



Post Approval Monitoring (PAM) Program

374.1 Purpose

The Emory Institutional Animal Care and Use Committee (IACUC) is under federal mandate to monitor all research activities related to animal use. Pursuant to the eighth edition of *“The Guide for The Care and Use Of Laboratory Animals (Guide),”* this includes continuing IACUC oversight of approved animal activities related to ongoing protocol assessment and regulatory compliance (pg 33-34). According to the Guide, Post Approval Monitoring (PAM) activity may include the following: continuing protocol review, laboratory and facility inspections, veterinary or IACUC observation of selected procedures, daily observation of animals, and external regulatory inspections. There is no regulatory guidance as to specific activities that must be performed. Therefore, this document outlines the process for PAM at Emory University including the participants, the nature and periodicity of the monitoring activities, and the reporting mechanisms to document these activities.

374.2 Objectives

The primary goal of the PAM program is to monitor congruence between laboratory practice and the approved IACUC protocol, so as to ensure compliance. Factors to be monitored include, but are not limited to, the number of animals used, proper training and continuing education of staff, surgical and other procedures being performed, maintenance of accurate records, and use of appropriate analgesia and anesthesia. In addition, the PAM program may be utilized as one method to monitor the overall animal program and provide input to the IACUC regarding processes, identifiable risks, and to foster a positive research culture. An effective PAM program should also strive to keep investigators aware of new policies, regulations, and guidelines that may affect protocol compliance and laboratory “best practice”. Finally, the program should strive to establish a collaborative partnership with investigators to promote animal welfare, a culture of compliance, and to provide open forums of communication between investigators, the IACUC and the staff of the respective Animal Programs. In this regard, regular monitoring as well as continuing education and training are critical components of an effective PAM program.

374.3 Participants

According to the eight edition of *“The Guide”* PAM activity can be carried out by various individuals including, IACUC Office staff, IACUC members, veterinary staff, animal care technicians, and others. Therefore, the participation and responsibilities of the following groups are defined here.

374.3.1 IACUC members: All IACUC voting members participate in PAM activities via the protocol review and approval process, semiannual site inspections, semiannual program review, and service on subcommittees such as the Subcommittee on Animal Activities in Laboratories (SAAL), and the Noncompliance Investigations Subcommittee.

374.3.2 Animal Care Staff: This includes a number of people at various levels of responsibility including the Attending Veterinarians (AV), veterinary staff, training coordinators, and animal husbandry staff at both Emory University main campus and the Yerkes National Primate Research Center. These individuals carry out a large number of duties related to animal care and are thus active participants in the PAM program. Specific activities include, but are not limited to: engagement in surgical training and proficiency assessments of research personnel, routine animal care and observation of animals on active studies, performance or oversight of surgeries including monitoring of anesthesia and analgesia, endpoint monitoring, and providing training for routine laboratory animal practices.

374.3.3 IACUC Office Staff: The IACUC office is responsible for the oversight and maintenance of the PAM program, with primary operational supervision provided by the IACUC Associate Director. The IACUC office staff is responsible for periodic review of approved protocols for congruence, and for confirming proper training of personnel. In addition, IACUC staff will perform both standard PAM review of procedures, and will conduct more intensive protocol reviews on a “for cause” basis. IACUC staff also participate in and ensure completion of IACUC action items related to numerous activities including, protocol review and approval, semiannual site inspections and program reviews, issues of noncompliance, approved pilot studies, and other actions as taken by IACUC.

374.4 PAM Processes:

A number of PAM activities are detailed below. Several of these are considered “informal PAM processes” and as such are performed on a continual, rolling basis. Others are more formal and as such are designed to either be performed periodically, or on an as needed basis. Regardless, the goal of the program is to perform informal PAM continuously, and to apply one or more formal PAM processes to selected protocols on a routine basis using a risk assessment platform. In general, protocols will be ranked in this order 1) serious noncompliance related to animal welfare issues, 2) “high risk” labs as identified by a combination of species, activity, performance location, past poor performance and other factors, 3) protocols with “high risk” procedures such as multiple survival surgeries, class E, death as an endpoint, and prolonged restraint, 4) protocols with lower risk non-terminal procedures performed in the laboratory 5) low risk protocols confined to the facility with first priority to those containing Act species 6) Facilities and programmatic areas.

374.4.1 Ongoing protocol review: All approved protocols are subject to potential periodic review either as part of a formal PAM, or during other processes and activities. For Act species, an annual review is performed by a voting IACUC member, with assistance from the IACUC office staff. This review constitutes an annual renewal, and as such is not considered a formal, documented PAM activity. All protocols are subject to review during the amendment process. In some cases, concerns are

identified which are not directly related to the amendment in question. In these cases the IACUC has a formal process to request review of the item noted in a separate amendment after the current amendment is approved. In addition, the IACUC staff can work with the PI lab to make protocol revisions, or attach updated information outside of the formal review process. Common issues handled in this secondary manner include, but are not limited to, updates to biosafety or chemical safety approvals, revision of outdated text in regard to policies or procedures, removal of staff that have since left the lab, and updates to training verifications. All protocols are subject to three-year renewal, at which time protocol activity is reevaluated based on current policies, regulations, guidelines, and current best practice.

374.4.2 Semiannual site inspections: These are performed by IACUC members with the assistance of the IACUC Office and animal care staff. Although aimed mainly at facilities, these inspections also aid protocol compliance review in the following manner: a) acts as a mechanism to monitor compliance with facility-related issues regarding equipment and processes, b) monitoring of drug storage and usage, c) monitoring of surgical and procedure logs, d) assessment of lab personnel general knowledge of protocol content, e) monitoring for potential red flags regarding animal health and welfare, and f) dissemination of information regarding new policies and reinforcement of “best practice.” The IACUC office staff will provide information to the site inspectors regarding approved protocols within investigator maintained procedural spaces to aid in this process, and will provide materials for dissemination to lab staff regarding relevant new or revised policies or SOP’s.

374.4.3 Training and continuing education: The IACUC Office provides educational opportunities via the AALAS Learning Library and various webinars. Face-to-face and hands-on initiatives are primarily managed by the animal care programs of the Emory main campus and Yerkes National Primate Research Center. Both initial training and proficiency evaluations, as well as protocol-specific hands-on training and continuing education are now required by Emory University as detailed in IACUC Policy 354: Education and Training. These programs are overseen by the AV and the veterinary staff and are implemented in most instances by full-time training coordinators on staff at both programs. Training includes, but is not limited to, surgical proficiency, animal handling, animal breeding and weaning, and instruction in CO2 euthanasia. Many other hands-on training modules can be provided on an as needed, or protocol-specific basis. Training records are kept on file in either the facilities or the IACUC office, and are fully accessible so that qualifications of research staff can be confirmed by multiple individuals as needed.

374.4.4 Ongoing oversight by animal program: Animal-related activities that occur within the EU- DAR or Yerkes facilities are subject to routine monitoring and evaluation by the staff of these programs. These include, but are not limited to, a) daily observations of animal health and welfare, b) periodic observations of standard procedures, and c) monitoring of compliance with signage, PPE, and standard laboratory practices. In addition, veterinary staffs at both sites are heavily involved with the performance of certain procedures, most notably surgery and post-operative monitoring. Generally, records for these activities are maintained within the animal care programs, but are relayed to the IACUC when concerns are noted, or upon request.

374.4.5 Standard periodic protocol monitoring: This activity is performed by the IACUC Office staff and is designed to provide a mechanism for ongoing, periodic protocol review. This review will be performed on either an individual protocol basis, or on a group of related protocols from the same PI. The review generally focuses on a subset of procedures performed by the lab,

and as such is not designed to be a comprehensive review of all procedures and personnel for a given protocol, but rather a “snapshot” of activity. In this manner, a larger percentage of active protocols within the overall IACUC program can be monitored at a standard level, as in comparison to an exhaustive review of individual protocols, which would result in fewer protocols being reviewed in a given period. This also allows greater focus on potentially higher risk procedures performed on a given protocol (such as survival surgeries), compared to other procedures that generate lesser concerns. This may involve direct observation of procedures, a review of records, SOP’s, and training documents, specific review of the protocol content, or a combination of all of the above.

374.4.6 Formal “for cause” protocol monitoring: In some cases increased PAM monitoring is necessary outside of the standard schedule outlined above. There are numerous reasons why more frequent, or “off schedule” monitoring may be appropriate as indicated in the subsequent descriptions. These activities are generally performed by IACUC Office staff, but may also be performed by other individuals as defined below.

374.4.6.1 Specific instances of noncompliance. Depending upon the nature of the offense, PAM activity could be limited to a particular individual or procedure, or could be more wide-sweeping. In general, the IACUC noncompliance subcommittee will propose sanctions and or retraining requirements upon labs found to be noncompliant, which would be approved by the full IACUC committee. These requirements would be considered separate from PAM, however part of the PAM process would be to ensure that these corrective measures were completed, and were sufficient to address the issues. EU-DAR or Yerkes training coordinators and vet staff may be involved in cases of retraining or competency assessment, either as part of the noncompliance component, as a separate continuing education, or as part of a formal PAM. The IACUC Office staff will be responsible for all other aspects of PAM activity, including the generation of reports to the PI and the IACUC. Specific actions within the PAM process could include the following:

- a) Scheduled meeting with PI and staff to discuss the protocol and issues at hand
- b) Review of documents, files and procedures
- c) Review of training documentation, and interviews with staff
- d) Observation of specific activities by one or more individuals in the laboratory
- e) Follow up of actions imposed by the IACUC

374.4.6.2 Specific request (other than noncompliance): At times, the IACUC, veterinary staff, or others may raise concerns related to specific protocols not related to any noncompliance. It is critical that issues of this type be addressed in a timely manner so that more serious issues do not arise. These will be handled on a case by case basis.

374.5 Other PAM Activities

374.5.1 Exemptions to standard policies: In some cases exemptions to standard policies are granted. Dependent upon the nature of an individual exemption, periodic monitoring of the activity, or documentation of receipt and distribution of standard reports are required. These will be monitored on a case by case basis and will generally be the responsibility of the IACUC Office staff. In some cases, these issues could also be monitored during semiannual site inspections.

374.5.2 Policy alterations: Periodically, IACUC, University, or federal policies and regulations will change such that action is required by lab staff to meet new standards. Compliance to these new standards will be accomplished primarily through semiannual site inspections (IACUC members) and standard monitoring (IACUC Office staff, animal care staff) The IACUC office will disseminate this information through email communication, by posting the new guidelines on the IACUC web site, and by personal communications with lab staff.

374.5.3 Data collection and distribution: In some instances the IACUC will request periodic or end point reporting from labs as part of the requirement for protocol approval. Common instances of this include pilot experiments, and ongoing reporting of animal welfare in cases of certain “high risk” class E experiments. The IACUC staff will bear primary responsibility for obtaining this data and making it available to the IACUC, unless otherwise noted.

374.5.4 Random walk through (Readiness Rounds). One mechanism for developing a “culture of compliance” is to be available to investigators and to become familiar with their laboratories and facilities. In that regard, IACUC staff will periodically visit laboratories and facilities to check in with investigators and their staff, to answer questions, or to disseminate information.

374.6 Data Collection and Reporting Mechanisms

374.6.1 Initial Report Generation: All formal PAM activity conducted by the IACUC Office staff is documented in a database maintained in the IACUC office. An official report of the findings is generated and provided to the IACUC Associate Director. Any protocol violation that affects the health and welfare of the animals will be immediately reportable to the Noncompliance Investigations Subcommittee. Other minor infractions such as mislabeled cage cards will be resolved through continuing education and may not be reported as noncompliance. NOTE: all activity identified during inspection that results in an immediate danger to animal welfare will result in on site action. In this case both the AV or designee, and the IACUC Office will be notified and will be provided the opportunity to address the activity in person at point.

374.6.2 Reports to Investigators: Once the PAM activity is complete, a letter indicating the findings will be forwarded to the PI. If no significant deviations from protocol are noted, the PI will be issued a letter of commendation. If there are findings of protocol deviation, or if there are other notes of concern based on observation, the PI will be notified along with appropriate action depending upon the issue at hand.

374.6.3 Reporting to the IACUC: The Associate Director will present a summary of PAM activity conducted by the IACUC Office staff before the full committee on a monthly basis. In addition, the Associate Director will also present the current status of the PAM program to the executive IACUC committee upon request.

374.7 Document Properties

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