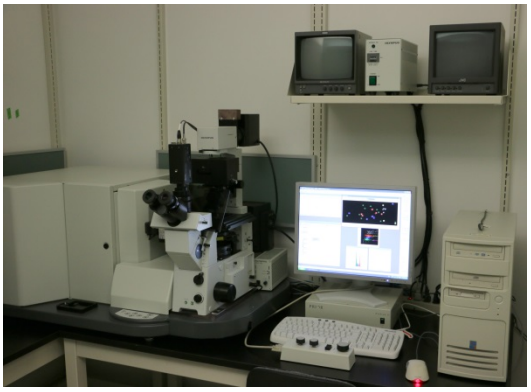
iCys Research Imaging Cytometer



A laser scanning cytometer (LSC) for quantitative imaging cytometry. The LSC is a flow cytometer analogue adapted for both epifluorescent imaging and quantitative measurements of fluorescence in tissue sections and adherent cell systems. In addition, the system may be configured for quantitative analysis of chromatically stained tissue sections.

Microscope	Olympus IX71 inverted microscope	
Objectives	Fluorescence: 10x, 20x, 40x	
Lasers	Gas (488 nm; 5-20 mW adjustable) and solid state diode lasers (405 and 633 nm) for fluorescent excitation.	
Filter Cubes	DAPI (Blue):	Em BP 463/39 nm
	FITC (Green):	Em BP 530/30 nm
	PE (Orange):	Em BP 580/30 nm
	Cy5 (Long Red):	Em LP 650 nm
Automation	Stage	
Illumination	Fluorescence: Mercury Burner; Brightfield: Halogen bulb.	
Detectors	Photomultiplier tubes (PMT) and photodiodes.	
Software	iCys (v 3.4.) and iBrowser image acquisition and analysis software.	
Other	High resolution stepper stage for high resolution laser scanning.	
	Dual channel scatter detector assembly for light loss and shaded relief scatter imaging.	
	Two color quantitative analysis of chromatically stained tissue using the dual channel scatter detector assembly.	
Applications	**-** *Quantitative fluorescence measurements in adherent cells and tissue sections.*	
	- *Quantitative nuclear fluorescence for analysis of cell cycle, DNA content, DNA damage, cell proliferation and apoptosis.*	
	- Cell viability and immunophenotyping of cell populations.	
	- Analysis of cellular protein translocation and compartmentalization.	
	- Mitochondrial studies using Mitotracker and MitoSox dyes.	
	- Quantitative analysis chromatic stains in tissue sections.	
	- Quantitative analysis of viral infection or nucleic acid transfection efficiencies in cells.	