Managing Director
Dr. Lloyd Williams
Email: williams@genectr.hunter.cuny.edu
Office: 826B in the Hunter North Building
Phone: (212) 650 3872
Fax: (212) 650 3565
Scientific Director
Prof. Diana Bratu, Associate Professor
Email: bratu@genectr.hunter.cuny.edu
Office: 914D in the Hunter North Building
Phone: (212) 772 5235
Fax: (212) 772 5227

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 images in multiple wavelengths with 1.3x the sensitivity of other microscopes. 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 DG5000 laser. It is also equipped with an Andor Mosaic/MicroPoint system for Optogenetics, Opto physiology, 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
The UltraView is a spinning disk confocal microscope equipped with five laser lines, which allow visualization of GFP, RFP, and other fluorescent proteins.

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](http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/Spinning%20Disk%20Calendar/calendar.aspx).

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](http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/Leica%20Confocal%20Calendar/calendar.aspx).

The calcium ratio imaging system consists of: a Nikon Eclipse TE 200 inverted epifluorescence microscope, Sutter Lambda 10-2 microinjector, and software that allows for analysis of calcium imaging data. The system also is equipped with 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](http://biosharepoint.hunter.cuny.edu/Bio-Imaging/Lists/Calcium%20Imager%20Calendar/calendar.aspx).
The Belfer Nikon Ti-S Fluorescence 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.

The JEOL JEM-100C/CX Transmission Electron Microscope is an advanced high-performance electron microscope. It offers resolutions up to 100,000X. A 10M-pixel HAMAMATSU C4742-95 digital camera is integrated into the system for high-resolution image acquisition.

The Nikon Color Imaging system consists of a Nikon Eclipse E400 upright microscope, and Nikon DXM 1200F high-resolution digital camera. The system utilizes Nikon Imaging Software. The system also has Adobe Photoshop installed for image acquisition and manipulation. The charge for this instrument is $5/hr.
Imaris Imaging Station

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

NIS-Elements Imaging Station

This Imaging workstation 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

Autoquant and NIS-Elements Imaging Analysis Station

This Imaging workstation 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:
Bio-Imaging Facility - Biology
Last Updated Thursday, 20 September 2018 14:30

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 waveband 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 autoradiography technology and direct imaging of chemiluminescence. The typhoon can also be used to analyze microarrays. The charge for this instrument is $5/scan.
Belfer GE FLA 7000 Typhoon

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

The Odyssey replaces traditional methods of analyzing western blots, chemiluminescence, and fluorescence. It is equipped with two infrared channels: 700 nm and 800 nm, allowing it to probe two different targets in the same experiment. The charge for this instrument is $5/scan.

PowerWave HT Microplate Spectrophotometer

PowerWave HT is a multi-channel reader for maximum speed in both 96- and 384-well plate formats. The system is equipped with powerful Gen5 PC-based software for system control and data analysis. The charge for this instrument is $3/scan.
The max specimen size is 55 X 70 mm and can cool samples down to - 50°C.

If you come 30 minutes late you will lose

Email Zhong Wang (zwang@genectr.hunter.cuny.edu) in advance for applying this policy.

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HT Plate Reader

Disparities (MD007599) of the National Institutes of Health.

The Digital Bio-Imaging Facility is supported by a Research Centers in Minority Institutions Program grant from

Website:

Objectives of Microscopes in the Bio-imaging Facility

(iv) PVX video conferencing for real-time consultation: during imaging experiment, PVX

(iii) Microscope remote control: Webex is used to setup the remote desktop sharing for

microscope system has fast scanning speed, it is ideal for cellular dynamic studies. Please

check the following link for Perkin Elmer spinning disk microscope system:

it is also equipped with an environment chamber for live cell imaging. Also, this type of

spinning disk systems) are expensive, not every research lab can have enough fund to support

Nowadays, microscopic imaging techniques are becoming more and more popular in

such system for their research. A solution to overcome this problem is to share the microscope

Purpose

Remote Instrumentation

Fee Schedule

4 - 10 hours $10/hour

4 - 10 hours $10/hour

4 - 10 hours $10/hour

4 - 10 hours $10/hour

Institutes of Health."

(This project was supported by a Research Centers in Minority Institutions Program grant from

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D. Training is required before using all machines. This can be done by individually with the

facility manager, or by experienced users in the various CTBR laboratories. For the three

door when you leave, and access using a key obtained from the facility.

B. Your use of the facility will be recorded. For the optical microscopes and the Gel and Blot

scanners, you must obtain a "Gene Center" computer account. This is required to log on to the

Computers that control the equipment. Your use of the machine will then be automatically

recorded. For the optical microscopes and the Gel and Blot

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In-cell Western Assay

Protein Quantitation

Proliferation, and Cytotoxicity Enzyme Assays

Transporter Assays Phosphatases/Kinases Microbial Growth

Reporter Gene Assays

ELISA Enzyme Kinetics

RNA quantitation

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The charge for this instrument is $3/scan.

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The Leica CM 3050S Cryostat features motorized sectioning and programmable defrost cycles. The cryostat can cut sections in the range 0.5 to 300

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A confirmation email will be sent before the experiment date. A WebEx meeting link will

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The facility charges $20 per hour for use of this microscope. There is a $15

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The facility charges $3 per scan. Use is monitored by the

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The facility charges $5 per hour for use of the confocal. There is a $15

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The facility charges $5 per hour for use of this image

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The facility charges $10 per hour for use of this image

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The facility charges $10 per hour for use of this image

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The facility charges $15 per

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The facility charges $15 per

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The facility charges $10 per hour for use of the Cryostat. There is a $15

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The facility charges $20 per hour for use of the confocal. There is a $15

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The facility charges $5 per hour for use of this image

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The facility charges $5 per hour for use of this image