Houston Methodist Research Institute IBC Meeting Minutes

7/9/2026

Meeting Time Records

Meeting start time: 10:46 am

Meeting end time: 12:02 pm

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, in person
Vicente Zuno, BS, RBP	Member	Biosafety Officer, Affiliated		Yes, in person
Joan E. Nichols, PhD	Member	Scientific, Affiliated		Yes, in person
Chas Gray, RPh	Member	Scientific, Affiliated		Yes, virtually
Tanya Herzog, DVM	Member	Animal Expert, Affiliated		Yes, in person
Edward Graviss, PhD	Member	Scientific, Affiliated		No
Wenhao Chen, PhD	Member	Scientific, Affiliated		Yes, virtually
Daniel Kiss, PhD	Member	Scientific, Affiliated		Yes, in person
Tamara Steele, BS	Member	Community member, Non-affiliated		Yes, virtually
Jillian Chahal, MPH, CSP	Member	Community member, Non-affiliated		No
Francesca Taraballi, PhD	Member	Scientific, Affiliated		No
Jiangyong Shao, MS	Member	Scientific, Affiliated		Yes, in person
Nagendran Tharmalingam, PhD	Member	Laboratory representative, Affiliated		Yes, in person
Anjana Tiwari, PhD	Member	Laboratory representative, Affiliated		No
Dimitrios Wagner, MD PhD	Member	Human gene transfer expert, Non-affiliated		Yes, virtually
Gretchen	Member	Safety		Yes, in person

Gotlieb, MS		representative, 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, in person
Enid Burns	Ex officio, Central Laboratory Operations Safety Representative	Yes, in person
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	Yes, virtually
Leon Brown, MS	Ex officio, HMRI Radiation safety officer	No
Wanda Quezada, CIP	Ex officio, Director Regulatory Oversight	No
Don Sibley, PhD	Consultant, Expert Reviewer	Yes, virtually

QUORUM INFORMATION

Number of IBC members on the roster: 16

Number required for quorum: 9

All members attending via Microsoft Teams received all pertinent materials before the meeting and were able to actively and equally participate in all discussions

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
Leola Griffin, Analyst QI & Education
Thao Nguyen, Guest

ATTENDANCE STATUS AND VOTING KEY	
ABSTAIN:	Present for the vote and 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 regular 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 hybrid meeting via Microsoft Teams on July 9, 2026. The meeting was called to order at 10:46 a.m., with 12 members participating, exceeding the quorum requirement of 9 members.

REPORTS

BSO Report:

The BSO reported no biosafety incidents. On June 25, the BSO received a request for a Letter of Compliance to be submitted on behalf of an HMRI PI to the Multiple Myeloma Research Foundation. The request was to verify the PI's compliance with institutional biosafety requirements. The letter was provided.

EDUCATION

None provided

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

- 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 June 4, 2026 were reviewed. A motion to approve was made and seconded, and the minutes were approved.

Motion: Approved

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

AGENDA ITEMS

IBC NEW APPLICATIONS

IBC00002813
Title: Research using recombinant nucleic acid to express reporter proteins and genes of interest in cell lines and animal models to study cancer biology
Principal Investigator: Wenliang Li

Study Overview: This protocol was submitted by a new principal investigator. The PI proposes to investigate the molecular mechanisms of prostate cancer progression and therapeutic resistance using human and mouse prostate cancer cell lines and genetically engineered mouse models. Recombinant and synthetic nucleic acid technologies, including plasmid-based gene modification and replication-defective lentiviral and retroviral vectors, will be used to overexpress, silence, delete, or otherwise modify genes of interest.
Genetically modified cell lines expressing reporter genes, recombinant proteins, or gene-silencing constructs will be generated and evaluated using standard molecular and cellular assays. Modified cells may also be implanted into mice to study tumor growth, metastasis, treatment response, and cancer-related mechanisms. Genetically engineered mouse models with prostate cancer-associated genetic alterations will also be utilized.
All recombinant DNA and viral vector work will be conducted under BSL-2 containment in accordance with institutional biosafety policies and NIH Guidelines. Exposure risks will be mitigated with biological safety cabinets, appropriate personal protective equipment, laboratory training, and established standard operating procedures. No replication-competent viral agents, human gene transfer studies, or clinical administration of recombinant materials are proposed under this protocol.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-D-1 & 4
- **Containment Conditions to be implemented**: BSL-2
- **Risk Assessment & Discussion**: The IBC reviewed the proposed use of human and

murine cancer cell lines, including recombinant cell lines generated using lentiviral and retroviral vectors. Potential routes of exposure include accidental inoculation, mucosal membrane contact, and inhalation of aerosols generated during laboratory procedures. Human cancer cell lines are considered potentially infectious because they may harbor adventitious human pathogens, including bloodborne pathogens, and may remain viable outside the body under suitable conditions. Similarly, recombinant murine cell lines containing lentiviral or retroviral vectors present a risk of transducing mammalian cells following occupational exposure. Lentiviral vectors, which are often pseudotyped to broaden host cell tropism, can infect a wide range of dividing and non-dividing mammalian cells. Although replication-deficient viral vectors are generally considered low risk when properly designed and handled, their ability to infect mammalian cells warrants BSL-2 containment and work practices. The IBC determined that the risks associated with these materials can be effectively mitigated through BSL-2 practices, including the use of appropriate PPE, biological safety cabinets for aerosol-generating procedures, sharps precautions, and routine decontamination with disinfectants effective against enveloped viruses. Based on the proposed activities and controls, the work presents a moderate occupational risk that is appropriately managed under BSL-2 containment.

- **Comments sent to the PI for clarification**:
    - **Section Hazard Identification - Agent: DNA lentiviral expression and RNAi Vectors -** Please change "in standard E. coli strains" to " in standard K-12 type E. coli strains ..." K-12 type E. coli have a well-defined safety profile and as such, are preferred for these uses. **Agent: Recombinant DNA (expression plasmids)** - K-12 type E. coli have a well-defined safety profile and as such, are preferred for these uses.- Agent: Recombinant DNA (expression plasmids) - Please change "in common E. coli strains" to " in common K-12 type E. coli strains ..." K-12 type E. coli have a well-defined safety profile and as such, are preferred for these uses.
    - **Section Summary of Proposed Research** - The transport SOP needs to be customized to remove the red generic text. It also needs the PI's signature. Please reach out to the biological safety officer (BSO), Vicente Zuno, if further assistance is needed.
    - **Section Plasmid Studies**- DNA lentiviral expression and RNAi Vectors: Change the risk group of the host to Risk group 2
    - **Exposure Management Facilities** - The room pressure in Smith 8-074 will be confirmed by the BSO. Please contact the BSO, Vicente Zuno, for confirmation.

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

Motion: Approval after Administrative Member Review

- Yes votes: 12

- No votes: 0
- Abstained: 0
- Recused: 0
- Absent: 0

IBC00002845
Title: IBC for Hegde Lab: Recombinant DNA, Viral Vector (AAV/Lentivirus), and Animal Studies for DNA Repair and Neurodegeneration Research
Principal Investigator: Muralidhar Hegde

Study Overview: The research seeks to investigate mechanisms of DNA repair, neurodegeneration, and therapeutic intervention using recombinant DNA technologies, viral vectors, mammalian cell culture systems, patient-derived iPSC neurons, and transgenic mouse models. Studies will employ molecular, cellular, genomic, and biochemical approaches to evaluate pathways involved in DNA damage and repair, mitochondrial dysfunction, neuroinflammation, protein aggregation, and neuronal degeneration. The protocol includes the use of recombinant plasmids, CRISPR/Cas9 genome editing, lentiviral vectors, and adeno-associated viral (AAV) vectors to modulate gene expression and generate disease-relevant cellular and animal models. Lentiviral vectors will be produced using third-generation packaging systems and utilized for gene expression and genome-editing studies. Recombinant AAV vectors expressing human PARG will be administered to mice via intrathecal injection to assess effects on DNA repair, mitochondrial function, neurodegeneration, and related disease outcomes.
Experimental endpoints include molecular, cellular, histological, and behavioral analyses to evaluate therapeutic efficacy and disease mechanisms.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-D-1, 3 & 4
- **Containment Conditions to be implemented**: BSL-2
- **Risk Assessment & Discussion**: The proposed research involves the use of recombinant lentiviral vectors, recombinant AAV vectors, recombinant DNA plasmids, lentivirus-transduced cell lines, and HEK293 packaging cells. The primary biosafety concerns include accidental occupational exposure, the theoretical generation of replication-competent lentivirus (RCL), and insertional mutagenesis resulting from integration of lentiviral vector sequences into host cell genomes. The proposed work presents a moderate occupational risk primarily associated with accidental exposure to recombinant viral vectors and genetically modified cell lines. The use of replication-deficient third-generation lentiviral systems, recombinant AAV vectors, established BSL-2 containment practices, engineering controls, PPE, and approved decontamination procedures adequately minimizes the risk to laboratory personnel and the environment. Therefore, the proposed activities are appropriate for conduct at BSL-2.
- **Comments sent to the PI for clarification**:
    - **Funding Information -** Marked “internally funded” with grant fields &

sponsor/OSP ID blank, but the work is described as NIH-funded. List the actual NIH award(s) & sponsored projects ID or provide clarification

- **Hazard Identification** - HEK293 vs HEK293T. Lentiviral packaging requires HEK293T; standardize naming across agent tables and narrative. Make this change in the hazard identification section to harmonize in all sections. AAV constructs- 3 conflicting descriptions were provided- AAV-CMV-PARG vs AAV-PHP. eB-PARG vs AAV-PARG99 (neuron-specific). Provide one consistent transgene/promoter/capsid description throughout. Please harmonize throughout the protocol- AAV is missing from the exposure laboratory section. Since it is handled in the lab, please select "laboratory areas" in the hazard identification.
- **Summary of Proposed Research** - Under question #1, Please delete the duplicated paragraph. Human iPSCs /primary neurons/SH-SY5Y are also referenced throughout the protocol. Please clarify whether any of these cell types are genetically modified using recombinant DNA. If so, they should be included as hazards in the Hazard Identification section. If these cells are not recombinant, please add them to the HSC protocol, as previously requested during pre-review. Per RE60, all human cell lines, including established human cell lines, require HSC review.
- **Exposure Management - Animal Areas** - 24/7 contact numbers differ between this section and the former section Please reconcile.
- **Staff Identification** - The title understates the scope. Please consider broadening to include AAV, lentivirus, and animal work. Staff Member training status states "will receive" training; Section 23.0 shows it completed. Update accordingly.
- **Risk Assessment** - Please update the response to "Yes" to align with Section III-D-4 of the NIH Guidelines, as AAV vectors will be administered to animals as part of this study.

- **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: Chinnaswamy Jagannath

Study Overview: Ongoing studies in this renewal propose to evaluate replication-deficient recombinant bovine adenoviral (BAdV) vaccine vectors expressing *Mycobacterium tuberculosis* antigens (Ag85B, ESAT6, and CFP10) and a C5 adjuvant peptide. Newly developed BAdV vaccine constructs will be received from Purdue University and tested in mouse models. The study also includes the use of synthetic mRNA vaccine constructs encoding *M. tuberculosis* antigens (Ag85A, Ag85B, Ag85C, TB10.4, ESAT6, and CFP10) and selected HIV-1 antigens (GP160, GP120, Vpr, and Tat), formulated in liposomes for vaccination studies.
Research activities include in vitro infection of mouse macrophages and dendritic cells with replication-deficient bovine and human adenoviral vectors, gene expression analyses, siRNA-mediated gene knockdown studies, and vaccination/challenge experiments in mice. Some experiments involve co-infection with *Mycobacterium tuberculosis* and HIV and will be conducted under approved BSL-3/ABSL-3 containment conditions.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-D-1, 2 & 4
- **Containment Conditions to be implemented**: BSL-3
- **Risk Assessment & Discussion**: The Committee reviewed the proposed use of nonreplicating, noninfectious mRNA vaccine constructs delivered by lipid nanoparticles (LNPs). The mRNA products are not capable of replication, transmission, or genomic integration and therefore do not pose an infectious disease risk. Primary biosafety concerns relate to accidental occupational exposure through needlestick injuries, mucous membrane contact, or skin exposure, which could result in localized or systemic inflammatory reactions associated with the bioactive mRNA or LNP delivery system. Appropriate containment practices, PPE, sharps precautions, personnel training, and exposure response procedures were determined to adequately mitigate these risks. The Committee concluded that the overall biosafety risk is low.
- **Comments sent to the PI for clarification**:
    - **Summary of Proposed Research**- How are the harvested tissue samples fixed for flow cytometry? What is the fixative used and process? Please include this information. Please also add a statement indicating that all work will be conducted in accordance with the most current approved BSL-3 procedures, SOPs, and laboratory manual since it is reviewed and updated annually. This is strongly recommended to ensure that the practices being followed remain current and consistent with the latest ABSL-3 procedures and manual requirements.
    - **Training** - Please confirm that the lab-specific training includes training regarding HIV. For assistance, please contact the BSO, Vicente Zuno, with any questions.
    - **Exposure Management** - Staff needs to be aware of the 72-hour window for PEP treatment in case of HIV exposure. Please contact the BSO, Vicente Zuno, with any questions.
- **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

IBC00002856
Title: IBC for Research using CRISPR encapsulated in LNP in in vitro and in vivo traumatic brain injury models
Principal Investigator: Sonia Villapol

Study Overview: This study evaluates the use of lipid nanoparticles (LNPs) and liposomes to deliver CRISPR components, mRNA, siRNA, or shRNA to macrophages for targeted modulation of genes involved in inflammation, immune regulation, and disease progression. Unlike traditional CRISPR approaches that use plasmid DNA, the proposed system utilizes CRISPR nuclease proteins or mRNA encoding CRISPR nucleases (e.g., Cas9, Cas13, Cpf1) together with guide RNAs, thereby avoiding risks associated with plasmid-based expression such as genomic integration and prolonged CRISPR activity.
The research includes: (1) formulation and characterization of CRISPR-loaded lipid nanoparticles; (2) biodistribution studies in healthy and traumatic brain injury mouse models; (3) evaluation of on-target and off-target gene editing, macrophage polarization, and cytokine responses in vitro; and (4) assessment of the therapeutic effects of CRISPR-LNP administration in a traumatic brain injury model. Potential risks are associated with exposure to bioactive nucleic acid formulations and lipid nanoparticle carriers, which may induce local or systemic inflammatory responses. No viral vectors or replication-competent agents are used as part of the CRISPR delivery system.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-D-4
- **Containment Conditions to be implemented**: BSL-2
- **Risk Assessment & Discussion**: The Committee discussed the proposed use of lipid nanoparticle (LNP) and liposome-based delivery systems to introduce CRISPR components, mRNA, siRNA, and shRNA into macrophages for gene-editing and gene-silencing studies. Members noted that the CRISPR system will be delivered as nuclease proteins or mRNA encoding CRISPR nucleases together with guide RNAs, rather than through plasmid DNA or viral vectors. The absence of viral vectors and plasmid-based expression reduces concerns regarding vector mobilization, replication competence, genomic integration, and prolonged transgene expression. The primary biosafety risks identified were associated with the handling of recombinant and synthetic nucleic acid molecules, potential off-

target gene-editing effects in experimental systems, and accidental occupational exposure to bioactive nucleic acid formulations. The Committee further discussed potential inflammatory and reactogenic effects associated with lipid nanoparticle formulations, including the possibility of local or systemic immune activation following accidental inoculation or exposure. Appropriate engineering controls, sharps precautions, personal protective equipment, and exposure response procedures were considered adequate to mitigate these risks. Animal studies involving administration of CRISPR-LNP formulations to mouse models, including traumatic brain injury models, were reviewed. The Committee noted that the proposed materials are noninfectious and replication-deficient and do not pose a risk of environmental spread or transmission. Standard ABSL-1/ABSL-2 practices, as applicable to the animal procedures and materials used, were determined to be appropriate. Overall, the Committee concluded that the research presents a low to moderate biosafety risk primarily related to the manipulation and delivery of recombinant nucleic acids and bioactive lipid nanoparticle formulations. With the proposed containment practices, training requirements, and institutional biosafety procedures in place, the risks to personnel, the community, and the environment were considered adequately controlled.

- **Comments sent to the PI for clarification**:
    - **Staff Identification -** Ensure that all staff have years of experience listed. Please also update Dr. Villapol's years of experience to accurately reflect her tenure at the institution, as she has been affiliated with Houston Methodist for more than five years.
    - **Hazard Identification** - The 21 genes and proteins listed in this protocol represent major signaling nodes in immunology, metabolism (mTOR, RICTOR, RPTOR), and cancer biology. Together, they regulate pathways central to macrophage polarization (e.g., M1/M2 phenotypes) (MAPK9, IRF5, SOCS1, SOCS2, NTN1, HMGB), cell proliferation, angiogenesis (Notch3 and DII4), and immune system evasion but all genes are not listed and the protocol states "etc". Under the NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules, researchers conducting gene editing studies must list all targeted genes. This is required to evaluate the biosafety and off-target risks of the LNP-CRISPR material. Please review and revise the protocol to ensure that the broad language such as "etc." is removed.
    - **Summary of Proposed Research**, - Remove the terminated IACUC protocols and update with the appropriate IACUC protocols- Are the macrophages used in this study of human origin? Research involving mammalian cells or in vivo administration to animal models should typically be conducted at BSL-1 with standard universal precautions. While LNP-siRNA itself is often a BSL-1 agent, the containment level may be elevated to BSL-2 if the study involves Risk Group 2 organisms, human pathogens, or if it targets human-derived tissues or cells. Please state if these are human cells or not. While LNP platforms have an established safety profile for delivering transient RNA and therapeutics,

cationic ionizable lipid nanoparticles can still trigger localized reactogenicity (swelling, redness) or systemic inflammatory responses in animals and in clinical settings. Please state this in the proposal and remove the statement regarding lack of toxicity of the LNPs. The ionizable lipids in LNPs can inadvertently act as innate immune stimulators, activating Toll-like receptor 4 (TLR4) pathways and the NLRP3 inflammasome.

- **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

IBC00002831
Title: IBC for RNA vaccine production (and testing in tissue culture) targeting Risk Group 4 agents in the Kiss Lab
Principal Investigator: Daniel Kiss

Prior to discussion, Daniel Kiss exited the meeting room due to a conflict of interest as the PI of the protocol.

Study Overview: This study involves the design and generation of linear and circular RNA (circRNA) vaccine candidates encoding selected pathogen-derived antigens. Researchers will use standard molecular cloning techniques, including restriction enzyme cloning, Gibson Assembly, Golden Gate cloning, and site-directed mutagenesis, to create plasmid templates for RNA production. All cloning activities will be conducted in K-12 derivative E. coli strains.
Following in vitro transcription, the resulting RNA constructs will be introduced into mammalian cell cultures using commercially available transfection reagents. Expression of the encoded antigens will be evaluated in vitro through standard molecular and cellular assays, including western blotting, ELISA, microscopy, and related protein detection methods. Transfected cells will be harvested 24-48 hours following transfection for analysis.
The RNA constructs may encode individual proteins derived from known pathogens; however, no infectious agents, replication-competent organisms, or complete pathogen genomes will be generated or used. The encoded proteins are expressed as isolated recombinant antigens and are intended for vaccine development research. Following in vitro characterization and confirmation of antigen expression, RNA vaccine candidates may be provided to collaborating investigators for evaluation in animal models under

separately approved protocols.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-D-2
- **Containment Conditions to be implemented**: BSL-2
- **Risk Assessment & Discussion**: The Committee discussed several items requiring clarification to ensure an adequate biosafety risk assessment under the NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules. Members noted that the protocol is written as a broad platform application and questioned whether sufficient information has been provided regarding the specific nucleic acid constructs and expressed proteins. The Committee also discussed the importance of clearly identifying the agent of interest. The Committee further noted that, while the parent virus is classified as Risk Group 4, the materials proposed for use in this protocol are recombinant nucleic acids and noninfectious gene products and should not be categorized as RG4 agents. Hazard descriptions should be revised to accurately reflect the risk classification of the materials being handled- in this case RG2. Additional discussion focused on the cell systems used for antigen expression. Finally, members identified several protocol sections requiring clarification and revised language. Specifically, the description of RNA-mediated antigen expression should be corrected to indicate that the in vitro-transcribed RNA directs cellular production of the antigen rather than delivering the antigen itself. The Committee also requested clarification regarding verification and maintenance of K-12 E. coli strains used for cloning activities. In addition, statements suggesting that risks are "eliminated" through laboratory controls should be revised to state that risks are "reduced" or "mitigated," consistent with accepted biosafety principles. Overall, the Committee concluded that additional information and revisions are needed to support a complete assessment of the proposed recombinant nucleic acid work and associated laboratory hazards.
- **Comments sent to the PI for clarification**:
    - **Summary of Proposed Research** - Question #2: The following statement appears unclear and may contain a typographical error: "Once in vitro transcribed, the resulting RNAs will be used to deliver the antigens for vaccine candidates." The understanding is that the in vitro-transcribed RNAs would direct cellular production of the target antigens, rather than directly deliver the antigens themselves. Please clarify or revise this statement to accurately describe the intended process. Question #2: Confirm K-12 strain verification practices: The application relies on K-12 derivative E. coli as a nonpathogenic host system. Please describe how strain identity, source, and stock integrity are verified and maintained.
    - **Exposure Management – Laboratory:** Regarding the statement "Together, the safety-conscious design elements eliminate the risks of working with these plasmid DNAs in a BSL-2 setting." Risk cannot be eliminated through engineering controls, procedures, and PPE. Please edit

to replace "eliminate" with "mitigate" or "reduce".

- **Hazard Identification** - Under agents, none of the materials are RG4. They are RG2. Agents listed as RG4 must be worked with at BSL-4. State in the description that the glycoprotein is from RG4 agent Bundibugyo ebolavirus.- Please identify the source of the sequence.

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

Motion: Approval after Designated Member Review

- Yes Votes: 11
- No Votes: 0
- Abstained: 0
- Recused: 1, Daniel Kiss
- Absent: 0

IBC00002824
Title: BESTA: Research using retroviral vectors to generate allogeneic CD30 CAR-expressing EBV-specific T cells for treatment of relapsed or refractory CD30-positive lymphomas
Principal Investigator: Carlos Ramos

Study Overview: Participants with relapsed or refractory CD30-positive lymphoma will receive donor-derived Epstein-Barr virus-specific T cells (EBVSTs) genetically modified using a replication-deficient retroviral vector to express a CD30-directed chimeric antigen receptor (CD30.CAR). The study includes dose escalation and expansion phases evaluating four dose levels ranging from 4×10^7 to 8×10^8 CD30.CAR-EBVST cells administered following lymphodepleting chemotherapy. Participants are monitored for safety, persistence of the modified cells, and clinical response, with particular attention to adverse events associated with CAR T-cell therapy, including cytokine release syndrome and neurotoxicity. The study may enroll up to 96 participants.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-C-1
- **Containment Conditions to be implemented**: BSL-2
- **Risk Assessment & Discussion**: The Committee reviewed the use of allogeneic EBV-specific T cells genetically modified with a replication-defective retroviral vector to express a CD30-directed CAR for treatment of relapsed or refractory CD30-positive lymphoma. Primary biosafety considerations include the use of recombinant retroviral vectors during cell manufacturing, potential occupational exposure to transduced cells, and the theoretical risk of replication-competent retrovirus generation or insertional mutagenesis. Members noted that the cell product is manufactured under GMP conditions with appropriate regulatory testing,

including monitoring replication-competent retrovirus. The final product does not contain replication-competent viral agents and poses minimal risk for environmental release or secondary transmission. Standard precautions for handling human-derived materials and genetically modified cells were deemed appropriate. The Committee noted that dose escalation has been completed, and participants are currently receiving Dose Level 4 in the cohort expansion phase. Based on the information provided and existing containment measures, the Committee concluded that biosafety risks remain adequately mitigated and acceptable for continuation of the study.

- **Comments sent to the PI for clarification**:
    - **Human Clinical Trials** - These questions apply where HMRI is the initiating site. HMRI is a treatment site of a BCM trial and the product is not first-in-human (prior CD30 CAR T safety data cited). Confirm answers are consistent with that.
    - **Summary of Proposed Research** - Lay summary. This is a single technical paragraph; the form asks for ~2 lay-term paragraphs and doesn't plainly state the allogeneic/donor-derived nature. Add a short lay paragraph. Please address the typo error - correct "CD.30 CAR-EBVT" to CD30.CAR-EBVST.
    - **Staff Identification** - The Study Primary Contact) and Coordinator appear in the Section 23 credentials list but not in the Section 2 staff table. Add them if they handle the product/biological agents or confirm they are administrative staff only. For PI, the "Responsibilities" column contains training text instead of his role, and his "Position" reads "Co-Investigator" though he is the PI. Please correct both.
    - **Exposure Management** - Clinic/Hospital - Patient care area incomplete. Add the BMT outpatient clinics.
    - **Viral Studies** - Autologous vs. allogeneic contradiction. Title and product are allogeneic (T cells from healthy-volunteer donors), but the description says "patients will receive autologous ATL…" and refers to "autologous ATL" twice. Correct the carried-over template language to reflect the allogeneic, donor-derived EBVSTs. No vector / CAR construct map is attached. Consider attaching the SFG.CD30.28 CAR map
- **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

IBC00002825
Title: MAGENTA: Phase I Study of CD5.CAR T Cells in Patients with Relapsed/Refractory T-Cell Malignancies
Principal Investigator: LaQuisa Hill

Study Overview: This Phase I clinical trial evaluates the safety and preliminary antitumor activity of CD5.CAR T-cell therapy in patients with relapsed or refractory T-cell malignancies. The investigational product consists of autologous T cells or T cells obtained from the patient's original hematopoietic stem cell transplant donor that are genetically modified to express a CD5-directed chimeric antigen receptor (CAR). The CD5.CAR transgene is introduced using a replication-incompetent gammaretroviral vector derived from the SFG retroviral backbone.
Following ex vivo activation, genetic modification, and expansion, the CAR T-cell product is administered by intravenous infusion after lymphodepleting chemotherapy. The study was designed to evaluate three dose levels: 1×10^7 cells/m², 5×10^7 cells/m², and 1×10^8 cells/m². Participants are monitored for safety, persistence of the modified cells, and antitumor response following treatment.
The Autologous Arm closed in September 2025 after meeting target accrual, and the Allogeneic Arm remains open, with participants currently receiving Dose Level 1 (1×10^7 cells/m²) following lymphodepletion. The study includes long-term follow-up to assess safety and persistence of genetically modified T cells.

Training: All staff members have completed training.

- **Applicable NIH Guidelines**: Section III-C-1
- **Containment Conditions to be implemented**: BSL-2
- **Risk Assessment & Discussion**: The Committee reviewed the biosafety risks associated with administration of CD5.CAR T cells generated using a replication-incompetent gammaretroviral vector. Members noted that genetic modification of T cells occurs in a controlled GMP manufacturing environment by trained personnel using established containment procedures. The final cellular product is cryopreserved, transported, and administered by personnel trained in handling genetically modified cell products and spill response procedures. The primary occupational risk is accidental exposure to genetically modified cells through spills or direct contact during handling and administration. Appropriate engineering controls, personnel training, use of personal protective equipment, and institutional spill response procedures were considered adequate to mitigate these risks. In the event of a spill, approved disinfectants are available for decontamination. The Committee also discussed the potential for shedding of vector sequences or genetically modified cells following infusion. Because the gammaretroviral vector is replication-incompetent and incorporated into the final cell product, the likelihood of environmental release or transmission through patient secretions is considered extremely low. Standard precautions for handling patients receiving genetically modified cellular therapies were deemed appropriate. Overall, the Committee concluded that the study presents a low biosafety risk and that existing

containment, training, and exposure control measures adequately mitigate risks to healthcare personnel, the public, and the environment.

- **Comments sent to the PI for clarification**: None
- **The motion to approve was seconded and passed.**

Motion: Approved

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

IBC00002803
Title: Research using lentiviral and retroviral vectors to express reporter genes and CAR constructs in human and mouse cancer cell lines and T cells in vitro and NSG mouse models to study tumorigenesis and therapeutic response
Principal Investigator: Yulin Li

Study Overview: This study investigates mechanisms of cancer treatment resistance and tumor recurrence using both chemotherapy- and immunotherapy-based approaches. Human cancer cell lines, including MIA PaCa-2 and MDA-MB-231, will be genetically modified using replication-deficient lentiviral and retroviral vectors to express reporter genes (luciferase and GFP) for in vitro studies and in vivo tumor monitoring. Genetically modified tumor cells will be implanted into NSG mice to evaluate tumor growth, therapeutic response, and residual disease following treatment with approved chemotherapeutic agents.
In addition, mouse lymphoma cells derived from IgH-MYC mice will be transduced with a gammaretroviral vector to express Suv420h1 and evaluate the impact of this genetic modification on tumor development and response to anticancer therapies in vivo.
The study will also generate genetically engineered CAR T cells through lentiviral transduction of T cells with constructs expressing CD70- and CD33-targeted chimeric antigen receptors (CARs). These CAR T cells will be evaluated in vitro and in animal models for their ability to target and eliminate tumor cells. Non-modified NB4 leukemia cells will be used exclusively in vitro drug sensitivity studies and will not be genetically altered or used in animal experiments.

Training: All staff members have completed training.

- **Applicable NIH Guidelines**: Section III-D-1, 2, & 4, III-E-3
- **Containment Conditions to be implemented**: BSL-2
- **Risk Assessment & Discussion**: The committee reviewed the proposed use of lentiviral and retroviral vectors to genetically modify human cancer cell lines,

mouse lymphoma cells, and T cells for in vitro and in vivo studies. The protocol references multiple recombinant and synthetic nucleic acid molecules, including third-generation lentiviral packaging plasmids, pCL10A retroviral packaging plasmid, luciferase and GFP reporter constructs, CD33 and CD70 CAR constructs, and Suv420h1 expression constructs; however, these materials are not clearly identified within the Hazard Identification section. The committee requested that all recombinant and synthetic nucleic acid components be fully described to ensure an accurate biosafety and NIH Guidelines assessment.

- The committee also noted that the NB4 human leukemia cell line is described in the research summary but is not included in the Hazard Identification or Exposure sections. The protocol should be updated to reflect its use and document the appropriate oversight for this human-derived cell line.
- Additional clarification was requested regarding the use of lymphoma cells derived from IgH-MYC transgenic mice and whether transgenic animals are maintained at Houston Methodist, as this may affect the NIH Guidelines classification reported in the application.
- The committee further requested that all viral vector systems, genetically modified cell lines, CAR T-cell constructs, associated risk groups, biosafety levels, and containment measures be consistently documented throughout the protocol.
- Finally, the committee identified an inconsistency between the assigned animal containment level (ABSL-1) and the enhanced containment practices described for work involving human cell lines and virally transduced cells in animals. Clarification and alignment of the animal biosafety level and containment requirements were requested to ensure consistency across the application and compliance with institutional biosafety standards.
- **Comments sent to the PI for clarification**:
    - **Section Hazard Identification** - Please clarify the recombinant and synthetic nucleic acid components used in this study. The protocol currently transitions from *Viral Studies directly* to *Exposure Management* sections and there does not appear to be a section describing the plasmids or recombinant/synthetic nucleic acids used in the research. However, the narratives in *Exposure Management reference* several plasmids and genetic constructs, including: Third-generation lentiviral packaging plasmids pCL10A retroviral packaging plasmid transfer plasmids (e.g., lentiGuide-Puro, pLenti PGK V5-LUC Puro, pMSCV-EGFP) Synthetic CAR constructs (CD33 and CD70) Suv420h1 constructs
    - **Section Hazard Identification -** Please update the protocol to clearly identify all recombinant and synthetic nucleic acid molecules used in the study and ensure they are appropriately described in the relevant sections of the application. This information is necessary to accurately assess the scope of the recombinant DNA work and associated biosafety requirements. Please address the typo in 'lentivral'.
    - **Section Hazard Identification -** The NB4 human leukemia cell line is described in the *Summary of Proposed Research* as being used for in vitro

chemosensitivity studies; however, it is not listed in the *Hazard Identification* section and does not appear in the *Exposure Laboratory* sections, which currently list the same eight agents.

- **Section Hazard Identification -** If NB4 cells will be genetically modified as part of this research, please add the cell line to the *Hazard Identification* table and include the appropriate Risk Group (RG), biosafety level (BSL), and containment information in the relevant sections. If the NB4 cell line is not genetically modified, please ensure it is included under an approved HSC protocol, as required by RE60 for all human-derived cell lines.
- **Section Animals** - Animal containment level is internally inconsistent. This section lists every administered agent at ABSL-1, but the animal-area exposure narrative directs staff to "always follow BSL-2+ procedures" and to treat the material as potentially infectious. Human cell lines and lentiviral/retroviral-transduced cells administered to mice are ordinarily ABSL-2.
- **Section Risk Assessment** - Please clarify the source and use of the IgH-MYC transgenic mice. The protocol indicates that mouse lymphoma cells are obtained from IgH-MYC transgenic mice; however, Question 18 (Section III-E-3, involving transgenic rodents maintained at BL1) is marked "No." Please confirm whether the IgH-MYC mice are bred, maintained, or housed at Houston Methodist as part of this research, which would be consistent with a "Yes" response under Section III-E-3 of the NIH Guidelines. If only lymphoma cells or tumor tissue are obtained from an external collaborator and no transgenic animals are maintained or used on-site, please state this clearly in the protocol.

- **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

IBC00002787
Title: IBC for Grattoni/Chua Research using expression plasmids & lentiviral factors in B16, TM3, & Tregs for immune modulation; MDA-MB-231, 4T1, EMT6, KPC, LLC, Panc02, & Y1 tumor studies; & ARPE-19/eHEK293 engineered-cell therapy studies
Principal Investigator: Alessandro Grattoni

Study Overview: This protocol evaluates several implantable and cell-based technologies

designed to modulate immune responses, improve cancer therapies, and support engineered cell therapies in animal models.

NanoLymph Studies: The NanoLymph device is a subcutaneous implant designed to recruit and locally modulate immune cells through controlled release of biologically active agents. Studies will assess the device's ability to enhance anti-tumor immune responses, support transplanted cells, and regulate autoimmune responses. Devices may contain immune-modulating compounds, antigens, tumor-derived materials, transplanted cells, or tissue-engineering components. Outcomes include evaluation of immune cell recruitment and activation, transplanted cell survival, disease progression, vascularization, and tissue integration.

b-NDES Studies: The b-NDES device is an implantable intratumoral drug-delivery platform designed to provide sustained local release of therapeutic agents directly within tumors. The device will be evaluated in multiple mouse tumor models and compared with conventional treatment approaches, including local or systemic administration of drugs. Studies may also incorporate radiation therapy and immunomodulatory agents to assess treatment efficacy, tumor response, and local immune effects.

BioHybrid Studies: These studies evaluate encapsulated engineered HEK293 (eHEK293) cells implanted in animals within a biocompatible device. The cells are designed to express and secrete reporter proteins following stimulation. Animals will be monitored for cell viability, reporter protein production, device performance, and host responses using serum analysis and noninvasive imaging. The studies are intended to support the future development of biohybrid devices capable of controlled therapeutic protein delivery.

Across all study arms, animals will undergo device implantation under anesthesia using approved surgical techniques and will be monitored through clinical observations, imaging, and collection of tissues and biological samples to assess safety, device performance, immune responses, and therapeutic outcomes.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-D-1 & 4
- **Containment Conditions to be implemented**: BSL-2
- **Risk Assessment & Discussion**: The Committee reviewed the proposed use of implantable devices containing immune-modulating agents, tumor-derived materials, and engineered cells in animal models. Biosafety risks are primarily associated with handling recombinant cells, tumor cell lines, and biologically active materials during device preparation and implantation. Members noted that engineered eHEK293 cells expressing reporter proteins will remain contained within implanted devices and are not expected to pose a risk of environmental release or transmission. Standard BSL-2 practices, appropriate PPE, and institutional animal biosafety procedures were considered adequate for the proposed work. Overall, the Committee determined that the study presents a low to moderate biosafety risk and that the proposed containment and handling procedures adequately mitigate risks to personnel, animals, and the environment.
- **The motion to approve the study was seconded and passed.**

Motion: Approved

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

IBCA00001598
Title: PI Amendment 2 for IBC for Pathogenic Mechanism in Segmental Demyelination
Principal Investigator: Bo Hu

Amendment Overview: This amendment requests a change in Principal Investigator from Dr. Jun Li to Dr. Bo Hu. The approved research activities remain unchanged and involve the use of replication-deficient lentiviral vectors to modulate expression of GNB1 and PAK2, genes involved in cellular signaling pathways relevant to peripheral nervous system function and Schwann cell biology.
The vectors are administered to the murine sciatic nerve to investigate the molecular mechanisms regulating Schwann cell-mediated myelination and segmental demyelination in the peripheral nervous system. The Committee noted that Dr. Hu recently received NIH R01 funding in this area of research and will provide scientific leadership and oversight of the project. Dr. Li will remain actively involved in the laboratory and research program. The Committee determined that Dr. Hu possesses the appropriate expertise, training, and resources to assume responsibility for the protocol.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: N/A due to the nature of the amendment
- **Containment Conditions to be implemented**: BSL-2
- **Risk Assessment & Discussion**: N/A
- **The motion to approve the amendment was seconded and passed.**

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

IBCA00001617
Title: Hazard Amendment 1 for Phase 1 Study of NKX019, a CD19 Chimeric Antigen Receptor Natural Killer Cell Therapy, in Subjects with Autoimmune Disease
Principal Investigator: Myriam Guevara

Study Overview: This hazard amendment updates the Phase 1 study of NKX019, a CD19-directed CAR-NK cell therapy for autoimmune disease. The amendment includes revisions to the inclusion and exclusion criteria, modifications to the treatment washout period, reduced enrollment staggering between participants, and the addition of Dose Level 3. The new dose level permits administration of up to 4×10^9 CAR-NK cells for participants weighing ≥50 kg or up to 8×10^7 CAR-NK cells/kg for participants weighing <50 kg, with flexibility for the Sponsor to evaluate intermediate dose levels based on emerging safety and efficacy data.
Additional protocol revisions include updates to the informed consent form, visit schedule, blood collection procedures, and participant compensation. The amended study documents have been reviewed and approved by the IRB of record. No changes are proposed to the manufacturing process, genetic modification methods, or biosafety containment procedures associated with the investigational CAR-NK cell product.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-C-1
- **Containment Conditions to be implemented**: BS2
- **Risk Assessment & Discussion**: The Committee reviewed the proposed amendment and noted that the changes are limited to clinical study design elements, including revisions to eligibility criteria, washout periods, enrollment procedures, and expansion of the dosing schema to include a higher CAR-NK cell dose level and potential intermediate dose levels. No changes are proposed to the manufacturing process, genetic modification methods, vector systems, or handling procedures for the NKX019 cellular product. The Committee determined that the amendment does not introduce new biological agents, increase the risk of environmental release, or alter the existing biosafety profile of the study. Although the amendment permits administration of higher cell doses, the biosafety risks associated with handling and administration of the genetically modified CAR-NK cell product remain unchanged. Existing containment practices, personnel training, and exposure control procedures were deemed adequate. The Committee concluded that the amendment does not significantly alter the risks previously reviewed and approved by the IBC.
- **Comments sent to the PI for clarification**:
    - **Hazard Identification** - Please correct the dose to accurately reflect the initial dose described; it should be equal to or greater than 50 kg, not lower/ less than. Please correct this typo: update Hazard Amendment "2" to "1" since it is the first hazard amendment submitted for this protocol
- **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

IBCC00000641
Title: 2026 IBC Review for Phase 2_ASK-PD5-CS201_PD_ (AskBio/Asklepios BioPharm) - Randomized, Double-Blind Sham Surgery-Controlled Study for Efficacy & Safety of Intraputaminal AAV2-GDNF as a treatment for Moderate Stage Parkinson's Disease
Principal Investigator: William Ondo

Study Overview: The Committee reviewed the annual continuing review for the Phase 2 ASK-PD5-CS201_PD study evaluating AAV2-GDNF (AB-1005), a recombinant adeno-associated virus serotype 2 (AAV2) gene therapy designed to deliver the human glial cell line-derived neurotrophic factor (GDNF) gene for the treatment of moderate-stage Parkinson's disease. The investigational product is administered by intraputaminal infusion and co-administered with gadoteridol contrast agent to allow real-time MRI visualization of delivery. The annual review was presented to the full Committee following receipt of a Sponsor-issued Urgent Safety Measure Notification Letter dated November 25, 2025, describing an unanticipated adverse event involving cerebral ischemia and altered mental status in a study participant. Following review by the Data Monitoring Committee and the Sponsor, the event was assessed as unlikely to be related to the investigational product or delivery procedure, and the overall benefit-risk profile of the study was determined to remain favorable. However, a causal relationship could not be completely excluded at the time of review. As a result of the event, the clinical protocol was amended to include an additional MRI assessment for participants' monitoring.

- **Training**: All staff members have completed training.
- **Applicable NIH Guidelines**: Section III-C-1
- **Containment Conditions to be implemented**: BSL-2
- **Risk Assessment & Discussion**: The Committee noted that while the reported event primarily impacts participant safety oversight, there were no changes to the biosafety profile of the recombinant AAV2-GDNF product, containment practices, or procedures affecting occupational exposure risks to research personnel. The annual review was presented to the Committee for awareness and continued oversight of the investigational gene therapy program.
- **The motion to approve the continuing review was seconded and passed.**

Motion: Approved

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

- Recused: 0
- Absent:0

ADJOURNMENT

The meeting adjourned at 12:02 pm