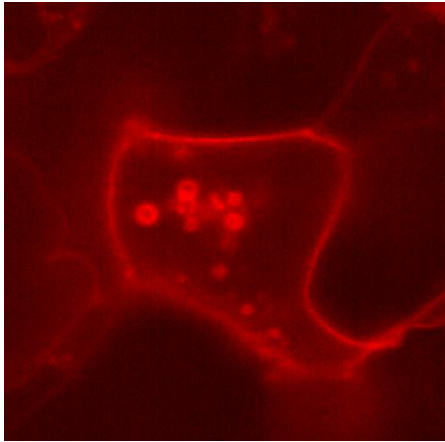


Zeiss LSM 5 Live: High speed confocal laser scanning microscope

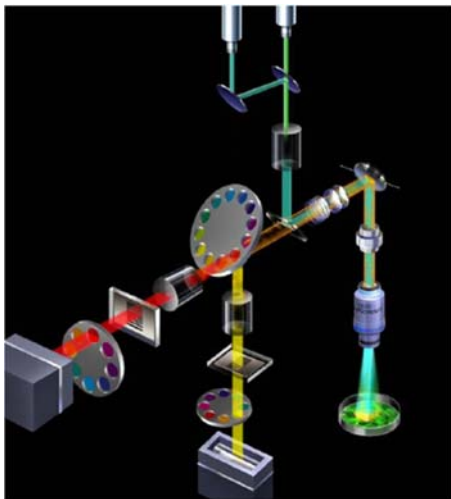
Location: Acute-Heart Lung building, St.Olavs hospital, 3.floor (room 342.03.022)



(med link til fila LPSENDOSOMES.MOV)

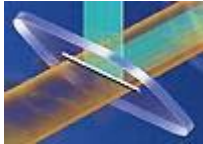
Description: The LSM 5 Live in combination with an LSM 510 Meta, is installed on an Axiovert 200 fully motorized microscope. LSM 5 Live can scan up to 120 confocal frames pr. sec with image quality 512 x 512 pixels in two different channels. Line scanning speed is up to 60.000 lines pr. sec. All scan combinations of line, X, Y, Z and time are possible. Available laser lines are diode 405 nm, diode 489 nm, DPSS 532nm and diode 635 nm. Data rates of up to 100 Mb pr. sec. are being processed with a real-time computer.

Zeiss LSM Live optic configuration:



Beam shaper

The complex beam shaper converts the collimated circular Gaussian laser beam into light with a rectangular cross-section (line) and then focuses it on the beam splitter.



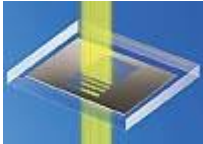
AchroGate beam splitter.

The new AchroGate splitter has virtually 100 % excitation efficiency and a highly effective emission yield. Color-independent beam splitting gives flexible, universal and sensitive imaging.



Zoom optics

The zoom optics 0.5x – 2.0x, attuned to the overall optical concept, adds motion to the scanning field, without altering the focus of the sample



Confocal aperture

Two individually adjustable confocal apertures with 16 different sized pinslits ensure maximum confocality.



Detector

The ultra-fast line CCD detector allows parallel imaging of 512 pixels with quantum efficiency of more than 75 %.