Guidelines for the Optical Microscopy (OM) facility

§ 1. General user rules

(1) All users of the OM facility need to respect the usage guidelines of the Core Facility BioSupraMol (www.biosupramol.de/en) and further requirements for the respective provider of a device (https://www.biosupramol.de/en/Betreiber/).

(2) Users have to get a safety training and an introduction to the devices by the OM staff as well as practical training by the key user of their own research group before they can use laboratories, equipment, and computers of the OM (for more detailed information and procedure during the corona pandemic, check https://wikis.fu-berlin.de/x/z4LyT). *A **key user** is an already experienced OM user that represents the research group and is trained and authorized by the OM staff.*

(3) The specific safety rules and operation instruction for the respective laboratories apply (check with the OM staff and see https://wikis.fu-berlin.de/x/z4LyT). *Most important rules*:
- Access to the OM labs & devices is forbidden for any person without introduction by the OM staff.
- It is mandatory to wear a lab coat in the OM rooms.
- It is forbidden to bring and handle hazardous substances, chemicals and biomaterials in the OM facility; exception: after registration and approval with the OM staff and the respective authorities, handling of biomaterials & genetically modified organisms of risk group 1& 2 is possible.
- Eating, drinking and storing food, drinks, jackets, bags or back packs is forbidden in the microscope and sample preparation rooms.
- The work place, microscopes and equipment must be cleaned and left in a tidy condition.

(4) The usage costs are calculated based on the booked time and prices published on the BioSupraMol web page (www.biosupramol.de/en).

(5) When results are published, the Core Facility's contribution should be acknowledged as follows: "We would like to acknowledge the assistance of the Core Facility BioSupraMol supported by the DFG *(plus <device + FDG fund no> for devices purchased from 2021)."*

§ 2. Booking rules

(1) The microscopes and the analysis computer need to be booked in advance using the OpenIRIS booking system https://fub.openiris.io (registration & access information: www.biosupramol.de/en/Buchung).

(2) Devices can be booked up to 14 days in advance. Cancelation is possible up to 2 days in advance without charging. *Inform the OM staff in case you need to delete less than 2 days in advance.* Even if you cancel a booking, you are responsible for switching off the system.

(3) For bookings out of official working hours/building opening hours a written approval by the responsible research group head is needed as well as approval by the OM staff.

§ 3. Data storage rules

(1) **Use the BCP storage file network drive to transfer and store data.** It is not allowed to connect any external storage device or cloud storage to the computers of the OM facility. Ask your key user to register your ZEDAT account to the bcp storage in the MI portal (https://portal.mi.fu-berlin.de).

(2) **To access the BCP storage on a microscope PC use the mount & unmount icon.**

(3) **To access data on your PC mount the BCP storage:** \\bcp-storage01.imp.fu-berlin.de\ag-<lab> (Windows), smb://bcp-storage01.imp.fu-berlin.de/ag-<lab> (Mac/Linux) (for detailed instructions see https://wikis.fu-berlin.de/x/VwcSTQ).

(4) **For detailed information and data storage guidelines register your zedat account on** https://git.imp.fu-berlin.de **and go to** https://git.imp.fu-berlin.de/bcp/bcpfs-doc**.**

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§ 4. Device operating rules

*for the Leica clsm **SP8_1** (SupraFAB, Altensteinstr. 23a, 026.1) and **SP8_2** (Takustr. 6, room K022, first bay); for the **STED** (SupraFAB, Altensteinstr. 23a, 026.4)*

(1) Do not use glove to touch the equipment, devices, computers and keyboard, etc.

(2) Handling of liquids close to the microscopes is forbidden. For sample preparation and more extensive lab work or cell culture, access to a nearby lab 027.1 is possible.

(3) Seal coverslips with nail polish or use a mounting medium that solidifies.

(4) Use lens tissue to clean objectives and Kim wipes to clean slides & coverslips.

(5) Follow the Start-up and Shot-down procedures:

*Start-up procedure for **SP8_1** and **SP8_2** (for **STED** an extra intro is needed)*

1. Fill the log book and check previous entries for unusual remarks.
2. Remove the cover from the microscope.
3. Switch on the power for the microscope, laser, scanner, computer, and the HTX halogen lamp, and turn the laser key in the on position (On-1).
4. Log in to Windows (user name: BioSupraMol_User, password: use_me).
5. Mount the BCP storage to access and safe data in the clsm-SP8-1 or clsm-SP8-2 folder (→ *my computer*).
6. Launch the LAS software, switch on lasers, and set the Argon laser power to 20% max. 30% (SP8_1).
7. Make sure objectives are not locked and the correction collar is at the right position.
8. Place the properly mounted and sealed sample on the stage, fix it with one clamp and get on focus using the epifluorescence microscope mode.
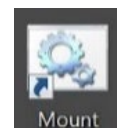
*Shut-down procedure for **SP8_1** and **SP8_2** (for **STED** an extra intro is needed)*

1. Lower the turret, remove your sample, remove oil/immersion fluid on immersion objectives.
2. Switch to the 5× objective (SP8_1) or 10x objective (SP8_2).
3. *Save your experiment directly in the clsm-SP8-1 or clsm-SP8-2 folder creating a subfolder in your group folder labeled with **measurement date (YYY-MM-YY)** and your **zedat name** to backup your data properly for the mandatory 10 Years. Do not save data on the hard drives of the computer or on external USB devices.*
4. Log off from the BCP storage by clicking the unmount button.
5. *a) If there are users signed up within the next 2h:*
   - Keep the laser on (SP8_1) or set the lasers to standby (SP8_2) in the LAS software.
   - Lock the screen (*control+alt+del* → *lock this computer*).

   b) If no one signed up the next 2h
   - Switch of the lasers in the LAS software, close the software, and shut down Windows
   - Wait until the fan for the Argon laser has stopped (SP8_1) and switch off the power for all components (scanner power, laser power, PC, Microscope, HTX halogen lamp)
6. Turn the laser key in the off position (Off-0), clean up the work area, and put the cover back.
7. Complete the log book and lock the room.