

MicroPET–MRI Laboratory
 Department of Diagnostic Radiology
 The University of Hong Kong
 LG3-12, The Hong Kong Jockey Club Building for Interdisciplinary Research,
 5 Sassoon Road, Pokfulam, Hong Kong
 Email: fanshj08@hku.hk Tel: (852) 2831 5010

Usage Policies and Guidelines

Imaging Rate

Service Type	LKS Faculty of Medicine, HKU– Internal	Non-LKS Faculty of Medicine, HKU– Internal	Non-HKU– External	Private Industry
microPET–MR Imaging	HKD 1,100/hour*	HKD 1,800/hour	HKD 2,400/hour	Call for pricing
¹⁸ F-FDG	HKD 300/mouse			Call for pricing
¹¹ C-ACETATE	HKD 500/mouse			Call for pricing
¹⁸ F-FMISO	HKD 1000/mouse			Call for pricing
MRI Contrast Agents	HKD 100/mouse			Call for pricing

- Scanning price is quoted for collaborative projects only based on routine cancer imaging procedures, and is calculated per hour rate including scanner usage, technical support, anesthesia, consumables and reconstruction of datasets into standard image formats.
- Rodents, radioisotopes, contrast agents and post-processing are extra (not included) and prices will vary. Please contact research staff of microPET–MRI laboratory for more details.
- All charges are subjected to annual adjustments based on cost changes.
- * For a typical ¹⁸F-FDG PET imaging (static scans only), cost will be capped at HKD 1,100/mouse (excluding ¹⁸F-FDG).

Acknowledgement

The microPET–MRI Laboratory is jointly funded by the Collaborative Research Fund Major Equipment Project (CRF C7018-14E) and The University of Hong Kong, and it is part of the LKS Faculty of Medicine Faculty Core Facility managed by the Department of Diagnostic Radiology. It is important that the use of our facility is being acknowledged appropriately in all scholarly reports, presentations, posters, papers, publications and grant applications. Proper acknowledgement provides a visible measure of the impact of the shared facilities to our research community and is essential for our ongoing effort to secure funding and support to improve the quality of our services for your research. We ask you to include the acknowledgement of the following in all publications that incorporate any results obtained through our facility:

“We thank the support of Hong Kong Research Grants Council Collaborative Research Fund (CRF C7018-14E) for small animal imaging experiments.”

The research staff of the microPET–MRI Laboratory frequently contribute to the research carried out by our investigators and collaborators. They can have an important scientific role through experimental design, data acquisition or analysis, etc. We therefore encourage personal acknowledgment since our research staff made a significant contribution to your experiments, and acknowledgment at the authorship-level would be strongly appreciated and encouraged when collaborative efforts are involved.

General Procedure

- A summary of research proposal describing background, hypothesis/objective, studies timeline, anticipated outcomes, data acquisition method and analysis (a maximum 3 pages) must be submitted together with the completed Service Request Form to the microPET–MRI Laboratory for consideration. Scientific Committee of the microPET–MRI Laboratory will convene meetings to review research projects based on scientific merits, feasibility and sustainability, and PI will be contacted by research staffs for logistical arrangement and review outcome.
- It is the responsibility of PI or a representative from the PI’s lab (primary contact) to ensure that he/she has the relevant animal research ethics approval e.g. CULATR and animals to be studied are ready prior to initiation of any imaging experiments. PI is reminded to attach the relevant Animal Ordinance (approval letter) and CULATR approval information (original protocol and approval letter) together with the research proposal and Service Request Form to facilitate the reviewing process.

- Once a project has been approved, research staff of microPET–MRI Laboratory will liaise with PI to schedule an imaging session and any necessary logistical arrangement. In general, experiments should commence one week after the project approval; however please bear in mind that imaging studies may be delayed or cancelled due to unforeseen circumstances e.g. Unexpected scanner break-down, preventive maintenance, insufficient/no supply of radiotracer etc. PI may request for a specific time for imaging studies before being scheduled to a time slot, this is however subjected to the availability of scanner and does not guarantee the desired time slot to be granted. Nevertheless, research staff will do their best to actively engage and communicate with PI to better suit their needs. If for any reasons PI needs to postpone the appointment, please contact the research staff at least 3 days prior to the scheduled time so that arrangement can be made to use this vacant time slot for other investigator and to re-schedule for another appointment.
- All raw imaging data will be stored in the workstation of the laboratory and are available upon request. Images will be sent to PI or primary contact via email in the standard image format, and if analysis of imaging data is required, please bear in mind that data will be ready at a later stage to allow research staff to perform the necessary analysis. Under no circumstances will the PI or primary contact be allowed to retrieve the data from any workstation in the laboratory by himself/herself and using any removable media e.g. USB pen-drive.
- PI(s) are being reminded to follow the policies and guidelines as stated, including any applicable HKU safety regulations and appropriate procedural requirements of the microPET–MRI Laboratory at all times in the laboratory. Full co-operation is expected between PI or primary contact with research staff to ensure safety of all parties in the laboratory.
- Research staff from microPET–MRI Laboratory and the Department of Diagnostic Radiology reserve the right to change these terms and conditions stated in the Usage Policies and Guidelines at any time without prior notice. In the event that any changes are made, the revised version shall be updated and posted immediately.

General Imaging Procedures

All experiments, including scanner operation will be managed and coordinated by research staff of microPET–MRI Laboratory; however, one member from the Principal Investigator's group must be present for the duration of every experiment (prior to and at the end of each experiment) to assist research staff in animal preparation and care.

Once an experiment is scheduled, the following procedures will be applied:

- Animals will be transported via a predetermined/precise route to the microPET–MRI Laboratory by PI 15 minutes prior to the scheduled time. Animals should be placed inside a cage that is secure and escape-proof, and the cage is wrapped with a black plastic bag (or an opaque carrying bag) which can be removed after entering the laboratory to minimize risk of contamination of patient/public area.
- Animal will be anesthetized for imaging either by isoflurane inhalation or by intraperitoneal injection of Ketamine/Xylazine. All anesthetic agents used during imaging will be recorded and provided by microPET–MRI Laboratory.
- The administration of the radiotracer will be performed only by authorized research staff of microPET–MRI laboratory who have (1) completed radiation protection course and training, (2) registered as a radiation worker in The University of Hong Kong, (3) completed appropriate animal training. The administration of all radiotracers will be performed in the specific areas commissioned for radioactive work within the microPET–MRI laboratory. PI may be involved in assisting research staff in any other of animal handling procedures provided that he/she is not exposed to radiation (exception is made when PI is a registered radiation worker in HKU).
- The images are acquired over a time period of up to 2 hours but typically around 1.5 hours for each mouse/rat. Animal will remain anesthetized during the entire imaging procedure and must not be left unattended by the research staff or PI. Image processing and analysis will be performed on another workstation in the laboratory to allow experiments to proceed uninterrupted.
- Upon completion of microPET imaging, animals will be immediately transferred to a cage (provided by microPET–MRI laboratory) that is secure and escape-proof surrounded by lead bricks at the specific area of microPET–MRI laboratory for decay. Animals will be transported to the specified animal holding site at LAU for overnight decay prior to returning to PI at the end of all imaging experiments. All animal waste e.g. Blood, faeces, urine, etc. shall be treated as radioactive materials and extra care must be exercised to prevent unnecessary radiation exposure and cross contamination.
- For ACUTE studies: At the end of the study, animals will be euthanized as per the method described in the PI's service request form, and all carcasses remained and stored in the appropriate refrigerator/freezer for decay prior to disposal. Cages for animal transportation will be returned to PI
- For CHRONIC studies: At the end of the study, animals that have been administered radioactivity will be returned to the specified animal holding site at LAU for overnight decay. It is the responsibility of PI to ensure that animals have unlimited access of food and water for overnight stay at the housing area (food and water to be supplied prior to animal transportation), and re-claim their animals from the housing area on the next morning.
- Upon completion of all imaging studies, PI is expected to assist research staff in standard housekeeping chores to restore the usual state of cleanliness of microPET–MRI laboratory. High-risk

areas e.g. Animal handling platform/benches, equipment, exposed surfaces must be thoroughly cleaned and disinfected with disinfectant (ANIGENE, alcohol wipes).

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