GENERAL FRAMEWORK FOR USE OF IMB CORE FACILITIES

PREFACE

JGU's master Terms of Use serve as a template for this document; these Terms of Use have been adjusted to suit IMB.

Core Facilities (CF) are central, scientific infrastructure and service units that operate according to CF concepts at the Institute of Molecular Biology (IMB) gGmbH in Mainz. The use of the CF is governed by the binding **General Framework for Use of IMB Core Facilities** and the specific **Terms of Use** of each respective CF in accordance with § 11. This framework allows for a simple, uniform and transparent manner of cooperation between CFs and users.

§ 1 DEFINITIONS

(1) Core Facilities provide scientific services (hereinafter referred to as **services**). Services are differentiated into
   a) **operator service**, which refers to CF staff providing services or in-house produced products for the users, or
   b) **application service,** which refers to authorized users operating CF instruments largely independently.

(2) Each CF has specific **Terms of Use**. These regulate the intersection between users and CFs.

(3) **PIs** are heads of scientific research groups. They are ultimately responsible for the execution of scientific projects.

(4) **Users** are persons who make use or want to make use of a CF service.

(5) **Internal users** are persons with an IMB contract or groups with IMB CF budget or those who are members of institutions that have active collaboration agreements with IMB or the Core Facilities.

(6) **External users** are all other users not included in (5).

(7) A **booking** is
   i. a reservation of usage time for application service or
   ii. a commissioning of an operator service.

(8) **Access to CFs** describes the registration of users for potential use of CF services.

(9) **Access to services** describes the basic eligibility to book or commission services.

(10) **Management platform** for some CF services is the „OpenIRIS“ web application. It is used for depicting, booking and invoicing of CF services. The following terms are used in the context of OpenIRIS:

a) **Providers** offer services. CFs are set as providers.

b) **Resources** describe CF instruments that are offered by a provider.

CFs are free to utilize other management platforms if better suited for their services, such as LIMS.

(11) **CF User Committees** are composed of the Director of Core Facilities, the Head of the CF and representatives of the PIs. Further details are outlined in the CF operating concept.

(12) **Cost-bearing unit** at IMB is each working group with its own cost center, at JGU, UMC, MPIP, LIR, each organizational unit and each legal entity, its employees, vicarious agents or otherwise associated persons who make use of CFs.

§ 2 SCOPE OF APPLICATION

(1) These regulations govern the use of the services offered by IMB CFs.

(2) The Terms of Use of each CF refer to this General Framework for Use of IMB Core Facilities. In the event of contradictions, the provisions of the General Framework for Use shall apply.

(3) The General Framework for use is binding for all persons using the services of CFs at IMB.

§ 3 ACCESS TO CF

(1) Access to CF is regulated for various user groups:

a) Groups with an IMB Core Facility budget are prioritized and automatically have access or are granted access after request.

b) Internal users (see §1(5)) without an IMB Core Facility budget have access either automatically or after CF access request, as long as free capacity is available.

c) External users are granted access upon request in case of legitimate interest and available capacities (see § 4).

§ 4 ACCESS TO CF SERVICES

(1) At the discretion of CF management, access to CF service is granted automatically with access to the CF or, depending on type of service, after consultation and in the case of justified interest while considering instrument-specific third-party funding lock-up periods. Access may be limited in time and linked to a training.

(2) Access regulations vary between CFs due to spatial conditions and legal frameworks (e.g. biosafety requirements) and are therefore defined by the CF Terms of Use in accordance with § 11.

§ 5 BOOKINGS

(1) For application service, booking of usage time is mandatory. For application service, the person entered in the booking bears full responsibility for the correct use of the resource.
(2) Booking procedure for services is determined by the CF-specific Terms of Use in accordance with § 11.
(3) In case of internal use, the person entering the booking must specify the project to which the ordered/booked service belongs (e.g. by specifying the "cost center" or the "billing object").
(4) For operational reasons, CF may cancel a booking on short notice.

§ 6 PROVISION OF DATA

(1) The measurement data and results generated during **operator services** shall be recorded by CF in a suitable manner, stored digitally and made available to the users.
(2) For **application service**, the data can be temporarily stored on the measuring devices used. Users are strongly encouraged to transfer the data collected on the measuring devices to a central IT storage structure immediately after measurement.
(3) The storage and archiving of data is the responsibility of the user unless otherwise noted and agreed upon with the respective CF (e.g. Bioinformatics, Genomics).

§ 7 OCCUPATIONAL SAFETY

(1) Instructions from CF personnel must be strictly observed.
(2) The CF is solely responsible for workplace-specific safety instruction. The responsibility for general safety instructions lies with the user's supervisor. The CF may specify in the core facility-specific Terms of Use according to § 11 which topics must be covered by the general safety instruction. Sentence (1) shall remain unaffected by this.
(3) CF instrument operation requires documented safety instruction by an authorized person.
(4) Prior to booking and use, applicable statutory provisions must be observed. Users must ascertain whether special legal requirements have to be met for the intended use (see CF-specific Terms of Use according to § 11).

A non-exhaustive list of examples:

- Occupational health and safety regulations (also regarding the use of lasers etc.),
- Ordinance on Hazardous Substances
- Genetic engineering laws (GenTG, GenTSV, GenTAufzV)
- Ordinance on Biological Substances (BioStoffV)
- Animal protection laws (TierSchG)
- Disposal of chemical waste

§ 8 COSTS

(1) The use of CFs is subject to a charge. The costs will be charged to the cost-bearing unit.

(2) Prices are based on the legal and tax requirements for the respective project. The same usage fees shall apply within the usage groups. The current price list is part of the CF Terms of Use. The price list valid at the time service is provided shall apply; previous price lists shall become invalid accordingly.

(3) If the costs to be invoiced are higher than the costs that can be invoiced via a third-party funded project, the CF may show these in a separate invoice.

(4) Booked times will be charged if they are not canceled in due time, regardless of use. Cancellation deadlines are defined in the CF specific Terms of Use (§ 11).

§ 9 PUBLICATIONS AND GOOD SCIENTIFIC PRACTICE

(1) JGU[1] regulations and DFG[2] Guidelines for Safeguarding Good Scientific Practice in the CF apply.

(2) CF staff who make a substantial scientific contribution to a publication are to be treated in the same way as all other researchers involved. Co-authorship is independent of cost sharing.

(3) As soon as instruments or services (including in-house produced products) of a CF have contributed to a publication, the CF must be named in the publication. Further details are regulated in the CF-specific Terms of Use in accordance with § 11. **The CF acknowledgment must also include the funding code/project number of publicly funded large-scale equipment.**

(4) Publications (papers, patents and theses) based on work carried out at the CF must be submitted to the CF. Further details are governed by the CF-specific Terms of Use in accordance with § 11.

(5) In the event of non-compliance, § 12 (1) shall apply.

§ 10 LIABILITY

(1) CF's liability towards users is limited to intent and gross negligence. In particular, CF assumes no guarantee for the test material and no liability for loss of data.

---

[1] https://gwp.uni-mainz.de/files/2023/04/JGU-Mainz_Ordnung-zur-Sicherung-guter-wiss-Praxis_2023-02-13.pdf

[2] https://zenodo.org/record/6472827

(2) Users shall be liable in accordance with the statutory provisions. Any damage or malfunction must be reported to CF staff immediately. In the event of gross misconduct, CF management reserves the right to charge the costs incurred to the cost-bearing unit of the relevant user.

§ 11 CORE FACILITY TERMS OF USE

(1) The individual Core Facility must at least list the following information in their Terms of Use:
   a) Scope of the General Framework for Use of IMB Core Facilities
   b) Person(s) of contact
   c) Equipment
   d) Operating hours and allocation of usage time (application service)
   e) Commissioning of services (operator service)
   f) Cancellation and no-show conditions
   g) Criteria for the allocation of usage time in the event of overbooking
   h) Requirements/ necessary instructions/ necessary preparations for use (in particular preparation of the test material, necessary permits)
   i) Return of sample(s)
   j) Data processing, forwarding and, if applicable, archiving
   k) Legal safety regulations and the resulting necessary instructions
   l) Acknowledgment of the core facility used and naming of equipment funding in publications
   m) CF services and prices (appendix)

(2) The Terms of Use shall be linked on the management platform (iris.uni-mainz.de) and made available on the publicly visible homepage of the respective CF.

§ 12 RESTRICTION OF USE

(1) In the event of improper use of the CF, disregard of rules or usage regulations or disregard of the instructions of CF staff, the CF management or its representative shall have the right to temporarily exclude the person or group concerned from using the CF with immediate effect. The same applies to users repeatedly failing to observe the rules of good scientific practice, including proper acknowledgment of CFs in publications. The CF User Committee shall decide on any exclusion lasting more than three months or permanent exclusion after hearing the CF management and the person and/or PI concerned.

(2) Users shall not be entitled to compensation for damages due to the refusal, revocation, or subsequent restriction of access in accordance with §1.

§ 13 DATA PROTECTION

(1) CF is entitled to store all data necessary for the processing of the use, including personal data of the users, and to use it to the extent necessary. The data will not be passed on to third parties for any purpose other than those mentioned above.

§ 14 SEVERABILITY CLAUSE

Should any provision of these Terms of Use be or become wholly or partially unenforceable or void, or should a loophole be found in these Terms of Use, this shall not affect the validity of the remaining provisions. The invalid or unenforceable provision shall be replaced or the loophole filled by a valid and enforceable provision that achieves the original legal and economic intent and purpose. If the invalidity of a provision is based on a measure of performance or time (deadline or date) specified therein, the provision shall be reconciled with a legally permissible measure that comes closest to the original measure.

§15 TAKING EFFECT

These Master Terms of Use become effective on 01.01.2025. At the same time, any previous Terms of Use of the Core Facilities shall cease to apply.

Mainz, 17. December 2024

Dr Andreas Vonderheit
Director of Core Facilities and Technology
Institute of Molecular Biology Mainz

TERMS OF USE FOR MICROSCOPY AND HISTOLOGY CORE FACILITY

1. SCOPE OF MASTER TERMS OF USE FOR IMB CORE FACILITIES

Use of the Microscopy and Histology CF (MHCF) occurs in accordance with the General Framework for Use of IMB Core Facilities, which can be found here https://www.imb.de/core-facilities/ as well as the following defined content.

2. POINTS OF CONTACT

For training requests or advice, please contact the Microscopy/Histology team (microscopy (at) imb-mainz.de) or the CF Head (s.ritz (at) imb-mainz.de). Further contact details for the CF team are available in OpenIRIS (https://iris.uni-mainz.de) as well as online https://www.imb.de/core-facilities/microscopy.

CF Head:

- Dr Sandra Ritz: s.ritz (at) imb-mainz.de

Microscopy & Histology CF Team:

- microscopy (at) imb-mainz.de

3. EQUIPMENT AND SERVICES

The MHCF provides advice, hands-on training and access to various state-of-the-art light microscopes, and computers, as well as image processing support and bench space (incl. cell culture benches) for temporary sample preparation. For histology, MHCF offers machines for tissue embedding and sectioning and basic protocols (e.g. H&E staining, in situ hybridisation, immunostaining).

MHCF staff offers comprehensive training on the instruments. After training, users can book instrumentation via OpenIris (https://iris.uni-mainz.de/). All devices are mainly operated in **application service**. If desired, we also offer **operator service** and **support with image analysis**.

Image analysis is performed on five high-power workstations (PC1-PC5) with licensed software for image restoration functions like deconvolution (Huygens Essential, SVI) and 3D visualisation and analysis (Imaris, Harmony, Vision 4D, LAS-X, VisiView) or fluorescence lifetime analysis, e.g. via phasor plots. In addition, we develop custom solutions with users by macro programming in open source software (e.g. Fiji, ImageJ, or ilastik).

List of available instruments

Instrument	Instrument class (defined by DFG)	Description	Initial Operation	(OpenIRIS Link)
3D Cell Explorer	I	light microscope, quantitative phase contrast, fluorescence	2021	Link
M205 FA Stereo	I	stereo microscope, fluorescence	2011	Link
DM 2500	I	upright widefield, fluorescence, manual	2011	Link
AF7000	I	widefield fluorescence, motorized	2012	Link
THUNDER	I	widefield fluorescence with deconvolution, motorized	2021	Link
IncuCyte SX5	I	screening microscope, widefield	2021	Link
Opera Phenix	II	screening microscope, spinning disk confocal	2016	Link
BC43	II	spinning disk confocal, fluorescence	2023	Link
Visitron Spinning Disk „VisiScope“	II	spinning disk confocal, fluorescence, TIRF, FRAP, Ablation	2017	Link
TCS SP5	II	confocal, fluorescence	2012	Link

Stellaris & FALCON	II	confocal, fluorescence, super-resolution, FLIM	2022	Link
TCS SP5 STED	III	confocal, fluorescence	2012	Link
GSDIM	III	widefield, super-resolution, TIRF	2012	Link
NanoImager (ONI)	III	super-resolution, TIRF	2023	Link
PALM	III	widefield, laser-microdissection, optical tweezer	2023	Link
C-Trap	III	confocal with 4 optical traps and a 5-channel microfluidics	2024	Link
Image Processing PCs				
Image Processing 1		PC 1 Harmony		Link
Image Processing 2		PC 2 Leica LAS X, Imaris		
Image Processing 3		PC 3 Imaris Huygens		
Image Processing 4		PC 4 arivis Vision4D, Imaris		
Image Processing 5		PC 5 Stellaris Falcon (LAS X, FLIM)		
Histology Instruments				
Cryostat		Cryostat Leica CS3050 S	2011	Link
Microtom		Rotary Microtom Leica RM2255	2011	Link

Vibratom		Vibrating Blade Microtome Leica VT1000 S	2011	Link
Tissue Processing		Tissue Processor Leica TP1020	2011	Link
Tissue Embedding		Tissue Embedding Leica EG1150	2011	Link

4. OPERATING HOURS AND ALLOCATION OF USAGE TIME (APPLICATION SERVICE)

Hours of Operation

Mon – Fri	Sat – Sun, incl. holidays
Trained users (internal/access permit): 24/7	**Trained users (internal/access permit): 24/7**
Trained users (external): 07:00-19:00	**not available**
MHCF staff support: 09:00 – 17:00	**not available**

The CF reserves the right to adjust hours of operations or closing times.

• Allocation of usage time for CF services:

Usage time and service request acceptance are allocated according to the first-come-first-serve principle.

Booking of instruments before use is mandatory. Instruments can be booked up to 4 weeks in advance by registered users using the online calendar. Individual users should **not book more than 3 time slots per week and instrument (max. 4 hours per booking).**

Bookings for more than 4 hours/day or more than 3 time slots per week and instrument is only possible after contacting the MHCF team. Time intensive or long-term measurement/ experiments (e.g., long time-lapse microscopy) should be scheduled during off hours (i.e., between 7 p.m. and 7 a.m. or on weekends). If this is not possible, please contact the MHCF team.

5. COMMISSIONING OF CF SERVICE

N.A.

6. CANCELLATIONS AND NO-SHOW TERMS

Bookings can be canceled by users free of charge up to 48 hours before the booked appointment. After this time, the cancellation must be made by email to microscopy (at) imb-mainz.de stating the reason (e.g. failed experiment, illness, etc.). In the event of a no-show (i.e. non-utilization of the booking without cancellation), the full price (100%) will be charged.

7. DECISION CRITERIA FOR THE ALLOCATION OF USAGE TIME IN THE EVENT OF OVERBOOKING

In the event of overbooking, internal users with IMB core facility budget are prioritized over other internal users and these ahead of external users. In case that further prioritization is necessary, it will be determined with the CF's User Committee.

The CF Head also reserves the right to refuse bookings and commissions for service at his or her own discretion stating reasons.

8. REQUIREMENTS/ NECESSARY INSTRUCTIONS/ NECESSARY PREPARATIONS FOR USE (IN PARTICULAR PREPARATION OF THE SAMPLES, NECESSARY PERMITS)

Use of application services in the Microscopy/Histology CF only after booking an appointment in the electronic booking calendar and with documented training by Microscopy/Histology CF staff.

Rooms of the MHCF are designated biosafety level S1. Users are not allowed to eat and drink in the lab area and in the microscopy or histology rooms. In the docu zones, users are allowed to drink and eat. For work with genetically modified organisms (live cell experiments), permits and documents (e.g. Formblatt GO) in accordance with GenTG, GenTSV, GenTAufzV must be available before work begins. No Formblatt GO is needed for working with fixed material.

9. RETURN OF SAMPLES

It is possible to store samples in the microscopy fridge (room 00.413) until the end of your imaging experiment. Samples must be labelled with name, institute, email, sample name, and date. Samples stored longer than 3 month or without labeling will be disposed.

10. DATA PROCESSING, SHARING AND, IF APPLICABLE, ARCHIVING

Measurement data and reports on service measurements are made available to internal users via a group drive and OMERO (https://omero.imb.uni-mainz.de/webclient). For external users, the data can be transferred by the "exchange server" of the JGU, provided via Seafile or by other

agreement. Measurement data from the use of the Microscopy/Histology CF is stored on the **measurement computer for 1 month and on the image processing computer up to 3 month**. Users are responsible for storing data in the central IT infrastructure. For measurement data acquired with the high-content screening microscope Opera Phenix, MHCF offers tape archiving services.

It is not permitted to connect your own storage media directly to the CF computers.

11. STATUTORY SAFETY REGULATIONS AND THE RESULTING NECESSARY INSTRUCTIONS

The general requirements for safe work in the laboratory apply. The regulations on biological safety, genetic safety, radiation protection and laser safety must be observed. By signing the Terms of Use, the PI confirms that all applicable safety instructions have been given.

12. ACKNOWLEDGING THE CORE FACILITY AND USE OF EXTERNALLY-FUNDED INSTRUMENTS IN PUBLICATIONS

The existence and financing of core facilities depends in part on proper acknowledgment in publications. This is an important metric of the value of most core facilities, so if you publish any data that were generated with one or more instruments or with the help of the Microscopy and Histology Core Facility, we ask that you include an acknowledgement in your publication. The CF used and, if applicable, the instrument funding project number and persons must be named in the acknowledgement of a publication. Please see the following examples.

Acknowledging the CF:

"The authors gratefully acknowledge the IMB Microscopy and Histology CF for their support and assistance in this work."

Acknowledging the CF and CF staff (including the reason why the person is being acknowledged):

"The authors thank [enter staff name] of the IMB Microscopy and Histology CF for their support and assistance with super-resolution image analysis and image processing in this work."

Acknowledging the CF, CF staff (including the reason why the person is being acknowledged) and instrument including project funding number:

We thank the IMB Microscopy and Histology CF, especially [enter staff name] and [enter staff name], for their assistance with [type of assistance] analysis and [type of assistance]. [Method] was performed on the [instrument name & project number].

List of instruments for which the funding and the funding project number must be specified:

	Instrument	DFG Project #
Microscopy	TCS STED CW SUPER-RESOLUTION	204504610
	SR GSDIM SUPER-RESOLUTION	212047918
	AF7000 WIDEFIELD	212049334
	OPERA PHENIX	316215830
	VISITRON SPINNING DISC	402386039
	STELLARIS 8 FALCON CONFOCAL	497669232
	C-Trap	544814404

Before publication, the materials and methods section describing CF methods should be submitted to the CF for proofreading. The following linked list contains examples of key features that should be included in the materials and methods section of publications [https://www.nature.com/articles/s41592-023-01987-9].

The Microscopy and Histology Core Facility is pleased to collaborate on scientific projects. Co-authorship is warranted whenever our scientists have provided substantial intellectual contribution to the project. Please apply the same standards as you would within your group or with collaborating groups. CF service fees are meant to cover part of the running costs and do not preclude authorship involvement in accordance with the principles of good scientific practice.

13. TAKING EFFECT

These Terms of Use become effective on 01.01.2025. At the same time, any previous Terms of Use of the Core Facilities shall cease to apply.

Mainz, 20. December 2024

Dr Sandra Ritz
Head of Microscopy/Histology Core Facility
Institute of Molecular Biology Mainz