**BRIC & CMF Laboratory User Agreement**

The purpose of this agreement is to establish expectations between the users and lab personnel of the BIOS Research Instrumentation Core (BRIC) and the Core Microscopy Facility (CMF). All NIU faculty and staff are eligible to be users of the BRIC and CMF laboratories. These two core laboratories are located in Montgomery Hall (BRIC rooms 113, 119, and 116; CMF rooms 112 and 115).

1. Instruments and storages that are maintained and operated by BRIC/CMF lab staff:

a. BRIC Cell Culture Laboratory - Room 119

* **Equipment:** seven incubators (three 37°C, 5% CO2 incubators, one 34°C, 5% CO2 incubator, and one incubator with flexible temperature settings and optional adaptation for hypoxic work, all currently online; two incubators on standby; option available to fit any incubator with a cell-spin platform for tumorigenic studies); a light microscope with Nikon camera and associated digital imaging software; an EVOS FLoid cell imaging station (maximum optical magnification 460X; three preset fluorescence channels: blue – Ex. 390/40nm, Em. 446/33nm; green – Ex. 482/18nm, Em. 532/59nm; and red – Ex. 586/15nm, Em. 646/68nm); a handheld Scepter™ 2.0 digital cytometer; a Tali™ image-based digital cytometer; two manual hemocytometer plates; one Neon™ electroporation transfection system; a nanodrop spectrophotometer; a cup sonicator; a large capacity swinging-bucket rotor tabletop centrifuge; three fixed-rotor microfuges; two pH meters; a 37°C metal bead bath; four vortex units; a microfuge tube adapted hotplate; a heating/stir plate; two gram scales; small, medium, and large, horizontal gel electrophoresis tanks; four vertical gel electrophoresis and transfer tanks; two UV-Vis gel imaging stations with associated digital imaging software; three plate rockers; a plate shaker; three dedicated pipette sets for sterile cell culture applications and non-sterile applications; and access to water from RO tap and Nanopure™ purification system sources.
* **Storages:** two liquid nitrogen cryogenic tanks (-196°; one large unit in use and one small unit on standby), one -80°C freezer, two -20°C freezers, and two 4°C storages (one walk-in and one standing unit)
* **Work spaces:** one chemical fume hood, two laminar flow hoods (cell culture dedicated), and bench space for general use

b. BRIC Molecular Analytics Laboratory - Room 113

* **Equipment:** an Epoch UV-Vis microplate spectrophotometer with associated Gen5 software; a Cytation5 fluorescence and UV-Vis spectrophotometer; a luminometer; a standard PCR mastercycler unit; two real-time qPCR mastercycler units – Eppendorf and Applied Biosystems; a PCR workstation chamber; a dedicated pipette set for RNA applications; a fixed-rotor microfuge; two heating/stir plates; and access to water from RO tap and Nanopure™ purification system sources.
* **Storages:** one -20°C freezer and one 4°C storage
* **Work spaces:** a chemical fume hood and bench space for general use

c. BRIC Microbiology Laboratory - Room 116

* **Equipment:** two large-capacity, swinging bucket and fixed-rotor tabletop centrifuges; a fixed-rotor microfuge; a medium benchtop 37°C shaker; a large chest 37°C shaker; two medium 37°C incubators; one water bath; two heating/stir plates; a gram scale; a dedicated pipette set for microbiological applications; and access to water from RO tap.
* **Storages:** one -20°C freezer and one 4°C storage
* **Work spaces:** a chemical fume hood, a laminar flow hood, and bench space for general use

d. CMF Confocal and Sample Processing Room 112

* **Zeiss LSM 5 Pascal Confocal Laser Scanning Microscope** - 10x, 40x (oil), and 63x (oil) Plan Neofluar objectives; Argon (458, 488, and 514 nm) and HeNe (543 nm) lasers; Zeiss Pascal LSM 5 and Zen image acquisition and optimization software
* **Sample processing and storage**: Lab-Line slide warmer; Lab-Line and Tissue-Tek tissue flotation baths; AO Spencer microtome; gram and milligram scales; pH meter; chemical fume hood**;** two 4°C storages; and bench space for solution prep and staining

e. CMF Stereo, Light, Fluorescence, and Transmission Electron Microscopy Room 115

* **Nikon Eclipse E-600 Research Light Microscope (LM)** - standard Brightfield visualization; epifluorescence filter sets: UV-2B (ex 353, em 435), UV-2E/C (a.k.a. DAPI - ex 358, em 461), BFP (ex 380, em 440), GFP (ex 470, em 525), YFP (ex 500, em 535), TRITC HYQ (ex 545, em 620); Differential Interference Contrast (DIC, a.k.a. Nomarski optics); 1X, 4x, 10x, 40x, and 100x (oil) Plan Fluor,and 60x Plan Apo objectives; Nikon DS-Fi1c color digital camera system with Nikon NIS-Elements image capture and optimization software; Hamamatsu ORCA-ER high-sensitivity monochrome digital CCD camera with HCImage Live image capture and optimization software
* **Leica MZ7.5 Stereo Microscope** - Leica MC170 HD color digital camera; Leica Application Suite image capture and optimization software, with a newly added LAS MultiTime – Timelapse capture mode that will create video (.avi) files
* **Hitachi H-600 Transmission Electron Microscope (TEM)** - SIA L12C (16 mp) imaging system with MaxIm DL 5 image capture and optimization software
* **Other:** Reichert-Jung SuperNova Ultramicrotome; Reichert OmU2 Ultramicrotome; Sorvall Porter-Blum MT2-B Ultramicrotome; LKB Glass Knifemaker; Tissue-Tek II paraffin dispenser; AO knife sharpener; 60°C vacuum incubator

2. The BRIC/CMF laboratories provide the following services via Department Chair, Garry Sunter - contact gsunter@niu.edu

a. Performs day-to-day maintenance of instruments.

b. Assists with designing/carrying out experiments.

c. Provides lab-specific training to all users (supplementary to the required Institutional Training provided by Office of Research Compliance, Integrity & Safety (ORCIS) at NIU).

d. Maintains the online lab reservation system (BookkIt; clustermarket.com/bookkit).

e. Enforces safety regulations as well as proper use of equipment and work spaces.

3. User group member agreements:

a. All users must fill out the “**New User Registration Form**”. The lab is not charging any fees

at this time.

b. All users and visitors to the lab agree to follow all required safety procedures including the

use of current PPE requirements: face mask, safety glasses, gloves, and lab coats.

c. All users must use the Bookkit online system to reserve instrument and work space time.

d. If a user only wants to access the lab briefly to access materials or take a quick measurement, they may arrange that visit with the Lab Manager by email.

e. If a user wishes to run an instrument independently, they must complete the appropriate

Lab-specific user training. Please contact the Lab Manager for more details.

f. All users are responsible for their own data; the BRIC and CMF laboratories do not offer long term data storage. All users must maintain a personal USB flash drive to store data because some computers associated with BRIC and CMF instrumentation purposely do not have internet connections.

g. Instrument areas must be kept clear of waste, papers, and chemicals, other than what is necessary to carry out the experiments. There are hoods and designated bench space for working with samples.

h. All users must leave the areas in the lab that they access in the same working condition as

when they arrived.

i. Several types of temperature-dependent storages are available to individual research groups upon request. Users may request space to store items by contacting the Lab Manager.

4. Consequences and Remedies:

Should a user violate the terms and conditions of this agreement, their privileges to the

laboratory shall be revoked. Appeals may be directed to the Biological Sciences Department Chair, Dr. Garry Sunter, contact: gsunter@niu.edu

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

User Signature

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

User Name (please print)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lab Manager Signature

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lab Manager Name (please print)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date