Houston Methodist Research Institute IBC Meeting Minutes

6/4/2026

Meeting Time Records

Meeting start time: 10:00 am

Meeting end time: 11:16 am

VOTING MEMBER ATTENDANCE				
Name of Member	**Status (member or alternate)**	**IBC role**	**If Voting Alternate, Member Substitution**	**Present in Person or Virtually (TEAMS)?**
Biana Godin, PhD, M.Sc. Pharm	Chair	Scientific, affiliated		Yes, Virtually
Vicente Zuno, BS, RBP	Member	Biosafety Officer, affiliated		Yes, Virtually
Joan E. Nichols, PhD	Member	Scientific, affiliated		Yes, Virtually
Chas Gray, RPh	Member	Scientific, affiliated		Yes, Virtually
Tanya Herzog, DVM	Member	Animal Expert, affiliated		No
Edward Graviss, PhD	Member	Scientific, affiliated		Yes, Virtually
Wenhao Chen, PhD	Member	Scientific, Affiliated		Yes, Virtually
Daniel Kiss, PhD	Member	Scientific, affiliated		No
Tamara Steele, BS	Member	Community member, Non-affiliated		No
Jillian Chahal, MPH, CSP	Member	Community member, Non-affiliated		Yes, Virtually
Francesca Taraballi, PhD	Member	Scientific, Affiliated		Yes, Virtually
Jiangyong Shao, MS	Member	Scientific, Affiliated		No
Nagendran Tharmalingam, PhD	Member	Laboratory representative, Affiliated		Yes, Virtually
Anjana Tiwari, PhD	Member	Laboratory representative, Affiliated		Yes, Virtually
Dimitrios Wagner, MD PhD	Member	Human gene transfer expert, Non-affiliated		Yes, Virtually
Gretchen Gotlieb, MS	Member	Safety representative,		Yes, Virtually

		Affiliated		

NON-VOTING MEMBER ATTENDANCE		
Name of Member	**IBC Role**	**Present in Person or Virtually (TEAMS)?**
Brenda Hartman, BA	Ex-officio, Director, Central Laboratory Operations	Yes, Virtually
Enid Burns	Ex-officio, Central Laboratory Operations Safety Representative	Yes, Virtually
Michael Smith	Ex-officio, Legal Counsel	Yes, Virtually
Michael Metcalf	Ex-officio, Environmental Safety	No
Tiffany Gunter	Ex-officio, Employee Health Representative	No
Astrid Marcela Quiroga	Ex-officio, Employee Health Representative	No
Leon Brown, MS	Ex officio, HMRI Radiation safety officer	Yes, Virtually
Wanda Quezada, CIP	Ex officio, Director Regulatory Oversight	No
Don Sibley, PhD	Consultant, Expert Reviewer	No

QUORUM INFORMATION

Number of IBC members on the roster: 16

Number required for quorum: 9

All members present by TEAMs received all pertinent material before the meeting and were able to actively and equally participate in all discussions.

ATTENDANCE OFFICE OF RESEARCH PROTECTIONS STAFF
Malissa Mayer-Diaz, Safety Committees Manager
Perla J. Rodriguez, Sr. Analyst
Shane Wilson, Analyst
Prince Agyapong, Analyst
Rebecca Corrigan, IACUC Manager
Joylise Mitchell, IACUC Analyst
Joanna Espinosa, Analyst QI & Education
Shehla Barlas, Analyst QI & Education
Hope Alvarez, HMH Radiation Safety Officer

ATTENDANCE STATUS AND VOTING KEY	
ABSTAIN:	Present for the vote, but not voting “For” or “Against.”

ABSENT:	Absent for discussion and voting for reasons other than a conflicting interest.
RECUSED:	Absent from the meeting during discussion and voting because of a conflicting interest.
SUBSTITUTION:	When regular members and their alternate(s) are listed in the ATTENDANCE table above and an alternate member substitutes for the regulator member this identifies the name of the alternate to indicate which individual is serving as the voting member for this vote. May be deleted if there are no substitutions.

CALL TO ORDER

The Institutional Biosafety Committee convened a virtual meeting via Microsoft Teams on June 4, 2026. The meeting was called to order at 10:00 a.m., with 12 members participating, exceeding the quorum requirement of 9 members.

REPORTS

BSO Report:

- The BSO reported a biosafety incident involving a cryovial explosion during liquid nitrogen handling, resulting in a facial injury to a staff member who was wearing inadequate PPE. The individual is recovering, and appropriate medical evaluation and incident follow-up were conducted. The incident highlighted the importance of proper PPE use (e.g., cryogenic face protection) and safe handling practices, including avoiding work at floor level.
- Corrective actions include reinforcing training, issuing a safety communication to staff, and reviewing PPE compliance during laboratory inspections to prevent recurrence.

EDUCATION

The Biosafety, Chemical Safety, and Radiation Safety Officers presented an overview of their roles in supporting safe and compliant research operations. They emphasized their "boots-on-the-ground" approach, including protocol review, risk assessment, training, laboratory inspections, incident response, and regulatory oversight in alignment with federal, state, and institutional requirements.

Collectively, they highlighted their collaborative efforts to protect personnel, patients, and the environment while enabling research to proceed safely, efficiently, and in compliance with applicable regulations.

CONFLICT OF INTEREST

Committee members were reminded by the IBC Chair to recuse themselves in the event of any conflicts of interest.

OLD BUSINESS

- A list of approved protocols was shown to committee members prior to and during the meeting.

NEW BUSINESS

Safety Committee Evaluation Survey Results Presented by Roderick Price

- A summary of the ORP committee effectiveness survey was presented. The survey was distributed to ~70 committee members across all committees, including the IRB, IACUC, IBC, HSC, and RSC, with 37 respondents. Overall results were highly positive, with no systemic compliance or governance concerns identified; most responses fell in the "green" category, indicating strong confidence in committee leadership, review quality, and a culture of safety and open dialogue.
- Key strengths for the IBC/HSC included effective pre-reviews by ORP and safety staff, diverse member expertise, strong leadership, and constructive discussions supporting thorough risk assessment.
- Areas for improvement (identified as "amber") included equitable distribution of reviewer workload and challenges with MORTI. Additional IBC-specific opportunities included improving communication with investigators, maintaining appropriate reviewer expertise for complex protocols, and ongoing education to address evolving regulatory requirements.
- Planned actions include improving survey response rates, developing training resources and guidance for MORTI, reviewing reviewer workload distribution, and enhancing ongoing education and engagement of committee members. Discussion included clarifying survey response rates, consideration of committee size and expertise, and potential recruitment of additional members to address gaps.

- A list of approved amendments via designated member review was distributed to the committee members one week prior to the meeting and shown during the meeting.
- A list of approved administrative amendments was distributed to the committee members one week prior to the meeting and shown during the meeting.
- A list of approved continuing reviews via designated member review was distributed to the committee members one week prior to the meeting and shown to the committee members during the meeting.

MINUTES REVIEW

The meeting minutes from May 7, 2026, were reviewed. A motion to approve was made and seconded, and the minutes were subsequently approved.

Motion: Approved

- Yes votes: 12
- No votes: 0
- Abstained: 0

AGENDA ITEMS

IBC NEW APPLICATIONS

IBC00002754
Title: Phase I-II Study Evaluating HSV-tk + Valacyclovir Gene Therapy in Combination with Radiotherapy and standard of care Chemotherapy for recurrent glioblastoma multiforme.
Principal Investigator: David Baskin

Study Overview: The committee reviewed a resubmission of a prospective Phase I–II clinical trial evaluating AdvHSV-tk + valacyclovir gene therapy in combination with radiotherapy for the treatment of recurrent glioblastoma multiforme (GBM) in patients who have failed standard of care.

The investigational product (AdvHSV-tk) is a replication-defective adenoviral vector expressing the herpes simplex virus thymidine kinase gene. Following intratumoral administration, systemically administered valacyclovir is phosphorylated to a cytotoxic nucleotide analog, resulting in tumor cell death. A bystander effect is also anticipated, contributing to anti-tumor immune response and cytotoxicity in surrounding cells. Patients undergo surgical resection or biopsy followed by intratumoral injection of AdvHSV-tk and concurrent radiotherapy. The dose 5×10^{11} vector particles in 1 mL is divided into approximately 20 injection sites within the tumor bed. Injections are performed at a depth of 1–2 cm, avoiding eloquent brain regions, ventricles, and subarachnoid space. Standard perioperative care is provided. The AdvHSV-tk vector is supplied by Baylor College of Medicine Cell and Gene Therapy. Dose preparation and verification are completed by authorized personnel, with dual verification of sublot and concentration. The vector is transported to the operating room in a controlled cooler with documented chain of custody, retrieved from the BCM Feigin Center by study personnel and delivered to the Houston Methodist OR.

Investigators reported encouraging outcomes, with a subset of patients demonstrating significantly prolonged overall survival (greater than three times expected), including approximately one-third of recurrent cases. Repeat dosing has been utilized in select cases with reported benefit, including one long-term survivor (>10 years). One remaining dose is being reserved for potential future clinical use.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-C-1
- **Containment Conditions to be implemented**: BSL2
- **Risk Assessment & Discussion**: The committee reviewed the biosafety risk associated with the use of the AdvHSV-tk adenoviral vector. The risk of exposure to personnel during vector preparation and intratumoral injection is considered low. The vector is handled in a small volume (~1 mL) within a closed cryovial system, and transfer to the injection syringe is performed without anticipated loss. Leakage during intratumoral administration is expected to be minimal. Previous clinical studies have not demonstrated significant toxicity associated with AdvHSV-tk alone or in combination with radiotherapy or chemotherapy. Reported adverse effects are generally mild and may include fever related to inflammatory

or immune response. Other potential effects include transient elevations in liver enzymes, creatinine, bilirubin, cellulitis, and thrombocytopenia. These events are managed with standard clinical interventions. There is a theoretical potential for vector shedding through bodily fluids (e.g., urine, saliva, mucus); however, available animal and human data indicate no detectable vector shedding following administration. The likelihood of transmission to healthcare workers is therefore considered very low. The vector is replication-defective, and theoretical recombination events have not been observed; if they were to occur, resulting illness would be expected to be mild and self-limited. In the event of accidental exposure, the biohazard risk is considered minimal. Standard precautions for exposure to blood or bodily fluids are sufficient. No adverse effects have been reported in healthcare workers in prior clinical trials utilizing similar adenoviral vectors at comparable doses. The overall risk to healthcare personnel and close contacts is assessed as low, and no additional biosafety precautions or health screening beyond standard practices are required.

- **Comments sent to the PI for clarification**:
    - **Hazard Identification**: Please make sure that the name of the agent is listed as AdvHSV-tk vector in this proposal.
    - **Viral Studies:** The host range of an Adenoviral (ADV) vector carrying the Herpes Simplex Virus thymidine kinase (HSV-tk) gene depends on the viral delivery platform itself. In general, it has a broad, pan-species host range capable of transducing almost all mammalian cell types. Please specify the source of the AdvHSV-tk vector, such as whether it is obtained from a commercial vendor, a laboratory, or provided by the principal investigator at Baylor College of Medicine or otherwise.
    - **Exposure Management - Clinic/Hospital:** Please confirm the correct dosage concentration—whether it is 5×10^{11} or $5 \times 10^{1\circ}$ particles/mL. The document previously states 5×10^{11} particles/mL, so this appears inconsistent.

- **The motion to approve the study after designated member review was seconded and passed.**

Motion: Approval after Designated Member Review

- Yes Votes: 12
- No Votes: 0
- Abstained: 0
- Recused: 0
- Absent: 0

IBC00002742
Title: IBC for Transfer 1R01AI146244 - Novel Autophagy-Inducing Bovine Adenoviral Vaccines for Tuberculosis
Principal Investigator: Jagannath Chinnaswamy

The study team did not respond to the prereview clarification requests in time; therefore, the protocol was deferred to the next meeting on July 9, 2026 due to an incomplete prereview. No discussion occurred.

IBC00002767
Title: Recombinant and Synthetic Nucleic Acid-Based Studies in Ovarian Cancer Models
Principal Investigator: Daniela Matei

Study Overview: This protocol supports general cancer biology research in Dr. Daniela Matei's laboratory, with the objective of improving understanding of ovarian cancer cell growth, survival, metastasis, and responses to therapy. The laboratory will utilize established human and mouse ovarian cancer cell lines, including genetically modified models designed to evaluate specific gene functions and enable tumor tracking.

The study involves the use of recombinant and synthetic nucleic acid tools, including plasmid vectors, replication-incompetent lentiviral systems, gene overexpression, gene knockdown, and CRISPR/Cas9-mediated gene editing. Additional labeling methods, such as luciferase and fluorescent markers, will be used to monitor tumor behavior and biological processes. These approaches will facilitate investigation of molecular pathways, tumor progression, immune interactions, and therapeutic responses.

Experimental procedures include routine cell culture, molecular cloning, plasmid preparation, transfection, lentiviral transduction, and selection of modified cells using antibiotic resistance or fluorescence. Validation of genetic modifications will be conducted using established techniques. Genetically modified cell lines may be used in in vitro studies and in vivo mouse models, including xenograft and syngeneic tumor systems. All recombinant DNA and lentiviral work will be performed under BSL-2 containment using appropriate biosafety practices, including certified biosafety cabinets, personal protective equipment, and institutional waste disposal procedures. Animal studies will be conducted exclusively in approved facilities under active IACUC protocols.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-D-1, 4
- **Containment Conditions to be implemented**: BSL2
- **Risk Assessment & Discussion**: The committee noted that pre-established stable lentiviral murine (ID8 and BPPMN) and human ovarian cancer cell lines present reduced overall risk, as no active lentiviral particles are handled, thereby eliminating the primary exposure hazard associated with lentiviral vector work. Residual risks are consistent with standard BSL-2 practices for genetically modified cell lines, with minimal environmental concern when appropriate containment, PPE, decontamination, and biohazard waste disposal procedures are followed. Replication incompetent lentiviral vectors were determined to pose low risk, as they are not capable of replication, though genomic integration into transduced cells may occur. When handled under BSL-2 conditions with proper engineering controls, PPE, disinfection, and waste management, environmental risk

remains minimal. The use of recombinant DNA and plasmid vectors containing ovarian cancer–related genes was also reviewed. These materials are non-infectious and are commonly used in laboratory settings for molecular cloning, gene expression, gene knockdown/editing, and related applications. The primary risks involve accidental exposure or surface contamination; however, these are considered minimal when standard biosafety practices, including PPE, containment, disinfection, and proper disposal, are consistently implemented.

- **Comments sent to the PI for clarification**:
    - **Hazard Identification:**
        - Inconsistencies noted in the naming of the **BPPMN cell line** (also referenced as BPPNM and BPPNN); standardization is required
        - Unmodified human ovarian cancer (OvCa) cell lines should be included under the HSC protocol and removed from the current IBC protocol.
        - Unmodified ID8 cell line should be removed from this protocol
        - Recombinant DNA/plasmid vectors should also be categorized into functional categories:
            - Reporter constructs (luciferase, fluorescent markers)
            - Molecular biology constructs, with specific genes clearly identified
        - Lentiviral constructs should be clearly categorized into functional categories:
            - Reporter constructs (e.g., luciferase, GFP)
            - Ovarian cancer–related gene constructs (e.g., PGRMC1, SCD, SOX2, TG2/TGM2, FTO, METTL3)
    - **Risk Assessment:** The answer to this question #9 "*Does your proposed project include experiments involving whole animal's genome being altered by stable introduction of recombinant or synthetic nucleic acid molecules, or DNA or RNA molecules derived therefrom, into the germ-line (transgenic animals) and experiments involving viable recombinant or synthetic nucleic acid molecule-modified microrganisms tested on whole animals. (Sec.III.D.4)*" Should be "No"

- **The motion to approve the study after designated member review was seconded and passed.**

Motion: Approval after Designated Member Review

- Yes Votes: 12
- No Votes: 0
- Abstained: 0
- Recused: 0
- Absent: 0

IBC00002747
Title: CASEY (H-53163) - To study the safety and anti-tumor effects of CD70.CAR t-cells in patients with Leukemia or Lymphoma
Principal Investigator: Bilal Omer

Study Overview: The committee reviewed a resubmission for a Phase I clinical study evaluating the safety, tolerability, and preliminary anti-tumor efficacy of CD70-targeted CAR T cells in patients with leukemia or lymphoma. The investigational product consists of autologous T cells genetically modified to express a chimeric antigen receptor (CAR) targeting CD70, a protein expressed on certain malignant cells. The CAR construct incorporates elements of human CD27, enabling both binding to CD70-expressing tumor cells and co-stimulation of T-cell activity to enhance persistence and anti-tumor function.

CD70.CAR T cells are manufactured in a GMP facility at Baylor College of Medicine using peripheral blood–derived T cells obtained from study participants. Cells are transduced ex vivo using a gammaretroviral vector and expanded in culture with cytokine support prior to infusion. The final product is transported to Houston Methodist Hospital for administration in accordance with institutional SOPs for cellular product handling.

Study participants will receive lymphodepleting conditioning chemotherapy (cyclophosphamide and fludarabine) prior to a single CAR T-cell infusion. A dose-escalation design will be used to evaluate multiple dose levels based on the number of transduced T cells, with initial enrollment limited to adult participants. Safety monitoring includes assessment for adverse effects and testing for replication-competent retrovirus per FDA recommendations.

Overall, the study aims to establish a safe dosing range and characterize the therapeutic potential of CD70-directed CAR T cells in targeting CD70-positive hematologic malignancies. To date, the study has not had any enrollments. Three dose levels and a possible dose level [-1] in case of unexpected toxicity at dose level 1 will be evaluated.

Dose Level [-1]	3×10^5 cells/kg
Dose Level 1 (starting dose level)	1×10^6 cells/kg
Dose Level 2	3×10^6 cells/kg
Dose Level 3	1×10^7 cells/kg

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-C-1
- **Containment Conditions to be implemented**: BSL2
- **Risk Assessment & Discussion**: The committee determined that the overall risk to personnel is low. The investigational cell and gene therapy product is manufactured at the BCM CAGT GMP facility (Feigin Tower), which is separate from HMH and operated by non-HMH personnel under controlled conditions. Replication-deficient retroviral vectors are used for T-cell transduction; all vector handling occurs within the GMP facility, and transduced cells are subsequently cultured, washed, and cryopreserved prior to release. At HMH, only the final cell product is received and administered. Product transfer, thawing,

and handling are performed by GMP trained personnel in accordance with established SOPs. Syringes used for transport are needle free, capped, and contained within biohazard packaging. In the event of an accidental spill, standard disinfectants are sufficient to inactivate the material. All healthcare personnel involved in administration are trained in biosafety practices and the potential hazards associated with recombinant cellular products. The risk of exposure to replication-deficient retroviral vectors is minimal, as viral particles are not expected to be present at significant levels and are unlikely to be shed by patients. Any potential exposure would be managed per institutional bloodborne pathogen protocols. Accidental exposures (e.g., needlestick) are considered low risk and would involve standard clinical follow-up; adverse effects associated with therapeutic dosing (e.g., CRS or neurotoxicity) are not expected in the context of incidental exposure. Overall, when appropriate handling procedures, training, and containment measures are followed, the risk to healthcare personnel and the environment is considered minimal.

- **Comments sent to the PI for clarification**:
    - **Summary of Proposed Research**: Please clarify if the area receiving, thawing, and transporting the manufactured product at HMH is the Ann Kimball & John W. Johnson Center for Cellular Therapeutics (KJCCT) facility
    - **Exposure Management Clinic/Hospital**: In the post exposure section please include the ED for after hours and reporting of the exposure to the HMRI Biosafety Safety Officer as well. Please clarify if KJCCT facility is the cGMP facility mentioned in the "what is the danger to care staff, public, and the environment section". If it is, then please clarify in the "specifically describe the work being done at TMHS" section that receiving, thawing, and transporting the manufactured product at HMH will be performed by the Ann Kimball & John W. Johnson Center for Cellular Therapeutics (KJCCT) facility.
- **The motion to approve the study after designated member review was seconded and passed.**

Motion: Approval after Designated Member Review

- Yes Votes: 12
- No Votes: 0
- Abstained: 0
- Recused: 0
- Absent: 0

IBC00002746
Title: CARMEN H-43516: Chimeric Antigen Receptor Treatment for Acute Myeloid Leukemia Expressing CLL-1
Principal Investigator: LaQuisa Hill

Study Overview: The committee reviewed a completed clinical study evaluating the safety and

feasibility of CLL-1–targeted CAR T-cell therapy in patients with relapsed or refractory CLL-1–positive acute myeloid leukemia (AML). The investigational product consisted of autologous T cells genetically modified to express a chimeric antigen receptor (CAR) targeting CLL-1.
Participants received lymphodepleting chemotherapy followed by a single infusion of CLL-1.CAR T cells under a dose-escalation design. Dose levels were defined based on the number of transduced T cells, consistent with prior CAR T-cell studies demonstrating acceptable safety profiles.

The cellular product was manufactured at the Baylor College of Medicine GMP facility using peripheral blood–derived T cells. Cells were transduced with a gammaretroviral vector, expanded ex vivo, and released for infusion upon meeting predefined quality and safety criteria, including testing for replication-competent retrovirus. Infusions were administered at Texas Children's Hospital and Houston Methodist Hospital.

The study is now closed to enrollment. A total of 40 subjects were procured for product manufacturing, with 14 subjects receiving treatment. Two patients remain in long-term follow-up. The therapy was generally well tolerated in adolescent and adult patients, including at the highest dose level (1×10^8 cells/m²), with a low incidence of severe cytokine release syndrome (CRS) and immune effector cell–associated neurotoxicity syndrome, and no evidence of increased toxicity at higher dose levels.

Preliminary findings suggest that lower levels of inflammatory markers pre- and post-infusion were associated with improved responses. CLL-1.CAR T-cell treatment induced morphologic remissions in a limited number of patients, enabling consolidative allogeneic hematopoietic stem cell transplantation in two cases; however, overall efficacy was considered modest.
Overall, the study supports an acceptable safety profile for CLL-1–directed CAR T cells, with ongoing follow-up to further assess durability of response and clinical outcomes.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: NIH Guidelines are not applicable, as active treatment is no longer being administered. However, per HMH policy, the protocol will remain open until the clinical study is formally closed.
- **Containment Conditions to be implemented**: BSL2
- **Risk Assessment & Discussion**: There are no associated risks to staff, public or the environment given that treatment has concluded, and enrollment is closed.
- **Comments sent to the PI for clarification**: None
- **The motion to approve the study as seconded and passed.**

Motion: Approved

- Yes Votes: 12
- No Votes: 0
- Abstained: 0
- Recused: 0

- Absent: 0

IBC00002758
Title: Synthetic RNA and plasmid DNA to express reporter proteins in mammalian cell culture to study regulatory effects of UTRs.
Principal Investigator: Ewan McRae

Study Overview: The investigator proposes to further develop and evaluate a HuR-responsive RNA regulatory platform using recombinant DNA and RNA constructs. The work includes design and testing of IRES- and UTR-based regulatory elements to control protein translation in mammalian cell systems.
Key experimental activities include plasmid construction and propagation in *E. coli* (BL21), purification of plasmid DNA and RNA, and transfection of plasmid DNA and in vitro–transcribed RNA into mammalian cell lines (HEK, HeLa, MDA-MB-231, MCF-7, HUVEC, and HAEC). Functional outcomes will be assessed through reporter assays (fluorescence, qPCR, and western blot).
Additional procedures include protein expression and purification, RNA/protein interaction studies, and structural analysis of purified complexes using cryo-EM. All work involves recombinant or synthetic nucleic acids handled under standard BSL-2 laboratory conditions.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-F
- **Containment Conditions to be implemented**: BSL2
- **Risk Assessment & Discussion**: The committee reviewed the proposed activities involving HEK, HeLa, MDA-MB-231, MCF-7, HUVEC, and HAEC cell lines and determined that the associated risks to personnel and the environment are minimal when conducted under BSL-2 conditions. Potential hazards include exposure to human-derived materials and the generation of aerosols; however, these risks are adequately mitigated through adherence to standard BSL-2 practices, including the use of appropriate PPE, certified BSCs, and proper decontamination and disposal of waste. The use of purified in vitro transcribed RNA and plasmid DNA constructs was also assessed and found to pose negligible risk under the proposed conditions. These materials are noninfectious, incapable of replication outside of suitable host systems, and are not expected to present a hazard via incidental exposure. Standard laboratory practices and containment measures will be employed to minimize the potential for contamination, accidental exposure, and environmental release.
- **Comments sent to the PI for clarification**:
    - **Study Staff:** Please describe training acronym for WHMIS for Dr. McRae
    - **Study Progress:** Please provide at least the PMID of the "major publication" discussed in the summary. Acronyms should be clearly defined when used initially, such as HuR, IRES, and UTR.
    - **Hazard Identification:** "cell culture" should be updated to "human cell lines" or something more descriptive

- **The motion to approve the study after administrative review was seconded and passed.**

Motion: Approval after Administrative Review

- Yes Votes: 12
- No Votes: 0
- Abstained: 0
- Recused: 0
- Absent: 0

IBC00002774
Title: Plasmid-based Expression of NMDA Receptors in HEK293T to Investigate Autoantibody Function in Cognitive Decline
Principal Investigator: Sonia Villapol

Study Overview: The investigators propose to study the N-methyl-D-aspartate (NMDA) receptor, a key neuronal protein involved in synaptic signaling and communication, which has been implicated in multiple neurological and psychiatric disorders. The study will utilize RNA sequencing data to identify and reconstruct potentially novel NMDA receptor fragments. These constructs will be expressed in HEK293 cells via plasmid transfection to evaluate the functionality of the identified fragments, as well as their effects on receptor structure and behavior in a controlled in vitro system.

In parallel, the study will assess the interaction between NMDA receptors and antibodies present in cerebrospinal fluid (CSF) obtained from patients with schizophrenia. These findings will be compared to CSF samples from patients diagnosed with anti-NMDA receptor encephalitis (NMDARE). The objective is to determine whether NMDA receptor autoantibodies targeting novel receptor fragments may account for previously reported low levels of such antibodies in schizophrenia, and to evaluate differences in binding characteristics relative to NMDARE. These comparisons are intended to provide insight into potential differences in disease mechanisms.
Experimental approaches include plasmid construction, transfection of HEK293 cells, live-cell fluorescence imaging, and fluorescence resonance energy transfer analysis to characterize NMDA receptor structure and antibody binding interactions.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-D-1,2
- **Containment Conditions to be implemented**: BSL2
- **Risk Assessment & Discussion**: The committee determined that the proposed use of HEK293T cells and recombinant plasmid constructs presents minimal risk to personnel and the environment when conducted under BSL-2 conditions. HEK293T cells are human-derived and may pose low risk through accidental ingestion, inhalation, or mucous membrane exposure; however, these risks are effectively mitigated by standard BSL-2 practices, including PPE and use of biosafety cabinets. The pCMV-hGRIN plasmid is a

non-viral, noninfectious construct that is not replication-competent and is not expected to cause disease. Primary risks are associated with handling recombinant DNA in human cell cultures, which are minimized through appropriate containment, disinfection, and biohazardous waste disposal. Overall, environmental and personnel risks are considered low.

- **Comments sent to the PI for clarification**:
    - **Exposure Management - Laboratory Facility:** There is no BSC in R11-436. Please update this to a room that contains a BSC.
- **The motion to approve the study after designated member review was seconded and passed.**

Motion: Approval after Designated Member Review

- Yes Votes: 12
- No Votes: 0
- Abstained: 0
- Recused: 0
- Absent: 0

IBC00002682
Title: Research using recombinant/synthetic nucleic acid (plasmids, viral vectors) to express cargo (reporter proteins, oncogenes) in murine & human cell lines to study tumor immune microenvironment & therapeutic response
Principal Investigator: Keith Chan

Study Overview: The proposed research is a broad tumor immunology and tumor microenvironment program using recombinant and synthetic nucleic acids to modify murine and human cancer cell lines. The overall goal is to study how extracellular matrix components, particularly collagen and collagen-receptor signaling pathways, regulate tumor progression, metastasis, immune interactions, and therapeutic response. The work includes both in vitro and in vivo studies using human and murine cancer models, including bladder, pancreatic, colon, and breast cancer cell lines. The protocol includes standard in vitro procedures such as cell culture, plasmid transfection, lentiviral or retroviral transduction, RNAi or CRISPR-based gene modulation, PCR/qPCR, western blotting, flow cytometry, immunofluorescence, and immunohistochemistry. The in vivo component includes mouse tumor engraftment, subcutaneous and intravenous tumor cell administration, intracardiac injection for selected murine tumor models, diphtheria toxin administration, blood collection, necropsy, and tissue collection. These procedures are linked to approved IACUC protocols and conventional rodent housing.

The scope is complex but the major biosafety categories are recognized, and the application includes containment, PPE, waste management, spill management, animal oversight, hazardous agent review, and personnel training

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-D-1, 2, & 4
- **Containment Conditions to be implemented**: BSL2
- **Risk Assessment & Discussion**: The study involves Risk Group 2 materials, including plasmid and viral vector systems, replication-deficient lentiviral/retroviral vectors, RNAi reagents, and both human and murine cancer cell lines (wild-type and genetically modified), as well as diphtheria toxin. Work with recombinant nucleic acids, viral vectors, and human-derived materials will be conducted under BSL-2 containment, while animal activities will be performed under ABSL-1 conditions with appropriate oversight. The committee determined that overall risk is low when appropriate controls are in place. Lentiviral systems are replication-incompetent, though a low theoretical risk of recombination persists. Additional hazards include potential oncogenicity, exposure to recombinant materials, transgene effects, and risks associated with human-derived cell lines (e.g., adventitious agents). Exposure may occur through inoculation, mucous membrane contact, or aerosol generation. These risks are mitigated through established biosafety measures, including use of certified biosafety cabinets, negative pressure rooms, appropriate PPE, personnel training, and standard decontamination and biohazardous waste disposal procedures.

- **The motion to approve the study was seconded and passed.**

Motion: Approved

- Yes Votes: 12
- No Votes: 0
- Abstained: 0
- Recused: 0
- Absent: 0

ADJOURNMENT

The meeting adjourned at 11:16 am
