



Flow Cytometry and Confocal Microscopy Facility

University of Connecticut; Biotechnology•Bioservices Center
91 N. Eagleville Rd., Unit 3149; CT 06269-3149

Instrumentation & Services

2011

Facility Co-Heads:

Dr. David Knecht
Phone: (860) 486-2200
david.knecht@uconn.edu

Dr. Joseph LoTurco
Phone (860) 486-3271
joseph.loturco@uconn.edu

Dr. Michael Lynes
Phone: (860) 486-4350
michael.lynes@uconn.edu

Dr. Lawrence Silbart
Phone: (860) 486-6073
lawrence.silbart@uconn.edu

Dr. Adam Zweifach
Phone: (860) 486-4542
adam.zweifach@uconn.edu

Facility Scientist:

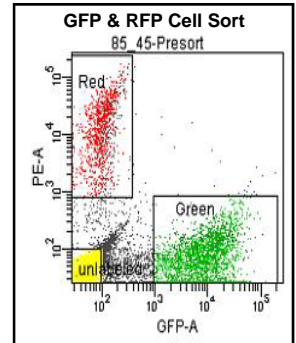
Dr. Carol Norris
Phone: (860) 486-3080
carol.norris@uconn.edu

The Flow Cytometry and Confocal Microscopy (FCCM) Facility is pleased to provide you with a list of accessible instrumentation to aid you in your research. FCCM Facility staff provide training and consultation in the use of facility instruments. Consultations are free but prospective users must schedule an appointment through Facility Scientist Carol Norris at (860) 486-3080 or to carol.norris@uconn.edu

INSTRUMENTATION

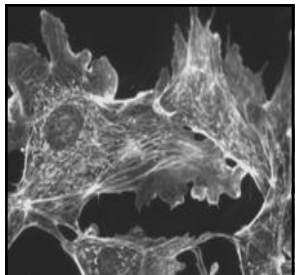
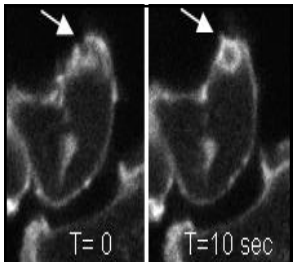
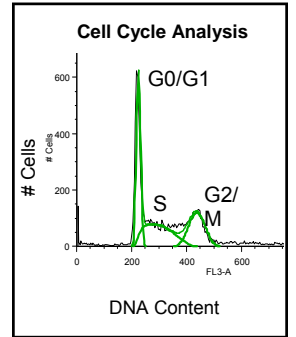
Flow Cytometry

- **BD Biosciences FACSria II Fluorescence-activated Cell Sorter**
 - Three lasers provide excitation at 407, 488, and 633 nm for analysis of up to 10 fluorescence channels plus forward and side scatter
 - Digital electronics
 - Sort up to four populations simultaneously
- **BD FACSCalibur Flow Cytometer**
 - Two lasers provide excitation at 488 and 633nm for analysis in four fluorescence channels plus forward and side scatter
 - Straightforward operation allows independent use by researchers
 - Offline computer with FlowJo analysis software
- **FlowJo Analysis Workstation**
Post-acquisition compensation to correct cross-talk between fluorescence channels
Multiple graphing options
Algorithms for analysis of cell cycle and cell proliferation data



Imaging

- **Nikon A1R Spectral Confocal Microscope**
 - Excitation wavelengths: 405, 457, 476, 488, 514, 561, 640 nm
 - High efficiency detectors
 - 32 channel spectral detector for separation of overlapping signals
 - FRET, FRAP, photoactivation, photoconversion
 - Computer-controlled x-y stage
 - Incubation chamber for control of temperature and CO₂
 - Nikon Perfect Focus system
- **Andor Confocal & TIRF Microscope**
 - High speed 4D confocal imaging or TIRF microscopy with EMCCD camera
 - Incubation chamber maintains live cells at 37 C and 5-10% CO₂
 - Four lasers for excitation at 405, 488, 561, and 633 nm
 - Nikon Perfect Focus system
- **Zeiss LSM 5 Multiphoton Confocal**
(Contact Facility Co-head Joseph LoTurco)
 - System configured for intravital imaging of fluorescently labeled cells
 - Zeiss Axoskop 2 FS upright scope with Sutter mechanical stage to accommodate most small animal preparations
 - Chameleon Ultra II pulsed laser for multiphoton excitation of eGFP or mRFP
- **Leica TCS SP2 Laser Scanning Confocal**
 - Excitation wavelengths: 458, 476, 488, 543, 633 nm
 - Three fluorescence detectors plus transmitted light
 - Reflection mode, xzy imaging, wavelength scanning, time lapse, FRET
- **Zeiss Axiovert Widefield Microscope**
 - Filter sets for: DAPI, FITC, TRITC, GFP, Cy5, CFP-YFP FRET, Texas Red
 - Computer-controlled operation for complex time lapse imaging
 - High sensitivity Hamamatsu CCD camera and Q Imaging color camera



REAGENTS

The FCCM Facility has a small supply of reagents available at cost for pilot experiments. Contact Facility Scientist Carol Norris for details.

COST FOR SERVICES

Costs for services can be found at <http://www.biotech.uconn.edu/fccmf/> in the Rates/Budget Certification Forms section.



"The mission of the Flow Cytometry and Confocal Microscopy Facility is to train and assist research personnel in the use of sophisticated instruments designed to detect, image, and/or quantify fluorescent and visible light in a wide variety of samples."