**U-M Institutional Biosafety Committee**
**Minutes**
Approved at the August 15, 2025, IBC Meeting

## Meeting Information:

**Date:** Friday, July 18, 2025
**Time:** 1:15-2:30 p.m.
**Location:** Via conference call (Zoom)

**Voting Members Present:** Pamela Bennett-Baker, Matt Chapman, Wanlu Du, Chris Fenno, Janet Follo, Huira Kopera, Patrick Lester, Stephen Rapundalo, Alex Rickard, Jackie Shields, Andrew Tai, John Thomas, Fei Wen

**Voting Members Absent:** Joyce Lai, Tom Lanigan, Daniel Lawrence, Akira Ono, Christiane Wobus

**Alternate Members Present:** Ingrid Bergin (alt. for Lester), Crystal O'Donnell (alt. for Follo)

**IBC Staff Members Present:** Jen Harley, Michael Santiago-Castro, Alicia Trombley

**Guests Present:** Carolyn Kuenz, Andrew Kennedy, Kathy Ignatoski, Jonah Lee, Sarah Lawson, Pat Ward

**The meeting was called to order at:** 1:15 p.m.
**The meeting was adjourned order at:** 1:40 p.m.

## Agenda Items:

### 1. Updates from the Chair – Andrew Tai (in place of Christiane Wobus)

Dr. Tai introduced Fei Wen. Dr. Wen joined the IBC on May 1, 2025.

### 2. Consideration of minutes from the previous meeting

The committee reviewed the minutes from the June 20, 2025, meeting. There were no changes recommended.

> **Motion:** Stephen Rapundalo moved to approve the minutes.
> **Second:** Matt Chapman seconded the motion.
> **Vote:** All in favor.

### 3. Biosafety Officer Report – Janet Follo

An incident involving potential exposure to recombinant DNA was reported to NIH. The incident occurred in a BSL2 laboratory space. An undergraduate was performing cell lysis when a glass rod broke during stirring, resulting in a cut on their hand. The worker cleaned and bandaged the wound. The student did not seek care from Occupational Health Services. Upon investigation EHS found that biosafety training for most staff was incomplete or missing, and the SOP was not being followed. EHS staff recommended all staff review the SOP and complete the required training.

The BSL3 facility at the School of Public Health is undergoing the commissioning process. Facility testing has begun. There is currently no proposed research for the space.

Members were informed of a town hall meeting presented by the Research Academic and Safety Town Hall titled, "Best Practices for Bringing Biological Material to the University of Michigan" and a link was shared to access the recording (https://drive.google.com/drive/folders/1xpjcN10NPEGr13r-SfWthusrXCSy0K5R?usp=share_link).

Ms. Follo stated she has accepted a new position, and a replacement candidate is being sought. More information will follow.

**4. Conflict of interest disclosure opportunity**

Dr. Wobus asked committee members whether they or their labs were involved with, or were in conflict with, financially or otherwise, any items on today's agenda.

1. Fei Wen indicated a conflict with application IBCA00000117_AR05 for Dr. Wen.

2. Huira Kopera indicated a conflict with application IBCA00000170_AR04 for Dr. Seo and IBCA0000656_AR04 for Dr. Dick.

**5. Applications for committee action**

BSL2 Applications

*The following BSL2 applications were considered and voted upon separately by the committee due to a conflict of interest.*

**5. IBCA00000117_AR05**
**Wen, Fei – Amendment**
**Current approval:** BSL1 (plasmid and baculoviral vectors); BSL2 (MSCV vectors); BSL2 (RG2 viruses); BSL1 (animal-derived substances from chickens); BSL2 (human- and animal-derived substances from non-human primates); ABSL1 (transgenic mice); ABSL2 for the duration (mice administered Influenza virus). No work involving biological toxins or plants.
**Changes:** Updated work with influenza virus (BSL2) and updated risk mitigation practices.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate.

> **Motion:** Stephen Rapundalo moved to approve the (1) applications listed above, at the containment levels agreed upon, contingent on satisfactory completion of a laboratory inspection in the past year and upon any other contingencies noted above.
> **Second:** John Thomas seconded the motion.
> **Vote:** All in favor, with Fei Wen recused.

**9. IBCA00000170_AR04**
**Seo, Young Ah – Renewal**
**Current approval**: BSL1 (plasmid vectors); BSL2 (human-derived substances); ABSL1 (transgenic mice). No work involving infectious agents, biological toxins, animal-derived substances, or plants.
**Changes:** No major changes.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate. Approval is contingent upon minor edits being made to the application and favorable re-review from one reviewer.

**Motion:** Stephen Rapundalo moved to approve the (1) applications listed above, at the containment levels agreed upon, contingent on satisfactory completion of a laboratory inspection in the past year and upon any other contingencies noted above.
**Second:** Matt Chapman seconded the motion.
**Vote:** All in favor, with Huira Kopera recused.

*The following BSL2 applications were considered by the committee and voted upon:*

**1. IBCA00000016_AR10**
**Wang, Xueding – Renewal**
**Current approval:** BSL1 (AAV vectors); BSL2 (human- and animal-derived substances from chickens and swine); ABSL1 (transgenic mice); ABSL1 (mice administered rDNA-modified animals cells; rabbits administered AAV vectors); ABSL2 for the duration (rodents or rabbits administered human-derived substances and mice administered rDNA-modified human-derived substances). No work involving infectious agents, biological toxins, or plants.
**Changes:** No major changes.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate.

**2. IBCA00000056_AR09**
**Sherman, David – Amendment**
**Current approval:** BSL1 (plasmid vectors); BSL2 (RG2 bacteria and fungi); BSL2 (microcystin and anatoxin A); BSL2 (human-derived substances). No work involving animal-derived substances, animals or plants.
**Changes:** Added additional plasmid vectors (BSL1) and removed work with human-derived substances.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 containment.

**3. IBCA00000062_AR13**
**Hershenson, Marc – Amendment**
**Current approval:** BSL1 (plasmid vectors and vectorless systems); BSL2 (plasmid, adenovirus vectors, retrovirus vectors, rhinovirus vectors, and coronavirus vectors); BSL2 (RG2 bacteria and viruses); BSL2 (Diphtheria toxin and LPS); BSL2 (human-derived substances); ABSL1 (transgenic mice); ABSL1 (mice administered vectorless systems, rDNA modified animal cells, LPS, or Diphtheria toxin); ABSL2 for 3 days (mice administered adenovirus vectors, retrovirus vectors, or alpha coronavirus NL63); ABSL2 for the duration (mice administered RG2 bacteria and viruses, rhinovirus vectors, and coronavirus vectors). No work involving animal-derived substances or plants.
**Changes:** Added work with Aspergillus species proteases (BSL2) with administration to mice (ABSL1) and work with Aspergillus fumigatus (BSL2) with administration to mice (ABSL2 for 3 days). Removed work with pneumonia virus of mice.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate.

**4. IBCA00000089_AR04**
**Burant, Charles – Renewal**
**Current approval:** BSL1 (plasmid and AAV vectors); BSL2 (lentivirus vectors); BSL2 (human-derived

substances); ABSL1 (rats administered AAV vectors). No work involving infectious agents, biological toxins, animal-derived substances, or plants.
**Changes:** Added work with additional human-derived substances (BSL2).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate. Approval is contingent upon minor edits being made to the application.

**5.** *This application was handled separately due to a conflict of interest*.

**6. IBCA00000141_AR09**
**Ross, Brian – Renewal**
**Current approval:** BSL1 (plasmid vectors); BSL2 (adenoviral and lentiviral vectors); BSL2 (Pertussis toxin, LPS); BSL2 (human-derived substances); ABSL1 (transgenic mice); ABSL1 (mice administered LPS or Pertussis toxin); ABSL2 for 3 days (mice administered adenoviral vectors); ABSL2 for the duration (mice administered human-derived substances). No work involving infectious agents, animal-derived substances, or plants.
**Changes:** No major changes.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate.

**7. IBCA00000144_AR05**
**Traynor, John – Renewal**
**Current approval:** BSL1 (plasmid vectors); BSL2 (lentiviral vectors); BSL2 (human-derived substances); ABSL1 (transgenic mice); ABSL1 (mice administered lentiviral vectors). No work involving infectious agents, biological toxins, animal-derived substances, or plants.
**Changes:** No major changes.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate. Approval is contingent upon minor edits being made to the application and favorable re-review from one re-reviewer.

**8. IBCA00000157_AR04**
**Laouar, Yasmina – Renewal**
**Current approval**: BSL1 (AAV vectors and vectorless systems); BSL2 (MSCV vectors); BSL2 (RG2 bacteria, Cytomegalovirus, and Leishmania major); BSL2 (Pertussis toxin and LPS); BSL2 (human-derived substances); ABSL1 (transgenic mice); ABSL1 (mice administered Pertussis toxin, LPS, rDNA modified animal cells, or AAV vectors); ABSL2 for the duration (mice administered human-derived substances, RG2 bacteria, Cytomegalovirus, or Leishmania major). No work involving animal-derived substances or plants.
**Changes:** No major changes.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate.

**9.** *This application was handled separately due to a conflict of interest*.

**10. IBCA00000179_AR05**
**Keller, Evan – Renewal**

**Current approval:** BSL1 (plasmid vectors and vectorless systems); BSL2 (lentivirus vectors); BSL2 (human-derived substances); ABSL1 (transgenic mice); ABSL1 (mice administered rDNA modified animal cells); ABSL2 for the duration (mice administered human-derived substances or rDNA modified human-derived substances). No work involving infectious agents, biological toxins, animal-derived substances, or plants.
**Changes:** No major changes.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate.

**11. IBCA00000252_AR06**
**Kim, Kevin – Renewal**
**Current approval:** BSL1 (plasmid and MoLV vectors); BSL2 (lentivirus and adenovirus vectors); BSL2 (Diphtheria toxin); BSL2 (human-derived substances); ABSL1 (transgenic mice); ABSL1 (mice administered Diphtheria toxin or rDNA modified animal cells); ABSL2 for 3 days (mice administered plasmid vectors or adenovirus vectors); ABSL2 for the duration (mice administered human-derived substances). No work involving infectious agents, animal-derived substances, or plants.
**Changes:** Changed administration of plasmid vectors to mice from ABSL2 for 3 days to ABSL1.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate. Approval is contingent upon minor edits being made to the application.

**12. IBCA00000263_AR05**
**Gregg, Brigid – Renewal**
**Current approval:** BSL1 (human breastmilk); BSL2 (human cell lines); ABSL1 (transgenic mice); ABSL2 for the duration (mice administered human-derived substances). No work involving rDNA, infectious agents, biological toxins, animal-derived substances, or plants.
**Changes:** Added work with additional human-derived substances (BSL2). No longer administering biological substances to animals.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate.

**13. IBCA00000287_AR04**
**Tall, Gregory – Renewal**
**Current approval:** BSL1 (plasmid and baculoviral vectors); BSL2 (MoLV and lentiviral vectors); BSL2 (LPS); BSL2 (human-derived substances); ABSL1 (transgenic mice); ABSL1 (mice administered rDNA-modified animal cells or LPS). No work involving infectious agents, animal-derived substances, or plants.
**Changes:** No major changes.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate. Approval is contingent upon minor edits being made to the application.

**14. IBCA00000292_AR11**
**Markovitz, David – Renewal**
**Current approval:** BSL1 (plasmid and baculoviral vectors, vectorless systems); BSL2 (RG2 bacteria, viruses, and fungi); BSL2 (LPS); BSL1 (animal-derived substances from chickens and sheep); BSL2 (human-derived substances); ABSL1 (transgenic mice); ABSL1 (mice administered LPS, vectorless

systems, or animal-derived substances from chickens and sheep); ABSL2 for the duration (mice administered human-derived substances, rDNA-modified human-derived substances, or RG2 infectious agents). No work involving plants.
**Changes:** No major changes.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate.

**15. IBCA00000313_AR05**
**Samuelson, Linda – Renewal**
**Current approval:** BSL1 (plasmid vectors); BSL2 (lentivirus vectors); BSL2 (Diphtheria toxin); BSL2 (human-derived substances); ABSL1 (transgenic mice); ABSL1 (mice administered Diphtheria toxin). No work involving infectious agents, animal-derived substances, or plants.
**Changes:** No major changes.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate. Approval is contingent upon minor edits being made to the application and favorable review from one re-reviewer.

**16. IBCA00000323_AR07**
**Cai, Dawen – Renewal**
**Current approval:** BSL1 (plasmid and AAV vectors); BSL2 (MoLV, lentivirus, and rabies virus vectors); BSL1 (Cholera toxin subunit B); BSL2 (Diphtheria toxin); BSL2 (human-derived substances); ABSL1 (transgenic mice and fruit flies); ABSL1 (mice and fruit flies administered plasmid vectors; mice administered rabies, AAV, or retrovirus vectors, Diphtheria toxin, or Cholera toxin subunit B); ABSL2 for 3 days (mice administered retrovirus vectors). No work involving infectious agents, animal-derived substances, or plants.
**Changes:** No major changes.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate. Approval is contingent upon minor edits being made to the application.

**17. IBCA00000328_AR09**
**Ono, Akira – Renewal**
**Current approval**: BSL1 (plasmid vectors, vectorless systems); BSL2 (lentiviral and influenza viral vectors); BSL2 (RG2/RG3 viruses); BSL2 (human- and animal-derived substances). No work involving biological toxins, animals or plants.
**Changes:** Added new gene elements in plasmid vectors and vectorless systems (BSL1) and in lentiviral vectors (BSL2).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate.

**18. IBCA00000547_AR05**
**Antonetti, David – Amendment**
**Current approval:** BSL1 (plasmid and AAV vectors); BSL2 (adenovirus and lentivirus vectors; AAV vectors with growth control genes); BSL2 (Pertussis toxin); BSL2 (human-derived substances); BSL1 (animal-derived substances: ruminants); ABSL1 (transgenic mice and zebrafish); ABSL1 (rodents administered pertussis toxin or AAV vectors). No work involving infectious agents or plants.

**Changes:** Added new gene elements in plasmid vectors (BSL1), work with a new AAV vector (BSL1) and AAV vectors with growth control genes (BSL2). Removed work with adenovirus vectors.
Update for July Agenda: Added administration of plasmid vectors to mice (ABSL1).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate.

**19. IBCA00000548_AR05**
**Hu, Jan – Amendment**
**Current approval:** BSL1 (plasmid vectors); BSL2 (human-derived substances); BSL1 (animal-derived substances: swine); ABSL1 (transgenic mice). No work involving infectious agents, biological toxins, or plants.
**Changes:** Added new gene elements in plasmid vectors (BSL1) and work with AAV vectors (BSL1).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 containment.

**20. IBCA00000566_AR07**
**Kao, John – Amendment**
**Current approval:** BSL1 (plasmid vectors); BSL2 (adenovirus and lentivirus vectors); BSL2 (RG2 bacteria and Toxoplasma gondii); BSL2 (Diphtheria toxin); BSL2 (human-derived substances); ABSL1 (transgenic mice); ABSL1 (mice administered Diphtheria toxin); ABSL2 for the duration (mice administered rDNA modified animal cells, RG2 bacteria, and Toxoplasma gondii). No work involving animal-derived substances or plants.
**Changes:** Added new gene elements plasmid vectors (BSL1) and lentivirus vectors (BSL2) and added work with pathogenic E. coli (BSL2) with administration to mice (ABSL2 for the duration).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate. Approval is contingent upon minor edits being made to the application.

**21. IBCA00000569_AR07**
**Qi, Nathan – Amendment**
**Current approval**: BSL2 (AAV vectors); ABSL1 (transgenic rodents); ABSL2 for 3 days (rodents administered AAV vectors). No work involving infectious agents, biological toxins, human- or animal-derived substances, or plants.
**Changes:** Added work with human-derived substances (BSL2).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. Approval is contingent upon favorable re-review from one reviewer.

**22. IBCA00000650_AR03**
**Brenner, Chad – Amendment**
**Current approval:** BSL1 (plasmid vectors and vectorless systems); BSL2 (lentivirus and MoLV vectors); BSL2 (human-derived substances); ABSL1 (transgenic mice); ABSL2 for the duration (mice administered rDNA modified human-derived substances). No work involving infectious agents, biological toxins, animal-derived substances, or plants.
**Changes:** Added work with animal-derived substances from non-human primates (BSL2).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate.

**23. IBCA00000752_AR04**
**Biteen, Julie – Amendment**
**Current approval:** BSL1 (plasmid vectors); BSL2 (Pseudomonas aeruginosa and Vibrio cholera). No work involving biological toxins, human- or animal-derived substances, animals or plants.
**Changes:** Added work with an additional plasmid vector (BSL1), rDNA modified bacteria (BSL1 and BSL2), and pathogenic E. coli (BSL2).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate.

**24. IBCA00000775_AR09**
**Seeley, Randy – Amendment**
**Current approval:** BSL1 (plasmid, AAV vectors, and vectorless systems); BSL2 (lentiviral, adenoviral, and AAV vectors with growth control genes); BSL2 (LPS, Diphtheria toxin); BSL2 (human-derived substances); ABSL1 (transgenic rodents); ABSL1 (rodents administered vectorless systems, AAV vectors, or LPS; rodents administered lentivirus or adenovirus intracranially; mice administered rabies or pseudorabies viral vectors); ABSL2 for 3 days (rodents administered lentiviral, adenoviral, or AAV vectors with growth control genes). No work involving infectious agents, animal-derived substances, or plants.
**Changes:** Added work with additional human-derived substances (BSL2).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate.

**25. IBCA00000816_AR04**
**Dawid, Suzy – Amendment**
**Current approval:** BSL1 (plasmid vectors); BSL2 (plasmid vectors in RG2 host and vectorless systems); BSL2 (Streptococcus pneumoniae and Streptococcus anginosus); BSL2 (human-derived substances); ABSL2 for the duration (mice administered Streptococcus pneumoniae or Streptococcus anginosus; mice administered rDNA modified RG2 bacteria). No work involving biological toxins, animal-derived substances, or plants.
**Changes:** Added work with Streptococcus constellatus and Streptococcus intermedius (BSL2) and administration of Strep intermedius to mice (ABSL2 for the duration). Removed administration of Strep anginosus.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate.

**26. IBCA00000825_AR05**
**Lee, Jun Hee – Amendment**
**Current approval:** BSL1 (plasmid and AAV vectors); BSL2 (adenovirus, lentivirus and AAV vectors); BSL2 (human-derived substances); ABSL1 (transgenic mice and fruit flies); ABSL1 (mice administered AAV, plasmid vectors, or rDNA-modified animal cells); ABSL2 for 3 days (mice administered AAV or adenovirus vectors); ABSL2 for the duration (mice administered human-derived substances). No work involving infectious agents, biological toxins, animal-derived substances, or plants.
**Changes:** Added new gene elements in plasmid and AAV vectors (BSL1) and in adenoviral and lentiviral vectors (BSL2). Removed work with biological toxins.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate.

**27. IBCA00000939_AR11**
**Ohi, Melanie – Amendment**

**Current approval:** BSL1 (plasmid vectors and baculoviral vectors); BSL2 (baculoviral vectors); BSL2 (RG1 and RG2 bacteria); BSL2 (human-derived substances). No work involving biological toxins, animal-derived substances, animals or plants.
**Changes:** Added additional work with Legionella pneumophila (BSL2).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate.

**28. IBCA00000970_AR04**
**Smith, Janet – Amendment**
**Current approval:** BSL1 (plasmid and baculoviral vectors). No work involving infectious agents, biological toxins, human- or animal-derived substances, animals or plants.
**Changes:** Added additional plasmid vectors (BSL1) and work with human-derived substances (BSL2).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate.

**29. IBCA00001070_AR11**
**Truttmann, Matthias – Amendment**
**Current approval:** BSL1 (vectorless systems, plasmid and phage vectors); BSL2 (lentiviral and AAV vectors); BSL2 (RG1 and RG2 bacteria); BSL1 (animal-derived substances from llamas and alpacas); BSL2 (human-derived substances); ABSL1 (transgenic mice and C. elegans); ABSL1 (C. elegans administered Enterococcus faecalis; llamas and alpacas administered vectorless systems; mice administered vectorless systems); ABSL2 for 3 days (mice administered AAV vectors); ABSL2 for the duration (C. elegans or mice administered RG2 bacteria; mice administered human-derived substances). No work involving biological toxins or plants.
**Changes:** Added work with Candida auris (BSL2).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate.

**30. IBCA00001161_AR02**
**Nikolovska-Coleska, Zaneta – Renewal**
**Current approval:** BSL1 (plasmid vectors); BSL2 (MSCV vectors); BSL2 (human-derived substances). No work involving infectious agents, biological toxins, animal-derived substances, animals or plants.
**Changes:** Added additional plasmid vectors (BSL1) and work with vectorless systems (BSL1). Removed work with MSCV vectors.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. Approval is contingent upon minor edits being made to the application.

**31. IBCA00001226_AR02**
**Ljungman, Mats – Renewal**
**Current approval:** BSL1 (plasmid vectors and vectorless systems); BSL2 (lentiviral vectors); BSL2 (human-derived substances); ABSL1 (administration of vectorless systems to mice). No work involving infectious agents, biological toxins, animal-derived substances, or plants.
**Changes:** Added new gene elements in lentiviral vectors (BSL2).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. The proposed animal housing containment level is considered appropriate. Approval is contingent upon minor edits being made to the application.

**32. IBCA00001238_AR04**
**Mundada, Lakshmi - Cardiovascular Regeneration Core Laboratory – Renewal**
**Current approval:** BSL1 (plasmid vectors and AAV vectors); BSL2 (adenovirus, lentivirus and Sendai virus vectors); BSL2 (human-derived substances). No work involving infectious agents, biological toxins, animal-derived substances, animals or plants.
**Changes:** No major changes.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 and BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate. Approval is contingent upon minor edits being made to the application.

**33.** *This application was tabled.*

**34. IBCA00001405_AR04**
**Tripathi, Ashootosh - Natural Products Discovery Core – Amendment**
**Current approval:** BSL1 (plasmid vectors); BSL2 (plasmid vectors in RG2 host); BSL2 (RG2 bacteria and fungus); BSL2 (microcystin); BSL2 (human-derived substances). No work involving animal-derived substances, animals or plants.
**Changes:** Added additional plasmid vectors (BSL1) and removed work with human-derived substances.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 containment.

**35. IBCA00002013_AR03**
**Emrick, Joshua – Amendment**
**Current approval:** BSL1 (AAV vectors); BSL2 (LPS); BSL1 (Cholera toxin subunit B); ABSL1 (transgenic mice); ABSL1 (mice administered AAV vectors, CTB, or LPS). No work involving infectious agents, human- or animal-derived substances, or plants.
**Changes:** Added work with human-derived substances (BSL2) and updated the risk mitigation section.
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate.

**36. IBCA00002304_AR05**
**Kaczorowski, Catherine – Amendment**
**Current approval:** BSL1 (plasmid and AAV vectors); BSL2 (lentivirus vectors); BSL2 (tetrodotoxin); ABSL1 (transgenic mice); ABSL1 (mice administered AAV vectors). No work involving infectious agents, human- or animal-derived substances, or plants.
**Changes:** Added new gene elements in AAV vectors (BSL1).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 containment. Approval is contingent upon minor edits being made to the application.

**37. IBCA00002307_AR07**
**Cornett, Ashley - EPIC 7T Small Animal MRI – Amendment**
**Current approval:** BSL2 (human-derived substances); BSL1 (animal-derived substances: swine); BSL2 (animal-derived substances: sheep). No work involving rDNA, infectious agents, biological toxins, animals or plants.
**Changes:** Added work with transgenic mice (ABSL1).
**Consensus:** The committee agreed with the reviewers that the proposed animal housing containment level is considered appropriate.

**38. IBCA00002420_AR01**
**Hollis-Etter, Karmen – Amendment**

**Current approval:** BSL2 (RG2 parasites); BSL2 (animal-derived substances: racoon). No work involving rDNA, biological toxins, human-derived substances, animals or plants.
**Changes:** Updated risk mitigation practices (BSL2).
**Consensus:** The committee agreed with the reviewers that the described BSL2 risk mitigation practices are appropriate.

**39. IBCA00002698_AR01**
**Cernak, Timothy – Amendment**
**Current approval:** BSL2 (RG1 fungi; Cryptosporidium parvum; Aspergillus fumigatus); BSL2 (human-derived substances); BSL2 (animal-derived substances: sea turtles). No work involving rDNA, biological toxins, animals or plants.
**Changes:** Added work with Saxitoxin (BSL2) and additional animal-derived substances (BSL2).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL2 containment and that BSL2 risk mitigation practices are likewise appropriate.

> **Motion:** Huira Kopera motioned to approve the (37) IBC applications listed above at the containment levels agreed upon, contingent on satisfactory completion of a laboratory inspection in the past year and upon any other contingencies noted above.
> **Second:** Patrick Lester seconded the motion.
> **Vote:** All in favor.

BSL1 Applications

*The following BSL1 applications were considered by the committee and voted upon.*

**40. IBCA00002447_AR01**
**He, Ping – Amendment**
**Current approval:** BSL1 (plasmid vectors and tobacco rattle virus vectors); BSL1 (Fusarium oxysporum and Pseudomonas syringae); BL1-P (transgenic arabidopsis) BL1-P (arabidopsis administered plasmid vectors). No work involving biological toxins, human- or animal-derived substances, or animals.
**Changes:** Added work with transgenic cotton and Nicotiana benthamiana (BL1-P) with administration of plasmid vectors to both (BL1-P).
**Consensus:** The committee agreed with the reviewers that the proposed plant containment level is considered appropriate. Approval is contingent upon minor edits being made to the application.

**41. IBCA00002449_AR01**
**Shan, Libo – Amendment**
**Current approval:** BSL1 (plasmid and tobacco rattle virus vectors); BSL1 (RG1 fungi and bacteria); BL1-P (transgenic plants); BL1-P (plants administered plasmid vectors, tobacco rattle virus vectors, RG1 bacteria, or RG1 fungi). No work involving biological toxins, human- or animal-derived substances, or animals.
**Changes:** Added new gene elements in plasmid vectors (BSL1).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 containment.

**42. IBCA00002517_AR01**
**Marand, Alexandre – Amendment**
**Current approval:** BSL1 (plasmid vectors); BL1-P (transgenic plants); BL1-P (plants administered plasmid vectors). No work involving infectious agents, biological toxins, human- or animal-derived substances, or animals.

**Changes:** Added additional plasmid vectors (BSL1).
**Consensus:** The committee agreed with the reviewers that the described work is appropriate for BSL1 containment.

**43.** *This application was tabled.*

> **Motion:** John Thomas motioned to approve the (3) IBC applications listed above at the containment levels agreed upon.
> **Second:** Matt Chapman seconded the motion.
> **Vote:** All in favor

Tabled Applications

*The following applications were tabled.*

**43. IBCA00002911**
**Dick, Gregory - Initial Application**
**Proposed:** BSL1 (Microcystis aeruginosa). No work involving rDNA, biological toxins, human- or animal-derived substances, animals or plants.
**Consensus:** Tabled.

**6. Matters Arising**

There were no matters arising.