

The microscopy remote interaction program at MDIBL

Collaborating by courier, imaging by mail

Get access remotely to critical infrastructure and expert knowledge

To be successful in research, scientists require access to complex instruments and sophisticated technologies. Due to the accelerating rate of imaging technology development and turnover, **it is difficult for individual research labs to maintain cutting edge infrastructure.**

Some institutes have microscopy core facilities where advanced instruments, technologies and services are centralized and share among internal people. However, for an external user who would like to use this service, getting access to a microscopy core can be challenging because of distance and/or due to the current Covid pandemic.

Access to state-of-the-art microscopes and software does not need to be limited home institutions. The microscopy remote interaction program at MDIBL provides access to sophisticated instruments without the need to travel and to be on site.

How it Works

Send us your samples by courier and receive the data by mail.

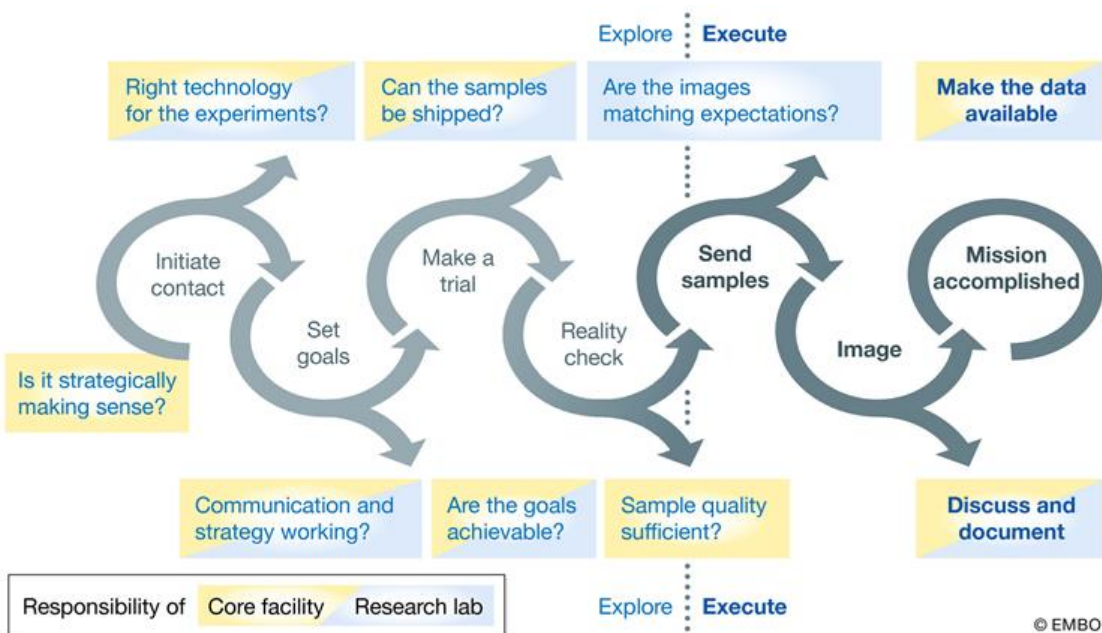


Figure: Flow diagram of the remote interaction of a core facility with an external collaborator (see: **EMBO Rep, Volume: 21, Issue: 1, First published: 16 December 2019, DOI: (10.15252/embr.201949755)**)

The program works in two phases: exploration and execution. The exploration phase relies on good communication between the facility and the user to prepare the experiment procedure and make sure that all the expectations are full fill for a successful collaboration.

This step is followed by the execution phases where images and data are acquired by the core facility and reviewed by the user. Then both collaborate to publish.

If the scientist wants to supervise the imaging session of his samples by the facility staff, a screen sharing of the imaging software can be done by program like zoom, allowing a direct interaction at the microscope but away a part from each other. (see figure below)

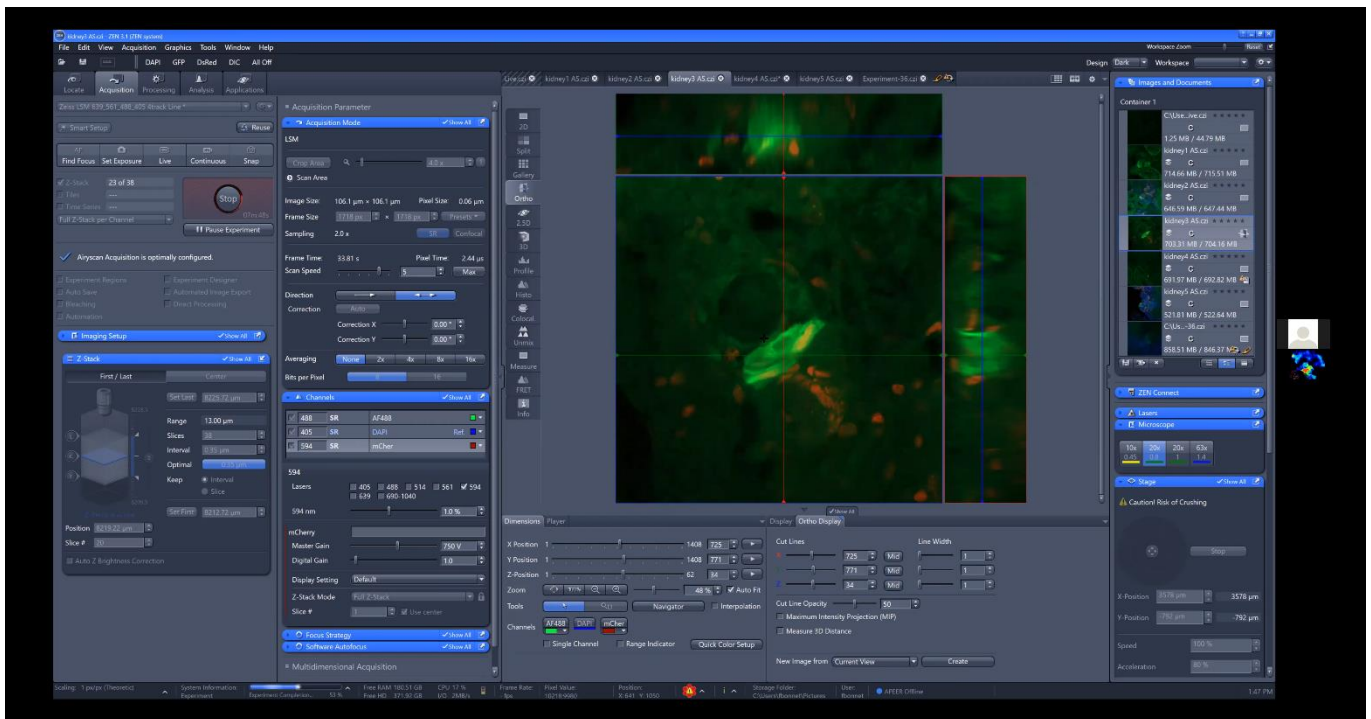


Figure: Screen sharing of the microscope software during acquisition between the facility staff at the microscope and a user in his office. A direct communication between both ensure that the imaging parameters match the scientist's expectations.

Find the Solution that is Right for You

We aim to offer access to cutting-edge hardware and software as well as professional guidance at any step of the imaging project, from experiment design to image analysis to provide the best service as possible for our users.

We provide:

- Information and advice on imaging techniques and experimental design
- Ongoing tailored advice and support for imaging projects
- Imaging and Image analysis service
- Bright-field and multi-channel fluorescence microscopy
- Time-lapse bright-field and fluorescence imaging of live specimens.
- Laser scanning confocal microscopy, including spectral imaging, multi-positional imaging and photo-manipulation
- Spinning disk confocal imaging for live experiments in organisms, tissues or cells
- Super-resolution imaging using Airy scan 2
- Two-photon for deep tissue imaging and Second-harmonic generation imaging microscopy
- Image processing and segmentation with Imaris and Fiji

Choose The Best Microscope for your Sample

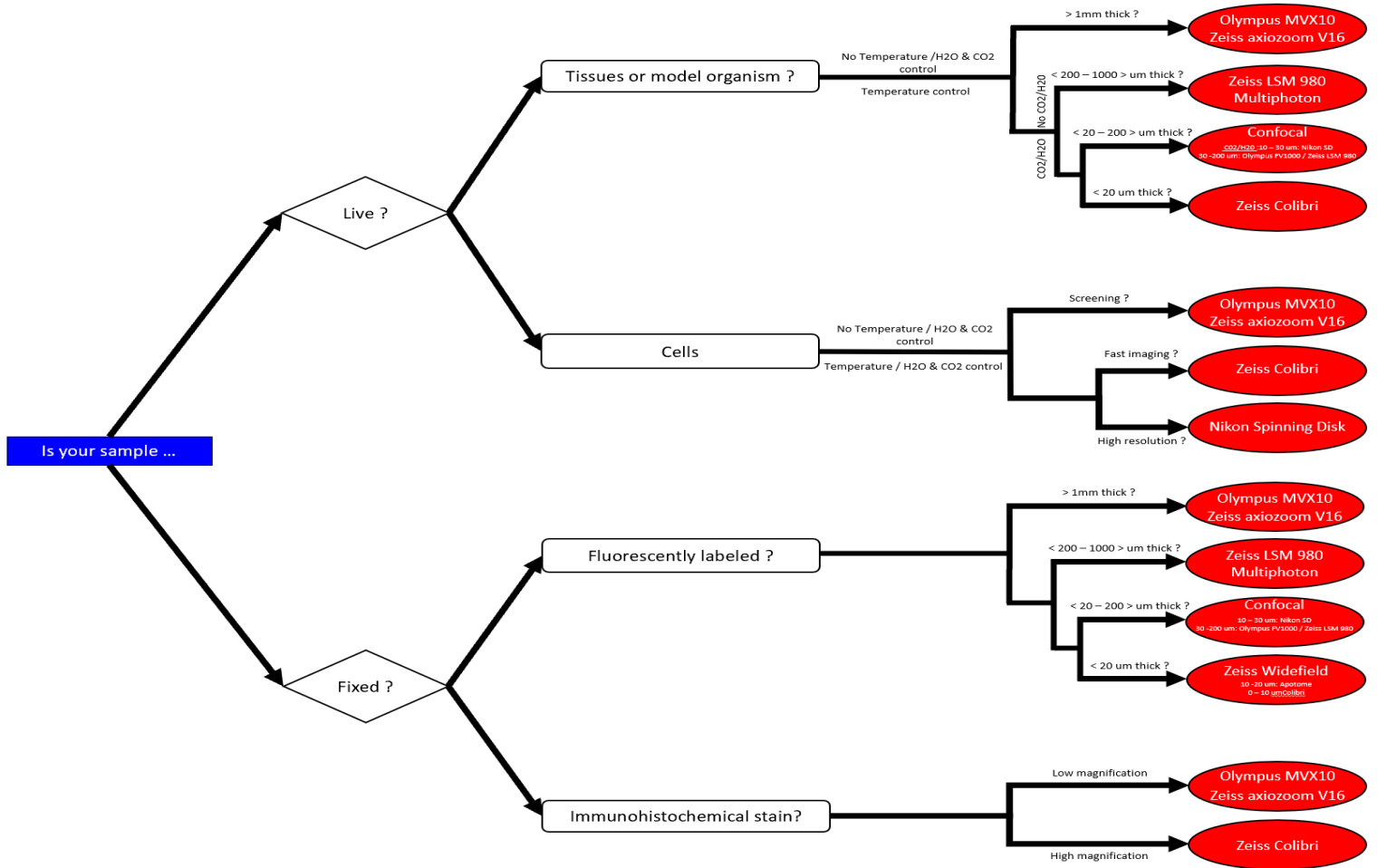


Figure: flow chart to get an image with the best resolution and contrast depending on your sample on the LMF at MDIBL. We cover all range of microscopy technique form screening with stereoscopes to super resolution and deep imaging microscopy.

Simple & Transparent Pricing

The LMF is open to every scientist desiring access to the state-of-the-art equipment and technologies that are lacking in their home institution. In the MDIBL LMF we try to keep our fees as low as possible and we offer different price plans that depend on the level of interaction between user and the facility, and the level of acknowledgement. Whichever plan you choose, rigor, reproducibility, and good science are the major goal of the interaction.

	Pay-as-you-Go	Collaboration 1	Collaboration 2
Pricing	External – operator assisted	Collaborator – operator assisted	Collaborator – user
Guided instrument set up	Yes	Yes	Yes
Communication before, during and after the experiment	Yes	Yes	Yes
Pilot discount	No	Yes	Yes
Usage discount	No	Yes	Yes
Image acquisition	Simple acquisition of raw data	Simple acquisition of raw data	Operational image acquisition with input and decisions dependent on expertise
Image analysis	Recommendation of analysis software and tools	Recommendation of analysis software and tools	Operational image analysis dependent on expertise
Acknowledgement	Simple	Simple	Co authorship

Figure: Formula for using the remote interaction program at MDIBL.

2020 IMAGING CORE FEES



	Faculty Hourly Rate	Collaborating Faculty Hourly Rate	External Faculty Hourly Rate
Stereoscope / Macroscopes			
Zeiss SteREO Discovery V12	\$7	\$8	\$12
Training Rate	\$9	\$12	\$24
Service Provided Rate	\$19	\$32	\$59
Olympus MVX 10	\$7	\$8	\$13
Training Rate	\$9	\$12	\$26
Service Provided Rate	\$19	\$32	\$60
Zeiss AxioZoom V16 w/ Apotome	\$9	\$10	\$16
Training Rate	\$11	\$15	\$32
Service Provided Rate	\$21	\$34	\$63
Widefield Microscopes			
Zeiss Axiovert 200	\$9	\$11	\$18
Training Rate	\$11	\$17	\$36
Service Provided Rate	\$21	\$34	\$65
Zeiss Apotome	\$10	\$12	\$18
Training Rate	\$13	\$18	\$36
Service Provided Rate	\$22	\$36	\$65
Zeiss Colibri	\$14	\$19	\$29
Training Rate	\$17	\$29	\$58
Service Provided Rate	\$25	\$43	\$76
Confocal Microscopes			
Olympus Fluoview 1000	\$17	\$23	\$36
Training Rate	\$22	\$35	\$72
Service Provided Rate	\$29	\$47	\$83
Nikon Spinning Disk	\$22	\$32	\$49
Training Rate	\$27	\$48	\$98
Service Provided Rate	\$33	\$56	\$96
Confocal for Advanced Techniques			
Zeiss LSM 980 SU/AS	\$24	\$37	\$57
Training Rate	\$30	\$55	\$113
Service Provided Rate	\$36	\$60	\$104
Zeiss LSM 980 MP	\$30	\$49	\$76
Training Rate	\$37	\$74	\$152
Service Provided Rate	\$42	\$73	\$123
Work Station for Imaging Analysis			
Work Station with Computer	\$5	\$5	\$8
Work Station with Computer & Imaris Software	\$7	\$9	\$14

Figure: Fees for LMF service for 2020 at MDIBL. Fees are calculated by category of microscopes, by the service provided, and by status (faculty, collaborator, or external user).

The facility offers bonus discount: 30% discount if 2000 \$/ 3 months and allows 'pilot' experiments: 75% discount on a usage price to start.

Contact and information:

For any questions concerning the facility or the program, please contact: fbonnet@mdibl.org

For more information concerning our instruments, please visit: <https://lmf.mdibl.org/>