

## Confocal microscope Leica SPE

### Location

Room DaI / basement / room 001 (tel. 2274)

Laboratory of Biomathematics, Institute of Physiology of the Czech Academy of Sciences, Vídeňská 1083, Prague 4, Czech Republic

### Contacts

Manager:

**Mgr. David Vondrášek**

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Administrative tasks and technical operation, consultations.

Deputy Manager:

**Ing. Mgr. Daniel Hadraba, Ph.D.**

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Administrative tasks and technical operation in manager's absence.

Head of the Laboratory of Biomathematics:

**RNDr. Jiří Janáček, Ph.D.**

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Consultations in the field of image processing and analysis.

### Usage rules

See the documents [General Usage Rules](#) and [Rules of operation](#).

### Fees

Information about fees is at <https://www.fgu.cas.cz/en/articles/672-poplatky-czbi>.

## Detailed description of confocal microscope Leica SPE

**Microscope:** Upright fluorescent microcope Leica DM 2500 CSQ V-VIS

### Available objectives:

- HI PLAN 4x / 0.10 Dry, WD = 26.2 mm
- ACS APO 10x / 0.30 Dry CS, WD = 3.0 mm
- HC PL APO 20x / 0.70 IMM CORR CS, WD = 0.260-0.170 mm
- ACS APO 40x / 1.15 OIL CS 0.17, WD = 0.270 mm
- ACS APO 63x / 1.30 OIL CS 0.17, WD = 0.160 mm

(objectives from Leica SP2 may be used by prior arrangement with the manager)

**Scanning head V-VIS.** Spectral detectors with tunnable emission range 430 nm to 750 nm, monitored beam splitters 405/532, 488/635, 30/70 ND, transmission light detector, AcustoOptical Tunnable Filter (AOTF).

**Illumination path.** 4 solid state lasers with excitation (/power). 405 nm (/25 mW), 488 nm (/15 mW), 532 nm (/15 mW), 635 nm (/15 mW)

**Detection path.** Objective and condensor prisms for DIC suited for basic objectives set.

### Useful websites

- [LAS X Core Offline](#) software for opening Leica file formats
- [Nyquist online calculator](#) for theoretical calculation of pixel and voxel size
  
- Fiji (Fiji is Just ImageJ):
- Bioformats (former LOCI Tools) [ImageJ](#)
- [SLIM Curve](#)
- [ImageJ world mailing list](#)
  
- Interactive dye spectra viewer:
  - [ThermoFisher](#) (Life Technologies) interactive Spectra Viewer
  - [Leica FluoScout](#)
  - [BdBioSciences Spectrum Viewer](#)
  - [BioLegend SpectraAnalyzer](#)
  
- Tables of fluorescent dyes spectra:
  - <https://www.fluorophores.tugraz.at/substance/>
  - <http://www.leica-microsystems.com/science-lab/fluorescent-dyes/>
  - <http://works.bepress.com/gmcnamara/9/>