BioImaging Facility Reopening

The facility has reopened. Below are post COVID rules.

Post COVID 19 Rules

- Reserving equipment at 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 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
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 high-resolution images 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 DG5 octuplet with an Andor Mosaic/MicroPoint system for Optogenetics, Opto physiology, photobleaching/activation and uncaging applications.

The charge for this instrument is $15/hr.
Perkin Elmer UltraView ERS
The UltraView is a spinning disk confocal microscope equipped with five laser lines, which allow visualization of GFP, RFP, and other fluorescent proteins. It is designed for high-speed, multiple-probe, time-lapse experiments; NIS-Elements software is used for image acquisition and analysis.

Leica Confocal TCS SP8 DLS
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 in 809HN.

The charge for this instrument is $20/hr.

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.
The calcium ratio imaging system consists of: a Nikon Eclipse TE 200 inverted epifluorescence microscope, Sutter Lambda Fluorescence Microscopy Laser System, and Optima 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 digital camera. It has filter sets for DAPI, FITC, and RFP.

The charge for this instrument is $5/hr.

The JEOL JEM-100C transmission electron microscope is an advanced high-performance electron microscope with a 10M-pixel HAMAMATSU C4742-95 digital camera integrated into the system for high-resolution image acquisition.
Bio-Imaging Facility - Biology

The Nikon Color Imaging system consists of a Nikon Eclipse E400 upright microscope, and Nikon DXM 1200F high-resolution digital camera. The system also 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.

Imaris 9.1 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. 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.

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 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 FLA

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.

Odyssey Infrared Imager

The Odyssey replaces traditional methods of analyzing western blots, chemiluminescence, and fluorescence detection, allowing the Odyssey to detect two different targets in the same experiment. It is equipped with two infrared channels (700 nm and 800 nm). 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. It supports both kinetic and spectral scanning modes. 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 with a high sensitivity and broad range of detection for luciferase, chemiluminescence, and bioluminescent assays, eliminating the need to dilute samples or manage detector-driven gain changes. The charge for this instrument is $5/scan.
The max specimen size is 55 X 70 mm and can cool samples down to -50°C.

(i) Leica SP2 confocal microscope: it is ideal for regular 2D & 3D scanning for fixed slide samples. Please check the following link for Leica SP2 system:

(j) Gemini Spectrophotometer, Typhoon 9410 Imager

(k) PowerWave HT Plate Reader:

(l) Volocity Analysis Workstation:

(m) Elements Analysis Workstation:

(n) Microwestern

(o)  On-cell Western Assay

(p) Biotek PowerWave

(q) LI-COR Odyssey

(r) Western blot sample

(s) Image: The facility charges $5 per scan. Use

(t) Endpoint/Kinetics

(u) Luminescence

(v) Quantitative Phosphorimaging

(w) Chemiluminescence

(x) Fluorescence

(y) Multifluorescence applications (such as 2-D DIGE and ECL Plex)

(z) Image

AA (a) 96-well plate

BB (b) 96 to 384-well plate

CC (c) 96 & 384-well plate

DD (d) 4x/0.1

EE (e) 4x/0.13

FF (f) 40x/1.25/oil

GG (g) 100x/1.4/oil

HH (h) 60x/1.4/oil

II (i) 100x/1.4/oil

JJ (j) 40x/0.6

KK (k) 20x/0.75/multi

LL (l) 100x/1.4/oil

MM (m) 60x/1.4/oil

NN (n) 250-850nm

OO (o) 300-650nm

PP (p) 360-850nm

QQ (q) 457nm/488nm/

RR (r) Phosphorimaging

SS (s) Fluorescence

TT (t) Nucleic Acid Quantitation

UU (u) Transporter Assays Phosphatases/Kinases

VV (v) Microbial Growth

WW (w) Quantitative Westerns

XX (x) Image

YY (y) Image

ZZ (z) Image

10 - 24 hours $5/hour

4 - 10 hours $10/hour

0 - 4 hours $20/hour

special rate policy described as follows: in any 24 hour period

M. Clean oil off the microscope objective lenses after use.

L. Users may have no more than 2 reservations made on a calendar at one time for any single reservations on the site. You will need a “Gene Center” network account to use most

K. Equipment is available on a first come first serve basis. You can book 3 hours slots on the

J. Report mercury lamps in service for more than 300 hours

I. Turn off all microscope lamps after use. It is particularly important to turn off the mercury

H. Do not leave your samples in the facility

G. Do not wear latex gloves in the facility

F. If you encounter problems with the facility E-mail the facility facility manager, or by experienced users in the various CTBR laboratories. For the three

E. When using the Cryostat,

C. The facility is available for use 7 X 24. After normal working hours (9-5 Mon-Fri) lock the

A. The facility is open for use by members of the CTBR, other CUNY departments, and

The charge for this instrument is $5/hr.

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

A fluorescence spectrometer

For remote users to solve on-site experimental issues. Please check the following link for PVX real-time conferencing: PVX video conferencing operational guide.

(v) Cell staining protocol: a simple cell staining protocol is posted here as an example:

(b) Spinning-disk

(c) PE

(d) Titans

(e) Cryostat

(f) Olympus

(g) Nikon

(h) Nikon

(i) Olympus

(j) Nikon

(k) Nikon

(l) Nikon

(m) Nikon

(n) Nikon

(o) Nikon

(p) Nikon

(q) Nikon

(r) Nikon

(s) Nikon

(t) Nikon

(u) Nikon

(v) Nikon

(w) Nikon

(x) Nikon

(y) Nikon

(z) Nikon

AA (a) Nikon

BB (b) Nikon

CC (c) Nikon

DD (d) Nikon

EE (e) Nikon

FF (f) Nikon

GG (g) Nikon

HH (h) Nikon

II (i) Nikon

JJ (j) Nikon

KK (k) Nikon

LL (l) Nikon

MM (m) Nikon

NN (n) Nikon

OO (o) Nikon

PP (p) Nikon

QQ (q) Nikon

RR (r) Nikon

SS (s) Nikon

TT (t) Nikon

UU (u) Nikon

VV (v) Nikon

WW (w) Nikon

XX (x) Nikon

YY (y) Nikon

ZZ (z) Nikon

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