IBC IUB COMMITTEE MEETING
IBC MEETING MINUTES

Thursday, June 05, 2025
VIRTUAL
01:00 PM – 02:00 PM

Members Present: Peter Hollenhorst (Chair), Ryan Cushman, Tania Daffron, Barbara Hocevar, Elizabeth Kramer, Randalyn Shepherd, Smitha Rayadurg, Julia van Kessel

Guests Present: Emily Winters, Holly Moore

The meeting was called to order by Dr. Hocevar at approximately 1:01 p.m.

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1. **The committee reviewed and approved the meeting minutes from the May 01, 2025 IBC meeting.**

2. **The committee reviewed the items reviewed and approved outside of full committee. There were no questions or concerns.**

3. **Submissions for Review:**

4. **BSO Only Submissions for Review:**

   None

Major Amendments:

#20215 (Shen, Jia) *Cancer stem cell maintenance in glioblastoma* (**Primary:** Hocevar; **Vet:** Shepherd; **Biosafety:** Kramer)

- **The committee unanimously provisionally approved this submission at BSL-2/ABSL-2, pending revisions.**
- **Types of manipulations planned:**
  - Adding administration of modified human cells to mice per IACUC 23-022.
  - Upgrading from animal containment.
- **Transgenic animals:** None (WT Mice)
- **Recombinant DNA:**

SOURCE SPECIES	PLASMID AND/OR VECTOR	HOST TO BE USED	GENE OR TRANSCRIPTION PRODUCT	KNOWN HARM
Human	psPax2	Human cells, E. coli	Lentivirus packaging protein: Gag-pol	No
Vesicular stomatitis virus	pMD2.G	Human cells, E. coli	Lentivirus packaging protein: VSV-G protein	No
Mouse and human	pLKO.1-shRNAs for SUV39H1	Mouse cells and human cells	shRNAs for SUV39H1	No

Synthetic	Luciferase expressing plasmid	Mouse cells	Luciferase	No
Mouse	pLKO.1-shRNAs for KBTBD2	Mouse cells	shRNAs for KBTBD2	No
Mouse	pLKO.1-shRNAs for KLHL4	Mouse cells	shRNAs for KLHL4	No

- **Recommended containment conditions:** BSL-2 ABSL-2
- **Section of the NIH guidelines selected by the investigator:**
  - III-D-1: Experiments using Risk Group 2 (RG2), Risk Group 3 (RG3), Risk Group 4 (RG4), or Restricted Agents as Host-Vector Systems (See Section II-A, Risk Assessment, of the NIH Guidelines)
  - III-D-3: Experiments Involving the Use of Infectious DNA or RNA Viruses or Defective DNA or RNA Viruses in the Presence of Helper Virus in Tissue Culture Systems
  - III-D-4: Experiments With Whole Animals Involving Recombinant or Synthetic Nucleic Acid Molecules
  - Experiments with recombinant or synthetic nucleic acid molecules in an animal (transgenic or otherwise)
  - III-F-8: Those that do not present a significant risk to health or the environment, as determined by the NIH Director, with the advice of the RAC, and following appropriate notice and opportunity for public. (You MUST check one of the Appendix C exemptions below)

#1399 (Silveyra, Patricia) *Sex differences in asthma and lung inflammation* (**Primary:** Hocevar; **Vet:** Shepherd; **Biosafety:** Kramer)

- **The committee unanimously provisionally approved this submission at BSL-2/ABSL-1, pending revisions.**
- **Types of manipulations planned:**
  - Upgrading from exempt to non-exempt
  - Adding lung cancer model
  - Adding use of transduced/transformed murine cells
  - Adding rDNA
  - Checking III-D-4
  - Animals: Updating route of administration for mouse cells and indicating that these cells are modified
- **Transgenic animals:** Mice (WT Mice)
- **Recombinant DNA:**

SOURCE SPECIES	PLASMID AND/OR VECTOR	HOST TO BE USED	GENE OR TRANSCRIPTION PRODUCT	KNOWN HARM
We do not insert DNA, but we inject modified cells that are commercially available (LL/2-Luc2 cells)	None. Cells come already modified. The cells are: LL/2-Luc2 (ATCC CRL-1642-LUC2)	The cells we purchase are murine cells.	The commercial cells express the Luc2 gene, a codon-optimized version of the Photinus pyralis (firefly) luciferase gene.	No

- **Recommended containment conditions:** BSL-2 ABSL-1
- **Section of the NIH guidelines selected by the investigator:**
  - III-D-4: Experiments With Whole Animals Involving Recombinant or Synthetic Nucleic Acid Molecules

- Experiments with Transgenic Animals
- Experiments with recombinant or synthetic nucleic acid molecules in an animal (transgenic or otherwise)
- III-F-8: Those that do not present a significant risk to health or the environment, as determined by the NIH Director, with the advice of the RAC, and following appropriate notice and opportunity for public. (You MUST check one of the Appendix C exemptions below)
- Appendix C-VII: The purchase or transfer of transgenic rodents at BL-1

5-year Renewals:

#1262 (Lai, Cary) *Laboratory in Molecular Neuroscience (P473)* (**Primary:** Hollenhorst; **Biosafety:** Kramer)

- **This protocol, an exempt teaching protocol, was added to the full committee agenda by mistake and did not require FCR review. However, the committee provisionally approved the renewal at BSL-1. This will be approved outside of committee after revisions.**
- **Types of manipulations planned:** 5-year renewal
- **Transgenic animals:** None
- **Recombinant DNA:**

SOURCE SPECIES	PLASMID AND/OR VECTOR	HOST TO BE USED	GENE OR TRANSCRIPTION PRODUCT	KNOWN HARM
Aequoria victoria	pGEX 6P-1, 2 or 3	E. coli (NEB Turbo, NEB 5-alpha)	GFPuv	No
Aequoria victoria	pEGFP-C1, pEGFP-N1	Neuro2A (murine)	EGFP	No
Mus musculus	pGEX 6P-1, 2 or 3 ; pEGFP-C1	E. coli (NEB Turbo, NEB 5-alpha)	Nrg1, Nrg2, Nrg3 and ErbB4	Yes In humans, an increase in ErbB4 activity has been shown to increase the growth of a subset of melanomas. It breast cancer, ErbB4 tends to have the opposite effect as it promotes differentiation over proliferation.
Mus musculus and Streptococcus pyogenes	pX330, pX330.pten.a and pX330.pten.b	Neuro2A	pX330.pten.a and pX330.pten.b each contain a small region (encoding a guide RNA) from a non-coding portion of the murine PTEN gene. The parent vector (pX330) contains Cas9 from Streptococcus pyogenes.	Yes This tool should only target the murine PTEN gene. We could not identify a human gene target via a search with BLASTn.

- **Recommended containment conditions:** BSL-1
- **Section of the NIH guidelines selected by the investigator:**
  - III-E. ALL experiments not included in Sections III-A, III-B, III-D, III-F, and their subsections are non-exempt from the NIH Guidelines and fall under Section III-E. All Such experiments may be conducted at BL-1. The IBC reviews and approves all such proposals, but IBC review and approval prior to initiation of the experiments is not required.

- III-F-8: Those that do not present a significant risk to health or the environment, as determined by the NIH Director, with the advice of the RAC, and following appropriate notice and opportunity for public. (You MUST check one of the Appendix C exemptions below)
- Appendix C-II: Escherichia coli K-12 Host-Vector Systems*

#1223 (Tracey, Dan) *Molecular, Cellular, and Circuit Mechanisms of Nociception Behavior* (**Primary:** Rowe-Magnus; **Biosafety:** Kramer)

- **The committee unanimously provisionally approved this submission at BSL-1/ABSL-1, pending revisions.**
- **Types of manipulations planned:** 5-year renewal
- **Transgenic animals:** Fruit fly (Drosophila spp.)
- **Recombinant DNA:**

SOURCE SPECIES	PLASMID AND/OR VECTOR	HOST TO BE USED	GENE OR TRANSCRIPTION PRODUCT	KNOWN HARM
Drosophila	Various non-infectious pUC based Drosophila transformation vectors that are in wide and standard use. pUAST pENTR pTW pTVW pTWV pTWG pHD-dsREd-attP PU6-BbsI-chiRNA	Drosophila	CG33202, CG18103, CG8297, CG8440, CG12681, CG14608, CG31976, CG34362, CG7066, CG42261, CG18495/CG30382, CG1709, CG8216, CG4185, CG33202, CG18103, CG8297, CG8440, CG12681, CG14608, CG31976, CG34362, CG7066, CG42261, CG18495/CG30382, CG1709, CG8216, CG4185	No
Drosophila	Various pUC based plasmids pUAST pENTR pTW pTVW pTWV pTWG pHD-dsREd-attP PU6-BbsI-chiRNA	E. coli. Strains, DH5-alpha, XL-1 Blue, Top10, SW102, one shot	CG33202, CG18103, CG8297, CG8440, CG12681, CG14608, CG31976, CG34362, CG7066, CG42261, CG18495/CG30382, CG1709, CG8216, CG4185, CG33202, CG18103, CG8297, CG8440, CG12681, CG14608, CG31976, CG34362, CG7066, CG42261, CG18495/CG30382, CG1709, CG8216, CG4185	No
Various fluorescent proteins and epitope tags	pUC based plasmid systems. pTW pTVW pTWV pTWG pAFMW	Drosophila S2R+	CG33202, CG18103, CG8297, CG8440, CG12681, CG14608, CG31976, CG34362, CG7066, CG42261, CG18495/CG30382, CG1709, CG8216, CG4185 , CG33202, CG18103, CG8297, CG8440, CG12681, CG14608, CG31976, CG34362, CG7066, CG42261, CG18495/CG30382, CG1709, CG8216, CG4185	No

- **Recommended containment conditions:** BSL-1 ABSL-1
- **Section of the NIH guidelines selected by the investigator:**
  - III-D-4: Experiments With Whole Animals Involving Recombinant or Synthetic Nucleic Acid Molecules
  - Creation of Transgenic Animals other than BL1 Rodents
  - Experiments with Transgenic Animals
  - III-F-1: Uses synthetic nucleic acids that: A) Can neither replicate nor generate nucleic acids that can replicate in any living cell, and B) Are not designed to integrate into DNA, and C) Do

not produce a toxin that is lethal for vertebrates at an LD50 of less than 100 nanograms per kilogram of body weight.
  - III-F-8: Those that do not present a significant risk to health or the environment, as determined by the NIH Director, with the advice of the RAC, and following appropriate notice and opportunity for public. (You MUST check one of the Appendix C exemptions below)
  - Appendix C-II: Escherichia coli K-12 Host-Vector Systems*

#1231 (Zlotnick, Adam) *Evaluating structural proteins of respiratory viruses for antiviral inactivation* (**Primary:** Hocevar; **Biosafety:** Kramer)

- **The committee unanimously provisionally approved this submission at BSL-1, pending revisions.**
- **Types of manipulations planned:** 5-year renewal
- **Transgenic animals:** None
- **Recombinant DNA:**

SOURCE SPECIES	PLASMID AND/OR VECTOR	HOST TO BE USED	GENE OR TRANSCRIPTION PRODUCT	KNOWN HARM
SARS-CoV2 2019-nCoV WHU02	pET15b and similar	E. coli	N-protein	No
Influenza A virus (A/Puerto Rico/8/1934) segment 7	pET21b and similar	E. coli	M1 protein	No

- **Recommended containment conditions:** BSL-1
- **Section of the NIH guidelines selected by the investigator:**
  - III-D-2: Experiments in which DNA from RG2, RG3, RG4, or Restricted Agents is Cloned into Nonpathogenic Prokaryotic or Lower Eukaryotic Host-Vector Systems
  - III-E. ALL experiments not included in Sections III-A, III-B, III-D, III-F, and their subsections are non-exempt from the NIH Guidelines and fall under Section III-E. All Such experiments may be conducted at BL-1. The IBC reviews and approves all such proposals, but IBC review and approval prior to initiation of the experiments is not required.
  - III-E-1: Experiments involving the formation of recombinant or synthetic nucleic acid molecules containing no more than 2/3 of the genome of any Eukaryotic virus.
  - III-F-1: Uses synthetic nucleic acids that: A) Can neither replicate nor generate nucleic acids that can replicate in any living cell, and B) Are not designed to integrate into DNA, and C) Do not produce a toxin that is lethal for vertebrates at an LD50 of less than 100 nanograms per kilogram of body weight.
  - III-F-8: Those that do not present a significant risk to health or the environment, as determined by the NIH Director, with the advice of the RAC, and following appropriate notice and opportunity for public. (You MUST check one of the Appendix C exemptions below)
  - Appendix C-II: Escherichia coli K-12 Host-Vector Systems*

New Protocols:

- None

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*Julia van Kessel left the meeting at approximately 1:22 p.m. before the review of her submission.

Major Amendments:

#827 (van Kessel, Julia) *Regulation of quorum sensing in vibrios* (**Primary:** Rowe-Magnus; **Biosafety:** Kramer)

- **The committee unanimously provisionally approved this submission at BSL-2/ABSL-2, pending revisions.**
- **Types of manipulations planned:**
  - Adding Biological material
- **Transgenic animals:** None (WT Coral; WT Brine Shrimp)
- **Recombinant DNA:**

SOURCE SPECIES	PLASMID AND/OR VECTOR	HOST TO BE USED	GENE OR TRANSCRIPTION PRODUCT	KNOWN HARM
Vibrio campbellii, Vibrio cholerae, Vibrio parahaemolyticus, Vibrio vulnificus, Vibrio coralliilyticus, Vibrio natriegens, P. aeruginosa	pET28b, pUC19, pEVS143, pLAFR2, pSW23T, pRE112, pSAL12.1, pMMB47EH	E. coli, V. campbellii, V. cholerae, V. vulnificus, V. coralliilyticus, V. parahaemolyticus, P. aeruginosa	Genes involved in quorum sensing and transcriptional regulation (transcription factors, autoinducers synthases, receptors, sRNAs, nucleoid-associated proteins)	No

- **Recommended containment conditions:** BSL-2 ABSL-2
- **Section of the NIH guidelines selected by the investigator:**
  - III-D-1: Experiments using Risk Group 2 (RG2), Risk Group 3 (RG3), Risk Group 4 (RG4), or Restricted Agents as Host-Vector Systems (See Section II-A, Risk Assessment, of the NIH Guidelines)
  - III-D-2: Experiments in which DNA from RG2, RG3, RG4, or Restricted Agents is Cloned into Nonpathogenic Prokaryotic or Lower Eukaryotic Host-Vector Systems
  - III-D-4: Experiments With Whole Animals Involving Recombinant or Synthetic Nucleic Acid Molecules
  - Experiments with recombinant or synthetic nucleic acid molecules in an animal (transgenic or otherwise)
  - III-E. ALL experiments not included in Sections III-A, III-B, III-D, III-F, and their subsections are non-exempt from the NIH Guidelines and fall under Section III-E. All Such experiments may be conducted at BL-1. The IBC reviews and approves all such proposals, but IBC review and approval prior to initiation of the experiments is not required.
  - III-F-1: Uses synthetic nucleic acids that: A) Can neither replicate nor generate nucleic acids that can replicate in any living cell, and B) Are not designed to integrate into DNA, and C) Do not produce a toxin that is lethal for vertebrates at an LD50 of less than 100 nanograms per kilogram of body weight.
  - III-F-3: Those that consist solely of the exact recombinant or synthetic nucleic acid sequence from a single source that exists contemporaneously in nature

- III-F-4: Those that consist entirely of nucleic acids from a prokaryotic host, including its indigenous plasmids or viruses when propagated only in that host (or closely related strain of the same species), or when transferred to another host by well-established physiological means
- III-F-6: Those that consist entirely of DNA segments from different species that exchange DNA by known physiological processes, though one or more of the segments may be a synthetic equivalent
- III-F-8: Those that do not present a significant risk to health or the environment, as determined by the NIH Director, with the advice of the RAC, and following appropriate notice and opportunity for public. (You MUST check one of the Appendix C exemptions below)
- Appendix C-II: Escherichia coli K-12 Host-Vector Systems*

Reportable Events:

- None

Other Business:

- Reschedule July 03 meeting:
  Committee members are available to meet on July 03, 2025. The scheduled meeting will remain unchanged.

Next Meeting
Thursday, July 03, 2025, 1:00 – 2:00 p.m., Virtual Meeting

The meeting adjourned at approximately 1:26 p.m.