan head 2

Mounted filters 3

FITC, CFP, Rhodamine

Objectives 4

EC Pln N 10x/0.3 DICII
EC Plan-Neofluar 20x/ 0.5 WD=2mm
LD Plan-Neofluar 40x/0.6 Korr WD=2.9mm
Plan Apo 40x/1 Oil DICIII
Plan Apo 63x/1.4 Oil DICIII
EC Plan N 100x/1.3 Oil Ph3

Detector 5

Evolve EM512 camera (Photometrics), EMCCD camera
Combined with high sensitive backillumination
512 x 512 Pixel, 16x16 μm, Frame Transfer CCD
16 BIT 16 bit Dual ADC, 10 Mhz, 5MHz and 1.0 Mhz Operation
About 34 full frames/sec
Up to about 748 sub frames/sec (ROI)
Thermoelectrically cooling down to
-85°C air cooled about 95% QE

Microscope 6

Zeiss Cell Observer.Z1 (inverted)
HAL100 and HXP120C for transmission and fluorescence
widefield eyepiece visualization
CSU X1 automatic Yokogawa spinning disk head
Dual-View system
Definite Focus system

Software 7

- Windows XP
- MetaMorph (v7.8.2)
- MetaFluor (v7.8.2)