

WHITEHEAD INSTITUTE



Whitehead Institute  
for Biomedical Research

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25 April 2006

The Sunshine Project  
P.O. Box 41987  
Austin, TX 78704  
Attn: Edward H. Hammond

Dear Mr. Hammond:

This letter is in response to The Sunshine Project's request for meeting minutes of the Whitehead Institute for Biomedical Research Institutional Biosafety Committee. We are providing all committee-approved minutes from July 2004 to the present, which you will find attached. The committee is comprised of investigators, safety staff, students and community members, as required by the NIHG and Cambridge Ordinance for Recombinant DNA Technology.

From our founding in 1983 to June 2004, the Whitehead Institute used the MIT Committee on Assessment of Biohazards by virtue of our affiliation agreement and contract to oversee our biosafety program. The MIT Biosafety Officer, Claudia Mickelson, will provide you with minutes from the period preceding June 2004.

In answer to your question regarding the Fink Committee, Dr. Fink is a member of our institution and the Institutional Biosafety Committee initial discussion regarding the seven categories of experiments of concern can be found in the minutes of September 28 2004 and June 24 2005.

Sincerely,

Linda Wolfe, SM (NRM); CBSP (ABSA)  
Director of Environmental Health and Safety and Biosafety Officer  
Whitehead Institute for Biomedical Research

cc: B. Siegel  
C. Mickelson  
L. DiBernardinis  
IBC File

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## the sunshine project

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13 March 2006

## ADVISORY COMMITTEE

Ignacio Chapela  
Berkeley, United StatesChee Yoke Ling  
Kuala Lumpur, MalaysiaJulian Perry Robinson  
Brighton, United KingdomTewolde Berhan Gebre Egziabher  
Addis Ababa, EthiopiaChristine von Weizsäcker  
Bonn, GermanyMark Wheelis  
Davis, United States

## GERMAN OFFICE

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501(c)3 non-profit organization.  
Donations are tax-deductible.The Sunshine Project Germany  
(e.V.) is a federally recognized, tax-  
exempt association.Linda Wolfe  
Whitehead Institute for Biomedical Research  
Nine Cambridge Center  
Cambridge MA 02142-1479  
By fax: (617) 258-6294

Dear Linda Wolfe

Pursuant to the National Institutes of Health Guidelines on Research Involving Recombinant DNA Molecules (NIH Guidelines), Section IV-B-2-a-(7),<sup>1</sup> the Sunshine Project hereby requests the Minutes of all meetings of the Whitehead Institute for Biomedical Research Institutional Biosafety Committee (IBC) since 1 May 2003.

Please send the minutes to the address above. The NIH Guidelines require that minutes be made available "upon request". I request that you send your reply by Friday, 28 April 2006.

This letter is sent to you because IBC registration records of the National Institutes of Health Office of Biotechnology Activities indicate that you are responsible for the Whitehead Institute for Biomedical Research IBC.

This letter is sent to you as part of a national survey of compliance with the NIH Guidelines.

When you respond, I would appreciate your answer to the following question (please circle one):

The Whitehead Institute for Biomedical Research IBC HAS / HAS NOT implemented written policies for the identification, review, and oversight of research involving any of the seven categories of experiments of concern identified by the National Academies of Science in its report *Biotechnology Research in an Age of Terrorism* (the "Fink Committee" report).

Please feel free to attach any additional explanatory materials that you feel are appropriate. Thank you very much for your attention to this request.

Sincerely,

Edward H. Hammond  
Director

<sup>1</sup> Section IV-B-2-a-(7). Upon request, the institution shall make available to the public all Institutional Biosafety Committee meeting minutes...

**WIBR Institutional Biosafety Committee**  
**Tuesday, 6 July, 2004**  
**9 Cambridge Center, Founder's Room**  
**Final Minutes**  
**Approved 5/9/2005**

Commenced: 12:00 p.m.

Adjourned: 1:30 p.m.

Members Present: Jeffrey Baron; Stacie Bumgarner; Jackie Sherry (stand-in for David Diamond); William Donovan; James Fox; Paula Grisafi; Richard Jenner; Barb Siegel; Lydia Villa-Komaroff.

Biosafety Officer: Linda Wolfe

**I. Member Introduction and Luncheon**

All members present except faculty member, David Bartel.

**II. Review of Regulations and Responsibilities**

Linda Wolfe distributed regulatory documents outlining the responsibilities of the IBC. The Committee is made up of 11 members who fulfill the roles set forth in Section IV-B-2-a of the *NIH Guidelines for Research Involving rDNA*. All Committee members have received letters of appointment from Susan Lindquist, WIBR Director. All members shall be covered by WI's liability insurance. Selection of a Committee Chairperson was deferred to a later date.

Duties of the IBC include: reviewing projects being researched at the Whitehead Institute; assigning appropriate biosafety containment level/s to projects; providing medical oversight to WI investigators as needed; and informing WIBR PI's of any decisions or changes made to their projects.

Terms of Service: Determining Term of Service length for Committee members was deferred due to the absence of D. Bartel.

**III. Committee Procedures**

Committee Charge: L. Wolfe distributed a list of possible regulations to include in the charge to the IBC. L. Villa-Komaroff motioned to include all regulations on this list, seconded by P. Grisafi. All Committee members were in favor. Other regulations may be added to the Charge as needed.

Voting: Projects shall be approved by a simple majority vote.

**IV. Program Documents**

Project Registration Form: L. Wolfe distributed a draft version of the form. The document will also be circulated electronically so the group can further comment on it. Feedback is also needed from D. Bartel. Points discussed during the meeting:

- 'Associate Investigators' includes students and technicians.
- No projects shall be approved unless the scientist has appropriate space available in which to work, especially at higher containment levels. BSL of all projects conducted in shared rooms must be listed on the form.
- Proof of training should be required for persons shipping specimens with a containment level of BL2 and above.

Biosafety Manual: Rewrite is in progress.

**V. Current Project Roster and Associated Documents**

Current Protocols: L. Wolfe distributed a list of all WIBR protocols. Projects 273, 461 and 141 are outstanding and will be voted on at the September meeting. The Committee was unanimously in favor of a motion to accept all current approvals for one year from their last approval date. Documents listed as 'on hold' will continue to be listed as such until a procedure for handling archival research materials is outlined. Issues involving Lander research at 9CC need to be resolved by September's meeting.

BloodBorne Pathogen Training Program: A document noting the training and Exposure Control Plan status of WI labs was distributed.

MWRA Letter: A letter describing the cause of June's drain sieve system failure in the Plant Growth Room was distributed. This issue was discussed at the June Biosafety Committee meeting. J. Fox recommended emphasizing corrective measures taken after the release in the rewrite of the Plant Growth Room Manual.

P. Grisafi will report the length of time it took for her seeds to die when submerged in water. This information will be emailed to members prior to the next meeting. The Plant Growth Room will be inspected by Cambridge sometime this summer.

**VI. Adjournment and Next Meeting Date**

The next IBC meeting will be held in September, prior to the Whitehead Retreat.



**WIBR Institutional Biosafety Committee**  
**Tuesday, 28 September, 2004**  
**9 Cambridge Center, Founder's Room**  
**Final Minutes**  
**Approved 6/10/2005**

Commenced: 12:12 p.m.

Adjourned: 1:40p.m.

Members Present: Jeffrey Baron; David Bartel; Stacie Bumgarner; David Diamond; William Donovan; Paula Grisafi; Richard Jenner; Barb Siegel; Lydia Villa-Komaroff

Members Absent: Dr. James Fox, DCM

Biosafety Officer: Linda Wolfe

**I. Member Introduction and Luncheon**

**II. Old Business**

- Linda Wolfe has been acting chair since July in order for the Committee to be recognized by the NIH. L. Villa-Komaroff nominated Linda to serve as chair, and P. Grisafi seconded the motion. All were in favor.
- It was determined that member terms of service shall initially be for one year. This issue will be revisited in spring 2005. Please let L. Wolfe know if you will be graduating, leaving the Institute, etc, before this year's cycle ends. D. Bartel is serving as interim faculty member. Gerry Fink is expected to replace him in spring 2005.
- Format of the project registration document was discussed. For the time being, it will remain an MS Word document but may later be converted to MS Excel. Possible use of electronic signatures will also be explored. In response to P. Grisafi's question about teaching courses, it was confirmed that projects should be registered at the institute where the experiments are taking place. Broad Institute projects are registered with the MIT CAB.
- BloodBorne Pathogen training update: All members received an updated spreadsheet with details on training and ECP status for all labs. The goal is to complete all necessary training and ECP updates by December. Friday afternoon, 2-3 p.m., has been reserved for training sessions. Hepatitis B vaccination forms are distributed at training, and copies are kept on file at both the WIBR EH&S Office and MIT Medical.
- Plant Growth Room Manual: The manual was updated to include more information about Physical Plant, such as response to alarms and drain inspections. Copies of completed work orders for July and August drain inspections are on file at the WIBR EH&S Office. L. Villa-Komaroff moved to approve the Manual, and all Committee members were in favor. P. Grisafi and D. Bartel abstained from the vote. HEPA filters in the PGR's biosafety cabinets are scheduled to be replaced.

The PGR inspection by the Cambridge Biosafety Committee took place in July with positive results. A copy of the Manual will be sent to them after it is signed.

- July Minutes: July's IBC minutes were approved via email vote, 5/9. Copies of the minutes were distributed at the meeting. J. Baron requested that the location of 'member absent' information be moved within the document. Please email [eich@wi.mit.edu](mailto:eich@wi.mit.edu) with any other comments/requests regarding minute reports.

### III. New Business

- A National Scientific Advisory Board for Biosecurity is being formed, based on a document written by Gerald Fink. B. Siegel announced that the Board will be an NIH-level organization. The Board will be finalized in the coming year. Once formulated, the National Board may require that the IBC assume additional responsibilities.
- WI shall follow MIT's CAB guidelines for undergraduates and high school students in the lab. High school students may only work with BL1 materials; undergraduates are limited to BL2. This information will be distributed to Safety Reps, included on WI's new employee orientation form and posted as a link on the internal website.

A discussion followed on working alone at night, and how to control/discourage this practice.

- NIH has approved the formation of WIBR's Internal Biosafety Committee. Committee roster and project documents are available on the internal WIBR EH&S website. L. Wolfe distributed copies of the Project Reminder letter sent to WIBR Investigators on 9/10/04. This letter is distributed twice a year.

An email to PI's clarifying the meaning of 'on hold' projects was distributed to members prior to the meeting.

### Project Reviews

Number	PI	Level	Title	Vote	Comments
0904-004	David Sabatini	BL2+	Identification of genetic factors required for cell growth and proliferation	Approved	D. Sabatini was available to answer questions. L. Wolfe is working with lab to ensure proper equipment and containment procedures are implemented. Room numbers need to be updated in registration document.
0904-006	Ernest Fraenkel	BL1 / Exempt	Domain Specificity Measurements	Approved	BL2 work is conducted in R. Young's tissue culture rooms. Fraenkel lab has been folded into Young's ECP.
0904-003	Ernest Fraenkel	BL2	Method for Discovering Novel Transcriptional Regulators	Approved	BL2 work being done in Young's space.

0804-001	Eric Lander / Nick Houstis	BL2	Genomic Dissection of Cellular Insulin Resistance	Approved	Naomi Cohen and Claire Kitidis, Lodish Lab, are acting as Safety Reps for this lab. Project is also being registered at MIT. Graduate student oversight a concern.
0904-002	Eric Lander / Amanda Paulovich	BL2	Transcriptional Analysis of Cellular Response to X- Rays	Approved	Investigator will be departing WIBR in October 2004.
0603-141	Rick Young	BL1 / exempt	The Genome Wide Study of Regulation of Gene Expression in Yeast	Approved	

- Next Meeting: Tuesdays are still convenient for all members. The next meeting will be held in January 2005, after the holidays.

**WIBR Institutional Biosafety Committee  
Tuesday, 11 January, 2005  
9 Cambridge Center, Founder's Room  
Final Minutes  
Approved at 3/22/05 Meeting**

Commenced: 12:09 p.m.  
Adjourned: 1:45p.m.

Members Present: Jeffrey Baron; Stacie Bumgarner; William Donovan; Dr. James Fox; Richard Jenner; Barb Siegel; Lydia Villa-Komaroff

Members Absent: David Bartel; Dr. David Diamond; Paula Grisafi

Biosafety Officer: Linda Wolfe

**I. Member Introduction and Luncheon**

**II. Old Business**

- The Project registration document has been converted to Excel. The document is being edited based on feedback from the Committee concerning typographical errors and text-wrapping issues.
- An updated spreadsheet noting ECP status of labs was distributed. All ECPs have been updated for the year. Some labs are sharing ECPs because they also share lab space.

All BBP refresher training has been completed except for a small number of Physical Plant personnel, who will be trained 1/12 – 1/13. Since 9/28, 52 people have attended refresher BBP training. Two people have attended an initial session. Initial BBP training is still offered twice a month for new personnel.

L. Wolfe is evaluating a web-based training system, which could be used for refresher trainings.

- L. Wolfe gave an update on scientists working alone in the lab. Regarding a particular graduate student discussed at the September meeting, nighttime Physical Plant staff makes it a point to check in with him. Another lab also checks in with him on a regular basis. L. Wolfe reiterated that WI's general policy is nobody should ever work alone when they are using hazardous materials.

J. Baron inquired as to whether there is staff in the building 24/7, and there is. Nighttime Physical Plant staff performs regular security checks on all floors throughout their shifts. They carry emergency communications equipment and this phone number is posted at all phones throughout the building. A discussion took place regarding the capabilities of the card access reader and nighttime neighborhood safety.

L. Wolfe described procedures for working in remote areas, such as the BL3. Lab members employ a 'buddy system' in such situations, letting a lab mate know where they are going and when they will return, as well as a way to contact them. This is a good practice to follow at all times, no matter what type of lab a person works in.

- Lab inspection follow-ups from September have been completed. Only a few open items remain regarding the Lander lab. The WI EH&S Office is working with the lab to take care of these issues.



### III. New Business

- BL2+ Manual was distributed to the Committee for review. Three new investigators have been added as signatories: Rudolf Jaenisch, Fernando Camargo and Thijn Brummelkamp. Page 14, Section 17, of the manual will be amended per suggestions from J. Fox and L. Villa-Komaroff to clarify animal and plants in the lab, and the attachment regarding use of viral vectors in animals. The Committee voted to accept the Manual pending these changes.

Based on the R. Weinberg lab inspection, updates may also be made to page 10, section 8 (transfer of material within the lab) and page 14, section 14 (handwashing). The 11/12/04 inspection of the Weinberg lab revealed that lab members are not following appropriate BL2+ procedures. Since the inspection, card readers have been installed on the lab doors and only personnel trained since September 2004 have access to the room.

A graduate student is currently responsible for the management of the BL2+ rooms. He has reported difficulty in getting other lab members to follow proper work procedures. L. Villa-Komaroff suggested it may be more effective to place one of the new Fellows in charge of the room, as this person would have more authority.

S. Bumgarner voiced concern about the number of labs sharing the BL2+ space, and whether it was over-crowded. Minimal work is currently going on in the space. Personnel typically enter the room only long enough to conduct certain steps of their project. L. Wolfe noted that the student in charge estimated 30 minutes of use per person per day for a short duration, to establish cell lines and test for free virus prior to removal for work at BL2.

The Committee approved the manual pending the changes and clarifications noted above.

Action items: L. Wolfe will monitor the lab and access logs to ensure it is being well-maintained and does not become over-crowded. She will follow up with the labs regarding secondary containment for material transport within the lab, and will circulate the updated manual after the noted revisions have been made.

- **Project Reviews**

See page three for details on all projects that were reviewed. Points of note that came up during the reviews:

- Nearly all labs misunderstood questions in Section IV of the registration document, regarding the rate of replication of generation competent virus and assay sensitivity. These items will be re-worded and examples given to prevent future confusion.
- J. Fox requested that labs be more specific when answering questions about the type and concentration of disinfectant they will use in case of a spill.
- J. Baron asked about the EH&S page of the document.
- W. Donovan asked if there is a lab termination protocol in place. If a lab is simply terminating a project, the PI sends a letter to the WI Biosafety Officer, giving notice that the project is terminated. A different protocol is followed if an investigator is leaving the Institute, which includes removal of all lab materials and decontamination of the lab space.

- **Regulatory Issues:** L. Wolfe reported that she is looking into the use of electronic signatures on project registration documents. More information about what type of authentication is needed to make such a solution acceptable is needed before this option can be pursued.

Next meeting: The next meeting will take place in March. Proposed dates will be sent to the Committee as soon as possible.

<b>New Projects</b>					
<b>Project Number</b>	<b>PI</b>	<b>Biosafety Level</b>	<b>Title</b>	<b>Vote</b>	<b>Comments</b>
0104-005	Brummelkamp	BL1, 2, 2+	SiRNA screens to identify gene products that are required for oncogenesis	Approved, pending additional information	Further information is needed regarding: the host range for each vector system; rate of generation of replication competent virus expected for each vector system; sensitivity of transfer assay for each vector system.
0104-006	Camargo	BL1, 2, 2+	Characterization of hematopoietic stem cell proliferation and differentiation	Approved pending receipt of additional information; approval for work with VSV only until information requests are completed.	Further information is needed regarding: disinfectant to be used in case of spill; rate of generation of replication competent virus expected for each vector system; sensitivity of transfer assay for replication competent virus for each vector system; further documentation of rabies gene to be used.
0105-007	Young	BL2+	Identification of transcription factors required for cellular proliferation	Approved pending receipt of additional information.	Further information is needed regarding: type of disinfectant to be used in case of spill; sensitivity of the horizontal transfer assay for replication competent virus for each vector system; further description of workflow (received on 1/13/05, shall be attached to the project registration form)

<b>Project Renewals</b>					
<b>Project</b>	<b>PI</b>	<b>Biosafety</b>	<b>Project Title</b>	<b>Approval</b>	<b>Comments</b>

Number		Level			
0104-453	Lindquist	BL1	Protein Conformation: Mechanisms and Consequences	Approved, pending receipt of further information	Further information is needed regarding: type of disinfectant to be used in case of a spill; complete information on rDNA materials to be used.
0104-475	Lindquist	BL2	Investigation of the Pathogenesis of Transmissible Spongiform Encephalopathies	Approved	Further information needed regarding: type of disinfectant to be used in case of a spill; rate of generation of replication competent virus expected for each vector system; DCM Hazmat form need to be completed. EH&S to confirm that lab is familiar with MSDS's for all agents.
0104-477	Lindquist	BL1	Hsp90 as an Evolutionary Capacitor and Genetic Tool	Approved, pending receipt of additional information	Further information is needed regarding: type of disinfectant to be used in case of spill; rate of generation of replication competent virus expected for each vector system; assay sensitivity details; clarification of vector being used.
0104-375	Sabatini	BL2	Translational Control Pathway #375	Approved, pending receipt of further information	Further information is needed regarding: type of disinfectant to be used in case of a spill; verification that labs are posted at appropriate Biosafety level. Lab inspection scheduled for 1/20.
0104-491	Sabatini	BL2, BL2+	Cell growth regulation via the Rapamycin sensitive pathway #491	Approved, pending receipt of further information and lab inspection	Further information needed regarding: type of disinfectant to be used in case of spill; rate of generation of replication competent virus expected for each vector system; assay sensitivity information. Lab inspection scheduled for 1/20.
0104-056	Weinberg	BL1, 2, 2+	Studies in the growth and suppression of cancerous tumors	Approved, pending receipt of further information	Further information needed regarding: rate of generation of replication competent virus expected for each vector system; clarification of assay sensitivity information; clarification of biosafety levels for animal rooms.

<b>Amendments</b>					
0104-502	Lindquist	BL2, 2+	The role of Hsp90 in facilitating malignant transformation and the progression of cancers	Amendment not approved – beyond the scope of original project. No work above BL1 allowed at this time.	Original project written at BL1 containment level, 12/03 approval did not apply to the use of viral vectors in cancer genes in human and mammalian cell systems. L. Wolfe to meet with scientist working on this project to discuss.
0104-150	Jaenisch	BL1, 2, 2+	Introduction of retroviruses into mouse embryos and tissue culture cells	Approved	

<b>Project Terminations</b>			
<b>Project Number</b>	<b>Investigator</b>	<b>Project Title</b>	<b>Termination Date</b>
0302-461	Weinberg	Effects of Telomerase on Senescence and Telomere Structure	9/9/04
0104-379	Weinberg	Cellular Immortality and Human Cancers	12/04
0104-438	Weinberg	Targeted Gene Expression	12/04
0904-002	Lander/Paulovich	Transcriptional Analysis of Cellular response to x-rays	10/04

**WIBR Institutional Biosafety Committee  
Tuesday, 22 March, 2005  
9 Cambridge Center, Founder's Room  
Final Minutes  
Approved at 6/21/05 Meeting**

Commenced: 12:07 p.m.

Adjourned: 1:20 p.m.

Members Present: Jeffrey Baron; Stacie Bumgarner; Dr. Fernando Camargo (visiting); William Donovan; Dr. Gerry Fink (replaces David Bartel); Dr. James Fox; Paula Grisafi; Richard Jenner; Barb Siegel (ex-officio, non-voting); Linda Wolfe

Members Absent: Dr. David Diamond; Lydia Villa-Komaroff

Chair and Biosafety Officer: Linda Wolfe

**I. Member Introduction and Luncheon**

**II. Old Business**

- **BL2+/BL3 Lab Organization:** L. Wolfe reported that R. Young's BL3 materials are to be destroyed and the project terminated so the facility can be reassigned. F. Camargo will check with the Young lab's Safety Representative (Nancy Hannett) to find out if there are any TB materials still in the lab. B. Donovan asked if an inventory system is in place for the BL2+/BL3 facilities. A better system needs to be implemented for tracking materials stored in these freezers.

Card readers have been installed for the BL2+ facilities, rooms 347 and 351. Room 347 is assigned to the Weinberg group and overseen by Tamer Onder; F. Camargo oversees room 351, which is used by a number of labs. L. Wolfe, T. Onder and F. Camargo receive weekly room access reports, which are used to monitor acceptable facility use and track floor charges.

The BL2+ manual has been approved and is awaiting a signature from R. Weinberg. A draft of the BL2+ facility housekeeping procedures is being circulated for review. L. Wolfe will conduct quarterly inspections of the facilities to ensure proper housekeeping. To aid with housekeeping matters, commercial Biosystems burn boxes might also be supplied to the rooms.

- Follow-up pages from protocols reviewed 9/04 and 1/05 were distributed to the Committee. As L. Wolfe noted, the pages are for WI EH&S use and are updated on a continuing basis. J. Baron asked when NIH review is needed. NIH must review protocols classified as *Major Actions* according to *NIH Guidelines* (in your Biosafety reference manual, see *NIH Guidelines*, pg 14 Section III for more information). For example, protocols involving gene transfer into human subjects and certain toxin cloning require NIH approval.
- The Committee voted to approve Protocol 0104-502 after reviewing additional documentation provided by the Lindquist lab. Personnel have been trained and are ready to start.
- **Sabatini Update:** the RNAi screening facility, room 329, is scheduled to open next week. It will be BL2+ and will utilize robotics to aliquot and screen viral libraries. In two weeks (i.e. the first week of April), collaborating personnel from the Broad Institute will move into their new lab space at Bent Street. The RNAi Consortium currently occupies room 342/356, 323 and 321 at Whitehead.

Sabatini also has a BL2+ project for room 351 which does not involve RNAi screening. Training will be scheduled for Sabatini personnel who will be doing BL2+ bench-level hand tissue culture work in 351.

P. Grisafi questioned the safety of material transport from the RNAi high throughput facility at Whitehead to other area laboratories. Only formaldehyde fixed (no longer infectious) materials shall be transported out of the building for imaging elsewhere.

### III. New Business

#### Procedures discussion:

- J. Fox requested that meeting minutes be approved at Committee meetings, rather than via email. The Committee agreed that future draft minutes can be circulated by email, but will be voted on at the beginning of the next meeting.
  - L. Wolfe requested that she be given permission to grant administrative approval to protocols BL2 or lower. The IBC will vote protocols BL2 or lower via email. J. Baron requested that voting results be circulated to IBC. J. Fox requested that details also be discussed at the meetings. Project at BL2+ will always be approved during meetings, but can be circulated by email for comments.
  - Project Reviews: See page three for details on projects reviewed. Additional items that were raised during reviews included:
    - R. Jenner will draft new language for questions on page four of the rDNA protocol form regarding replication competent virus. People completing the form seem to misunderstand the intent.
    - G. Fink asked about select agents and other materials reportable under the Patriot Act. In particular, he noted that VSV is included on one of the government lists due to its association with hoof and mouth disease. L. Wolfe noted that the VSVg gene used in our protocols was reported to the USDA in '02 when requested by the national survey. Word came back that only the 'exotic' agent capable of causing disease was reportable. IBC members will receive an updated Select Agents list and the regulations to include with their Biosafety Reference Manual.
    - L. Wolfe noted that the designee for protocol renewals varies by lab. This has led to some difficulties in receiving complete renewal forms from labs, as the designee is not always familiar with the procedure. B. Siegel and L. Wolfe will work to clarify the Safety Rep and Lab Administrators' roles.
  - L. Wolfe and M. Patterson (DCM) are working together to revise DCM Hazmat forms and harmonize procedures. WI's EH&S Office received updated hazmat forms for F. Camargo and S. Lindquist protocols. The Weinberg hazmats will be updated next. More protocols will be completed in the coming months.
  - AAALAC (Association for Assessment and Accreditation of Laboratory Animal Care) inspection is this fall. The animal facility must be inspected by AAALAC every three years to maintain its accreditation. The inspection is expected to last two-three days. In preparation, WI'S EH&S Office includes DCM rooms as part of their area inspections. Physical Plant is addressing air balance and other facility issues as well.
  - Whitehead's rDNA permit was renewed at biosafety levels one, two and three, small scale, i.e. < 10 litres.
- J. Baron asked if there was further feedback from the regulators on the greenhouse release from last fall. Except for a call from the MWRA coordinator, the corrections, new procedures and Manual provided to the Cambridge Biosafety Committee, there has been no further word or inquiry.
- L. Wolfe distributed an article about a recent laboratory exposure that occurred at BU. There was some discussion of the possible root causes of the problem. The incident serves as a reminder to follow good microbiological practices, establish that your materials are not contaminated, recognize and report work-related illnesses.
  - The EH&S Office is looking into web-based training programs to satisfy shipping training needs. A solution will be decided upon by the next IBC meeting.
  - Next meeting: The next IBC meeting shall take place in June 2005. More information will be forthcoming.



<b>New Projects</b>					
<b>Project Number</b>	<b>PI</b>	<b>Biosafety Level</b>	<b>Project Title</b>	<b>Approval</b>	<b>Comments</b>
0305-008	Fink	BL2	Overexpression of Dectin-a beta-glucan receptor	Approved	G. Fink, P. Grisafi, S. Bumgarner abstained on project
<b>Renewals</b>					
0304-138	Page	BL2	DNA Probes of the Human Y Chromosome	Approved	
0304-175	Matsudaira	BL2	Cytoskeletal proteins and their calcium and actin binding domains	Approved	
0304-480	Matsudaira	BL2	GFP biosensor with integrated CMOS-based MEMS detection	Approved	
0304-481	Matsudaira	BL1	Large-scale protein interaction mapping	Approved	
0304-296	Fink	BL2	Pseudohyphal Growth in	Approved	G. Fink, P.

			<i>Saccharomyces cerevisiae</i> and <i>candida albicans</i>		Grisafi, S. Bumgarner abstained on project
0304-526	Young	BL2	Expression and location analysis of mouse and human tissues	Approved	
0304-306	Bartel	BL1	New ligands, catalysts and small regulatory RNAs	Approved at BL1, BL2, possibly BL2+ pending clarifications	Clarify rooms in use; clarify materials lab works with; send updated project to IBC
<b>Extensions</b>					
0304-359	Chess	BL2	Olfactory Receptor Gene Regulation	Approved	Extended through 6/30/05
<b>Terminations</b>					
0304-205	Fink	BL1	Genetics of Amino Acid Biosynthesis in Arabidopsis	Terminated	Terminated 1/31/05

**WIBR Institutional Biosafety Committee**  
**Tuesday, 21 June, 2005**  
**9 Cambridge Center, Founder's Room**  
**Final Minutes**  
**Approved at 9/20/2005 Meeting**

Commenced: 12:07 p.m.

Adjourned: 2:00 p.m.

Members Present: Jeffrey Baron; Dr. David Bartel; Stacie Bumgarner; Dr. David Diamond; William Donovan; Dr. James Fox; Paula Grisafi; Richard Jenner; Barb Siegel (ex-officio, non-voting); Linda Wolfe

Members Absent: Lydia Villa-Komaroff

Recording Secretary: Stephanie Eich, EH&S Staff

Chair and Biosafety Officer: Linda Wolfe

Visitors: Sudeep Agarwala, Student; Parimala A Raj, EH&S Staff

**I. Member Introduction and Luncheon**

**II. Old Business**

- Approval of minutes from 3/22/05 meeting: Minutes from the March meeting were approved. A typo in section III, New Business, incorrectly referred to AAALAC (Association for Assessment and Accreditation of Laboratory Animal Care) as AALAC. The corrected minutes will be re-distributed via email.
- BL2+/BL3 Labs Report: L. Wolfe reported that the BL2+ Manual has been approved, and three shared facilities are up and running. Biological waste is being handled by Stericycle and scientists are no longer responsible for autoclaving the waste themselves. A housekeeping checklist has been developed for the lab managers to follow. J. Baron asked why it was necessary to ship biowaste to a facility outside of Massachusetts. Although there used to be waste facilities in-state, they have been shut down and waste is now transported to the nearest location.
- New Wording in Section IV of Protocol Document: Although new wording to clarify questions in Section IV of the protocol registration document was added, this section is still problematic for labs. L. Wolfe and R. Jenner met to review reference materials on various tests used to determine this information. They suggested that labs be given a specific procedure to follow. The results would then be gathered at the next year's renewal. J. Fox reported that, for DCM protocols, all PCR tests for lentivirus have been negative so far.
- Reference Updates for IBC Binders: Updated references on Select Agents and bioterrorism (7 CFR Part 331 and 9 CFR Part 121; 42 CFR Parts 72 and 73) were distributed to the Committee via email. Please contact [eich@wi.mit.edu](mailto:eich@wi.mit.edu) if you need them re-sent.
- Protocol Update Responsibilities: L. Wolfe reported that a mixed group of lab personnel, ranging from administrative staff to scientists, complete the protocol forms. This seems to contribute to incomplete information being submitted for review. D. Bartel reported that in his lab, his Safety Rep and/or a postdoc writes a first draft and he reviews it for accuracy. L. Wolfe suggested that training may be needed so people have a better understanding of how to complete the protocol document. D. Bartel suggested that examples of properly written

protocols be provided to labs when it's time to renew their projects, and that L. Wolfe visits the PI/lab to assist.

- **DCM Forms on WI Webpage:** Forms required for DCM protocols have been added to the WI EH&S website. Labs can download the forms from the site and contact DCM with questions.
- **Shipping and Transport:** WI plans to offer web-based training for labs requiring shipping training. Training will need to be repeated every other year to stay certified.

### **III. New Business**

- **Biosecurity:** L. Wolfe distributed three handouts on biosecurity as it relates to seven types of experiments that would require extra consideration. G. Fink chaired the National Academy of Sciences Committee on Research Standards and Practices to Prevent the Destructive Use Application of Biotechnology. This Committee produced the report "Biotechnology Research in an Age of Terrorism". B. Siegel reported that the first meeting of the National Science Advisory Board for Biosecurity is scheduled for 6/30. We will hear more about our role in the coming months.
- **Bloodborne Pathogen Update:** P. A Raj reported that she has brought all labs up to date on their BBP training. An Exposure Control Plan has been written for Room 652, which is a lab shared between the Bartel and Matsudaira labs. The Fink lab's ECP is under review. A re-write of the Camargo lab's ECP is in progress. The Lodish lab's ECP is being reviewed by the EH&S Office. During the past year, 151 persons received Bloodborne pathogen training, and 53 were trained for BL2+.
- **Protocol Reviews:** See page (3) for details on projects reviewed. Additional items that were raised during reviews included:
  - **Hidde Ploegh** is expected to come to WIBR in mid-late August. His work focuses on immune response studies. They have no plans to work with TB. The Ploegh group will have their own BL2+ lab within their BL2 facility. L. Wolfe will meet with Dr. Ploegh to go over questions from the IBC about his projects and report back to the Committee. She will administratively approve the BL1 and BL2 Ploegh protocols after receipt of further information.
  - **Children in Labs:** There is a recurring problem with lab personnel bringing children into lab areas. No children under the age of 14 are allowed in lab areas. Children are welcome in administrative areas throughout the building. WI will reinforce this issue with its scientists, postings, notices and spot checks.

<b>New Projects</b>					
<b>Project Number</b>	<b>PI</b>	<b>Biosafety Level</b>	<b>Project Title</b>	<b>Approval</b>	<b>Comments</b>
0605-009	Hui Ge	BL1	Integration of genomic information for <i>C. elegans</i> embryonic development	Approved	
0605-010	Hide Ploegh	BL2	The immune response to <i>Cryptococcus Neoformans</i>	Administratively approved pending follow-up by L. Wolfe	Further information will be provided to IBC after follow-up
0605-011	Hide Ploegh	BL2	Molecular analysis of Antigen Presentation using HSV-I	Administratively approved pending follow-up by L. Wolfe	Further information will be provided to IBC after follow-up
0605-012	Hide Ploegh	BL2	Investigation of Evasion of the host immune system by Human Herpes Virus-8	Administratively approved pending follow-up by L. Wolfe	Further information will be provided to IBC after follow-up
0605-013	Hide Ploegh	BL2	Use of Lentivirus to deliver transgenes to primary bone marrow derived cells	Administratively approved pending follow-up by L. Wolfe	Further information will be provided to IBC after follow-up
0605-014	Hide Ploegh	BL2	The role of immunoglobulin in influenza infection	Administratively approved pending follow-up by L. Wolfe	Further information will be provided to IBC after follow-up
0605-015	Hide Ploegh	BL2	In Vivo analysis of immune evasion	Administratively	Further information will be provided to

			genes	approved pending follow-up by L. Wolfe	IBC after follow-up
0605-016	Gerald Fink	BL1, BL2	<i>D. melanogaster</i> as a method for screening fungal pathogenesis of <i>C. albicans</i> .		Discussed but not voted on. No signed copy provided at time of meeting.
<b>Renewals</b>					
0604-313	Rudolf Jaenisch	BL1/BL2	Genetic disease, cancer and mammalian development	Approved	SOP that was distributed belongs to Jaenisch protocol number 0104-150 from last meeting, not this protocol
0604-170	Harvey Lodish	BL2	Cloning mRNAs for Mammalian membrane enzymes and transport proteins	Approved, pending removal of BL2+ work from protocol	L. Wolfe to meet with H. Lodish to amend protocol
0604-198	Terry Orr-Weaver	BL1	Replication and polytenization in drosophila development	Approved	Kill procedure for flies needs to be reviewed and updated.
0604-264	Hazel Sive	BL1	Formation of the Anteroposterior axis in <i>Xenopus laevis</i> , <i>Xenopus tropicalis</i> and in <i>Danio rerio</i>	Approved	Lab inspection scheduled for 7/7/05
<b>Terminations</b>					
0104-380	Robert Weinberg		Target proteins of the TGF-Beta response		Terminated 4/30/05



**WIBR Institutional Biosafety Committee  
Tuesday, 20 September, 2005  
9 Cambridge Center, Founder's Room  
Final Minutes  
Approved at 01/26/2006 Meeting**

Commenced: 12:07 p.m.

Adjourned: 1:30 p.m.

Members Present: Jeffrey Baron; Dr. David Bartel; Stacie Bumgarner; Fernando Camargo; Dr. David Diamond; William Donovan; Dr. James Fox; Paula Grisafi; Richard Jenner; Linda Wolfe

Members Absent: Barbara Siegel

Recording Secretary: Stephanie Eich, EH&S Staff

Chair and Biosafety Officer: Linda Wolfe

**I. Member Introduction and Luncheon**

**II. Old Business**

Approval of 6/21/05 meeting minutes: Minutes from the June meeting were approved. No changes were requested to the report.

Virus Update: L. Wolfe and R. Jenner have investigated standard assays for scientists at WI to use. This should reduce confusion when people complete Section IV of the protocol form. L. Wolfe reported that labs have performed the assays and she is awaiting results.

Bioshipping Training: After reviewing the Saf-T-Pak CD, it was decided that it would not be a good option for WI. P. A Raj is looking into another training organization called HazmaTeam, which offers in-house training. Whitehead would most likely invite people outside the Whitehead community to attend the training if this option is selected.

Children in labs: Since June, the problem with children under 14 in lab areas has been addressed in a number of ways. The faculty has been reminded of the Institute's policy on this issue, and an excerpt from the Faculty Guide was published in the news section of the WI intranet. New signage that clearly states the policy has been posted on each floor throughout the building.

- Outstanding protocol items from June: L. Wolfe gave updates on two protocols from the June meeting.
  - Fink protocol 0605-016: S. Agarwala updated the EHS on his project injecting and confining fruit flies. Given his success, L. Wolfe administratively approved the BL2 portion of his project.
  - Lodish protocol 0604-170: Per the Committee's request, Dr. Lodish revised this project so it did not contain BL2+ work. His lab submitted a separate protocol, #0905-015, to cover BL2+ aspect of their work. The revised protocol #0604-170 was approved at BL2.

Administrative Approvals: According to our policy, the Committee's Biosafety Officer (L. Wolfe) can administratively approve projects at the BL1, BL2 levels. J. Baron and J. Fox requested that projects be circulated via email so Committee members can ask questions prior to any type of approval being granted. This includes amendments affecting Material Transfer Agreements.

It was agreed that administrative approval would only be granted to renewals and amendments after consultation via email with the Committee. New projects and amendments will always be presented at meetings for Committee ratification. This will be clarified in the Committee procedures.

### **III. New Business**

**Protocol Reviews:** See page 3 for details.

**Bloodborne Pathogen, Laboratory Inspection Update:** Refresher training for labs that are due will be completed within the next three months. Inspections are completed for about half of the labs due for inspection. New labs are being inspected first, to ensure that proper signage, etc, is posted.

**Schedule for the new year:** The group was asked if Tuesdays were still acceptable days to meet. J. Baron has a conflict on the third Tuesday of every month. D. Bartel's lab currently has meetings on Tuesdays, but this schedule might change. There may be other scheduling issues, so S. Eich will poll the Committee and others at the Institute to determine if meeting time needs to be changed.

**Letters of Appointment:** All Committee members received reappointment letters from David Page, Acting Director.

**Annual Reports:** Whitehead's annual IBC report to the NIH and Cambridge Biosafety Committee were received by the agencies.

**Material Transfer Agreement tie-ins:** Recently, L. Wolfe has become more involved in reviewing MTAs. The Intellectual Property Group asks Linda to review the MTA to ensure that the lab has an active protocol that covers the materials they requested. If they do not, Linda asks the lab to amend their protocol with a letter noting the materials.

New Projects					
Project Number	PI	Biosafety Level	Title	Vote	Comments
0905-013	Young	BL2	Analysis of interactions between HIV proteins and human DNA and RNA	Approved	Employee health monitoring has been offered to Richard Jenner by MIT Medical. The WI EHS Office will work with Richard to develop appropriate waste procedures and housekeeping guidelines. All samples used for this project should be kept separate from other lab materials and be clearly marked at all times. No sharps may be used with the full-length HIV DNA constructs which, if injected, can cause HIV infection.
0905-014	Page	BL2, BL2+	Screening of lentiviral cDNA libraries for factors that regulate Stra8 expression	Approved	Work to be conducted in room 351.
0905-017	Fink	BL2+	Recognition and phagocytosis of <i>Candida albicans</i> by the innate immune system	Approved	Work to be conducted in room 329.
0905-010	Ploegh	BL2	Molecular analysis of antigen presentation of viral and fungal pathogens	Approved	Medical surveillance offered by MIT Medical. The Committee asked that flasks of <i>Cryptococcus</i> be grown in plastic, unbreakable flasks that are plugged and taped in warm rooms 346 or 348. Warning will be incorporated into BL2 room signage noting pregnant women and immune compromised individuals may be at particular risk for work with infectious agents. The Committee physician requested the drug sensitivity profile for <i>S. typhimurium</i> .
0905-011	Ploegh	BL1, BL2	Molecular analysis of antigen presentation 1	Approved	
0905-012	Ploegh	BL2	Use of lentivirus to	Approved	Room assignment is room 336. If gene inserts change from

			deliver transgenes to primary bone-marrow derived cells		those described in your protocol, WI EH&S office will be contacted during planning stages to determine if changes in containment level are warranted.
0905-015	Lodish	BL2+	Engineering cell lines to modulate the expression of cytokines or their respective receptors, of EGF family growth factors and of amyloid precursor protein	Approved	Staff training to be arranged by WI EHS office.
<b>Project Renewals</b>					
0603-141	Young	BL1	The genome wide study of regulation of gene expression in yeast	Approved	
0104-458	Fraenkel	BL1	Domain specificity measurements	Approved	
0904-003	Fraenkel	BL2	Method for discovering novel transcriptional regulators	Approved	
0904-004	Sabatini	BL2+	Identification of genetic factors required for cell growth and proliferation	Approved	
0604-150	Jaenisch	BL1, BL2, BL2+	Introduction of retroviruses into mouse embryos and tissue culture cells	Approved	BL2+ refresher training to be scheduled by WI EHS office.

**WIBR Institutional Biosafety Committee  
Tuesday, 24 January, 2006  
9 Cambridge Center, Founder's Room  
FINAL**

Commenced: 12:15 p.m.

Adjourned: 1:50 p.m.

Members Present: Jeffrey Baron; Dr. David Bartel; Stacie Bumgarner; Dr. David Diamond; William Donovan; Dr. James Fox; Paula Grisafi; Richard Jenner; Barbara Siegel; Linda Wolfe

Members Absent: Dr. Fernando Camargo

Recording Secretary: Stephanie Eich, EH&S Staff

Chair and Biosafety Officer: Linda Wolfe

**I. Member Introduction and Luncheon**

**II. Old Business**

**Approval of 9/20/05 meeting minutes:** Minutes from the September meeting were approved. A slight change was requested, to indicate protocol 0905-015 was Dr. Lodish's BL2+ protocol and 0905-170 was BL2. The amended report will be distributed to the Committee.

**Bioshipping Training:** Negotiations are in process with HazmaTeam to provide training for WI personnel who ship materials BL2 and above. Training is estimated to be \$400 per person for a four-hour session. WI's EH&S office is compiling a list of personnel who require training. WI's Procurement Department is also looking into a vendor such as Tradewinds that would provide on-site packing services. P. Grisafi pointed out that such services still require assistance from the labs, so this would not entirely remove lab personnel from the process.

Committee members questioned why this training is needed. D. Bartel suggested that labs know how to properly package materials because they receive packages and see how vendors pack them. L. Wolfe explained that shipments of BL2 or higher materials are regulated differently than BL1 materials and have different packaging requirements. FAA regulations have become more stringent in the past year and have inspected other institutions in the area to ensure compliance. Therefore, it's important to properly train and certify personnel (and maintain inspectable records).

Committee members also asked how other types of shipments are handled at WIBR. Radioactive shipments from WIBR are handled by MIT. Chemical shipments are handled by Onyx.

**Updated Charge:** After the 9/05 meeting, the Committee Charge was updated to clarify when voting on protocols via email is appropriate. The Committee voted to accept the updated Charge with one clarification. D. Diamond requested wording be changed to the following (change is in bold): "New projects or projects BL2+ or higher shall always be **reviewed and voted on** during meeting sessions, but can be circulated via email prior to the meeting for comments."

**Virus Testing Update:** L. Wolfe reported that she attended a course on virus testing while at ABSA. The course did not cover any of the testing that is currently done at WI. L. Wolfe has discussed horizontal transfer assays with some postdocs in the Weinberg lab. In addition to the horizontal spread assay they've been using, they have started using a green fluorescent protein assay in some cases. The EH&S Office is expecting written documentation of this procedure.

L. Wolfe noted that no assay results have been submitted to EH&S for work done in the past year and asked if the IBC is interested in reviewing this data. P. Grisafi asked if outside agencies would ever want to review this information. D. Diamond asked what purpose the data serves. Agencies do not require that this type of information be kept on file with protocols. The main purpose of the testing is to prevent against contamination in experiments, protecting the research and research personnel. P. Grisafi noted that with such large numbers of people working in the labs, there is a good chance of contamination. S. Bumgarner said she would be interested in seeing the results. D. Diamond agreed that while the results should be kept on file, it doesn't necessarily need to be brought before the Committee. R. Jenner thought the Committee should get the reference paper and the number of replication competent viruses per batch expected and the number obtained in the experiment. This information should become part of the record for the Committee.

**EH&S will collect this data.**

**Follow-up items from 9/05 meeting:**

- Ploegh #0905-010: The Committee received a reference paper for the strain of *S. typhimurium* the lab works with. EH&S needs to follow-up with the lab on *Cryptococcus* growth procedure; however, the lab only recently started BL2 level work. D. Diamond requested that personnel always bring drug sensitivity profiles with them if they visit MIT Medical for health monitoring.
- Young #0905-013: Housekeeping guidelines for HIV DNA work have been written. Work has not yet begun.
- Lodish #0905-015: Initial BL2+ training was completed for personnel assigned to this protocol.
- Jaenisch #0604-150: BL2+ refresher training will be scheduled soon for personnel assigned to this protocol. **EH&S will arrange refresher training for the lab.**

**III. New Business**

**Plant Growth Room Issue:** Committee members received a copy of the final letter sent to the Cambridge Biosafety Committee, reporting the room pressurization that occurred on 10/30/05. J. Fox asked if it would be possible to tie together the operation of both exhaust fans, or if automatic door closures could be installed. The Physical Plant Director is looking into such possibilities. L. Wolfe and P. Grisafi described the layout of the Plant Growth Room, and noted that scientists are cautious about closing the doors in order to maintain the room's temperature. J. Fox and J. Baron asked about HEPA exhaust checks. L. Wolfe reported that exhaust HEPA filters are tested once a year by B&V Testing as arranged by EH&S.

**AAALAC Inspection:** J. Fox reported that MIT/WIBR passed the inspection and felt it went very well. A full report hasn't yet been received.

**Traincasters:** EH&S Office is almost ready to launch its new online training system, Traincasters. Traincasters will only be used to conduct refresher trainings. P. Grisafi asked if it would be possible to offer MIT's COUHES training via this system, as labs have a very difficult time obtaining passwords to access MIT's online training system. This will need to be investigated. W. Donovan noted that Draper Laboratories recently conducted HazCom training via an online system and it was a very positive experience.

**BBP Update:** L. Wolfe distributed a clarification of the OSHA Bloodborne Pathogen Standard and information on Presidential human embryonic stem cells. The clarification states that cell lines which can be proven to be free of pathogens can be exempted from the BPS. L. Wolfe asked if members felt that stem cell lines included on Jaenisch protocol #0604-150 could be considered exempt based on this information. Members felt that because many people are assigned to multiple protocols, there is still a reasonable risk of contamination. Further, although



the cell lines are tested for many contaminants, they are not tested for everything. It was agreed that materials will remain subject to the BBP Standard and the lab will be trained accordingly.

A spreadsheet detailing lab inspections and Exposure Control Plan status was distributed to Committee members. Highlighted rows indicate protocols due for review 1/24/06:

**Project Reviews:** See chart on page 4.

**Project Review Comments:**

- S. Bumgarner noted it would be helpful and reassuring to the Committee if we requested protocols be rewritten to clearly reflect the BL1, BL2 and BL2+ aspects, a good example of which was the Weinberg protocol #0104-056.
- Request of all BL2+ virus users the rate of spontaneous generation of replication competent virus or less than some upper limit of detection of the assay.
- Obtain all BL2+ virus assay SOPs.
- Pertussis toxin SOP, Ploegh lab: This toxin is not a Select Agent, so falls outside the Committee charge. It is relevant to the Chemical Hygiene Standard. It was presented to the Committee to clarify responsibilities. Only one scientist in the lab works with the material. Toxin is greatly diluted for procedures. Scientist has been briefed on handling precautions and exposure risks.

**David Page named Director of Whitehead Institute:** Dr. David Page was officially named Director of WIBR in December. Copies of Discovery Magazine were distributed to the Committee. Excerpts of Dr. Page's address to the WIBR Board of Associates were featured on page 9 of the Fall 2005 issue.

Meeting adjourned: 1:50 p.m.

<b>New Projects</b>					
Project Number	PI	Biosafety Level	Title	Vote	Comments
1005-019	Reddien	BL1	Molecular genetic analysis of planarian regeneration	Approved	Administrative approval letter sent 12/5/05
<b>Project Renewals with no changes</b>					
0104-375	Sabatini	BL2	Transitional Control Pathway #347	Approved	
0104-491	Sabatini	BL1 / BL2 / BL2+	Cell Growth regulation via the Rapamycin sensitive pathway #491	Approval pending	<ul style="list-style-type: none"> <li>• Approved pending receipt of rate of replication competent virus; sensitivity of transfer assay.</li> <li>• Rewrite protocol to clearly indicate BL1, BL2, BL2+ aspects of work.</li> </ul>
0104-453	Lindquist	BL1	Protein conformation: Mechanisms and Consequences	Approved	
0104-477	Lindquist	BL1	Hsp90 as an Evolutionary capacitor and Genetic Tool	Approved	
0104-056	Weinberg	BL1 / BL2 / BL2+	Studies in the growth and suppression of cancerous tumors	Approved	Approved pending receipt of rate of replication competent virus, assay sensitivity information.
0104-005	Brummelkamp	BL1 / BL2 / BL2+	SiRNA screen to identify gene products that are	Approved	Approved pending receipt of rate of replication competent virus per generation, assay sensitivity information. Committee requested that future protocol updates include

			required for oncogenesis		more information in Project Description section – would like to see division of work amongst various Biosafety levels.
0104-006	Camargo	BL1 / BL2 / BL2+	Characterization of hematopoietic stem cell proliferation and differentiation	Approved	<ul style="list-style-type: none"> <li>• Please submit results of horizontal transfer assay results from past year's work.</li> <li>• Rewrite to clarify BL1, BL2, BL2+ aspects of protocol.</li> </ul>
<b>Protocol Renewals with Changes</b>					
0104-475	Lindquist	BL2	Investigation of the Pathogenesis of Transmissible Spongiform Encephalopathies	Approved	<ul style="list-style-type: none"> <li>• Approved pending receipt of rate of replication competent virus per generation, assay sensitivity information.</li> <li>• Clarify in what rooms work with RSV will take place.</li> <li>• Is there a possibility of transmission outside the Institute?</li> <li>• Is TVA receptor present in birds?</li> <li>• Vector to deliver mouse cells.</li> <li>• Waste management is important.</li> </ul>
0105-007	Young	BL1 / BL2 / BL2+	Identification of transcription factors required for cellular proliferation	Approval pending	<ul style="list-style-type: none"> <li>• Information on assay sensitivity.</li> <li>• BL2+ training to be arranged for personnel assigned to protocol.</li> </ul>
0904-001	Lander	BL1 / BL2	Genomic dissection of cellular insulin resistance	Approval pending	Obtain information re: rate of replication competent virus.

Protocol Amendments					
Protocol Number	Principal Investigator	Biosafety Level	Proposed Amendment	Vote	Comments
0905-010	Ploegh	BL2	Proposal to work with <i>Toxoplasma gondii</i>	Approved	<ul style="list-style-type: none"> <li>• Committee would like to know if there is a method to test for oocysts.</li> <li>• Is there a possibility the agent could be inadvertently transferred out of the lab via insects?</li> <li>• Some concern was expressed about working with so many agents in one room.</li> <li>• Ensure that the agent is added to door sign, warnings are clearly posted.</li> </ul>
0905-010	Ploegh	BL2	Proposal to work with MHV-68	Approved	Door sign will be updated to include new agent.
0305-502	Lindquist	BL2	Proposal to work with oncogenic murine retrovirus encoding Bcr/AbR.	Approved	
0305-502	Lindquist	BL2	Proposal to work with huntingtin constructs	Approved	Note: construction of vectors and cell lines will take place in BL2+ lab – even though Huntingtin viral construct is considered BL2.

<b>PI Last Name</b>	<b>Inspection Completion Date</b>
Bartel	3/17/2005
Brummelkamp	11/9/2005
Camargo	11/9/2005
Fink	3/8/2005
Fraenkel	10/5/2005
Jaenisch	6/2/2005
Lindquist	11/15/2005
Lodish	7/28/2005
Matsudaira	3/21/2005
Page	3/2/2005
Ploegh	9/20/2005
Sabatini	9/22/2005
Weinberg	12/7/2005
Young	11/17/2005

Updated for April 11 Meeting.