BioImaging Facility Reopening

The facility has reopened. Below are post COVID rules.

Post COVID 19 Rules

- Reserving equipment at [http://bookit.hunter.cuny.edu](http://bookit.hunter.cuny.edu) prior to use is mandatory
- There is a 15 min buffer between bookings for any instrument
- Only one person at a time can use any instrument
- Masks must be used in the facility at all times
- Keep a 6ft distance from others while in the facility
- All users must complete the Hunter COVID screening checklist. [http://hunter.cuny.edu/covidscreening](http://hunter.cuny.edu/covidscreening) prior to coming to the facility
- Users must wipe down the equipment with an ethanol cleaning solution after each use. Ethanol spray bottle and paper towels are available in the facility

Several instruments are too close to be booked at the same time
The machines listed below should not be reserved at the same time. To check bookings use the resource calendar on the booking website

- Imaris 8.41 Imaging Station and the Imaris 9.12 Imaging Station
- Seahorse, Odyssey and BioTek PowerWave Microplate Reader
- GloMax®-96 Microplate Luminometer, Typhoon 9410 and Autoquant Deconvolution Station

When using the systems listed below please use the curtains that separate the instruments

- Nikon Eclipse Ti Mosaic System
- Nikon Eclipse TE 200 Calcium Ratio
- Leica TCS Confocal
- Perkin Elmer Spinning Disk Confocal
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.

To book time on any of the instruments go to http://bookit.hunter.cuny.edu
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.

Belfer Nikon A1 Confocal Microscope
The Nikon A1 Confocal microscope is Nikon’s powerful fully-automated confocal imaging system, capable of capturing images with high resolution, high sensitivity, 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.

Nikon Eclipse Ti Mosaic System
The Nikon Eclipse Ti scope is a wide-field fluorescent microscope. It is equipped with Andor iXon EMCCD camera and a DG530 xenon flash lamp. It can be used for Optogenetics, Opto physiology, photobleaching/activation and uncaging applications. The charge for this instrument is $15/hr.
The UltraView is a spinning disk confocal microscope equipped with five laser lines, which allow visualization of GFP, RFP, Cy5, and Cy7. It is suitable for high-speed, multiple-probe, time-lapse experiments; NIS-Elements software is used for image acquisition and analysis.

The Leica TCS SP8 DLS is a dual function fluorescence microscope that can be used as a conventional laser scanning confocal microscope (LSCM) or as a lightsheet fluorescence microscope (LSFM). This machine is located in 809HN and the charge for this instrument is $20/hr.

The Leica Confocal Microscope TCS SP2 can do measurements of transmitted light, fluorescence and laser scanning fluorescence imaging. The charge for this instrument is $20/hr.
The calcium ratio imaging system consists of: a Nikon Eclipse TE 200 inverted epifluorescence microscope, Sutter Lambda Pico-LED light source, and an Arcturus BDP capture imaging software with Calcium & FRET plug-in. The system also is equipped with a Narishige micromanipulator system. The charge for this instrument is $10/hr.

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.

The JEOL JEM-100C/CX transmission electron microscope is an advanced high-performance electron microscope.
The Nikon Color Imaging system consists of a Nikon Eclipse E400 upright microscope, and Nikon DXM 1200F high-resolution camera. The system utilizes Nikon Imaging Software. The charge for this instrument is $5/hr.

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.

The Imaris 9.12 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. It also has Imaris 9.12 installed. The charge for these instruments is $5/hr for NIS-Elements and $10 per hour for Imaris.
Autoquant Deconvolution 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. This machine also has a floating license of Imaris 9.6.

The charge for this instrument is $5/hr for Elements and $10 for Imaris and AutoQuant.

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. This machine also has a floating license of Imaris 9.6.

The charge for this instrument is $5/hr for Elements and $10 for Imaris.

Gemini EM Microplate Spectrofluorometer
The Molecular Devices SpectraMax Gemini EM Microplate Spectrofluorometer features top and bottom reading optics, dual 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 Bioscience Typhoon 9410

Typhoon is a highly sensitive variable-mode gel imager. The Typhoon 9410 unites the ability to detect an extensive range of chemiluminescence and fluorescence signals using fade-resistant plates. It can also be used to analyze microarrays. The charge for this instrument is $5/scan.

Belfer GE FLA 7000 Typhoon FLA 7000

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, and can thus probe two different targets in the same experiment. The charge for this instrument is $5/scan.
Biotek PowerWave Microplate Reader

PowerWave HT is a multi-channel reader for maximum speed in both 96- and 384-well plate formats. The PowerWave HT ... 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.

Belfer Bio Tek Synergy HTX Microplate Reader

Synergy HTX is a Multi-Mode Microplate Reader for making: absorbance, fluorescence, luminescence, and AlphaScreen/AlphaLISA measurements on 6- to 384-well microplates.

The charge for this instrument is $3/scan.

GloMax®-96 Microplate Luminometer

The GloMax®-96 Microplate Luminometer is a state-of-the-art Microplate Luminometer for making: absorbance, fluorescence, luminescence, and bioluminescent assays, eliminating the need to dilute samples or manage detector-driven gain changes.

The charge for this instrument is $5/scan.
Remote Instrumentation

Purpose

Remote instrumentation service

Elements Analysis Workstation:

PowerWave HT Plate Reader:

Imaris Analysis Workstation:

Nikon SIM/TIRF:

Fee Schedule

The facility charges $20 per hour for use of the confocal. There is a $15 minimum charge, and fractions of an hour count as whole hours. For long time duration experiment, we have a special rate policy described as follows: in any 24 hour period

Webex remote control guide

Remote users can get the instruments.

Contact emails:

Dr. Lloyd Williams:

Email Lloyd Williams (williams@genectr.hunter.cuny.edu) in advance for applying this policy. If you encounter problems with the facility E-mail the facility director Lloyd Williams at

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A. The facility is open for use by members of the CTBR, other CUNY departments, and outside parties with the prior arrangement of the staff of the Bio-Imaging facility.

D. Training is required before using all machines. This can be done by individually with the staff of the Bio-Imaging facility.

B. The facility is open for use by members of the CTBR, other CUNY departments, and outside parties with the prior arrangement of the staff of the Bio-Imaging facility.

The charge for this instrument is $5/hr.

To book time on this system use the Cryostat SharePoint Calendar at

The Leica CM 3050S Cryostat features motorized sectioning and programmable defrost cycles. The cryostat can cut sections in the range 0.5 to 300 Microns. The Probe Cryostat has a 160 Microns long and up to 160 Microns wide cutting blade. The probe can be removed from the cryostat, allowing for 24 hour missions (such as in-flight missions). The cryostat can cut sections in the range 0.5 to 300 Microns. The probe Cryostat has a 160 Microns long and up to 160 Microns wide cutting blade. The probe can be removed from the cryostat, allowing for 24 hour missions (such as in-flight missions).

The facility charges $5 per scan. Use is monitored by the

Contact us by email for scheduling a remote microscopic imaging experiment, in advance for applying this policy.

O. You must log in to use the equipment using

Grants from the National Institute for Minority Health and Health Disparities (MD007599) of the National Institutes of Health (NIH) support the Bio-imaging facility.

N. Report all accidents (injuries, spills, fires) to the Security (x4444) and Health and Safety.

M. For scheduling the above remote instrumentation service, please check the following guidelines:

(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 note that the microscope is also equipped with an environment chamber for live cell imaging. Also, this type of microscope can be used for important immunohistochemistry staining protocol.

(i) Leica SP2 confocal microscope: it is ideal for regular 2D & 3D scanning for fixed slides. The confocal microscope system has fast scanning speed, it is ideal for cellular dynamic studies. Please note that the microscope is also equipped with an environment chamber for live cell imaging. Also, this type of microscope can be used for important immunohistochemistry staining protocol.

In-cell Western Assay

ELISA/FLISA

On-cell Western Assay

Protein Quantitation

Proliferation, and Cytotoxicity Enzyme Assays

Reporter Gene Assays

Nucleic Acid Quantitation

Colorimetric assays

532nm/633nm

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