

WHO WE ARE

The Team



Scientific Director:

Marilyn Bui, M.D., Ph.D.
(813) 745-4940
Marilyn.Bui@Moffitt.org

Core Facility Manager:

Joseph Johnson, M.S
(813) 745-8710
Joseph.Johnson@Moffitt.org

Core Specialists:

Tingan (Anna) Chen, M.D., Ph.D
(813) 745-6567
Tingan.Chen@Moffitt.org

Kelly Guzman, B.S.

(813) 745-6157

Kelly.Guzman@Moffitt.org

Brooke Smedley, B.S.

(813) 745-6157

Brooke.Smedley@Moffitt.org

Our Background

The Analytic Microscopy Core Facility (AMC) was established in 1999 as a centralized and cutting-edge shared facility that provides scientific and technical expertise in optical microscopy applications.

Our Values

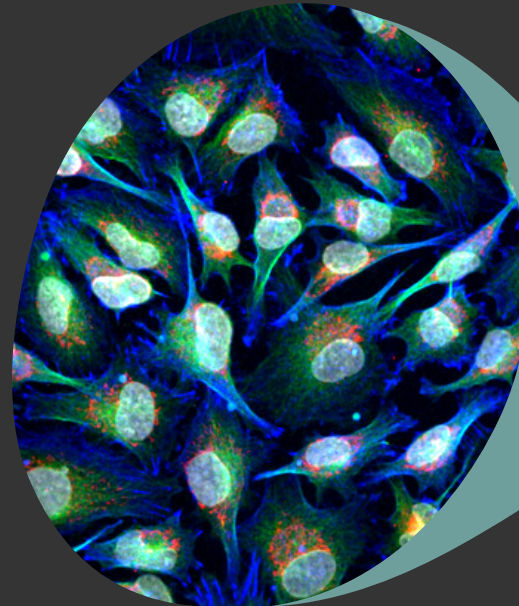
The specific aims of the AMC are to provide: (1) experimental design support for microscopy based studies, (2) access and assistance to the core's advanced microscopy systems, and (3) instrument training and microscopy educational resources to the research trainees and staff at MCC.

SCHEDULING

The AMC is open during regular business hours from 9AM to 5PM, Monday - Friday for assisted appointments. Properly trained users can utilize core instruments independently during off hours by appointment.

Training and assisted use are available by appointment only, so please consult with AMC staff for details.

Scan the QR code below for FAQ's, Labvantage scheduling (accessible once trained and provided access) as well as updated core fees.



VISIT US

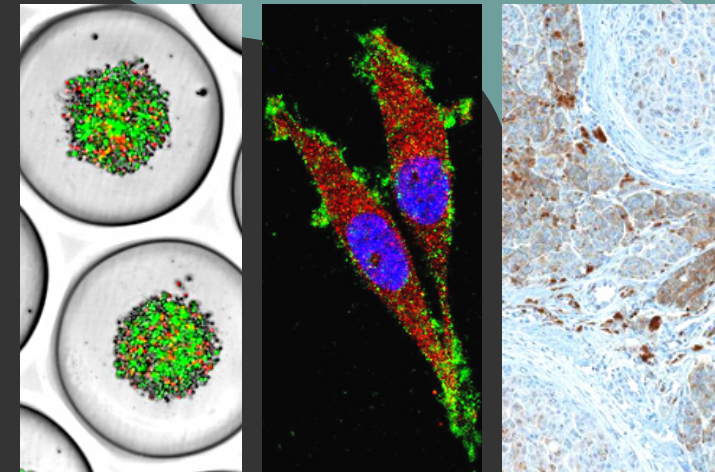
📍 MRC 4058

☎ (813)- 745-6157



ANALYTIC MICROSCOPY CORE (AMC)

OBSERVE LIFE.
QUANTIFY RESULTS.
DISCOVER NEW ANSWERS.



The AMC is an invaluable resource for Members performing image-based studies on cell lines, mouse models, human blood and tissue. Major services offered at the core include fluorescence and confocal microscopy, live cell imaging, intravital imaging, laser capture microdissection, digital pathology, and image analysis. These services are used by all five research programs and span basic, translational and clinical sciences.

MOFFITT
CANCER CENTER

Core Services

Confocal Microscopy

The **Leica SP5** AOBS laser scanning inverted multiphoton confocal has 9 tunable laser lines to excite any fluorochrome between 405 - 700nm, 4 PMTs (plus 2 HyD detectors), and top of the line objectives. The resonant scan mode allows researchers to acquire several images per second and the acquisition software includes tools for colocalization, FRET, FRAP, calcium imaging, and 3D reconstruction analysis. **Environmental chambers are available for live cell imaging and animal imaging.**

The **Leica Confocal SP8** has 4 laser lines with 2 PMTs (plus 2 HyD detectors) and can handle most routine confocal microscopy experiments.

Widefield Fluorescent Microscopy

The facility offers two state-of-the-art, fully automated instruments - the **Zeiss Z2 upright** and **ZI inverted** widefield microscopes. Both are equipped with high-quality objective lenses, high resolution CCD and CMOS cameras, DIC and phase contrast, as well as several fluorescent filter cubes to view most commercially available dyes and fluorophores. A fully enclosed incubation chamber is available for long term time lapse live cell imaging on the ZI. In addition, an apotome is available for use on the upright microscope.

The **EVOS FL** system is available for easy acquisition of fluorescence images and the **EVOS® FL Auto** Imaging System enables you to perform automated live cell imaging for time-lapse, area scanning, tile stitching, and automated cell counting.

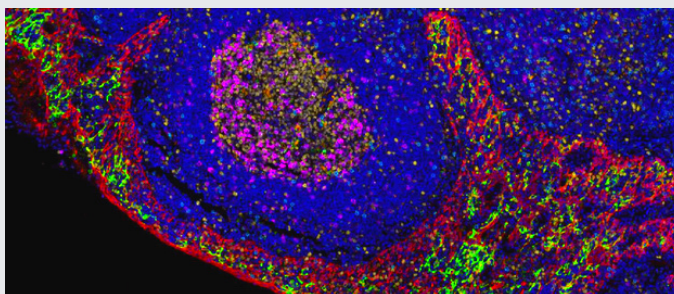
Laser Capture Microdissection

Laser Capture Microdissection (LCM) is an ideal method to isolate one cell type from a tissue sample. The facility supports the **Acturus XT** which can perform fully automated LCM for high throughput studies. Cells may then be lysed and DNA, RNA or protein may be extracted and purified. An **Olympus SZ61** dissection microscope is also available to help with sample preparation and collection.

Core Services

Opera Phenix Plus HCS

The **Opera Phenix** is designed for high-throughput high-content drug discovery assays, phenotypic screening, live cell assays utilizing primary cells and microtissues as well as fast-response assays such as Ca²⁺ flux. This is the premier confocal solution for today's most demanding high content screening needs. It has high resolution water immersion objectives and 4 laser/detector channels for viewing DAPI, FITC, TRITC and Cy5 (or similar dyes). The system can image slides or multi-well plates and, with a connected incubator outfitted with a robotic arm, it can manage up to 80 plates at one time. On board liquid handling allows for automatic addition of reagents or compounds during the experiment. The included Harmony software is a full featured solution for HCS experimental design, setup and analyses. If you are looking for a system with high-content live cell imaging abilities, this is the newest addition to our core and is the top option today for live cell assay imaging.



Incucyte S3 and SX5 HTS

The **Incucyte S3** high-throughput live cell microscope allows researchers to evaluate up to several hundred samples in one experiment run with phase contrast, green and/or red fluorescence. Our newest addition, the **Incucyte SX5**, allows you green, red and far-red fluorescence as well.

We offer a 96-well WoundMaker that automatically scratches all 96 wells with an identical wound for wound migration and invasion assays. Other predefined experiment modules include chemotaxis, spheroid, organoid and metabolism. In addition, various labeling kits are available for these instruments through Sartorius.

Core Services

PhenoCycler-Fusion

This system from Akoya Biosciences allows you to perform rapid high-throughput whole-slide imaging of 100+ biomarkers utilizing multi-plex barcode staining. Accommodates FFPE, Fresh frozen or TMA samples with validated, customized or pre-designed panels utilizing fluorophores ranging from AF488 – AF750 for spatial applications (cell phenotyping, rare cell discovery, functional state, cellular neighborhood and spatial signatures). Whole slide staining is performed in house.

Aperio ScanScope AT2 Slide Scanner

The **Aperio ScanScope AT2** Automatic Slide Scanner holds up to 400 slides and is designed for whole tissue scanning of H&E/IHC slides. The ScanScope includes the Eslide manager - a digital image database designed for a consolidated view of information relevant to the case information. The software also includes TMA Lab, which provides management of TMA slides and their individual cores. Whole slide image analysis available.

More about our services

Image Analysis

Images often require in depth quantification. To this end, the core has made available a collection of image processing and image analysis software packages on a powerful high end workstation. Available packages include Definiens Developer XD 64, Tissue Studio, Visiopharm, inform; Imaris 3-D; Media Cybernetics Image Pro Plus; NIH ImageJ and offline versions of the Leica and Zeiss software's.

