

protocol exists, then the TMPF is left holding animals that it has no interest in using. Even worse, if these animals are produced for ‘frivolous’ reasons, then no other researchers would be interested in using them. In either case, 90 animals are essentially wasted, contravening the IACUC mandate to reduce the number of animals used wherever possible.

Although its methods are different from those of a traditional breeding program, the TMPF’s functions are similar. The TMPF has no direct interest in the research goals of the investigator. Consequently, the TMPF protocol essentially functions as a breeding protocol, which is usually developed in conjunction with an experimental protocol. The parallel process does not occur in this scenario as the TMPF protocol is allowed to stand alone. As a result, the various animal issues that normally fall under the IACUC purview are not addressed, including scientific merit, animal health, biosafety and reduction of animal numbers. The IACUC (and the IBC) never has the opportunity to evaluate these fundamental issues and, therefore, is not able to fulfill its oversight role. Ultimately, the IACUC should authorize specific TMPF activities only when an approved research protocol exists. For its part, the TMPF should confirm that the experimental protocol is in place before commencing the production of transgenic animals.

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RESPONSE

Approval spot-check

Ginger Tansey, DVM

Although the outcome of this specific situation was acceptable, there are some potential consequences.

Because the TMPF has its own protocol for generating and holding genetically engineered mice, its personnel can safely make mice for any purpose. But if a specific piece of DNA was needed for the production of Peskin’s mouse line, then he needed to

have his own protocol and other regulatory approvals in place before submitting a request to the TMPF. Anyone using DNA must have proper registration documents and approvals, and this information should be included in the submission request to the TMPF. The TMPF protocol presumably has this registration for its own purposes.

When the mice were generated for Peskin, he did not have an approved protocol; therefore, they could not officially be transferred to him. Having a ‘holding’ protocol approved properly by the IACUC is acceptable, as long as the investigator does not carry out any breeding or research on the mice under the holding protocol. If the IACUC reviews the submitted protocol appropriately, then the ‘holding’ protocol is a valid means of generating and transferring mice from the TMPF to the investigator.

The TMPF, however, should take steps to close this potential loophole. As part of the submission process, the investigator should indicate the current approved protocol number (or other identification as provided by the IACUC); this provides a spot-check that the mice will be properly held on a protocol. If an investigator does not provide this information, then the TMPF has the option of waiting before proceeding with the generation of the requested mice. In addition, without this information, generated mice should not be released to the investigator until the required information is provided. The TMPF’s own protocol would cover the generation and holding of these mice, so it would not be at fault for proceeding. The TMPF would be at fault only for releasing mice without an approved protocol for the investigator.

In addition, it would be the responsibility of the IACUC coordinator to ensure that all animals housed under a ‘holding’ protocol are not used for breeding or research, unless they are officially transferred to an appropriate research or breeding protocol. The TMPF personnel should coordinate this information with the IACUC personnel, to ensure that all requests come from IACUC-approved personnel on approved protocols.

The facility that houses the mice should also have some communication with both the IACUC and TMPF personnel. Animals without an approved protocol should not be allowed to enter the facility or to be transferred from the TMPF to an investigator.

Having this spot-check in place will prevent the accidental production of mice for an investigator without an approved protocol. Otherwise, the next time a mouse line is generated for an investigator who has no protocol, that investigator might not be as careful about getting IACUC approval for a ‘holding’ protocol, and the facility could potentially have an investigator doing unapproved research on uncounted animals.

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RESPONSE

Risky assumptions

Kimberly S. Edgar, MBA

The TMPF’s operating practices regarding Peskin’s research and Great Eastern University’s Animal Care Program lack important checks and balances, which has led to the wrong assumptions being made in this case.

Upon receipt of the genetic materials and other background strain information from Peskin, the TMPF staff did not verify that his research and breeding protocols had received IACUC approval before starting to develop the founder mice for his research. Without this verification, the TMPF protocol cannot address the principle of the 3Rs (replacement, refinement and reduction)¹. One solution to this problem would be to amend the procedures in the TMPF protocol such that the TMPF staff could easily verify that investigators have approved breeding and research protocols. A computerized system for viewing approved protocols and amendments for each investigator might help the TMPF staff to do this. Investigators’ research staff often deal with day-to-day communications within the facilities, and so a ‘view only’ system that allows access to approved protocols and relevant information about health or behavioral status could be easily communicated to the technical staff.

The TMPF staff also did not verify that the University’s IBC had reviewed and approved the new transgenic line requested