Institutional Biosafety Committee – December 16, 2025 Meeting Minutes

Members Present	Members Absent
Pantelis Tsoulfas, M.D.*	Sophia George, Ph.D.
Ellen Kapsalis, Ph.D.	Kevin Folta, Ph.D (ad hoc member)
Micheline McCarthy, M.D., Ph.D	Minh Tran, Ph.D
Shane Gillooly	Dan Rothen, D.V.M
Kevin Sanders, D.V.M.	Kevin Mullen[1]
Julia Zaias, D.V.M, Ph.D	Rumela Chakrabarti, PhD**
Mercina Drake[1]	Susanne Doblecki-Lewis, MD
Jennifer Laine, PhD***	Ela Koncza
Lizzeth Meza ***	

* Denotes Chair
** Denotes Vice-Chair
*** Denotes BSO Alternate
[1] Denotes Community Representatives

1. **Call to Order and Announcements:**
   The IBC meeting was held on December 16 via Zoom. Dr. Chakrabarti chaired the meeting. After determining that there was a quorum, Dr. Chakrabarti called the meeting to order at 3:00 p.m.

   - Minutes from November 25th meeting – approved by vote 6-0
     - Minutes will be uploaded to the website

2. **Discussion:**
   I. Suggestion for meeting agenda to be reduced to only list protocol number, PI name, title, and reviewer.
   II. Meetings will be at 2:30p as of January 2026
   III. Update provided by Biosafety Officer on meeting with Lasorella lab

Old / Unfinished Business

Protocol Number: 25-063

Principal Investigator: Dr. David Lombard

Project Title: SIRT5 inhibitors and degraders as novel treatments for cancers

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-4 (use of recombinant/synthetic nucleic acids in RG2 agents/cells in vitro)

Containment Conditions: BSL-2 for lentiviral work; ABSL-2 for xenograft procedures

Agent Characteristics:

- Second-generation lentiviral vectors (Tet-pLKO-puro; pRSI16 U6-shRNA)
- CRISPR/Cas9 via TLCV2 for gene knockout
- Small-molecule SIRT5 inhibitors (e.g., YH160)—non-biohazard

Types of Manipulations:

- In vitro production of lentivirus in HEK293T; filtration of supernatant
- Transduction of Ewing sarcoma and other tumor cell lines; selection and molecular assays
- Xenograft establishment followed by small-molecule dosing

Source(s) of the Nucleic Sequences: Human tumor cell lines (A673, A4573, TC32, CHLA9/10/25); plasmids from Addgene and vendors

Nature of the Nucleic Acid Sequences: shRNA/CRISPR constructs targeting SIRT5; reporter/selection markers

Host(s) and Vector(s): Human cell lines; HEK293T packaging cells; lentiviral vectors (psPAX2, pLP VSV-G)

Transgene Expression: Yes—shRNA/CRISPR to modulate SIRT5 expression; no pathogenic gene products

Discussion Points:

- Provide concise project snapshot and stepwise workflow
- Clarify non-viral vs viral constructs, titers/volumes, and in vivo administration details

Recommendation: Approved; unanimously (6–0)

Protocol Number: 25-065

Principal Investigator: Dr. David Lombard

Project Title: Targeting the longevity regulator PAPP-A with small molecule inhibitors

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-4

Containment Conditions: BSL-2 for lentiviral knockdown; ABSL-2 for animal work

Agent Characteristics:

- Second-generation lentiviral vectors (Tet-pLKO-puro) for PAPP-A knockdown
- siRNA for transient knockdown (non-viral)

Types of Manipulations:

- Lentiviral production in HEK293T; transduction of A549, A673, A4573
- Molecular assays (RNA-seq, qRT-PCR, RPPA, flow cytometry)
- Future amendment: xenografts and small-molecule dosing

Source(s) of the Nucleic Sequences: Human cell lines from ATCC and MD Anderson; plasmids from Addgene

Nature of the Nucleic Acid Sequences: shRNA/siRNA targeting PAPP-A; standard selectable markers

Host(s) and Vector(s): HEK293T producer cells; lentiviral vectors (psPAX2, VSV-G)

Transgene Expression: Yes—shRNA to reduce PAPP-A; no toxins/oncogenes introduced

Discussion Points:

- Add brief project snapshot and step-by-step workflow
- Clarify viral types, packaging, titers, and any in vivo use/containment

Recommendation: Approved; unanimously (6–0)

Protocol Number: 25-066

Principal Investigator: Dr. David Lombard

Project Title: Targeting the chromatin scaffold Menin to overcome resistance to targeted therapy in melanoma

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-4

Containment Conditions: BSL-2 for lenti/retroviral work; ABSL-2 for animal work

Agent Characteristics:

- Second-generation lentivirus (Tet-pLKO-puro) for MEN1 knockdown
- Retrovirus (pBABE-hygro MEN1) for MEN1 overexpression

Types of Manipulations:

- Lentiviral/retroviral production in HEK293T; transduction of A375 parental and BRAFi/MEKi-resistant lines
- Functional assays (ChIP-seq/qPCR, colony formation, WB, flow cytometry)
- In vivo studies with A375 and melanoma PDX

Source(s) of the Nucleic Sequences: Addgene plasmids; Wistar Institute PDX (via CMSR)

Nature of the Nucleic Acid Sequences: shRNA and cDNA constructs for MEN1; lipid-metabolism genes knockdown cassettes

Host(s) and Vector(s): Human melanoma lines; HEK293T; lentiviral and retroviral vectors

Transgene Expression: Yes—MEN1 knockdown/overexpression; additional lipid enzyme knockdowns

Discussion Points:

- Provide concise snapshot and ordered workflow
- Detail vector types, packaging, titers, animal administration, and containment

Recommendation: Approved; unanimously (6–0)

Protocol Number: 25-090

Principal Investigator: Dr. David Lombard

Project Title: SIRT5 as novel therapeutic target in MPNST

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-4

Containment Conditions: BSL-2 for lentiviral/CRISPR work; ABSL-2 for animal studies

Agent Characteristics:

- Replication-defective lentivirus (pRSI16 shRNA); CRISPR via TLCV2
- Inducible CDKN2A overexpression via pINDUCER21

Types of Manipulations:

- HEK293T-based lentivirus production; transduction of MPNST lines
- Cross NPcis mice with SIRT5 KO mice for tumorigenesis studies

Source(s) of the Nucleic Sequences: Human MPNST lines (e.g., ST88, S462, sNF96.2); Addgene plasmids

Nature of the Nucleic Acid Sequences: shRNA/CRISPR targeting SIRT5; CDKN2A expression cassettes

Host(s) and Vector(s): Human cell lines; HEK293T; lentiviral vectors

Transgene Expression: Yes—gene knockdown/knockout; CDKN2A overexpression

Discussion Points:

- Provide project snapshot and stepwise workflow; specify titers/volumes and animal containment

Recommendation: Approved; unanimously (6–0)

Protocol Number: 25-091

Principal Investigator: Dr. David Lombard

Project Title: HDACi as treatment for Solitary Fibrous Tumor

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-4

Containment Conditions: BSL-2 for lentiviral/CRISPR work; ABSL-2 for murine studies

Agent Characteristics:

- Lentiviral vectors (pLVX-TetOne-Puro; pINDUCER21) for overexpression
- Inducible/constitutive shRNA for EGR1; CRISPR via TLCV2
- Cre recombinase delivery (Gesicles; lentivector for in vivo cre)

Types of Manipulations:

- Generate overexpression/knockdown lines; in vitro assays
- Cre activation in transgenic mice; xenografts/allografts; PDX treatments with HDACi

Source(s) of the Nucleic Sequences: Human and mouse fibroblast lines; tumor-derived SFT cells; Addgene/Takara vectors

Nature of the Nucleic Acid Sequences: EGR1 and NAB2-STAT6 fusion constructs; CRISPR knockouts; reporter/selection cassettes

Host(s) and Vector(s): Human/mouse cell lines; HEK293T; lentiviral vectors; Cre Gesicles

Transgene Expression: Yes—fusion/target gene expression or knockdown

Discussion Points:

- Provide brief goal, stepwise workflow, vector specifics, titers, animal details/containment

Recommendation: Approved; unanimously (6–0)

Protocol Number: 25-117

Principal Investigator: Dr. Daphne Avgousti

Project Title: Investigating chromatin mechanisms using viral systems

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-4

Containment Conditions: BSL-2 for adenovirus/HSV/HCMV and lentiviral work; BSL-1 for cloning

Agent Characteristics:

- Human adenovirus serotypes 5 and 9 (attenuated mutants; GFP reporters)
- HSV-1 strains (17syn+, KOS) mutants; HCMV Towne; potential vaccinia (future)
- Third-generation lentiviral systems for stable cell engineering

Types of Manipulations:

- Engineer cell lines (HILO or lenti); infect with Ad/HSV/HCMV; measure replication, RNA, protein, plaques
- Occasional larger-scale virus prep in producer lines (293 or U2OS)

Source(s) of the Nucleic Sequences: Human/viral genes (histones, chaperones; viral proteins like protein VII, ICP0)

Nature of the Nucleic Acid Sequences: Overexpression constructs and mutants; reporter genes (GFP/mCherry/luciferase)

Host(s) and Vector(s): A549, U2OS, 293, HFFs; adenovirus, HSV, HCMV; lentiviral cassettes

Transgene Expression: Yes—viral and host proteins to study chromatin-virus interactions

Discussion Points:

- Provide additional detail on vaccinia past/future use and organize experiments per virus with bullets

Recommendation: Conditional approval; unanimously (6–0); revised entry later approved

New Submissions

Protocol Number: 25-130

Principal Investigator: Dr. Jae Lee

Project Title: Targeting lipid clearance pathways to promote repair after SCI

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-4

Containment Conditions: BSL-2 for lentiviral work; ABSL-2 for SCI models

Agent Characteristics:

- Second-generation lentiviral vectors to knock down PIK3cd, BTK, SRC in RAW 264.7 cells

Types of Manipulations:

- In vitro lentiviral knockdown in RAW 264.7; IHC, pharmacological assays, scRNA-seq
- In vivo SCI studies assessing lipid accumulation and regeneration markers

Source(s) of the Nucleic Sequences: Mouse macrophage line RAW 264.7; standard lenti packaging plasmids

Nature of the Nucleic Acid Sequences: shRNA cassettes; no pathogenic inserts

Host(s) and Vector(s): RAW 264.7; HEK293T for packaging; lentiviral vectors

Transgene Expression: Yes—shRNA expression in vitro only (no in vivo viral administration)

Discussion Points:

- Revise risk assessment to Low (2); align PPE details; update vector forms (host range, locations)
- rDNA survey Q4 to YES; refine Biohazard Exposure Response form steps and sign-offs

Recommendation: Conditional approval; unanimously (6–0)

Protocol Number: 25-131

Principal Investigator: Dr. Nadine Kerr

Project Title: Lipid Nanoparticle–Mediated RNA Delivery to the Brain Following Experimental Stroke

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-7 (less than 2/3 viral genome sequences) and related provisions for non-viral synthetic RNA)

Containment Conditions: BSL-1

Agent Characteristics:

- Non-viral lipid nanoparticles (ionizable lipid, helper phospholipid, cholesterol, PEG-lipid)
- Synthetic mRNA/circular RNA encoding reporters (mCherry, firefly/renilla luciferase)

Types of Manipulations:

- Intracerebral microinjection of LNP-RNA under anesthesia; optional repeat dosing
- IVIS imaging and tissue collection for biodistribution/expression analyses

Source(s) of the Nucleic Sequences: Commercial RNA vendor; plasmid maps/coding sequences on file

Nature of the Nucleic Acid Sequences: Reporter protein coding sequences; no integration/replication elements

Host(s) and Vector(s): Mouse models (stroke and transgenic); LNP as delivery vehicle

Transgene Expression: Yes—reporters for tracking; proteins are non-toxic, well characterized

Discussion Points:

- Revise rDNA survey 7B/7C to YES as applicable to RNA/animals

Recommendation: Conditional approval; unanimously (6–0); revised and approved Dec 18

Protocol Number: 25-132

Principal Investigator: Dr. Daniel Pelaez

Project Title: Understanding Calcium Regulation and SERCA in Optic Nerve Injury: Roles of NNAT and TRIM59

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-4

Containment Conditions: BSL-1 for handling Ad-Cre aliquots and animal procedures; ABSL-1/2 as required by facility

Agent Characteristics:

- Adenovirus-Cre (commercial; not produced in-house)

Types of Manipulations:

- Intravitreal Ad-Cre or tamoxifen induction to drive conditional knockouts
- Optic nerve injury (crush/transection); imaging, histology, molecular assays

Source(s) of the Nucleic Sequences: Floxed mouse lines (TRIM59fl/fl, NNATfl/fl); commercial Ad-Cre

Nature of the Nucleic Acid Sequences: Cre recombinase coding sequence (adenoviral vector); no additional hazardous genes

Host(s) and Vector(s): Mouse models; adenoviral vector (no in-house propagation)

Transgene Expression: Yes—Cre expression to excise floxed genes

Discussion Points:

- Correct rDNA survey Q5 and 7C to YES; correct viral vector form to "adenovirus," not AAV

Recommendation: Conditional approval; unanimously (6–0); revised and approved Jan 8

Protocol Number: 25-133

Principal Investigator: Dr. David Baidal

Project Title: POLARIS: A Phase 1, Single Dose, Open-Label Study of GNTI-122 in Adults with Recently Diagnosed Type 1 Diabetes

Training Verification: Confirmed

NIH Guidelines Section: Section III-C (human gene transfer—handling of genetically modified human cells)

Containment Conditions: BSL-2 for receiving/handling autologous genetically modified cells

Agent Characteristics:

- Autologous CD4+ Tregs engineered ex vivo; AAV used during manufacturing at sponsor site (not on site)

Types of Manipulations:

- Single IV infusion of engineered Tregs; clinical monitoring; no on-site vector manufacturing

Source(s) of the Nucleic Sequences: Participant-derived T cells; GMP manufacturing (sponsor facility) with AAV donor templates

Nature of the Nucleic Acid Sequences: Transgenes: islet-specific TCR, FOXP3, and a rapamycin-inducible signaling module (CISC)

Host(s) and Vector(s): Human participants; no direct viral vector administration at site

Transgene Expression: Yes—engineered Treg proteins to enable antigen recognition and selective IL-2 pathway signaling

Discussion Points:

- Classify product as RG2/BSL-2; clarify SOPs for shipping/storage, spill response, waste; add risks and staff guidance; correct HGT form responses; include Product Handling Manual

Recommendation: Conditional approval; unanimously (6–0); revised and approved Jan 15

Protocol Number: 25-134

Principal Investigator: Dr. Nat Clarke

Project Title: Evolution of Cell Adhesion Mechanisms Using Marine Invertebrates

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-1 (recombinant DNA in non-pathogenic organisms under BSL-1)

Containment Conditions: BSL-1

Agent Characteristics:

- E. coli K-12 derivatives for cloning/expression; synthetic mRNA; plasmid DNA

Types of Manipulations:

- Cloning and protein expression in E. coli; in vitro transcription; microinjection of plasmid/mRNA into embryos

Source(s) of the Nucleic Sequences: Marine invertebrate genes; standard reporter genes (GFP, mCherry, mVenus)

Nature of the Nucleic Acid Sequences: Fluorescent reporters; adhesion protein constructs; no toxins/viral genes

Host(s) and Vector(s): E. coli K-12; marine invertebrate embryos; plasmid vectors

Transgene Expression: Yes—transient reporter expression for visualization; no pathogenic function

Discussion Points:

- Protocol praised for clarity; no major issues

Recommendation: Approved; unanimously (6–0)

Protocol Number: 25-135

Principal Investigator: Dr. Luis Morey

Project Title: Epigenetic Mechanisms of Cancer Progression and Therapeutic Resistance in Breast Cancer

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-4

Containment Conditions: BSL-2 for lentiviral engineering; ABSL-2 for mouse work/PDxOs as applicable

Agent Characteristics:

- Replication-incompetent third-generation lentivirus for CRISPR and gene modulation

Types of Manipulations:

- Lentiviral delivery of perturbation tools; epigenomic assays (ATAC-seq, ChIP-seq, CUT&RUN); PDO/PDxO studies

Source(s) of the Nucleic Sequences: Human/mouse tumor lines and organoids; plasmids from vendors (e.g., Addgene)

Nature of the Nucleic Acid Sequences: CRISPR guides and cassettes targeting ESR1, ARID1A, LSD1, etc.; reporter/selection markers

Host(s) and Vector(s): MCF7, T47D, MDA-MB-231, HEK293, 4T1; lentiviral vectors

Transgene Expression: Yes—gene perturbation cassettes; no replication-competent virus

Discussion Points:

- Refine targets/justification; expand experimental breakdown and hygiene plan; set risk as Low (2); rDNA survey Q4 to YES

Recommendation: Conditional approval; unanimously (6–0)

Protocol Number: 25-136

Principal Investigator: Dr. Luis Morey

Project Title: Polycomb Group Proteins in Neurodevelopment and Associated Disorders

Training Verification: Confirmed

NIH Guidelines Section: Section III-D-4

Containment Conditions: BSL-2 for lentiviral/PiggyBac engineering; ABSL-2 for mouse work as needed

Agent Characteristics:

- Replication-incompetent lentivirus; PiggyBac transposon systems

Types of Manipulations:

- Lentiviral/PiggyBac modulation of PRC1 components; epigenomic/transcriptomic profiling; in vivo mouse studies

Source(s) of the Nucleic Sequences: Mouse and human neuronal cell systems; vendor vectors (VectorBuilder, etc.)

Nature of the Nucleic Acid Sequences: Overexpression/depletion constructs for RING1A/B and related factors

Host(s) and Vector(s): Embryonic stem cell-derived neural progenitors; primary neurons; C57BL/6J; lentiviral/PiggyBac

Transgene Expression: Yes—developmental gene perturbations; no pathogenic sequences

Discussion Points:

- Explain purpose in lay terms; define Polycomb/genes; provide step-by-step experimental breakdown

Recommendation: Conditional approval; unanimously (6–0)

Addenda:

Number:	**24-016 IIIC ad**
Title:	A Biomarker-guided Phase 2 study of DB107-RRV (a retroviral replicating vector) combined with DB107-FC (Flucytosine extended-release tablets) in patients with recurrent glioblastoma or anaplastic astrocytoma
Principal Investigator:	Shah, Ashish
Primary Reviewer:	**Tsoulfas, Pantelis**

Number:	**24-030 IIIC ad06**
Title:	Randomized, Open-Label Study Of The BRIA-IMT Regimen And Check Point Inhibitor Vs Physician's Choice In Advanced Metastatic Breast Cancer (BRIA-ABC)
Principal Investigator:	Blandino Rosano, Manuel
Primary Reviewer:	**Tsoulfas, Pantelis**

Number:	**25-097 IIIC ad01**
Title:	Cerebral ischemia and exposure to recurrent hypoglycemia in diabetes-AAVx1.1 and AAV2/olig001
Principal Investigator:	Dave, Kunjan
Primary Reviewer:	**Tsoulfas, Pantelis**

Exemptions:

Number:	**25-127 IIIF**
Title:	Genetically modified rodents to study SIRT7 function in mammals
Principal Investigator:	Lombard, David
Primary Reviewer:	**Tsoulfas, Pantelis**

Number:	**25-128 IIIF**
Title:	Integrin Activation to Prevent Early Arteriovenous Fistula Failure in End-stage Renal Disease Patients: The mouse model

Principal Investigator:	Vazquez-Padron, Roberto
Primary Reviewer:	**Tsoulfas, Pantelis**