Managing Director
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Description of the Facility

Background Overview
The BioImaging Facility at Hunter College is centered in a multi-room facility of 1024 sq. ft. located in the Biological Sciences Department on the 8th Floor of Hunter North building. A satellite facility also includes a number of instruments on the 4th Floor of the Belfer Research building (at 69th Street and York Ave). Faculty and students have access to a broad spectrum of instruments, ranging from simple white light wide-field microscopes to fluorescent multidimensional super-resolution and confocal imaging systems. The Faculty supervisor and Scientific Director is Dr. Diana P. Bratu. Dr. Lloyd Williams is the Managing Director of the facility. The facility staff has expertise in many areas of microscopy including the laser scanning confocal microscopy, super-resolution microscopy, two-photon microscopy. They are also familiar with many image analysis software packages, including, Imaris, Volocity, Autoquant, MetaMorph, and NIS-Elements. Detailed descriptions of the equipment in the facility is given below. All equipment is located at Rm 826 HN or at the 4th floor of the Belfer Research Building where designated

Instruments
Nikon Eclipse Ti, TIRF/SIM
The Nikon TIRF SIM microscope allows the users to do both Total Internal Reflection Microscopy and SIM super-resolution microscopy. The acquisition software is Nikon NIS-Elements.
The charge for this instrument is $20/hr.
To book time, use the SharePoint Calendar at http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/TIRF%20SIM%20Calendar/calendar.aspx

Belfer Nikon A1 Confocal Microscope
The Nikon A1 Confocal microscope is Nikon’s powerful fully-automated confocal imaging system, capable of capturing detailed images with high signal-to-noise ratio and enhanced sensitivity. The acquisition software is NIS-Elements. The system is located at Belfer Research Building.
The charge for this instrument is $20/hr.
To book time use the SharePoint Calendar at http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/Nikon%20A1%20confocal%20microscope%20Belfer%20Building/calendar.aspx

Nikon Eclipse Ti Mosaic System for FRAP
The Nikon Eclipse Ti scope is a wide-field fluorescent microscope. It is equipped with Andor iXon EMCCD camera and a DG5 shutter, allowing for high-speed FRAP experiments. It is equipped with an Andor Mosaic/MicroPoint system for Optogenetics, Optophysical, photobleaching/activation and uncaging applications.
The charge for this instrument is $15/hr.
To book time on this system use the Sharepoint Calendar at http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/Nikon%20Eclipse%20Ti%20With%20Ultima%20High%20Speed%20Wavelength/calendar.aspx
Perkin Elmer UltraView ERS

The UltraView is a spinning disk confocal microscope equipped with five laser lines, which allow visualization of GFP, RFP, dual-color reporters, and allow visualization of high-speed, multiple-probe, time-lapse experiments. NIS-Elements software is used for image acquisition and analysis.

The charge for this instrument is $20/hr.

To book time on this system use the SharePoint Calendar at http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/Spinning%20Disk%20Calendar/calendar.aspx

Leica Confocal Microscope TCS SP2

The TCS SP2 Laser Scanning Spectral Confocal Microscope can do measurements of transmitted light, fluorescence, and laser scanning fluorescence imaging.

The charge for this instrument is $20/hr.

To book time on this system use the SharePoint Calendar at http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/Leica%20Confocal%20Calendar/calendar.aspx

Nikon Eclipse TE 200 Calcium Ratio & Micro Injection

The calcium ratio imaging system consists of: a Nikon Eclipse TE 200 inverted epifluorescence microscope, Sutter Lambda 10-2 laser, Sutter piezo stage, Instruments Design FluorView imaging software with Calcium & FRET plug-in, and a Narishige micromanipulator system.

The charge for this instrument is $10/hr.

To book time on this system use the Calcium Imager SharePoint Calendar at http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/Calcium%20Imager%20Calendar/calendar.aspx
Belfer Nikon Ti-S Fluorescence Microscope

The Nikon Ti-S microscope has a SOLA Light Engine solid state light source and a Nikon DigiSight camera. It has filter sets for DAPI FITC and RFP. The charge for this instrument is $5/hr.

JEOL JEM-100C/CX Transmission Electron Microscope

JEOL JEM-100CX II transmission electron microscope is an advanced high-performance electron microscope with stable and reproducible high resolution and performance. It has a 100kV accelerating voltage and a resolution of 0.19 nm (at 100kV). A 10M-pixel HAMAMATSU C4742-95 digital camera is integrated into the system for high-resolution image acquisition.

Nikon Eclipse E 400  Color Image Analysis System

The Nikon Color Imaging system consists of a Nikon Eclipse E400 upright microscope, and Nikon Digital Microscope Camera (DXM 1200F) high-resolution camera, UV cut filter, 10x objective, and Nikon Imaging Software. The system also has Adobe Photoshop installed for image acquisition and manipulation. The charge for this instrument is $5/hr.
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The Imaris Imaging station is a high-power workstation with Bitplane’s Imaris Imaging software installed. Imaris provides functionality for the visualization, segmentation, and interpretation of 3D and 4D microscopy datasets. The charge for this instrument is $10/hr. To book time on this system use the Imaris SharePoint Calendar at http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/Imaris%20Calendar/calendar.aspx

The NIS-Elements Imaging Station is a high-power workstation with Nikon’s NIS-Elements Imaging software installed. NIS-Elements provides cutting-edge tools for image manipulation and data management. The charge for these instruments is $5/hr. To book time on these systems use the Bioimaging SharePoint Calendar at: http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/NIS%20Elements%20Calendar/calendar.aspx

The Autoquant and NIS-Elements Imaging Analysis Station is an Imaging workstation that has both AutoQuant and Nikon’s NIS-Elements Imaging software installed. AutoQuant is used to deconvolve images acquired in the facility. The charge for this instrument is $10/hr. To book time on these systems use the Bioimaging SharePoint Calendar at: http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/Drobo_PC%20NIS%20Elements%20Calendar/calendar.aspx
Belfer NIS-Elements Analysis with Deconvolution

This Imaging workstation has Nikon’s NIS-Elements Imaging software installed. Additionally, it has Element’s deconvolution module installed.

The charge for this instrument is $5/hr.

Gemini EM Microplate Spectrofluorometer

The Molecular Devices SpectraMax Gemini EM Microplate Spectrofluorometer features top and bottom reading optics, dual filter wheels, full spectrum wavelength scanning, well scanning, auto PMT gain and is driven by Softmax Pro software on a Windows-based controller.

The charge for this instrument is $5/scan.

Amersham Biosciences Typhoon 9410

Typhoon is a highly sensitive variable-mode gel imager. The Typhoon 9410 unites the ability to detect multiple fluorophores, including near infrared, in a single, one-hour scan.

The charge for this instrument is $5/scan.
Typhoon FLA 7000 is a fast laser scanner for biomolecular imaging applications including sensitive and quantitative measurements of radioisotopic labels, chemifluorescent Western blots, and single fluorescence.

The charge for this instrument is $5/scan.

Odyssey Infrared Imager replaces traditional methods of analyzing western blots, chemiluminescence, and fluorescence. It is equipped with two infrared channels: 700 nm and 800 nm, and can thus probe two different targets in the same experiment.

The charge for this instrument is $5/scan.

PowerWave HT Microplate Spectrophotometer is a multi-channel reader for maximum speed in both 96- and 384-well plate formats. The PowerWave HT can perform kinetic and spectral scanning mode. Powerful Gen5 PC-based software is used for system control and data analysis.

The charge for this instrument is $3/scan.
The Digital Bio-Imaging Facility is supported by a Research Centers in Minority Institutions Program grant from the National Institute on Minority Health and Health Disparities (MD007599) of the National Institutes of Health. You must log in to use the equipment using the facility’s SharePoint Site:

E. When using the Cryostat, confocals, and the Nikon SIM/TIRF you must be trained by the facility managers. Once you are certified, you may use the equipment up to 300 hours. There is a $15 minimum charge, and fractions of an hour count as whole hours.

F. The facility charges $5 per scan. Use is monitored by the facility manager, or by experienced users in the various CTBR laboratories. For the three days of the microscope, there is a $10 minimum charge, and fractions of an hour count as whole hours.

Guidelines for using The Facility

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