

## Details

### Biopolis Dresden Imaging Platform (BioDIP)

The BioDIP is a multi-institutional community of core light and electron microscopy facilities on the Biopolis Dresden campus. It is represented by the DRESDEN-concept e.V. supporting the vision of one integrated campus with all partners sharing their resources and benefiting from the resulting synergies. BioDIP provides an open access imaging platform for internal and external users with over 5 years of experience. The participating facilities, all in walking distance from each other, are the Light Microscopy Facility (LMF) of the Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG), the joint LMF of the Biotechnology Center (BIOTEC) and the Center for Regenerative Therapies (CRTD), the Electron Microscopy Facility (EM) of the MPI-CBG, the EM of the CRTD, the High-throughput Technology Development Studio of the MPI-CBG, the joint LMF and EM of the Medical Theoretical Center of the Medical Faculty of the TU Dresden, the LMF of the German Center for Neurodegenerative Diseases (DZNE) Dresden within the Helmholtz Association and the Image Processing Facility of the BIOTEC. Due to the synergistic effects of the joint imaging platform the BioDIP can provide a wide range of state-of-the-art imaging techniques in the field of light and electron microscopy including screening and image processing service.

**Address:** Fetscherstraße 105  
01307 Dresden  
Sachsen  
Deutschland  
[To website](#)

### Host Institution

**TU-Dresden (Center for Regenerative Therapies (CRTD), Biotechnology Center (BIOTEC), Medical Theoretical Center (MTZ) of the Medical Faculty)**

Fetscherstraße 105  
01307 Dresden  
Sachsen  
Deutschland

<https://tu-dresden.de/cmcb/crtid>

**Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG)**

Pfotenhauerstr. 108  
01307 Dresden  
Sachsen  
Deutschland

<http://www.mpi-cbg.de/>

**German Center for Neurodegenerative Diseases within the Helmholtz Association (DZNE Dresden)**

Arnoldstr. 18  
01307 Dresden  
Sachsen  
Deutschland

<https://www.dzne.de/ueber-uns/standorte/dresden/>

### Scientific Domain

**Primary Subjects:**

- Biology
- Medicine

**Secondary Subjects:**

- Physics
- Materials Science and Engineering

### Category

Biomedical Imaging Facilities

### Scientific Services

The BioDIP offers advanced imaging systems, covering a broad range of imaging technologies: wide-field fluorescence microscopy, laser scanning and spinning disc confocal microscopy, two photon laser scanning microscopy, total internal reflection fluorescence microscopy (TIRF), selective plane illumination microscopy (SPIM), fluorescence correlation spectroscopy (FCS), Atomic Force Microscopy (AFM), super resolution light microscopy (structured illumination and dSTORM), high throughput microscopy, electron microscopy (SEM, SBF-SEM, TEM, cryo-TEM), correlative light and electron microscopy, and electron tomography. Imaging instruments as well as staff assistance are bookable via online booking databases. All together the BioDIP staff can offer many years of experience with advanced imaging using different imaging technologies and gained extensive experience with the imaging of a broad range of model organisms. The BioDIP staff assists users with the experiment design, sample preparation, instrument choice, microscopy training in image acquisition as well as with image analysis and image processing. In the field of high throughput microscopy and electron microscopy the instruments use has been established as service due to the complexity of these approaches. Moreover, the BioDIP is actively involved into collaborations with research groups and industrial partners regarding the development of new microscopy techniques.

## Scientific Equipment

- Confocal laser scanning microscope (LSM)
- Multiphoton laser scanning microscope (2p LSM)
- Real-time confocal microscope (spinning disc)
- Selected plane illumination microscope (SPIM)
- Wide field microscope (partially equipped for live cell imaging)
- Superresolution microscopes (structured illumination, dSTORM)
- Total internal reflection microscopes (TIRF)
- Fluorescence correlation spectroscopy microscope (LSM-FCS)
- Laser microdissection microscope
- Devices for EM sample preparation (e.g. High Pressure Freezer)
- Transmission electron microscope (TEM)
- Scanning electron microscope (SEM)
- Cryogenic transmission electron microscope (cryo-EM)
- High throughput screening microscope
- Atomic force microscope (AFM)

## Keywords

- Laser Scanning Confocal Microscopy
- Spinning Disc Confocal Microscopy
- Wide Field Fluorescence Microscopy
- Multiphoton Fluorescence Microscopy
- Total Internal Reflection Fluorescence Microscopy (TIRF)
- High-Throughput Microscopy (Screening)
- Fluorescence Correlation Spectroscopy (FCS)
- Atomic Force Microscopy (AFM)
- Super-resolution Microscopy
- Selective Plane Illumination Microscopy (SPIM)
- Electron Microscopy
- Cryo-Electron Microscopy
- Electron Tomography
- Correlative Light and Electron Microscopy (CLEM)
- Deconvolution and Image Processing

## Networks

**German Biolmaging - network of German microscopists and imaging experts**

<https://www.gerbi-gmb.de/>

**Involvement into Euro-Biolmaging ongoing**

<http://www.eurobioimaging.eu/>

## Users per annum

**Internal Users:** > 500

**External Users in total:** 25

**External Users:** 15

**External Users in the EU:** 9

**External Users outside of EU:** 1

