



Bioimaging Facility

OUR STATE-OF-THE-ART TOOLS ARE AVAILABLE TO YOU AND YOUR TEAM

The CBE bioimaging facility is the leading, centralized microscopy lab uniquely suited to provide high-quality imaging and analysis of intact biofilms. \$2.75 million in recent grants brings cutting-edge, real-time, high-sensitivity imaging of intact, complex biological samples. This allows us to understand biofilms at unprecedented levels.

HIGHER RESOLUTION

Customized DMI8 Inverted CSLM with Stimulated Raman Spectroscopy (SRS) & Digital Light Sheet

- Eight-fold increase of image-acquisition speeds
- Significant decrease of phototoxicity, enabling faster processes and long-term imaging
- SRS allows direct 3D visualization of chemical bonds
- The Digital Light Sheet module is ideally suited for sensitive 3D imaging of intact, living, and complex samples
- The environmental control chamber extends the time samples remain viable under the microscope

LOOKING DEEPER

Upright DM6 FS Upright DIVE CSLM

- Able to explore far greater depths of intact biofilm matrix in real time
- Label-free imaging of mixed microbial samples
- Image the entirety of an intact biofilm
- The white light laser enables light gating to be applied to any excitation line
- Extended IR laser enables excitation and imaging of red-shifted fluorophores
- Environmental-control chamber



“We asked Leica to modify their latest microscopes so that we can investigate biofilms much more rigorously.”

Dr. Heidi Smith, Manager
CBE Bioimaging Facility

CUSTOMIZED FOR BIOFILM

Other especially powerful hardware

- Leica THUNDER Widefield Imager System
- Horiba Scientific LabRam HR Evolution NIR High Resolution Raman Microscope
- Leica LMD6 Laser Microdissection Microscope
- ThorLabs Ganymede Series 200 Optical Coherence Tomography
- Leica M 205 FA stereomicroscope
- Nikon SMZ-1500 Barrel Zoom stereomicroscope w/color camera
- Leica DM6 automated fluorescent microscope
- Nikon Eclipse E-800 research microscope
- Leica CM1800 Cryostat
- Horiba Scientific LabRam HR Evolution NIR high resolution Raman microscope



see full list of equipment

WHAT CAN THESE TOOLS DO FOR YOU?

The CBE provides training and allows use of these instruments by industrial associates, visiting researchers, and others who have an interest in biofilm research. How can you take advantage of these futuristic tools?

CONTACT

Heidi Smith, Manager,
CBE Bioimaging Facility
406-994-7813
heidi.smith@montana.edu
www.biofilm.montana.edu
www.biofilmlab.org