University of Massachusetts Medical School
Biomedical Imaging Group Core Facility

RRID:SCR_021201
Type: Tool

Proper Citation

University of Massachusetts Medical School Biomedical Imaging Group Core Facility (RRID:SCR_021201)

Resource Information

URL: http://big.umassmed.edu

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Description: Interdisciplinary team of engineers and scientists, representing fields of physics, mathematics, and computer science, that combine their expertise in areas such as microscopy, lasers, optoelectronics, applied mathematics, image and signal processing, computer graphics, computer vision, statistics, software engineering, and biophysics, to develop imaging approaches for cell biology. Pioneers in high-resolution 3D imaging using wide-field fluorescence microscopy together with digital image deconvolution, and image visualization and quantitative analysis techniques, especially as applied to statistical analysis of images to determine co-localization of fluorescence markers inside cells. Research includes development and application of light microscopy and imaging in cell biology and biophysics. Developed TESM microscope that combines Total internal reflection fluorescence (TIRF) with Epi-fluorescence Structured illumination to provide new views of trafficking in near plasma membrane domain of cells. Provides custom-built, ultra-high-speed microscope system for imaging dynamics of intracellular calcium channel events, called calcium sparks, that are being found to regulate expanding array of cellular processes. Provides two photon fluorescence microscope for looking deep inside tissue, completing range from molecule to organism. Areas of ongoing technology research include high-speed, high-resolution imaging of live cells and tissues, novel image processing approaches, high-performance computing, and computer graphics.

Synonyms: Biomedical Imaging Group
**Resource Type:** service resource, core facility, access service resource

**Keywords:** USEDIt, ABRF, fluorescence microscopy, 3D imaging, light microscopy, live cells imaging, tissue imaging, calcium sparks

**Resource Name:** University of Massachusetts Medical School Biomedical Imaging Group Core Facility

**Resource ID:** SCR_021201

**Alternate IDs:** ABRF_1178

**Alternate URLs:** https://coremarketplace.org/?FacilityID=1178

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**Ratings and Alerts**

No rating or validation information has been found for University of Massachusetts Medical School Biomedical Imaging Group Core Facility.

No alerts have been found for University of Massachusetts Medical School Biomedical Imaging Group Core Facility.

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**Data and Source Information**

**Source:** [SciCrunch Registry](https://scicrunch.org)

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**Usage and Citation Metrics**

We have not found any literature mentions for this resource.