POLICY OF USE
Leica TCS g-STED CW SP8
Super-resolution microscope
Version 5
January 2019

Foreword
We purchased and incorporated in October 1st 2012 one super-resolution confocal microscope by Leica (model TCS gated-STED CW SP8).

This policy has been defined to set the organisation of the correct use and maintenance of this equipment. This document is open to improvements and suggestion, fruit of the use and experience in the common and collaborative use of this equipment. Suggestions are taken by the Facility Technician (aura.escobar@achucarro.org).

Property and right of use
This equipment is property of Achucarro Basque Center for Neuroscience, and was acquired thanks to a direct subsidy of the Basque Government, so its use is and must be open to the Basque Science Community, according to this policy of use.

Main technical specifications
- Inverted Leica DMI 6000B microscope.
- Objectives: 10x Air, 20x Air, 40x Oil, 63x Oil, 100x Oil (g-STED).
- Galvanometric Z-stage and motorized XY-stage for multi-position imaging (mosaic, time lapse).
- White Light Laser (470-670 nm tuneable excitation with 1nm interval).
- Argon Laser (458, 476, 488, 496, 514 excitation lines).
- Ultraviolet Laser (405 nm excitation line, AOTF Flexible)
- Gated STED CW unit (592 depletion laser for super-resolution and 100x objective)
- Galvanometric Scanner (up to 1400 Hz) and Resonant Scanner (8000 Hz) for fast scanning.
- High-sensitive Hybrid detectors (x2) and standard Photomultiplier tubes (PMT) (x2): 4 channel simultaneous acquisition with freely adjustable spectral detection.
- Environmental control chamber (temperature, CO2, humidity) for in vivo imaging

Microscope reference personnel
Currently, Laura Escobar, our Facility Technician is the person in charge of the technical issues of the microscope. Asier Ruiz (asier.ruiz@ehu.es) is also a reference person of some of the advanced features of the equipment. In case of any doubt while using it, question, problem, ask them please.

Basic working conditions and procedures
The check-list with all the mandatory steps to start, run and stop the microscope is available at the Facility Room.
Laura Escobar will supervise the use, if needed.

Acknowledgement
Users MUST mention the use of this equipment in their publications and research outcomes as:
Achucarro Basque Center for Neuroscience – Imaging Facility (Leioa, Spain)
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Working Hours
In order to try to guarantee the availability of the microscope for all the users/groups, each workday is divided into four blocks: from 8:00 to 11:00, 11:00 to 14:00, 14:00 to 17:00 and 17:00 to 20:00.

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Reservation Constraints
The minimum reservation unit is one hour per user, until a total of 15 hours per user and week. Reservations SHOULD be done, at least, 24 hours before the use of the equipment.

Each group can reserve one block per day, but you don’t need to use the use the complete hour block if it is not necessary. Different users on the same group can share blocks.

Once a week, each group will be able to reserve up to two continuous blocks (a total of six hours), mainly to ease the living cell experiments or extra workloads.

Reservation Calendar
The use of the microscope needs of a previous reservation in the shared Calendar for this equipment: https://www.google.com/calendar/embed?src=h9va4ses2p7eti74672bp4bdtc%40group.calendar.google.com

Requests to gain access to the management of this reservation system and calendar must be directed to Laura Escobar (laura.escobar@achucarro.org).

Group Leaders will be responsible for the use (and cost) of their group members, so you can establish your own (internal) request procedures.

When finding an empty space in the calendar, any user that has not previously or subsequently reserved more than 15 hours has the priority to take it, and after that anyone.
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User Priorities
- According to affiliation:
  1. Achucarro and UPV/EHU users have the maximum priority on the use of this
equipment; after them,
  2. Other non-for-profit research or technological centres within the Basque Science
Community (or abroad); and finally,
  3. Companies and private entities.

In exceptional cases, if a user of this third group has a special-time related-need and according
to their pricing policy, they could be given priority over other users.

- According to the required technology/experiment type
  1) This is singular equipment that allows STED, living cell and time-lapse
techniques, so users/experiments with these needs will have priority to use it.
In particular, living cell experiments, due to their constraints, will have
maximum priority for reservation.
  2) Given our current status and use of other resources, this equipment could be
used for Epifluorescence. This use will have the lowest priority among
the different techniques, and will be only accessible for internal use (Achucarro
research groups).

Penalties
- Users that reserve a time slot that then don’t use the microscope, and haven’t released
the reservations could suffer a penalty on their next reservation(s).

In order to keep a good atmosphere in the use of the equipment, and in the whole centre,
we kindly ask all the users to observe strictly the schedules and times of use, planning
adequately the experiments, being tidy and clean with the equipment, furniture and the
room.

User-levels

We define 2 levels of expertise/user profiles:

- Beginner: Mainly those that never used confocal microscopy independently before.
  - The Facility Technician provides training for being and Independent user and
certifies the knowledge and capabilities of the user.
  - Beginners can NEVER use the microscope alone and will always have to be
assisted by the Facility Technician, or an Independent user (Group Leader,
Senior, Supervisor), depending on the technique or type of experiment.
  - The Supervisor is responsible of any damage on the equipment.

- Independent:
  - People on this level are the Facility Technician, and those appointed this level by
this technician.
  - Those that used confocal microscopy (Leica SP5, SP8) before, and have their
experience validated by certificates of attendance to Leica official courses can
directly be appointed Independent users.
  - When training Beginners, Independent users will assure have new users have
carefully read and understood this document (Policy of Use).
Annex 1: Service Prices

These prices have been set according to the cost of maintenance of the equipment, and taking into account the differences that each resource/technique consumes.

**FEES 2019 (EUROS PER HOUR)**

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<th>WL + Argon</th>
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<tr>
<td>Achucarro users and research personnel of the UPV/EHU</td>
<td>21</td>
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<td>Non for profit Research organisations and Technological Centres on the Basque Science and Technology Network (*)</td>
<td>53</td>
<td>60</td>
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<td>Other External organisations and Private Entities, Companies (*)</td>
<td>95</td>
<td>108</td>
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(*) These fees include the support of our Facility Technician in the design of experiments and samples, and operating/supervising the equipment during its use.

These prices don’t include the taxes that would apply in each case.

**Prices are valid until December 31 2019.**

**HOUR PACKAGES**

Intensive users can have special conditions in the fees of the microscope.

Those Groups/Users that need to use microscopy intensively for their research can benefit for discounts linked to "hour packages". The hour packages must be consumed in a maximum of 12 months.

- 50 hours: Discount of 10%
- 100 hours: Discount of 20%
- 250 hours: Discount of 30%
- 500 hours: Discount of 40%