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 performing fast, precise, 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 photon counter 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, YFP, CFP, and mCherry channels.

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).

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.
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 Fluorescence Confocal Microscope, and Nikon DigiSight 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.

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-100C/CX transmission electron microscope is an advanced high-performance electron microscope with a stable and precise alignment. 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 also has Adobe Photoshop installed for image acquisition and manipulation, and 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 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 instruments 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 instruments 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 excitation and emission detection, 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 an extensive range of stains and labels. It employs dual laser imaging, 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 fluorescent images. It is equipped with two infrared channels at 700 nm and 800 nm, and can thus probe two different targets in the same experiment.

The charge for this instrument is $5/scan.
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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 supports absorbance, fluorescence, phase contrast, and 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.
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The max specimen size is 55 X 70 mm and can cool samples down to -50°C.

Williams@genectr.hunter.cuny.edu

Magnification/NA

HT Plate Reader
Luminometer

be included in this email for remote connection.

real-time conferencing: PVX video conferencing operational guide.

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

Also, this type of

Now a new service is ready for our remote users to get remote access to our advanced

(i) Utilize WebEx to setup remote desktop sharing for microscope control.

biomedical research. Most of the advanced high-end microscope systems (i.e., confocal &

control of the microscope for their experiment through a simple Internet connection. Our

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

hours.

hours.

minimum charge, and fractions of an hour count as whole

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

National Institutes of Health.”

O. You must log in to use the equipment using

Officer, Ricardo Franco (x4462)

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

another session, thus obtaining another/2nd appointment on the calendar, say Wed 2-5pm.

For example, Monday 12-4pm, Tues 9-1pm. After Monday's session, the user may schedule

come 30 minutes late you will lose your reservation. You can create an account to make

instuments.

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

cooled down for 15 minutes.

E. When using the Cryostat,

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

have complete the training course your account will be activated for the microscope.

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

automatically logged and you will be charged according to the fee schedule below.

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

Rules of Operations

Fluorescence

Imaris Analysis Workstation:

Colorimetric assays

On-cell Western Assay

Transporter Assays Phosphatases/Kinases Microbial Growth

Nucleic Acid Quantitation

RNA quantitation

650 nm

Solid State Laser

488 nm

640 nm

405 nm

532 nm

633 nm

HeNe Laser

561 nm

Argon Ion Laser

Leica SP2 Confocal, Room 826 HN

On-cell Western

Endpoint/Kinetics

Fluorescence

532nm/633nm

-1.

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