

You've Been Approved to Wait

Great Eastern University (GEU)'s Environmental Health and Safety (EHS) Office collaborates closely with the IACUC regarding the oversight of animal activities involving the use of biological, chemical and physical hazards. EHS reviews every proposal submitted to the IACUC that includes the use of any biological agent, chemical and/or physical hazard. Before EHS approves the use of any hazard in an animal-related activity, the Principal Investigator (PI) must:

- Have the hazard use approved by the appropriate safety committee (e.g., Biosafety Committee (IBC), Radiation Safety Committee (RSC) and/or the Chemical Safety Committee (CSC));
- Update the relevant laboratory safety documents (e.g., the chemical inventory and hygiene plan);
- Complete the required training for the safe handling and disposal of hazardous materials;

- Develop or refine lab-specific standard operating procedures (SOPs), including animal husbandry SOPs, for the management and control of each specific hazard being used; and
- Have their use areas (e.g., laboratories) inspected by EHS.

GEU's IACUC would approve hazard use in animals with the understanding that animal activities involving hazard use cannot begin until they are approved by EHS. With rare exception, IACUC approval is given before EHS¹.

Unfortunately, when Dr. Stesso Virale joined the faculty at GEU, EHS' expectations were not sufficiently communicated to Virale, whose lab began animal activities upon receipt of IACUC and IBC approval. Virale's work at GEU was a direct continuation of the work he conducted at his prior institution, and his staff moved with him to GEU. Consequently, all his staff members were

quite familiar with the safe handling and disposal of the hazards associated with his animal activities, including animals administered a hazard.

Virale received a call from the IACUC Administrator, Gwen Skladnost. Skladnost informed Virale that he was no longer permitted to conduct any activities that involved hazard use since he was in violation of the institution's safety policies. This suspension, Skladnost explained, was implemented through EHS rather than the IACUC. However, since GEU's IACUC policy requires EHS approval of all hazards use in animals prior to initiation, the animal activities involving hazards should not have begun until final approval from EHS was given.

As part of the non-compliance investigation, and to prevent any future reoccurrences, GEU's IACUC created a new policy requiring PIs to attach all EHS and safety committee reviews, approvals, and SOPs to the IACUC proposal submission application. These documents and related approvals would then be reviewed as part of the overall IACUC review process before granting IACUC approval to initiate animal activities involving hazards.

Although the IACUC was satisfied that this programmatic change adequately addressed the issue, the subsequent semi-annual program review gave the IACUC pause. The Post-Approval Monitor and EHS provided data to the IACUC showing that PIs were still often out of compliance with their EHS SOPs because processes within the lab and/or vivarium changed but the associated documents attached to the IACUC approval were not updated.

- What are your thoughts on GEU's approval requirements for initiating animal activities involving hazard use?
- Does GEU's process of attaching the safety approvals and SOPs to the IACUC application ensure ongoing program compliance?
- What suggestions for improvement can you offer?

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A WORD FROM OLAW

In this scenario, questions are asked about the role of the IACUC in ensuring compliance with safety procedures when animal activities involve hazards.

As stated in the *Guide*, the establishment of safety procedures requires 1) an assessment by knowledgeable persons of the particular hazards, 2) availability of necessary safety equipment, and 3) training of personnel to ensure safe conduct of the research¹. It is the institution's decision to determine how to coordinate the reviews by the IACUC and the relevant safety component(s). Many institutions have the IACUC and occupational health and safety program (OHSP) reviews conducted in parallel to expedite the review and approval process². Animal activities may not begin until both IACUC and applicable safety approval(s) are given. The communication between the two entities and with the Principal Investigator must clearly state when animal activities may begin and how subsequent changes in procedures are reviewed and approved. To avoid potential missteps all approvals must be documented to the satisfaction of the IACUC and the OHSP.

As a clarification of the scenario and responses, the use of "suspension"

of animal activities by individuals other than the IACUC (i.e., GEU's Environmental Health and Safety office, the Attending Veterinarian or IACUC Chair) does not meet the requirements for a suspension for institutions with an approved Animal Welfare Assurance. The Public Health Service Policy states that "The IACUC may suspend an activity only after review of the matter at a convened meeting of a quorum of the IACUC and with the suspension vote of a majority of the quorum present"³.

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Failure to prepare: Policies without resources

Coordinating reviews by multiple compliance bodies can be a tricky balancing act. When an institution lacks a mechanism to coordinate these reviews, or key stakeholders are not aware of institutional processes or requirements, it becomes even more difficult to ensure all approvals are in place prior to beginning work with animals or hazardous materials. Great Eastern University (GEU)'s review of Dr. Stesso Virale's work is the

perfect example of how processes and communication can break down in the absence of established policies and procedures.

By requiring a separate Environmental Health and Safety (EHS) review of Dr. Virale's work, GEU has self-imposed unnecessary administrative burden beyond that required by regulations. Many electronic protocol systems have an ancillary review mechanism that can

be triggered during submission review. Regardless of the mechanism that GEU chooses to employ, it should create a standard operating procedure (SOP) that outlines how and when ancillary reviews will occur with regards to protocol submission reviews.

The GEU IACUC's practice of approving applications even though work with animals cannot begin until EHS approves the hazard use could be viewed as a form of "conditional approval" despite the terminology used. While it is acceptable for an IACUC to approve a study pending specific clarifications that can be resolved by the Chair or their designee, OLAW and APHIS strongly advise against using conditional approval^{1,2} since it can lead to confusion about protocol initiation, and potentially lead to noncompliance such as that experienced by GEU.

When the concern was identified by IACUC staff, it should have been forwarded to the IACUC per an established procedure for the review of animal welfare and noncompliance concerns³. Given that the IACUC Administrator enacted the suspension of activities on behalf of EHS, it is doubtful that GEU has such a procedure, and it should create one. Even if GEU has a policy that allows for personnel such as the Attending Veterinarian or IACUC Chair to suspend animal-related activities in response to animal welfare concerns, it is unlikely that GEU's policy delegates this authority to either EHS or the IACUC Administrator.

GEU's new IACUC policy that requires reviews, approvals and SOPs to be attached to the IACUC application will likely result in more instances of noncompliance with SOPs given that the protocol submission is a snapshot of what is approved and is not meant to be a live document. If GEU will continue to require these attachments to be included with the IACUC application, it should create a mechanism that allows researchers to update these documents easily after protocol approval without requiring an amendment if protocol details are not changing. Ideally, GEU should trust its newly implemented ancillary review process to ensure all EHS and safety reviews, approvals and SOPs are in place and up to date prior to IACUC approval. Additionally,

COMPLIANCE CONSIDERATIONS

The Protocol Review coordinators offer the following compliance considerations:

What are the IACUC's responsibilities regarding the institution's occupational health and safety program (OHSP) and, in this particular scenario, the safety reviews of animal activities?

The *Guide's* definition of an animal program includes an institutional OHSP. OHSPs are required to have, for example, established processes and documents for¹:

- Control and prevention strategies;
- Hazard identification and risk assessment;
- Facilities, equipment, and monitoring;
- Personnel training, hygiene, and protection
- Safeguards for animal experimentation with hazardous agents; and
- Medical evaluation and preventive medicine for personnel

The *Guide* is clear, however, that the components of an OHSP are an institutional responsibility that requires "coordination between the research program (as represented by the investigator), the animal care and use program (as represented by the AV, IO, and IACUC), the environmental health and safety program, occupational health services and administration (e.g., human resources, finance, and facility maintenance personnel)."¹

While there are no federal mandates that specifically identify the IACUC's role in the safety reviews of animal activities involving hazards, a common method for conducting a risk assessment is for the PI to inform the institution of the details of those activities. IACUC protocols are an efficient way to obtain this information but are not the only method or source.

It is, therefore, an institutional responsibility to establish the appropriate oversight, monitoring, and maintenance of all aspects of the institution's OHSP, and for those involved to have a clear understanding of their respective role(s) in the program. One example of how oversight can be managed is for the IACUC to be the gatekeeper for safety requirements by, for example, withholding IACUC approval until the completion of applicable risk assessments, training, and medical surveillance.

Can IACUC approval be granted without completion of a risk assessment?

There is no federal mandate prescribing the method of implementing an OHSP; institutions simply need to develop processes to ensure that, before animal activities begin, all aspects of an OHSP are satisfied including the assessment of risks associated with each animal activity that it approves. If an institution does, for example, grant IACUC approval independent of the risk assessment and training, it should have established methods that ensure work does not begin until those requisite actions are completed. □

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GEU would benefit from educating researchers on institutional policies and requirements. The development of resources for new Principal Investigators would be a worthwhile investment and proactive approach to address future similar incidents.

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IACUC/EHS collaboration to prevent non-compliance

What are your thoughts on GEU's approval requirements for initiating animal activities involving hazard use?

According to the *Guide*¹, “adequacy of training and experiences of personnel in the procedures used, and roles and responsibilities of the personnel involved” and “use of hazardous materials and provision of a safe working environment” should be considered during the IACUC’s protocol review. Unfortunately, there is little guidance regarding how the IACUC should review and approve the use of hazards. However, the *Guide*¹ also states, “For some IACUC questions, input from outside experts may be advisable or necessary.” While it appears that GEU is checking all of the required information, the lack of communication between the IACUC and Environmental Health and Safety (EHS) during the approval process is apparent. In this instance, Dr. Virale’s protocol approval should have been contingent upon EHS approval of the animal activities involving hazards. The sequence of these approvals should have been communicated to the Principal Investigator (PI) before relocation or during onboarding to GEU.


Does GEU’s process of attaching the safety approvals and standard operating procedures (SOPs) to the IACUC application ensure ongoing program compliance? While the attachment of safety approvals and SOPs may aid communication between the PI, IACUC and EHS, it does not guarantee program compliance. It is also






important to note that safety approvals and SOPs are often updated; a process should be in place to ensure they are consistent with the IACUC and EHS. Post-Approval Monitoring, Semi-Annual Inspections, and EHS Inspections are valuable mechanisms for ensuring continued communication and compliance, but at many institutions, there is little timely monitoring other than the IACUC.

What suggestions for improvement can you offer? Systems integration among those responsible for oversight (including trainings and inspections, multiple safety committees, EHS, and IACUC) and communications with the PI are critically important to avoid such events. Attaching safety approval and SOPs may not be the most efficient method as it increases the burden on the PIs and IACUC reviewers, creates redundancy in compliance documents, and increases the chances of possible compliance issues as these documents are often updated. An alternative would be to create a subsection of the animal care and use protocol that details the use of hazards (including the route, dosage, frequency, and route of excretion), animal monitoring throughout the procedure, and any post-procedural care or monitoring provided. Before the protocol is approved, assign an EHS reviewer (or a designated IACUC staff member with an EHS background) to review this section. If a separate Risk Assessment is performed (by the IBC, RSC, CSC, etc.), it may be beneficial to link that information or the

assessment date to this section of the protocol.

Following protocol approval, a mechanism should be in place to incorporate EHS into post-approval monitoring and semi-annual inspection activities performed by the IACUC. Items that incorporate safety concerns should be brought to the attention of EHS. Vice versa, the IACUC should be informed should animal-related concerns be found during an EHS lab inspection. Communication between the two groups needs to be improved. It should not be the responsibility of IACUC staff to inform the PI of a “suspension” implemented through EHS.

Another area this scenario highlighted is the need for a new PI onboarding and training program. A new PI onboarding process that clearly communicates the requirements before beginning animal work with IACUC and EHS representation may have decreased the chances of this occurring. 

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