

## Confocal Spinning disk

### Nikon EclipseTi – Gataca Systems iLas FRAP and LiveSR system

#### Room: E1036 CBI

Inverted confocal spinning-disk microscope dedicated to live cell imaging and applications that require high speed multidimensional imaging. FRAP and Live SR option.

#### Excitation Lasers

405 nm – 491 nm – 561 nm – 635\* nm

\* The 635 nm laser is not functional for FRAP experiments

#### Microscope

Inverted Nikon Eclipse Ti equipped with the PFS (perfect focus system)

#### Stages

X-Y motorized stage for multiposition recordings

Motorized Z control of the objective for Z stack acquisition

Z piezo for fast acquisition

#### Confocal Unit:

Yokogawa CSU-X1 Confocal Scanner

Variable Scanner Motor Rotation Speed: 1500 to 10000 rpm

Pinhole size: 50µm

#### Live SR:

Super resolution module

Maximum resolution up to 105nm

Acquisition speed of the spinning disk

No specific fluorophores required

No structured artifact

#### Camera:

Photometrics Prime 95B

1.4 Megapixel BSI CMOS Sensor (1200x1200)

Backside Illuminated Sensor

1.6e- Read Noise (Median)

>95% peak QE

80,000e- full well

11 x 11µm pixels

18.7mm diagonal

## Objectives

Default objectives	Magnification	Numerical aperture	Working distance	Immersion	Specificity
S FLUOR	10x	0.5	1.2 mm	DRY	
PLAN APO VC	60x	1.4	0.13 mm	oil	
APO TIRF	100x	1.49	0.12 mm	oil	Corr coverglass thickness
HCX plan APO	100x	1.4-0.7		oil	Leica

## Detection

6 emission settings are accessible **camera 1**

Position	Filter name	Wavelength range, nm
1	QUAD	4-band filter suited to the 4 laser excitation
2	527/645	dual band 506 – 548 and 620.5 – 669.5
3	525/50	500-550
4	605/64	573 - 637
5	725/150	650 - 800
6	452/45	429.5-474.5

6 emission settings are accessible **camera 2**

Position	Filter name	Wavelength range, nm
1	open	Brigfield
2	none	
3	none	
4	609/54	582-636
5	708/75	670.5-745.5
6	none	

## Filter cubes for epifluorescence observation / widefield experiments

DAPI – GFP - mCherry

Cubes on demand: 355 – CFP - YFP

## Software:

Metamorph 7.10 for spinning disk control (iLas option for FRAP)

### Temperature\CO<sub>2</sub>:

A Tokai Hit Stage Top Incubator allows temperature, humidity and CO<sub>2</sub> control.

If you need to use the temperature control, 3 hours are needed to stabilize the temperature