

# Light Microscopy Core Facility



Centre Méditerranéen de Médecine Moléculaire

Inserm U1065

## Zeiss LSM 510 META Inverted Confocal Microscope

**Location:** Bat. Archimed, C3M, room G-40



### Capabilities :

- Imaging fluorophores from UV to Far Red
- 3D imaging by Z-sectioning
- Time lapse acquisitions (environmental chamber ; Temperature and CO<sub>2</sub>)
- Spectral acquisition (fluorophores unmixing, autofluorescence removal)
- Tile scan for large field acquisitions
- Multipositions acquisition

### Equipment:

- Zeiss Axiovert 200M
- Fully motorized
- Softwares: Zen 2009

### Lasers:

- 405 nm Diode laser ; 25 mW
- Argon/2 (458, 477, 488, 514 nm) ; 30 mW
- HeNe 543 nm ; 1 mW
- HeNe 633 nm ; 5mW

### Filter cubes for eyepieces visualisation:

| Cube | Fluorophores       | Excitation wavelengths | Dichroic | Emission wavelength |
|------|--------------------|------------------------|----------|---------------------|
| Fs01 | DAPI               | BP 365/12              | FT 395   | LP 397              |
| Fs09 | Green fluorophores | BP 450-490             | FT 510   | LP 515              |
| Fs15 | Red fluorophores   | BP 546/12              | FT 580   | LP 590              |

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## Objectives:

| Magnification | NA   | type              | immersion medium | WD                       | Other           | "optimal pixel size" |
|---------------|------|-------------------|------------------|--------------------------|-----------------|----------------------|
| 10x           | 0.3  | EC Plan-Neofluar  | air              | 5.5 mm                   |                 | ≈ 340 nm             |
| 25x           | 0.75 | LCI Plan-Neofluar | water/glycerol   | 0.21 at cover glass 0.17 | DIC, correction | ≈ 130 nm             |
| 40x           | 1.3  | Plan-Neofluar     | oil              | 0.21                     | DIC             | ≈ 80 nm              |
| 63x           | 1.4  | Plan-Apochromat   | oil              | 0.19                     | DIC             | ≈ 70 nm              |

## Detectors, PMTs and Emission Filters:

- Ch2 (PMT): LP420, LP475, BP420-480, BP470-500, BP505-530, BP505-570 IR
- Ch3 (PMT): LP505, LP560, LP615, LP650, BP505-530, BP530-600, BP560-615
- Chs (spectral detector): spectral range (411-754)
- ChD (transmission detector)

## Main Dichroic:

- NT 80/20
- HFT 405/488/543/633
- HFT 405/488
- HFT 405/514/594
- HFT 458/514
- HFT 458
- HFT 488/594
- HFT 488/543