COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

INSTITUTIONAL BIOSAFETY COMMITTEE

Minutes
Thursday, December 4th, 2025; 1:00PM
Teleconference

Present	Present	Excused
C. Aston	S. Morse (Chair)	K. Crowley
H. Blumm	T. McConville	S. Joussef Pina
L. Butaud-Rebbaa	D. Ng	L. Kam
C. Cameron	C. Pitoscia	P. Muranski
S. Hughes	E. Riber (Coordinator)	E. Peterson
B. Karolewski	V. Racaniello	M. Quick
J. Kaushal	A. Romanov	Q. Wang
J.J Miranda	M. Underwood	Y. Wojcicki
	Guest: K. Fritz	

S. Morse convened the Institutional Biosafety Committee (the **Committee**) at 1:02 PM.

S. Morse asked the Committee to approve the minutes of the November 6th, 2025 meeting.

- **The minutes were approved unanimously.**

S. Morse reminded the Committee of the Conflict of Interest Policy and asked all members to confirm that there were no conflicts of interest with regard to any of the protocols to be discussed at the meeting.

- **There were no conflicts of interest noted.**

DURC Review

- No protocols requiring DURC review were submitted to the Biosafety Officer or to the Committee since the previous meeting.

Human Gene Therapy

- Askanase_IRB-ACYY0427_APM-ACYY0083: A Phase 2, Multicenter, Open-Label Study Of CC-97540 (BMS-986353), CD19- Targeted NEX-T Chimeric Antigen Receptor (CAR) T Cells, in Participants with Active Systemic Lupus Erythematosus (SLE) (Including Lupus Nephritis) with Inadequate Response
    - APM-ACYY0083 was reviewed and approved by the committee on May 5th, 2025 as APM-AAAV8300 attached to IRB-AAAV6932.
    - The protocol was resubmitted with a new unique identifying number due to the event being irretrievable following a change in administrative personnel. No modifications to the research protocol have taken place requiring full committee review.

Biosafety Office Reviews

- No renewals for Coronavirus Research have been submitted to the Biosafety Office since the last meeting.

Coronavirus Research

- No new Coronavirus research proposals were received by the Biosafety Office since the previous meeting.

rDNA

Six rDNA and infectious agent appendices requiring work at the BSL-1 containment level were presented and discussed. A table describing each BSL-1 Appendix A was shown to the Committee and is available at the Biosafety Office.

- Three appendices were returned to the investigator for further information as shown in a Table presented to the Committee describing the nature of each hold comment.
- After Discussion by the Committee, all BSL-1 Appendices were voted upon collectively and approved unanimously.

Eleven rDNA and infectious agent appendices requiring work at the BSL-2 containment level were presented and discussed. A table describing each BSL-2 Appendix A was shown to the Committee and is available at the Biosafety Office.

- Six appendices were returned to the investigator for further information as shown in a Table presented to the Committee describing the nature of each hold comment.
- After Discussion by the Committee, all BSL-2 appendices were voted upon collectively and approved unanimously.

Announcements

- C. Aston announced the 2026 IBC Meeting Calendar.
- C. Aston informed the committee of the upcoming in person ad-hoc meeting.

rDNA Incidents

- K. Fritz reported a bite injury involving a mouse that had been injected intravenously with a replication-incompetent lentiviral vector encoding a murine anti-GFP CAR and an mScarlet fluorescent reporter. The incident involved an undergraduate student working under Dr. Tal Danino. The Biosafety Office determined that the research was subject to the NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules and that the incident met the criteria for reporting to the NIH Office of Science Policy.

Action Items

Action Items from 11-06-25 IBC meeting		
Status	**Description**	**Group/Investigator**
N/A	**N/A**	**N/A**

With there being no further business S. Morse adjourned the meeting at 1:48 PM. The next meeting will be held hybrid-in person on January 15, 2026.

2025 Meeting Calendar

Date
Thursday, January 16, 2025
Thursday, February 13, 2025
Thursday, March 13, 2025
Thursday, April 10, 2025
Thursday, May 8, 2025
Thursday, June 5, 2025
Thursday, July 10, 2025
Thursday, August 7, 2025
Thursday, September 11, 2025
Thursday, October 9, 2025
Thursday, November 6, 2025
Thursday, December 4, 2025

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INSTITUTIONAL BIOSAFETY COMMITTEE

IBC Meeting: December 4, 2025

Table 1: Recombinant DNA proposals

Proposals for Work at BSL-1

	PI	Insert	Vector	Host	Animal Biosafety Level	NIH category	Use/Comments	Year	Protocol #	Appendix A
1	Cheng, Ke	OSKM-LNP: LNP delivery of yamanaka factors to initiate cellular partial reprogramming	mRNA loaded nanolipid particles	Mouse	ABSL-1	III-F	We will use mRNA loaded liposome/lipid nanoparticles (LNP) in this protocol.	Y1 M0	AC-ACYY0023	BSJW0027
2	De Nooij, Joriene	Frataxin, Cas9, fluorescent proteins	AAV	Mouse	ABSL-1	III-E-1	Proprioception is the sense of the position of the body and limbs in space. This sensory feedback derives from specialized mechanosensory receptors that are embedded within skeletal muscle. There are three distinct receptor types in muscle, which each relay their sensory feedback through dedicated (proprioceptive) sensory neurons to the spinal cord and brain. Despite the importance of this sensory system, we know only very little of the role of the different proprioceptor subtypes in health or disease. One of the diseases in which proprioceptors are selectively affected is Friedreich Ataxia. As part of our studies to develop new therapeutic strategies for this neurodegenerative disease we will use viral (AAV) approaches in our rescue experiments in an FA mouse model.	Y1 M0	AC-AABR8601	BSJW0167
3	Gordon, Joshua	mCherry, GCaMP6f, tdTomato	AAV	Mouse	ABSL-1	III-E-1	Adeno-associated viral (AAV) vectors will be utilized to selectively express nonendogenous genes in the mouse brain through intracranial injections performed with glass micropipettes. AAV vectors are classified as Biosafety Level 1 agents. All procedures involving viral constructs will be conducted using appropriate personal protective equipment(PPE), including gloves, lab coats, and protective eyewear. Work surfaces and equipment that come into contact with the viral material will be decontaminated using a freshly prepared 10% bleach solution to ensure complete inactivation of the virus.	Y1 M0	LS-ACYY0021	BSJW0141
4	Mancia, Filippo	mNeonGreen, TEV protease, HRV3C protease, HECW1, HECW2, NEDD4.1, NEDD4.2, mITCH, Smurf1, Smurf2, WWP1, WWP2, MSMEG_6387 (AftA), MSMEG_6400 (AftB), MSMEG_2785 (AftC), MSMEG_0359 (AftD), MSMEG_6143, MSMEG_0315, MSMEG_5054 (LpqZ), MSMEG_3144, MSMEG_2319, MSMEG_2333, MSMEG_5149 (PimE), MSMEG_6387 (EmbC), MSMEG_6388 (EmbA), MSMEG_6389 (EmbB), MSMEG_5447 (Pmt), MSMEG_6899, MSMEG_1929, MSMEG_5083, FAXDC2, SLCO2B1, Rtn4a, STRA6, RBPR2, AAT1, DMT1, Wnt, Wls, sigma1R, dopamine transporter	Baculovirus, Mycobacterium smegmatis, Saccharomyces cerevisiae	In vitro	N/A	III-E-1	We employ standard molecular biology techniques for generating constructs for recombinant protein expression. For protein expression in prokaryotic hosts, we use T7-based systems. For expression in eukaryotic hosts, we use transient transfection and baculorvirus-mediated methods to introduce the gene(s) encoding the protein(s) of interest into insect and mammalian cells. Baculoviruses are produced in Sf9 insect cells and isolated viruses are utilized for viral transduction of mammalian hosts. These viruses are non-replicative in mammalian cells. All cells are treated with bleach prior to disposal. Culture flasks used for propagation are treated with bleach and autoclaved prior to reuse.	Y1 M0	LS-AAAD5151	BQVF5803
5	Rayport, Stephen	addgene 105540 pENN.AAV.hSyn.HI.eGFP-Cre.WPRE.SV40 (AAV5) addgene 125560 AAV-CAG-dLight1.3b (AAV1)	AAV	Mouse	ABSL-1	III-E-1	AAV vectors are used for cell-specific expression of fluorescent reporters, optogenetic activators or cell activity reporters.	Y1 M0	LS-ACYY0013	BSJW0128
6	Smeeton, Joanna	mCherry, mCherry-NTR, GFP, CreER, Cre, Gal4VP16, UAS, nlsEGFP, bactin2, mCherryCAAX, EGFPCAAX, Cas9, H2B-mCerulean, mKOPF2-CAAX, mEOS, Venus, mCerulean	CRISPR, plasmids	Fish	ABSL-1	III-F	Our lab is primarily interested in understanding the cellular and molecular regulation of joint development and regeneration. We propose to use Tol2 transposition or CRISPR to integrate DNA plasmids and generate stable reporter zebrafish lines, and to use CRISPR to generate novel mutant zebrafish lines for functional studies. To create each mutant and transgenic line, one-cell-stage embryos will be injected with CRISPR RNAs and/or protein, or DNA plasmids + Transposase RNA.	Y1 M13	AC-AABF1555	BSJW0173
7	Thawani, Akanksha	Genes encode for nucleic acid binding proteins from various organisms, including the human retrotransposon, human DNA repair factors and retrotransposon from avian species, as well as GFP. Plasmids include pFastbac, pET and pCDNA backbones.	Plasmid, Baculovirus	In vitro	N/A	III-E-1	We will be using recombinant DNA and baculovirus to produce transposon proteins studies in vitro and in cells.	Y1 M0	LS-ACYY0019	BSJW0139

Proposals for work at BSL-2

	PI	Insert	Vector	Host	Animal Biosafety Level	NIH category	Use/Comments	Year	Protocol #	Appendix A
8	Bogunovic, Dusan	sgRNA, IFIT1, IFIT3, IFI6, IFI27, IFI30, IFITM1, MX1, MX2, RSAD2, BST2, HA, mCherry	CRISPR, LV, IAV A/Vietnam/1203/04 HaLO PIV-3 Cl-1 F_K108 HN_H552Q mCherry	In vitro	N/A	III-D-1-a	Will employ lentiviral vectors to deliver guide RNAs (sgRNAs) targeting interferon stimulated genes of interest, for activation using a CRISPRa approach. Following gene activation, I will challenge the cells with Influenza A Virus and Parainfluenza Virus 3, with readout by flow cytometry to assess antiviral efficacy	Y1 M0	LS-ACYY0037	BSJW0179
9	Chan, Edmond	Cas9, Cas12a, WRN, PELO, GCN1, GCN2, RNF14, RNF25, sgRNA library	LV	In vitro	N/A	III-D-1-a	3rd generation lentivirus will be used to deliver CRISPR-based and cDNA genetic perturbations to study key genetic interactions in cancer	Y1 M0	LS-ACYY0012	BSJW0126
10	Rebecca Donegan	M. abscessus and M smegmatis heme biosynthesis proteins and identified uncharacterized proteins will be expressed with a His tag on a pet vector with Ampicilin resistance. HS1 heme biosensor gene (fusion of GFP, MKATE and CytB562 from E coli) will be expressed in M. smegmatis and M. abscessus with on a PYUB plasmid with Kanamycin resistance.	Mycobacterium abscessus (ATCC19977), Mycobacterium smegmatis (mc2 155)	In vitro	N/A	III-D-1-a	Cell strains: Mycobacterium abscessus (BSL2) and M. smegmatis (BSL1). Recombinant DNA - only on plasmids that can be replicated in bacteria like E. coli or in the mycobacteria themselves, no viral or mammalian vectors will be used. Both mycobacterial species will be grown in small volumes (<1 L) and any handling that can cause aerosols with M abscessus will be done in a biosafety cabinet (Chandler 268) with separate pipettors for handling. Cell media/liquid culture will be treated with 10% bleach for 10 minutes or more before disposal. Solid waste will be collected as regulated medical waste for disposal. Proteins expressed from rDNA will be using genes from M abscessus or M smegmatis and expressed in e. coli for purification and characterization. An M. smegmatis knockout collection maintained by Dr. Keith Derbyshire at the NY State Dept of Health will also be used. In this collection, genes are replaced by a zeomycin antibiotic resistance gene. also see AppA.pdf	Y1 M0	LS-AAAD3351	BNPK6264
11	Dorrello, Nicolino	N, P, H, F, M, and L genes plus cherry or GFP reporter	Measles, SARS CoV-2	Mouse	ABSL-2	III-F, III-D-1-a	This proposal will test the prophylactic and therapeutic efficacy fo anti viral inhibitors against Measles in mice	Y1 M1	AC-AACG8855	BSJW0131
12	Reya, Tannishtha	shRNA or Cas9 or dCas9 directed against target genes including stem cell and developmental signals, adhesion receptors, cell surface receptors, transcription factors, RNA binding proteins such as Musashi, Tspan3, Prap1, Snrpa, RORg; fluorescent reporters such as GFP, YFP, dsRed, CFP; oncogenes including BCR-ABL, NUP98-HOXA9, MSI2-HOXA9, MLL-AF9	LV, MSCV (Murine Stem Cell Virus, a retrovirus)	Mouse	ABSL-1 (Note 2)	III-D-1-a	Worldwide, cancer claims millions of lives each year. Among the most deadly is pancreatic cancer; this disease is projected to become the second leading cause of cancer-related deaths by 2030. Likewise, leukemia is also a disease with significant unmet need. A deeper understanding of the biology of these cancers along with the identification of key vulnerabilities, are desperately needed. Our goal is to develop a better understanding of signals driving the development, propagation, and therapy resistance of aggressive cancers, and identify new targets for therapy. Methodologies include transplantation of mice with human cancer cells, including cells with target gene knockdown, and evaluation of impact on growth of the cancer cells in vivo.	Y1 M21	AC-AABT5652	BSJW0083
13	Sadelain, Michel	anti-CD19 scFv, anti-uPAR scFv, LNGFR	Gammaretroviral vectors	Mouse	ABSL-1 (Note 2)	III-D-1-a	Ecotropic gammaretroviral vectors will be used to transduce mice cells ex-vivo in the lab premises, under a safety cabinet. These transduced cells will be later transplanted into mice through IV injections.	Y1 M0	AC-ACYY0125	BSJW0089
14	Steckelberg, Anna-Lena	eIF3A3, Upf1, MAGOH, Y14, ZIKV capsid, GFP, Luciferase	ZIKV (MR766, PRVABC59), WNV (pWNV lineage I), DENV2, USUV, SINV (KT121726.1), MAYV (IQT and TRVL), SFV (SFV4, SFV6), Chikungunya virus 181/25 (ATCC), O'nyong-nyong Virus UgMP 30 (ATCC)	In vitro	N/A	III-D-1-a	In this study, we will explore how different positive sense RNA viruses interact with the cellular machinery in cultured mammalian and mosquito cells. The following flaviviruses will be cultured in our lab: 1. Zika virus (MR766 and PRVABC59), 2. West Nile Virus ((pWNV lineage I, NY99), 3. DENV2, 4. Usutuvirus (USUV). In addition, we culture the alphaviruses Sindbis virus (SINV), Semlike Forest virus (SFV), Mayaro virus(MAYV), O'nyong'nyong virus (ONNV) and a BSL2 adapted Chikunginya virus (CHIKV). Viruses are produced through transfection of cultured mammalian cells with DNA plasmids containing the viral genomes. We infect mammalian and mosquito cell lines, and analyze infected cells using standard biochemical, molecular biology and virological assays (e.g. western blotting, northern blotting qRT-PCR, plaque assays, flow cytometry, fluorescence microscopy). We will also introduce mutations to the viral	Y1 M0	LS-ACYY0034	BSJW0171
15	Steckelberg, Anna-Lena	Various transgenes will be introduced by lentiviral transduction. These include various non-coding RNA from ZIKV and human NMD proteins. None of the introduced gene fragments are toxic or oncogenic.	LV	In vitro	N/A	III-D-1-a	We will produce replication-deficient lentiviral particles to introduce transgenes into mammalian (HEK293T, Hela, Huh7, A549, U2OS) and mosquito (Aag2, C6/36) cell lines.	Y1 M0	LS-ACYY0035	BSJW0172
16	Wang, Lili	SF3B1, METTL3, PGP, U2AF1, SRSF2, ZRSR2	LV, AAV, CRISPR	Mouse	ABSL-1 (Note 2)	III-D-1-a	The project aims to utilize recombinant DNA and/or lentivirus/rAAV to investigate gene function and cellular mechanisms. Work involves molecular cloning, vector construction, and introduction into cultured cells via transfection or transduction under approved biosafety conditions. All recombinant or viral materials are handled in a biological safety cabinet with standard PPE to minimize aerosol generation. Infectious materials are inactivated using validated chemical methods before disposal. Replication-incompetent viral vectors and split packaging systems ensure biosafety. Additional risks, such as the broad tropism of VSV- G–pseudotyped lentiviruses or off-target effects of CRISPR gene editing, are mitigated through containment, use of non-integrating systems, guide validation, and adherence to institutional biosafety protocols. All personnel receive documented biosafety training, and laboratory procedures follow IBC-	Y1 M0	AC-ACYY0165	BSJW0137
17	Zuker, Charles	Green fluorescent protein, red fluorescent protein, green fluorescent calcium indicator, and Channelrhodopsin-2 (ChR2)	AAV, LV, GdRV	Mouse	ABSL-1 (Note 3)	III-E-1, III-D-1-a	We want to understand how taste receptor cells transmit taste information to the first set of peripheral neurons which innervate them. By using genetic manipulations of subsets of taste receptor cells and ganglion neurons we hope to identify the molecular mechanisms of early gustatory transduction. To this end, we are currently engineering mice with loss-of function mutations in genes of interest (e.g., taste	Y1 M4	AC-AABO1551	BSJW0049

Note1: The Biosafety Office allows Stereotaxic injections to be designated as ABSL-1

Note2: The Biosafety Office allows Transduced cell injections that are free from virus to be designated as ABSL-1

Note3: The Biosafety Office allows the administration of replication deficient vectors or attenuated strains to be designated as ABSL-1

Note 4: BSL-2 practices for Fish procedures: store rVSV-infected fish within BSL1 satellite facility, in sealed disposable containers on a designated rack clearly labeled for PI handling only. Following euthanasia, water and containers will be decontaminated with >10% bleach prior to disposal.