

University of Pennsylvania-Radiology

Small Animal Imaging Facility

Standard Operating Procedure

Title: Instructions for completing the “SAIF Research Application” form

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Approval: Eric Blankemeyer, Technical Director, Nuclear Medicine Imaging Core

- I. **Purpose:** The purpose is to provide instructions on completing the application form “SAIF Research Application.” Penn researchers must complete this form to officially apply for and use the Small Animal Imaging Facility (SAIF).
- II. **Responsibilities and Scope:** All researchers who are involved in imaging studies at the SAIF are responsible for reading and following this SOP.
- III. **Definitions:**
 - a. Small Animal Imaging Facility (SAIF): This facility provides multi-modality radiological imaging and image analysis for small animals, mainly mice and rats. The assets of the SAIF include state-of-the-art instrumentation and recognized staff. SAIF currently provides four Sub-Cores of imaging modalities: 1) MRI/ MRS Imaging Core: magnetic resonance imaging (MRI) and spectroscopy (MRS), 2) PET, SPECT, CT Nuclear Medicine Imaging Core: positron emission tomography (PET), single photon emission tomography (SPECT), and computed tomography (CT), 3) Optical-Bioluminescence and Fluorescence Molecular Imaging Core, 4) Ultrasound Imaging Core, giving researchers access to a broad spectrum of imaging modalities. A number of ancillary facilities are devoted to Chemistry, Radiochemistry, Image Analysis and Animal Tumor Models.
 - b. “SAIF Research Application” form: This form is for Principal Investigators (PI) who plan on initiating research at the SAIF with and without small animal imaging work. PIs must complete this form, specifying their imaging studies It will be sent to the relevant Directors of the respective imaging cores at (see “Attachments”), MRI/MRS Founders animal imaging facility, PET/SPECT/CT nuclear medicine animal

imaging facility, Optical-Bioluminescence animal imaging facility, & Ultrasound animal imaging facility.

IV. Procedures:

Any PIs who plan on using any imaging modalities (i.e., MRI/MRS, PET/SPECT/CT, Optical, & Ultrasound) of SAIF must familiarize themselves with this SOP. Two forms are available for imaging studies (see “Attachments”). For animal research involving longitudinal imaging studies, the PI may complete one “SAIF Research Application” form for multiple transfers of animals.

a. Detailed instructions for the “SAIF Research Application” form.

The resources provided by the SAIF are made available to approved research projects after review of the “SAIF Research Application” form by each imaging facility director and the review committee. The approval process is designed to assure safe operation of the facility and compliance with animal handling regulations. To that end, the form’s purpose is to extract information that will impact these aspects of daily operations. Keeping these goals in mind while completing the form will facilitate rapid approval of your project. Incomplete or unclear responses will result in a request for resubmission thereby delaying your research. The itemized instructions given below should answer most of your questions with regards to filling out the application. However, if you are uncertain about how to fill out a given item on this form, you should discuss it with each imaging core staff before submitting your application.

1. Navigate a web browser to:
https://pathbio.med.upenn.edu/pbr_cake/stampede/CustomForms/projects to access the SAIF Application.
2. Under ‘Add a New SAIF Application’, click on ‘Click here to request a new SAIF Application’.
3. This will direct you to the ‘New SAIF Application’ page. Fill out the relevant information and click ‘Submit’. This will create the SAIF Application form and assign it a number.
4. Once this has been completed, the new SAIF Application will be listed in your main list of applications. From here, the application will have to be edited to include information about funding, users, and modalities. A copy of the IACUC protocol and approval letter will need to be uploaded under ‘Supporting Documents’.
5. For longitudinal housing studies, a Longitudinal Housing form, listed under modalities, will have to be filled out for each delivery of animals.

VI. Safety Considerations:

When applying for the MRI/ MRS imaging core, if any additional devices you will be using are ferromagnetic, indicate where the device will be placed and how it will be restrained. If you are unsure of the magnetic properties of your device, then find out immediately.

VII. References:

None

VIII. Attachments:

None

IX. Document History:

Number	Version	Effective Date	Author	Reason
1		November 10, 2005	I. Lee	New
2		December 8, 2005	I. Lee	Revised
3		January 19, 2006	I. Lee	Revised
4		October 10, 2023	E. Blankemeyer	Revised