User regulations

for users of university institutions

Core Facility for Cell Sorting and Cell Analysis

Version of January 15th, 2025

1 Organization

1.1 Head

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1.2 Technical management

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1.4 Access

Information about the Core Facility for Cell Sorting and Cell Analysis can be found on the internet at https://zsa.med.uni-rostock.de.

The offer is available to the following user groups:

- University medical staff
- Employees of the University of Rostock
- External users (separate user regulations)

At full capacity, the staff members decide whether to accept new projects, whereby groups from the Rostock University Medical Center will be given priority.

The employees of the Core Facility are usually available between 08:30 a.m. and 16:30 p.m. After having obtained complete instruction on the devices, the users are free to use them in the specified time. Access to the above-mentioned rooms is granted by applying to the facility management in the form of locking authorization.

2 Equipment

The Core Facility for Cell Sorting and Cell Analysis has three flow cytometers for analysis; the Cytek™ Aurora, the BD FACSCalibur™ and the BD FACSVerse™, three different cell sorting systems; BD FACSAria™ IIIu, the autoMACS® Pro Separator, as well as magnets for manual MACS separations and the Luminex100 / 200 for the multiplex bead-based analysis of soluble proteins. Furthermore we grant access to the BD Rhapsody barcoding system for single cell RNA analysis. A USB dongle with a transportable license for the FlowJo ™ and the SpectroFlo software can be borrowed for data evaluation.

The exact description of the devices, their configuration and applicability can be found on the homepage https://zsa.med.uni-rostock.de/ausstattung.

3 Range of services

3.1 Services offered by the Core Facility

- Assistance in planning of flow cytometric experiments
- Individual instruction on the devices and the acquisition software
- Advice on possibilities of cell sorting and their implementation on the BD FACSAria ™ IIIu
- Advice and instruction in single cell RNAseq barcoding via the BD Rhapsody system
- Establishment of marker panels
- Advice and implementation of magnetic-based cell separation
- Support in the evaluation of flow cytometric data
- Regular care and maintenance of the devices, performance check and data backup

3.2 Obligation of the user

- Recognition of the user regulations by the project manager and the user him/herself
- Booking of devices via the online booking portal *Clustermarket*

• Responsible use of the devices and provided workplaces
• Transport and anonymization of samples to the premises of the Core Facility
• Information about the type of sample, its safety level and any incidents at the instrument, provided in the logbook
• Information about the success of experiments, especially after sorting

4 Registration

Our registration procedure is as follows:

1. Initial project discussion
2. Acknowledgement of user guidelines
3. Safety instructions
4. Training on the instrument
5 Access to booking platform Clustermarket

Individuals interested in using the Core Facility contact its employees to make an appointment for an initial meeting. This initial meeting serves to discuss the project at hand, the suitability of devices, sample preparation and protocol.

Up to three appointments (approx. 1.5 hours each) - depending on the complexity of the device and the individual prior knowledge - are agreed upon during which the user is familiarized with the device and the corresponding software. The user carries out the device settings for the specific sample with the help of employees.

Interested users acknowledge our user regulations, which can be downloaded from the Core Facility homepage. The last two pages of the user regulations are printed out and signed by the project manager and the user, then returned to the employees.

After successful completion of the training units, the user is authorized by his/her colleague who is administrating the departmental access to *Clustermarket*, to book the devices and consumables via *Clustermarket.*

After handing in the signed user guideline, the interests user is gained key access to the instruments in lab room 0.81.

This procedure is summarized in a welcome email that the interested user receives after the initial meeting.

In addition, the user obtains an email with some links and tips on the theory of flow cytometry.

5 Booking of devices

After handing in the signed user guidelines and successfully completing the instructions, the user is authorized to book the devices via *Clustermarket*. The BD FACSAria™ IIIu is an exception, its use is only possible after direct consultation with the employees of the Core Facility.

If any device is defective, this will be shown in the Clustermarket booking calendar and a notification will be sent to the user via email. Users affected by a defective device report immediately to the employees of the Core Facility, so that the measurements can be transferred to an alternative device.

Booking by or for colleagues is not allowed. However, an unregistered user can work on the devices

under the supervision of a registered, experienced user. This must be expressly approved by the staff of the Core Facility.

6 Cancellation policies

Booked sessions can be canceled up free of charge to 6 hours before the planned use of the device. The user is asked to inform subsequent users about this case so that they can bring forward their measurements if necessary. Cancellations shorter than 6 hours will be charged at the full hourly rate.

If the last booking on that day is canceled, the user must ensure that the device is switched off correctly.

7 Responsibility of the user

The user agrees to the user regulations via his/her own signature plus the signature of his/her supervisor and submits the signed documents to the employees of the Core Facility. The user may only use the corresponding devices independently after successful instruction, after returning the signed user regulations and after having received safety instructions. Each user is responsible for cleaning the devices according to the instructions, for setting them up for the next measurement, for documenting the session in the logbook and for cleaning the workplace (tidy up and disinfect).

8 Responsibility of the Core Facility

The Core Facility employees service and clean the devices regularly. A so-called performance check is performed regularly and ensures reliable measurements. Every activity by the employees is documented in the folder for users to view. The employees maintain discretion about planned and ongoing projects towards third parties. Exceptions must be agreed individually.

9 Biosafety

The user's supervisor is responsible for the annual instructions on genetic engineering, infection protection, occupational safety, etc. and guarantees the user’s knowledge on the respective safety classifications, transport and handling of biological samples.

As part of the briefings, a short safety instruction is given by the employees of the Core Facility. This is documented with a signature (see appendix to this user regulation) and is repeated annually. The laboratories in which the devices are located are class class I or even II approved. Appropriate protective measures, such as wearing laboratory protective clothing (bring your own protective clothing or take it out of the central pool) and hygienic working methods (disinfection of workplace and hands) are compulsory.

The users must document their measurements in the logbook, which is available on each of the devices. Especially measurements of S2-level samples (e.g. human samples, virally transduced samples) must be reported.

Higher safety measures must be taken when using the BD FACSAria™ IIIu, as the device produces aerosols due to its operating modes. Therefore it is compulsory that the employees of the Core Facility are informed in advance of the safety aspects of the sample to be analyzed or sorted. If necessary,

appropriate measures for prevention and decontamination of the device are discussed and initiated.

10 Data collection evaluation and storage

The Core Facility is responsible for the correctness of the data collection and evaluation. The user is obliged to export his or her data and save it on an external storage medium. The collected data belongs entirely to the user. The standard formats *fcs, *xls, *doc, *odt, *ods, *csv, *png and *svg can be used for data exchange.

The employees archive the raw data every six months in the form of a backup, which saves the data on external hard drives of the appropriate devices and also on external, transportable hard drives as part of the regular cleaning / maintenance of the devices.

11 Acknowledgments in publications

The users of the Core Facility agree to give appropriate credit for the use of the instruments in accordance with the rules of good scientific practice. This means that the use of the devices and the services provided by the Core Facility staff must be mentioned in every form of publication. This also includes theses, conference contributions and third-party funding applications.

Core Facility staff will be taken into account in the publication of data generated and collected in the Core Facility with the cooperation of the Core Facility staff. Co-authorship is granted depending on the scope of services provided by the respective employee. Of course, this requires participation in the writing and editing of the corresponding manuscript.

In case of being acknowledged, we suggest the following wording:

We thank the Core Facility for Cell Sorting and Analysis for providing the equipment and technical and application support during data collection.

For the Core Facility, the above-mentioned references are important proof of the necessity for their existence and serve the further development within the framework of evaluation processes and third-party funding applications.

12 Fees

Using the online booking platform *Clustermarket* costs 27,37 € per year and department. Costs will be charged at the end of the first quarter.

Consumables such as sheath, cleaning fluids and the beads for the respective quality controls are charged as part of a fixed and an additional hourly rate. The fixed price includes the costs for spare parts, extensive cleaning and instrument performance checks. A price list for the use of the device follows:

Device name	Hourly price or separation price*
BD FACSAria™IIIu	once 64,00 € plus 3,50 € / hr
BD FACSVerse™	once 12,00 € plus 3,50 € / hr
BD FACSCalibur™	once 6,00 € plus 3,00 € / hr
Cytek®Aurora	once 8,30 € plus 1,30 € / hr

autoMACS® Pro Separator	once 35,00 € plus 7,00 € / sample
Luminex®100/200™	once 125,00 € plus 4,20 € per plate
BD Rhapsody	56,00 € (1-6 samples) 113,00 € (7-12 samples)
FlowJo/Spectro Flo Dongle	free*

* Borrowing and usage of the dongle requires the acknowledgement of a separate agreement which can be found on the homepage and is also attached to the dongle logbook.

Small test volumes of reagents and AKs can be purchased from the Core Facility, please find an overwie of our stocks below:

Reagent#	**Producer**
7-AAD Viability Staining Solution	BioLegend # 420403
DAPI (1:3600)	BioLegend # 422801
Propidiumiodid (10 µL)	eBiosciences # BMS500PI
ZombieNIR	BioLegend # 423105
ZombieRed	BioLegend #423109
LIVE/DEAD Fixable Aqua Viability Dead Stain Kit	Invitrogen # L34957
Fixable Viability Dye eFluor506	eBiosciences #65-0866-14
Fixable Viability Dye eFluor660	eBiosciences # 65-0864-14
Fixable Viability Stain 700	BD Horizon # 564997
ViaComp Beads	OLS # SSB-07-A
Cytek FSP CompBeads	Cytek # B7-10011
UltraComp eBeads Plus	Invitrogen #01-3333-42
MACS Comp Bead anti-REA	Miltenyi Biotec #130-104-693
5 ml Tube PP with lid (sterile)	Falcon™ 352063
5 ml Tube with cell sieve (sterile)	StemCell # 100-0087
5 mL Tube PS (non-sterile)	Sarstedt 551579
Antibodies (human, murin)	variable
Lactadherin:FITC	Haematologic Technologies BLAC-FITC
Apotracker Green	BioLegend # 427402
CFSE Cell Division Tracker Kit	BioLegend # 423801

Fees for the use of the devices and additionally requested consumables are billed quarterly and sent to the financial department with the request to transfer the costs.

user name:_____

user group:_____

Recognition by signature

Rostock, January 15th 2025 _____

Date — Signature Prof. Dr. Brigitte Müller-Hilke, Head of the core facility

Rostock, _____

Date — Signature user

Rostock, _____

Date — Signature project manager

Appendix

Documentation of safety instructions for the user

Date	Signature	
	User	Instructor