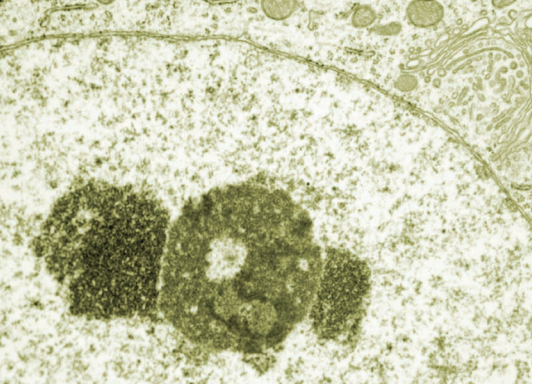

MICROSCOPY & IMAGE ANALYSIS LABORATORY

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

The Microscopy & Image Analysis Laboratory (MIL) provides access to the latest instrumentation equipment, including microscopes, software for digital imaging, microscope bulbs and more. MIL has two centralized facilities housing major equipment used on a shared basis by investigators focusing primarily on studies of cell and tissue morphology and ultrastructure. Routine sample processing, sectioning, staining and analysis is easily available with consultation and scheduling.

Available Microscopes Include

- **Deltavision-RT Live Cell Imaging System**
- **Olympus BX-51 upright light microscopes**
- **Leica MXFL III stereo fluorescent microscope**
- **Leica DMIRB inverted microscope**
- **AMRAY 1910 Field Emission Scanning Electron Microscope (FEG-SEM)**
- **Philips CM-100 transmission electron microscope (TEM)**
- **Zeiss LSM 510-META Laser Scanning Confocal Microscope**
- **Olympus FluoView 500 Laser Scanning Confocal Microscope**
- **Arcturus "Veritas" Laser Capture Microdissection System**
- **Zeiss Apotome**
- **Leica Inverted SP5X Confocal Microscope System with 2-Photon FLIM**
- **Leica Upright SP5X Confocal Microscope with 2-Photon**
- **Nikon E-800 Upright with Widefield Microscope**
- **Nikon A-1 Confocal**
- **Leica SP8 2-Photon confocal system with FLIM, FCS, White Light Supercontinuum Laser (470nm-670 nm)**
- **And More**

Digital Imaging Options Include

- **HP Scanjet IIcx flatbed scanner** for image acquisition and conversion of paper documents to electronic format (OCR)
- **Pit PC 1 image analysis computer** Houses remote workstation software for Zeiss confocal, Olympus confocal, and Metamorph image analysis software.
- **Cilia** (Windows XP): Microsoft Office, Adobe Photoshop, Adobe Illustrator, Fluoview, SoftWorx, ImageJ, Metamorph, Volocity
- **Golgi** (Mac OSX) Adobe Photoshop, Adobe Illustrator, Microsoft Office (Word, PowerPoint, Excel), Volocity
- **Synapse Imaging Computer** houses third party software for image analysis on 64 bit computer: Imaris, Zeiss LSM, Leica, Image J, MatLab, Leica LAS AF

Additional Instrumentation and Services Include

- **Full Histology sample preparation** for paraffin and cryo
- **Routine H&E staining**
- **Drop off service** or **customer training** on all aspects of histological prep
- **Consultation** needed prior to sample submission

Microscopy & Image Analysis Laboratory
Biomedical Research Core Facilities
Biomedical Science Research Building
Room A830 • 109 Zina Pitcher Drive
Ann Arbor, MI 48109-2200

OVER

> **The right technology. The right training. The right time. At MIL, our expert staff strives to meet the unique needs of each individual investigator.**
>
> *— Chris Edwards, Laboratory Manager, Microscopy & Image Analysis Laboratory*

- **Polaron E5100 Sputter Coater** for gold or gold/palladium coating
- **Denton DV-502 high vacuum evaporator**
- **H&E Stain Station**
- **Reichert Ultracut-E ultramicrotomes**
- **Leica 2235 rotary paraffin microtome**
- **Leica 2155 rotary paraffin microtome**
- **Leica 3050S cryostat**
- **Microm 550 cryostat** for sectioning frozen tissue, including disposable blade holder and automatic or manual operator modes.
- **Tissue-Tek paraffin tissue embedding station.**
- **Leica ASP 300 paraffin tissue processor.** This processor has multiple program lengths to suit various tissue types and sizes.

Reservations and Training

To reserve time on MIL equipment or make an appointment for a consultation or training session, simply reserve time online at the instrumentation page at: **medicine.umich.edu/mil** (login required). Operation manuals are available for download in PDF format, as is the first-time user form needed to begin working with us.

Training Opportunities

Individual training sessions and group workshops are available for each individual instrument. MIL also offers presentations on varied topics in microscopy and image analysis. Please contact us to discuss topics and availability.

Cost Estimates and Fees

Rates vary for University of Michigan users and public investigators. Rates are charged per hour for instrument use, training and sample processing. Please visit www.milimaging.com for current prices.

Connect with Us

MIL has two convenient locations at the University of Michigan Ann Arbor campus in the Biomedical Science Research Building and the North Campus Research Complex.

Biomedical Science Research Building
Room A830
109 Zina Pitcher Drive • Ann Arbor, MI 48109-2200
Phone: 734-763-1170 • Fax: 734-763-1166

Regular office hours at the BSRB are Monday-Friday 8 a.m. – 5 p.m., but the lab is open 24 hours to trained and approved users. For more information, email: mial.info@umich.edu.

North Campus Research Complex
Building 20, Room 53S
2800 Plymouth Road • Ann Arbor, MI 48109-2800
Phone: 734-763-0702

About the BRCF

The Microscopy & Image Analysis Laboratory (MIL) has an established history of connecting researchers with the latest equipment in the industry. Established in 1978, the Core is a member of the Biomedical Research Core Facilities (BRCF). The BRCF, part of the University of Michigan Medical School Office of Research, is a collection of centralized labs and services offering state-of-the-art instruments, resources and expertise to biomedical researchers, investigators and educators.

For more information on the BRCF, visit **medicine.umich.edu /brcf**

Biomedical Research Core Facilities
University of Michigan Medical School
2570 MSRB II • 1150 W. Medical Center Drive
Ann Arbor, MI 48109-0674
734-647-4776
brcf-umms@umich.edu

07/2013