Rules and Guidelines of the In Vivo Imaging Facility (IVIF)

1 Introduction

The In Vivo Imaging Facility (IVIF) is a core research facility of the Faculty of Biology and Medicine (FBM) of the University of Lausanne (UNIL). The IVIF offers services in the field of imaging and radiotherapy of small rodents which include intravital microscopy, bioluminsecence and fluorescence imaging, MRI, microCT, molecular imaging (PET and SPECT), ultrasounds imaging, image guided radiotherapy and global irradiation. The facility is present on two sites, at the AGORA cancer research center (Rue du Bugnon 25a, Lausanne) and at the Biopôle SE-C (Chemin de la Corniche 7, Epalinges). These *Rules and Guidelines* apply to both sites.

Mission and Responsibilities

The IVIF provides equipment and guidance to perform imaging experiments and :

- ensures that all equipments are functional and in appropriate working conditions; monitors systems' performances and organizes the necessary maintenance and quality checks;
- ensures the replacement of spare parts that might be damaged/unfonctional due to age-related wear and manages funding requests for the replacement of out-dated equipment or for the acquisition of new instruments;
- provides radioprotection for molecular imaging modalities
- supplies consumables needed in standard imaging experiments including all items needed to guarantee animal welfare;
- provides training services for the users, assists them in defining the optimal experimental protocol, assures technical support in the redaction of scientific documents and in communications with the veterinary authorities.

2 Access

The IVIF is accessible to research groups from the Faculty of Biology and Medicine at the University of Lausanne (UNIL and CHUV),as well as from other partner institutionsat SOC AGORA (EPFL, UNIGE). External academic institutions and private companies, can also access the platform upon agreement and after establishing a contract through the technilogy transfer office of Unil (**pactt**).
In order to have access to the IVIF equipment, interested users should:

1. get in contact by email with the platform (ivif@chuv.ch) or directly with the staff (sec.10); the project will be discussed in order to define the appropriate methodology and imaging protocol; access type (sec.2.1) will be also defined at this stage;
2. have a Unil account; the IVIF offers support through the process;
3. read and accept the present *Rules and Guidelines* by filling the access request form; ask to the respective group leader to read and accept the present *Rules and Guidelines* by signing the same access request form;
4. follow a specific training for each required equipment (sec.3);

2.1 Types of access

Depending on the application, the technique of choice, the user's technical competence and the projects requirements, different modes of access can be established:

- ***self-use:*** after an initial training by the IVIF staff, the user acquires and analyses the images in an independent manner;
- ***assisted:*** the user acquires and analyses the images under the supervision of an IVIF collaborator (a training by the IVIF staff is still required);
- ***under contract:*** image acquisition or analysis are performed by the IVIF staff. This mode of access will depend on the requested workload and should not affect the normal functioning of the Facility. This type of agreement can be stipulated in the framework of a common research project.

3 Training

3.1. Training is mandatory for the access to every equipment. The interested user can request for a training directly from the booking system.

3.2. The duration and conditions for passing the training are defined by the IVIF staff based on the specific equipment, the user's skills and the complexity of the experimental procedure.

3.3. All training will be given free of charge, as are all interventions following a request for support.

3.4. Courses as well as workshops are regularly given by the IVIF to users who want to improve their knowledge on advanced in vivo imaging techniques. Advanced training can also be organized on demand.

4 Booking System

All equipment has to be reserved via the platform booking system which is also used for billing. Each user will have unique credentials that will be granted upon creation of a Unil account.
The following rules apply :

4.1. A reservation is mandatory in order to use an equipment;

4.2. A user can only make a reservation for his/her own experiment;

4.3. Reservations can be cancelled free of charge until 24h in advance. After this deadline, a fee of 50% of the total charge, will be applied;

4.4. A reservation can be moved free of charge to a different slot on the same day;

4.5. It is possible to end a session early, and the unused time will not be billed;

4.6. It is possible to extend a session if this does not impact other users.

4.7. For technical or planning reasons, the IVIF may potentially move or cancel a user's reservation after announcing this to the user in question.

4.8. In principle, all users have the same reservation priorities. In the event of facility overload, priority will be given to users from the institutions that financed the IVIF, i.e. the Fundamental and Clinical Sciences departments of the Faculty of Biology and Medicine.

5 Billing and Fees

5.1. The use of all equipment is billed on a time basis. The actual usage time is obtained from the booking system;

5.2. Hourly rates are different depending on the type of access (self-use, assisted or under contract) and on user's affiliation (Unil/CHUV, affiliated institution, external academic, external company);

5.3. The price list can be obtained on demand by email at ivif@chuv.ch. For external companies, fees will be defined via a service contract to be established between the company and the IVIF through the technology transfer office of the Unil (**pactt**);

5.4. The use of resources during an initial training as well as the training itself will not be charged. The duration of the training period will change depending on the instrument and the complexity of the procedure;

5.5. In the case of a documented failure of a resource or setup during a session, the corresponding hours of reservation will not be charged;

5.6. In all other cases, including in case of unsuccessful experiments, the hours of reservation will be charged;

5.7. The income will contribute to consumables, services and supervision of the equipment. The fees are intended to ensure the accessibility of all equipment under optimal conditions.

6 Data Management

The IVIF is not responsible for data management and storage. It is the user responsibility to transfer and safely store data produced on the faclity's equipments. In accordance with the IVIF staff, the users may be allowed to temporarily keep their data on local disks in order to complete data analysis. These disks are not to be intended as a storage space and the IVIF declines all responsibility on eventual data loss.

The duration of data storage on the IVIF local disks is usually limited to one month. After this time, the data might be deleted without previous warning in order to guarantee the correct functioning of the system.

7 Animal Welfare

The facility is actively involved in promoting the 3Rs culture. In this context, it provides users with all the tools needed to improve animal welfare during experiments: sterile laminar flow hoods, anesthesia stations, instruments for physiological monitoring, etc. Users are trained on the appropirate use of these tools.

The IVIF offers support in setting up and in performing surgery in the framework of an imaging protocol.

Assistance can also be given in the redaction of an animal licence request. However, the IVIF is not responsible for submitting it.

It is the responsability of the user and the group leader to obtain a valid animal licence from the Swiss Veterinary Authority, to carefully follow the protocols defined therein, and to work under the sanitary status of the animal facility. It is at the study director responsability to make sure that users comply with the animal licence.

8 Authorship rights and publications

The IVIF will not be responsible for the scientific, biological, or technical validity of the results. Nevertheless, the users are strongly encouraged to contact the IVIF staff for any question or discussion on a potential improvement in their experimental design.

The scientific papers resulting from data acquired in the facility do not need to mention the IVIF staff as co-authors: the IVIF will be mentioned in the acknowledgements or in methods section.
Publications should be forwarded to the IVIF staff for internal records and for the annual report.

In case of major contribution, experimental set up, figure production, research and development by the IVIF staff authorship can be discussed.

9 Users' Responsibilities

In summary, users must comply to the followig rules:

9.1. Receive a training before using an equipment for the first time;

9.2. Reserve the equipment via the facility booking system;

9.3. Report any problem with the device, defect or damage to the IVIF staff immediately;

9.4. Strictly respect the experimental procedure established in accordance with the IVIF staff during the training; receive an explicit approval before introducing any modification to the acquisition protocol.

9.5. Do not remove any equipment from the facility and do not add any component to the instruments without authorization of the IVIF staff;

9.6. Guarantee the respect of the sanitary rules in the IVIF rooms, including appropriate cleaning of all equipment after usage;

The IVIF staff reserve the right to suspend users who do not comply with the present *Rules and Guidelines*.

Users will be held liable for any damage to the equipment caused by use that does not comply with the present *Rules and Guidelines*.

10 Contacts

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Lausanne, November 5, 2025