



NCI-FREDERICK
INSTITUTIONAL BIOSAFETY COMMITTEE

Minutes
April 21, 2009
NCI-Frederick

INTRODUCTION

The NCI-Frederick Institutional Biosafety Committee was convened at 12:02 p.m. in the Building 549 Executive Board Room with the following members in attendance:

Ms. Theresa Bell, IBC Secretary and Biosafety Officer

Dr. David Derse

Dr. David Garfinkel

Dr. Bruce Crise

Dr. Eric Freed

Dr. Dan McVicar

Mr. Scott Jendrek

Dr. Serguei Kozlov

Ms. Alberta Peugeot

Mr. Lucien Winegar

Members not in attendance: Dr. Randall Morin, Chair, Dr. Michael Baseler, Dr. Henry Hearn, Dr. Melinda Hollingshead, Dr. Stephen Creekmore, Dr. Stephen Hughes, Ms. Dianna Conrad

Others in attendance: Dr. Scott Keimig, Mr. Walter Hubert, Dr. Robert Thomas

Ms. Bell chaired the meeting today since Dr. Morin was unable to attend. She began by explaining the handouts presented at the beginning of the meeting. Ms. Bell described a rDNA federal register document presented to the members for their review. This document summarized proposed changes to the existing rDNA guidelines which are now available for public comments. Dr. Crise provided a brief summary of the document and encouraged members to review and comment.

MINUTES

-February 2009 minutes are posted to Sharepoint and a hard copy was distributed at today's meeting for IBC member review and comment. A vote for approval will be obtained through email.

-March 2009 minutes will be sent to members and a vote will be collected through email.

REVIEW OF PROTOCOLS

NEW IBC REGISTRATIONS

09-14 (Mr. Hopkins) Recombinant protein expression using the Baculovirus Expression Vector System (BEVS) and mammalian cell culture

-In B8a how would your group know what material is being received to determine if a toxin or protein would require additional IBC coverage? Is a service requestor form completed and submitted at the time a sample is provided to your lab for processing to describe the sample and what hazards may be present? Can you clarify if there is a mechanism in place to determine this information prior to sample receipt?

Dr. Derse made a motion to approve, Dr. Garfinkel seconded and all were in favor.

09-20 (Dr. Kimura) Role of secretoglobins in lung carcinogenesis

-There were no additional questions on this protocol.

Dr. Crise made a motion to approve, Mr. Winegar seconded and all were in favor.

RENEWALS

09-18 (Dr. Colburn/Dr. Young) Genetically engineered mouse and human cells for discovery and validation of tumor promoting or tumor suppressor genes

The lead reviewers had the following comments:

- A3: The retroviral vectors (pBABE) are notorious for producing replication competent virus during the packaging of the retroviral particles (due to recombination of the packaging genes and the vector). A3 should be modified to reflect the differences between retros and lentis. Also, if cells infected with retroviral vectors are placed into immunocompromised mice, the cells may become infected with endogenous retroviruses and cause the retroviral vector to be mobilized. This is important if the cells are taken out of the mouse and returned to the laboratory--they could be shedding mobilized vector.

-B3: " The recombination events resulting from the use of these systems produce replication incompetent transduced cells." The meaning is unclear and appears that it should read "these systems produce replication incompetent packaged viral vectors. After transduction of cells by the viral vector particles, no retroviral particles are produced." Please check the spelling of "lenti" throughout the document.

-B3: As noted above in the comment for A3, pBABE is likely to produce replication competent virus capable of mobilizing the viral vector. The statements in B3 and A3 should reflect this.

-B5a: MuLV recombinants, as noted in comments to B3 and A3 above should be noted in this response.

- B5d: Difficult question to answer... During the transfection of HEK cells, >2/3 of the virus is present. During transduction with lenti-vectors, <1/2 is present. During transduction with MuLV-based vectors, >2/3 may be present because of the recombination issue noted above. These are also amphotropic viral vectors infecting human cells.
- B5e4: Please have the MuLV-based vector section of this response changed to reflect the possibility of replication competent virus (product information provided is incorrect).
- B5f1: Needs to describe the MuLV-based vectors.
- B5g1: Again, the MuLV-based vectors need to be noted.
- B6c: Please also note other viral vectors (e.g. those producing interfering RNAs).
- B8a: Please make list as comprehensive as possible (e.g. ATK is not listed).
- B8b1: Please provide information that is more descriptive (if accurate): "the cDNAs and interfering RNAs expressed in these experiments are not anticipated to be pathogenic to humans..."
- B5h1 and B10: Sonication and Centrifugation will be limited, but not excluded? Please make the answers to these questions consistent.
- D7: The MuLV recombination issue should be noted.
- D9: See B5h1 and B10.
- E6e1: If cells transduced with MuLV-based vector are being introduced into mice, the cells may become infected with endogenous retroviruses that mobilize the vector.
- E6g: This is a nice response, and this could be incorporated into the response to B8b1.
- E6g: This is clear and will obviate several concerns mentioned by this reviewer in answers above.
- Overall the document is not clear, with different cell lines listed in different locations. With many grammatical errors and minimal descriptions of scientific content in some portions of the form, the registration can be difficult to figure out.
- In lieu of providing EHS safetygrams, please provide an SOP specific to your laboratory use of lentiviral vectors, how they are kept separate from other materials in the lab, and to describe specific practices and procedures in place with lenti to ensure it is used safely in the lab.
- Integrate gene expression.

A meeting will be set up with Dr. Young and Dr. Crise to discuss these edits and to revise the registration.

Dr. Crise made a motion to defer approval, Dr. McVicar seconded and all were in favor.

09-17 (Dr. Anderson/Dr. Sithanandam) ErbB3 in lung tumorigenesis

- Provide additional information on sharps safety and how the siRNA's will be injected safely.
- Clarify what portion of the waste will be handled by housekeeping.
- Who is handling biological materials?

A meeting will be set up with Dr. Anderson to resolve the remaining items on this registration.

Dr. Kozlov made a motion to defer approval, Dr. Crise seconded and all were in favor.

AMENDMENTS

All amendments were approved outside of committee meeting.

OUTSTANDING ITEMS

09-13 (Hartley/Taylor)-Pending receipt of edited registration from PI.

09-06 (Durum) – Revisions pending

09-07 (Durum) – Revisions pending

OTHER BUSINESS

BBP Compliance: 55/1109 = 95%

OHS Accident Update:

Nothing to report this month.

Outside IBC Member:

Reverend David Betzner has agreed to attend the May IBC meeting to observe and consider becoming an IBC member representing the surrounding community.

Other IBC Discussion:

-There were comments collected from various members regarding modifications needed to the IBC registration form:

- Change the wording for the question concerning the ability of the material to infect human cells.
- Create a web-based or web-available fully-functional form; and/or an HTML Word convertible to pdf format. The document should be searchable. The document should have automated default fields so if they answer “yes”, it will automatically forward them to the next series of questions.
- Change questions so they are less open to interpretation, yet not prescriptive.
- Question order needs to be revised to be more logical.
- Remove redundant questioning.

-There was a discussion regarding IBC and ACUC Harmonization and how the previously established harmonization between committees here at the NCI should move forward. Some potential changes or solutions that could be discussed and/or implemented are as follows:

- Establish a separate renewal form to make the process less cumbersome.
- Ensure that information going into a renewal is actually previously approved protocols and not new proposed research. This often is the case which may complicate approval of the renewal. The challenge is that some PIs want one comprehensive IBC registration to cover all their work, when in fact, many of their research protocols are independent from each other.
- How do we advertise IBC requirements and provide reminders to the research community to register their work.
- How do we advertise and emphasize the importance of registration in relation to the supervisors ultimately being legally responsible for the safety of their employees. The IBC registration process is designed to assist the PI with determining the hazards, how to mitigate those hazards, and identifying best

practices and procedures for the laboratory to ensure the employees know biological hazards are present in the laboratory and how to safely work with or around them.

- A suggestion was made to add a slide or two to the BBP computer based training to describe the IBC process and the reasons why registration is important.
- The NCI Policy and Procedure will also be made available to reinforce registration requirements of the IBC.

Thanks to all of the members and attendees who participated today and made objective recommendations to improve the operations and success of the IBC.

The meeting was adjourned at 1:20 p.m.

Theresa D. Bell, MPH, CBSP
IBC Secretary
Biological Safety Officer, EHS

Renée Kahn
IBC Administrator
EHS

APPROVED:

Randall S. Morin, Dr. P.H.
Chairman, NCI-Frederick IBC
Director, EHS

Date

xc: Dr. Reynolds
Mr. Wheatley
Dr. Arthur
Mr. Bufter