University of Notre Dame Institutional Biosafety Committee Post-Approval Monitoring (PAM) SOP

Purpose:
The post-approval monitoring (PAM) program serves as an additional mechanism to ensure continued compliance with state and federal requirements, funding agency guidelines, and institutional policies.

Background:
The *NIH Guidelines* require periodic review of recombinant or synthetic nucleic acid molecule research. Continued oversight of IBC approved protocols also safeguards researchers, employees, and the public. Monitoring of approved protocols occurs through a variety of methods, including: IBC protocol review, laboratory and facility inspections, observation of select procedures, and external regulatory inspections. Post-approval monitoring involves protocol-specific review of activities in cooperation with investigators, outside of the IBC protocol review process.

Scope:
Post-approval monitoring may be conducted on any approved IBC protocol. Studies may be selected at the discretion of the IBC, Biosafety Officer, or Director of Research Compliance ("for cause"). "For cause" reviews may be conducted due to reports of spills, accidents, exposures, or other concerns related to compliance with approved activities. Studies may also be selected for review as part of the routine periodic PAM review process ("not for cause").

PAM is intended to enhance communication between users of biohazardous materials and the IBC. The goal of the PAM process is to be educational and to help study personnel by ensuring congruence between a research protocol and the actual performance of research activities. Researchers will have an opportunity to ask questions and receive information about regulations and issues regarding the use of biohazardous materials. PAM is not intended to punish investigators, but to serve as an opportunity for study personnel to ensure their work is being done in a safe and appropriate manner.

PAM review is a function of the IBC and does not serve as a substitute for other institutional activities, such as Risk Management and Safety (RMS) assessments.

Roles and Responsibilities:

1) Principal Investigators (PI) and their staff will respond to PAM requests in a timely manner, ensure the presence of lab personnel during PAM visits (PI may assign a designee), verify protocol-specific procedures, and support review by providing access to study records and laboratory facilities as needed. The PI and their staff will

participate in the development and implementation of corrective actions when necessary.

Failure to cooperate with PAM review will be considered noncompliance with IBC policy. This may include failure to respond to PAM communications, refusing to make records available, denying access to laboratory spaces without cause, failure to respond to the PAM review report and implement necessary changes, and other actions which delay or prevent review of research activities. The IBC may take action related to a protocol's status when such noncompliance is referred for review at a convened meeting or to the IBC chair. PAM representatives may also notify the Department Chair or the Institutional Official (IO) of noncompliance with the PAM review process.

2) Notre Dame Research Administration & Compliance (NDRAC) staff will provide management of PAM on behalf of the IBC. NDRAC staff will schedule and conduct PAM review sessions, provide recommendations for maintaining compliance, and provide accurate documentation to the PI and IBC. NDRAC staff will provide training, consultation, and support to the investigators and the IBC as necessary to ensure compliance.

3) PAM is an extension of the oversight function of the IBC. The IBC will receive and evaluate reports of PAM activity, identify corrective actions, and determine outcomes. As necessary, the IBC will evaluate PAM reports to determine instances of noncompliance and direct appropriate corrective action and reporting recommendations to the Institutional Official.

4) The Institutional Official (IO) may receive and evaluate reports of PAM activity from the IBC. The IO will provide guidance, resources, and support for systemic and policy changes, updates, and improvements to address issues identified through PAM activity.

Procedures:

1) **Protocol Selection Criteria**

   Not for cause reviews may be conducted at random or due to higher risk activities identified in the protocol. These include, but are not limited to activities involving:

   - biohazardous materials requiring elevated Biosafety Containment (BSL2, BSL3)
   - increased aerosolization of biohazardous materials
   - Risk Group 2 biohazardous materials manipulated outside of a Biosafety Cabinet
   - Lentiviral vectors
   - Oncogenic vectors
   - highly pathogenic organisms or highly toxic materials

- biohazardous materials in animals

Protocols may also be selected due to previous noncompliance allegations or reports.

2) Pre-Review

a. NDRAC staff hold primary responsibility for conducting PAM review visits as IBC representatives.
b. NDRAC staff will notify the PI in writing/email at least 30 days in advance of a not for cause PAM review. The review will be scheduled at a mutually agreeable time. The review may be scheduled with research personnel designated by the PI.
c. For cause reviews may be conducted at any time, with or without advance notice to the PI or research personnel.
d. A member of NDRAC staff and at least one additional IBC designee or RMS staff member will be designated to complete the review.
e. The PI (and designee, if applicable) will be provided with an overview of the scope and process of the review and the checklist used to guide the review. The PI should use this list to gather any information they may need during the visit.
f. Prior to meeting with the PI, the designated PAM reviewers will familiarize them with the selected protocol. The pre-review section of the PAM review checklist will be completed by the PAM representative.

3) Review

a. The PAM review is centered on a dialogue between the investigators and the IBC's PAM representatives. During the session, PAM representatives will ask the PI and other laboratory staff present to describe the experiments conducted under the approved IBC protocol.
b. Using the PAM review checklist, The PAM representatives will discuss aspects of the research with the PI and other staff. The reviewers may also develop specific questions for the PI in addition to those listed in the checklist.
c. PAM representatives may inform the PI and other personnel of any IBC or institutional procedures that apply to their research activities, including new or recently revised procedures, for the purpose of education.
d. There may be a review of the laboratory areas used for experiments or storage of biohazardous materials. A review of housing rooms for animals involved in experiments may also be required.

4) Documentation and Dissemination of Findings

a. At the end of the PAM review meeting, the PAM representatives will discuss preliminary results with the PI or designee and other research personnel. If any noted findings are addressed in the course of the review, PAM representatives will make a record of the correction before leaving the lab.
b. NDRAC staff will generate a report of the findings and recommendations. Findings will be classified as major or minor. Major findings are identified when activities could adversely affect the safety and welfare of personnel or the public,

or adversely affect the scientific integrity of the research. Minor findings are identified when activities do not directly impact public welfare, personnel safety, or scientific integrity.

c. NDRAC staff will provide a copy of the report to the Biosafety Officer in RMS, who may add additional notes, comments, or requirements related to the findings in the report or the conduct of the covered research activities.
d. After receiving feedback from the Biosafety Officer, NDRAC staff will send a copy of the final checklist and report outlining the PAM results to the PI. The investigator will have the opportunity to respond and submit any necessary amendments within one month. PAM representatives may require that certain research activities cease until the approval of required amendments. Responses and correspondence will be filed with the final report.
e. PAM representatives will follow up on any issues that require protocol modifications or additional training of personnel. If necessary, an additional meeting may be scheduled.
f. At each monthly IBC meeting, the PAM representative will report a summary of PAM reviews completed since the last meeting. The IBC will be given the opportunity to provide feedback on the reviews and offer recommendations to the PAM representative. The IBC has the authority to require additional corrective action and determine if there is a need for noncompliance review.
g. Once the review is complete, a letter indicating the resolution of the PAM process will be forwarded to the PI. Any requirements identified by the IBC after PAM review will be communicated to the PI.
h. All formal PAM documentation is maintained in the NDRAC office. Official reports of findings are generated and reviewed with the Director of Research Compliance.

Acronyms and Abbreviations:

Acronym	**Meaning**
IBC	Institutional Biosafety Committee
IO	Institutional Official
NDRAC	Notre Dame Research Administration and Compliance
PAM	Post-Approval Monitoring
PI	Principal Investigator
RMS	Risk Management and Safety

The University of Notre Dame IBC Post-Approval Monitoring (PAM) Checklist

PAM Visitation Date: _____ PAM Visitation Site(s):_____

Principal Investigator (PI):_____

PI Designee (if applicable):_____

Protocol(s) Reviewed During Inspection:_____

PAM Representatives:_____

Protocol Pre-review

Agents listed in table: _____

_____

Protocol Pre-Review Questions	**Y**	**N**	**N/A**
1. Are all necessary Project Registration sections checked?			
2. Are all biohazardous materials listed in the Research Description captured in the Biological Agents table?			
3. Are agents listed in separate entries (as appropriate) in the Biological Agents table?			
4. Are Risk Groups assigned correctly and consistently?			
5. Is vendor information identified clearly in the protocol?			
6. Does the containment and housing of animals match the level of ABSL noted in the protocol?			
7a. Are any agents shed in animal waste?			
7b. Is this noted in the protocol and waste disposal plan?			
8. Is disinfection clearly described in the protocol?			
9. Are all modes of waste disposal identified in the protocol?			
10. Are all necessary SDS documents included in the Attachments section?			

Comments:

Research Personnel

Personnel listed on the protocol: _____

_____

Research Personnel Questions	**Y**	**N**	**N/A**
11. Are all personnel conducting the research identified in the protocol?			
12a. Does the lab document any “on-the-job” or SOP specific training?			
12b. Is training documentation up to date?			
13. Do the PI and research personnel know how to access the most recent version of the complete protocol, including amendments?			
14. Do the PI and research personnel know how to request training and access training resources (ex. eNDeavor Biosafety training)?			
Comments:			

Study Status

Procedure Room(s): _____

Study Status Questions	**Y**	**N**	**N/A**
15a. Is the protocol currently active?			
15b. Are the procedures described in the protocol ongoing and congruent with the description in the protocol?			
16a. Have there been any accidents, spills, or exposures?			
16b. Have these incidents been reported to the IBC?			

17. Are the locations listed in the protocol up to date?			
18. Description of progress of study to date: _____ _____			
Comments:			

Recordkeeping and General Safety

Recordkeeping and General Safety Questions	**Y**	**N**	**N/A**
19a. Does the lab maintain an inventory of infectious/recombinant agents?			
19b. Is it up to date?			
20a. Does the lab have a lab specific biosafety manual (or updated the University's manual with lab specific emergency response and contact information)?			
20b. Is the biosafety manual up to date?			
21. Does the lab's emergency action plan (EAP) include protocols for biohazards-related adverse conditions?			
22. Is the vendor information in the protocol up to date?			
Comments:			