About the Microscopy CORE

The ISMMS Microscopy CORE provides access to high-end instrumentation for generating light and electron microscopy images, and to workstations for image processing, deconvolution, and analysis.

Equipment:

Confocal and Multiphoton Microscopes:
Leica SP5 DM
Leica SP5 DMI
Zeiss LSM 880 with Airyscan
Zeiss LSM 780
Yokogawa Spinning Disk
Olympus FV1000 Multiphoton

Transmitted Electron Microscopes:
Hitachi 7000
Hitachi 7800

Widefield Microscopes:
Zeiss Axioplan 2
Olympus MVX10 Stereomicroscope
(with new dual chip camera)
Olympus IX70 Livecell
Olympus IX71

Image Analysis Software:
AutoQuantX3 Deconvolution
MetaMorph
Volocity 3D
Amira 3D

Services:

- Free training on all systems
- Consultation, guidance, and assistance
- Accessible 24/7
- Demonstrations
- Seminars

Capabilities:

- Second Harmonic Imaging
- Spectral Separation
- Extended Focus Imaging
- Tile Scanning
- Polarized Light
- FRET, FRAP, FURA
- Live Cell Imaging
- Intravital Imaging

Who we are:

Deanna Benson, Ph.D
Director
deanna.benson@mssm.edu

J. Javier Bravo-Cordero,Ph.D
Scientific Advisor
josejavier.bravocordero@mssm.edu

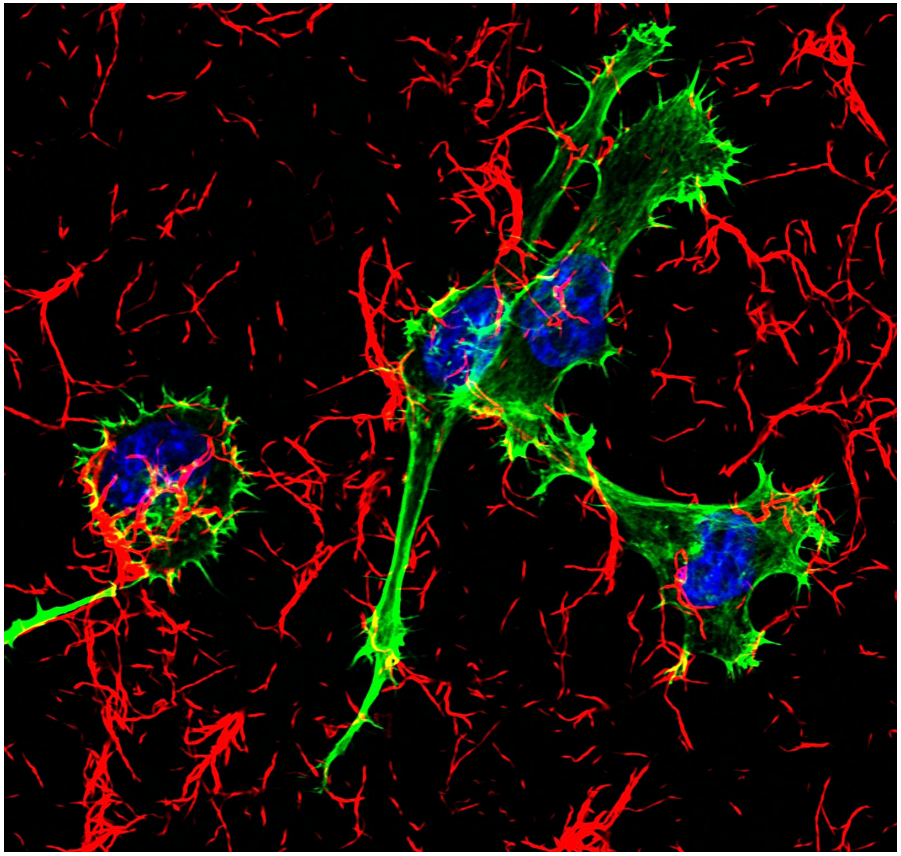
Nikos Tzavaras, Ph.D
Senior Associate Researcher
nikos.tzavaras@mssm.edu

William Janssen
Senior Researcher
bill.janssen@mssm.edu

Crystal Pristell, M.S.
Associate Researcher
crystal.pristell@mssm.edu

Leica MICROSYSTEMS

Mount Sinai



First Annual Light Microscopy Course

New York, June 14-16, 2016

Location:
Lectures: Annenberg Building, Room, 5-210 A/B
Hands-on sessions: Hess Building, Room S.203, 10th Floor

Organized by the Microscopy CORE, ISMMS and Leica Microsystems

Leica MICROSYSTEMS

Mount Sinai

Lecture Series

Tuesday June 14, 2016

9am: Continental Breakfast

- **9:45am-10:00am**

Welcome:
Deanna Benson, PhD, Director, Microscopy CORE; Professor, Neuroscience, ISMMS
Opening remarks:
Reginald Miller, DVM, Dean for Research Operations and Infrastructure, ISMMS

Session Chair: *J. Javier Bravo-Cordero, PhD, Scientific Advisor, Microscopy CORE; Assistant Professor, Dept. of Hematology and Oncology, ISMMS*

- **10am-10:40am**

Louis Hodgson, PhD. Associate Proefessor, Albert Einstein College of Medicine
"New Windows on Living Cells: Spatiotemporal Dynamics of Rho GTPases Regulate Cancer Invasion"

Keynote address:

- **10:40-11:30am**

Suzanne Scarlata, PhD. Professor, Worcester Polytechnic Institute
"Caveolae Connect Mechanical Deformation to Calcium Signals Generated through Gαq"

- **11:30-12:10pm**

Margarida Barroso, PhD. Associate Professor, Albany Medical College
"FRET and FLIM Imaging"

Wednesday June 15, 2016

9am: Continental Breakfast

Session Chair: *Deanna Benson, PhD.*
Microscopy CORE and Dept. of Neuroscience, ISMMS

- **10-10:40am**

Julie Canman, PhD. Assistant Professor, Columbia University
"The Molecular Choreography of Cell Division"

- **10:40-11:20am**

Jennifer Zallen , PhD. HHMI Investigator, Memorial Sloan Kettering
"Signals and Forces that Control the Dynamics of Multicellular Systems"

Keynote address:

- **11:20-12:10pm**

Wenbiao Gan, PhD. Professor, New York University
"Experience-dependent Dendritic Spine Plasticity in the Cortex"

- **12:10pm**

Closing remarks:
Deanna Benson, PhD. Director, Microscopy CORE, ISMMS

Hands-on Sessions

12:30-1:30pm: Lunch (workshop participants only) Hess building, 10th floor

Sessions 1 - 3 have three rotations. Rotations will be repeated every 1.5 hours for different groups of students. You must have a ticket and attend the session and rotation you reserved.

June 14th: Session 1 (1:30pm - 6pm)

- Microscope and Fluorescence Basics
- Live Imaging on a Microscope
- Live Cell Cinematography

June 15th: Session 2 (1:30 - 6pm)

- Optical Sectioning with Confocal Microscopy
- Long Term Timelapse Imaging, Multi-position, Focus and Environment
- Fast, Dynamic, and Molecular Imaging, FRET and Ion Concentrations

June 16th: Session 3 (9:30am - 6pm)

- Photomanipulation
- Live Data Analysis
- Additional Topic TBD

June 16th: Session 4

- 2:30 pm: Digital Light Sheet
- 3:30 pm: Multiphoton Imaging (Annenberg 18-250)

Special Thanks to Our Instructors:

Leica Microsystems
Lauren O'Rourke, Robert Fasulka, Paul Carman, Jessica Shivitz
ISMMS
J. Javier Bravo-Cordero, Nikos Tzavaras, Crystal Pristell

Instruments Featured:

Leica TCS SP8 with Digital Light Sheet Technology
Leica DMi8 Modular Inverted Microscope
Okolab Incubators
Olympus FV1000 Multiphoton

Thank you to our partner:

Leica
MICROSYSTEMS