COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

INSTITUTIONAL BIOSAFETY COMMITTEE

Minutes
Thursday, September 10th, 2026
Teleconference

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

J.J Miranda convened the Institutional Biosafety Committee (the **Committee**) at 1:00 PM.

J.J Miranda asked the Committee to approve the minutes of the August 6th, 2026 meeting.

- **The minutes were approved unanimously.**

J.J Miranda 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

- No human use protocols were submitted to the Biosafety Office for review.

rDNA

Five 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.

- Two 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.

Fifteen 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.

- Twelve 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

- There were no new announcements since the last committee meeting.

Report

- There were no new reports since the last committee meeting.

rDNA Incidents

- There were no incidents reported.

Action Items

Action Items from IBC meeting		
Status	**Description**	**Group/Investigator**
N/A	**N/A**	**N/A**

With there being no further business J.J Miranda adjourned the meeting at 2:16 PM. The next meeting will be held by teleconference on October 8th.

2026 Meeting Calendar

Date
Thursday, January 15, 2026
Thursday, February 12, 2026
Thursday, March 12, 2026
Thursday, April 9, 2026
Thursday, May 7, 2026
Thursday, June 4, 2026
Thursday, July 9, 2026
Thursday, August 6, 2026
Thursday, September 10, 2026
Thursday, October 8, 2026
Thursday, November 5, 2026
Thursday, December 3, 2026

IBC Meeting: September 10, 2026

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	Karsenty, Gerard	Diphtheria toxin receptor (DTR) driven by the Gprc6a promoter	AAV	Mouse	ABSL-1	III-E-1	The research goal is to characterize functionally and molecularly the subpopulation of hepatocytes responding to Ocn and necessary for adaptation to exercise. We, therefore, will include protocols with standard tail vein injection of AAV serotype 8 containing Diphtheria toxin receptor (DTR) gene under control of the Gprc6a promoter and a lox-stop-lox cassette into Albumin-Cre mice. Infection of these mice with this virus followed by diphtheria toxin treatment will selectively deplete the Gprc6a-positive hepatocytes in WT mice. Control mice will be infected with an empty vector virus. Exercise capacity will be measured in both DTR expressing and control mice. Since Gprc6a expression in the liver is required for the release of FGF21 during exercise, we will also measure circulating FGF21 levels after exercise in DTR expressing and control mice. Hormone-sensitive lipase (HSL) phosphorylation will be measured in DTR expressing and control mice after running.	T2M0	AC-AABH4550	BSJW0935
2	Maniatis, Tom	pcdhac2 gene flagged with hemagglutinin tag	AAV	Mouse	ABSL-1	III-E-1	We will use AAVs to specifically silence gene expression of pcdhac2 (protocadherins) proteins in specific cell types. We will use the same viral techniques to label specific cell types as well.	T1M3	AC-AABP2550	BSJW0941
3	Muhle, Rebecca	(1)CMVs.PI.Cre.rBG, (2)CMV.PI.EGFP.WPRE.bGH, (3)CAG.dLight1.1	AAV	Mouse	ABSL-1	III-E-1	To explore cellular mechanisms of the observed phenotypes AAVs expressing Cre-recombinase, GFP or dLight (dopamine sensor) will be injected in the midbrain or the striatum. Viruses will be purchased from Addgene. Using aseptic, stereotactic survival surgical techniques, 0.3ul of virus will be injected bilaterally into the brain. Mice will be checked postoperatively for 3 days.	T1M0	LS-ACYY0258	BSJW0981
4	Smeeton, Joanna	Cas9-expressing plasmid and guide RNAs (sgRNA). Crispr target is the gene mitfa to block melanocyte production (sg_mitfa_1:5'-TAGG AACATCAAAAGGGAATTCAC-3' sg_mitfa_2:5'-AAAC-GTGAATTCCCTTTTGATGTT-3') to validate that the system is working efficiently	CRISPR	Killifish	ABSL-1	III-F	This project aims to understanding the cellular and molecular regulation of injury response and aging outcomes in the short-lived vertebrate model organism, killifish. We propose to use CRISPR to generate novel mutant killifish lines for functional studies. To create each mutant, one-cell-stage embryos will be injected with CRISPR RNAs and/or protein.	Y1M0	AC-ACYY0606	BSJW0949
5	Wang, Qi	ChR2, a light sensitive ion channel for neuron activation Arch/Halorhodopsin, light driven proton pump for silencing neurons GCaMP/GFP/YFP/mCherry, fluorescent proteins for imaging/tagging neuronal activity DREADD, a designer receptor for perturbing neuronal activity Fluorescent sensors: proteins sensitive to neurotransmitters e.g. NE/Ach/5-HT/DA/GABA/Glutamate DTA: diphtheria toxin A fragment	AAV	Mouse	ABSL-1	III-E-1	The goal of the project is to understand the neural network mechanisms underlying neuropathic pain and device new closed-loop brain stimulation technology to alleviate neuropathic pain. We will use AAV to express desired protein, including DREADD, fluorescent proteins, and light-sensitive opsins, for manipulating and recording neural activity. We will also test engineered e.coli microbes that produce anti-inflammatory substances as a long-term pain treatment. The e.coli microbes are engineered by Dr. Tal Danino's lab.	T1M2	AC-AABO1558	BSJW0969

	PI	Insert	Vector	Host	Animal Biosafety Level	NIH category	Use/Comments	Year	Protocol #	Appendix A
6	Bartolini, Francesca	EB3; synaptophysin1;vMAT2; alpha-synuclein;Munc13;Rim1;GFP	AAV, LV	Mouse	ABSL-1 (Note 3)	III-E-1, III-D-1-a	primary dopaminergic neurons and in vivo ventral midbrains will be transduced with lentiviral or AAV particles for DNA expression	Y1M1	AC-AACJ3950	BSJW0954
7	Bath, Kevin	EYFP (yellow fluorescent protein), eNpHR (halorhodopsin), Cheta (channelrhodopsin), bone morphogenic protein 4 (BMP4), brain derived neurotrophic factor (BDNF), GCamp (Calcium sensitive fluorescent maker), GRAB-Crh, GRAB-DA, dLight.	AAV, HSV	Mouse	ABSL-1 (Note 3)	III-E-1, III-D-1-a	Briefly, the lab is interested in the impact of early life adversity in the form of altered maternal care and/or exposure to mood stabilizing drugs on neural and behavioral development. To do this, we use a variety of techniques, including transcardial perfusion and immunohistochemistry on brain tissue, genetically modified lines of mice, intracranial injection of labeled cholera toxin B to trace neuronal projections between brain regions, intracranial injection of AAV viral vectors to express optogenetic elements in neurons, 5-bromo-2-deoxyuridine injection to label and birthdate newly born cells, intraventricular injection of AraC to inhibit neurogenesis, and pharmacological treatment of mice at various ages to determine receptor involvement in development and expression of pathological behavior. The ultimate goal is to understand the mechanisms by which differences in early life experience alter neurodevelopmental trajectories to increase risk for later behavioral pathology.	Y1M0	AC-ACYY0697	BPLG5010
8	Cummings, Matthew	Cas9 protein–guide RNA RNPs will knock out endogenous CD274 (PD-L1) in human CD34+ HSPCs and PDCD1 (PD-1) in CD14+ monocytes. Proposed guide target sequences (5–3): CD274: ACCGTTCAGCAAATGCCAGT; PDCD1: GGCCAGGATGGTTCTTAGGT. Gene disruption will occur primarily through NHEJ-mediated indels. No HDR donor template, viral vector, or transgene insertion is planned.	CRISPR	In vitro	N/A	III-F	This protocol does not involve propagation, culture, or experimental manipulation of infectious agents. Work will include host single-cell RNA sequencing, flow cytometry, and ex vivo functional studies using stored peripheral blood-derived specimens collected under the RESERVE-U-3 study (AAAV1301). Some RESERVE-U-3 specimens were collected from participants living with HIV and will therefore be handled using appropriate precautions for potentially infectious human material. Commercially procured CD34-positive cells, monocytes, and endothelial cells will have been donor-screened by the commercial supplier for relevant infectious agents, including HIV, hepatitis B virus, and hepatitis C virus, according to the supplier's established procedures. CRISPR/Cas9 editing will be performed only in commercially procured cells and will occur entirely in vitro.	Y1M0	IRB-ACYY3121	BSJW0948
9	Kousteni, Stavroula	p53 with LOF mutation; extra copy of Cnot6L, Pan3; shRNAs for Nup50, Nup85, Nup107; large deletion for Tet2	LV	Mouse	ABSL-1 (Note 3)	III-D-1-a	We are aiming to introduce mutations, overexpress and/or knockdown several genes in murine hematopoietic stem cells, and study the interaction with osteoblasts that have different beta-catenin activity.	Y1M0	AC-ACYY0716	BSJW0938
10	Mahat, Jay	Plasmids will express Cre recombinase/CreERT2; Cas9 or dCas9-based CRISPR effectors (including dCas9-VPR); target-specific sgRNAs/crRNAs or shRNAs; and reporter genes such as luciferase and fluorescent lineage reporters (e.g., tdTomato or YFP). The specific target gene or regulatory element will vary by experimental arm.	AAV, LV, AV	Mouse	ABSL-1 (Note 2)	III-E-1, III-D-1-a	Recombinant DNA will be used to manipulate genes involved in pancreatic and colorectal cancer and tumor–immune interactions. Replication-incompetent AAV, adenoviral, and lentiviral vectors will deliver approved Cre, reporter, shRNA/sgRNA, or CRISPR/Cas constructs to cells, organoids, or mice. All materials will be handled under BSL-2 conditions using a biological safety cabinet, PPE, and sharps precautions. VSV-G-pseudotyped lentivirus will receive additional precautions because of its broad tropism; CRISPR risks include off-target and permanent genomic changes. Viral materials and spills will be inactivated with freshly prepared 10% bleach, and contaminated waste, bedding, and equipment will be autoclaved or disposed of as biohazardous waste.	Y1M0	AC-ACYY0406	BSJW1025
11	Mentis, George	SMN, fluorescent proteins (eGFP, TdTomato) or other genes (Stasimon, p53, Cre, NT3, P53Serine18)	AAV, RVdG	Mouse	ABSL-1 (Note 3)	III-E-1, III-D-1-a	Use of AAVs to induce SMN protein or fluorescent proteins or regulate other genes (Stasimon, p53, Cre, NT3, P53Serine18)	Y1M0	AC-ACYY0431	BSJW0886
12	Ryeom, Sandra	GFP	LV	Mouse	ABSL-1 (Note 3)	III-D-1-a	We are currently attempting to transplant our stem cells into mice. To label our cells, we purchase GFP lentivirus from Santa Cruz Biotech.	T1M0	AC-AABQ4551	BSJW0995
13	Steckelberg, Anna-Lena	eIF3A3, Upf1, MAGOH, Y14, GFP, Luciferase	Coxsackievirus B3	In vitro	N/A	III-D-1-a	In this study, we will explore how enteroviruses interact with the cellular RNA machinery in cultured mammalian cells. The following virus will be cultured in our lab: Coxsackievirus B3. We infect mammalian cell lines (Hela, RD,HEK293T, A549) 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).	Y1M0	LS-ACYY0251	BSJW0945
14	Tang, Guomei	transgenes encoding KCC2, Tsc1/Tsc2, and rictor, and SiRNAs for these genes, driven by CamKII- or synapsin promoter	AAV, LV	Mouse	ABSL-1 (Note 1)	III-E-1, III-D-1-a	High titer AAV or lentivirus expressing transgenes or SiRNAs will be given to the mice through stereotaxic injection or tail vein intravenous injection.	T1M0	AC-AABX9652	BSJW0956
15	Viny, Aaron	CRISPR, gRNA or shRNA against Stag2, Rad21, Smc1a, Smc3, Ctcf (gRNA or shRNA), Evi1 (gRNA or shRNA), Tet2 (gRNA or shRNA), Dnmt3a (gRNA or shRNA), Idh1 (gRNA or shRNA), Idh2 (gRNA or shRNA), PML-RARa (transgene), Flt3 (transgene or gRNA or shRNA), PU.1 (transgene or gRNA or shRNA), CEBPa (transgene or gRNA or shRNA), Nras (transgene or gRNA or shRNA), TP53 (transgene or gRNA or shRNA)	LV	Mouse	ABSL-1 (Note 2)	III-E-1, III-D-1-a	We will use retroviral and lentiviral vectors to transfect hematopoietic stem and progenitor cells to either disrupt gene expression through shRNA or CRISPR or drive expression of a transgene.	T1M0	AC-AABX6654	BSJW0980
16	Wichterle, Hynek	A focused collection of human Open Reading Frames (ORFs) primarily encoding transcription factors, developmental regulators, and cellular signaling proteins involved in neuronal differentiation, maturation, and survival.	LV	In vitro	N/A	III-D-1-a	The objective of this research is to perform in vitro pooled genetic screening using a Flex Mini-MORF (Molecular Open-Reading-Frame) lentiviral library in human induced pluripotent stem cell (iPSC)-derived motor neurons. The goal of this screen is to identify novel molecular pathways, phenotypic modifiers, and gene regulatory networks that govern motor neuron survival, maturation, and response to cellular stress.	T1M0	LS-ACYY0264	BSJW0996
17	Woappi, Yvon	Categorical inserts given and genes: (1) Cas9, gRNAs, shRNAs targeting skin genes of interest (e.g. Sox6, Sema3c, Cadm1, Nrg1); (2) Cre and Cre-ERT2 from Krt14, Lyz2 or ubiquitous promoters; (3) secreted signalling proteins under keratinocyte promoters (e.g. SEMA3C); (4) fluorescent reporters; (5) simian diphtheria toxin receptor (HBEGF),a Cre-dependent ablation allele. No toxin sequence is present. Any insert encoding a toxin, oncogene or hazardous product goes to EHS first.	AAV, LV, Candida albicans	Mouse	ABSL-1 (Note 3)	III-E-1, III-D-1-a	Our lab defines factors driving skin healing, focusing on epithelial-immune interactions. We use in vivo mouse wound models and CRISPR/Cas9 screens with gRNAs delivered by lentivirus. We also use replication-incompetent rAAV to overexpress genes in keratinocytes and deliver Cre for cell-type-restricted deletion. Two capsid uses: (1) serotypes AAV1/2/5/6/8/9 and AAV-DJ, screened for cutaneous tropism, for local skin delivery (e.g. AAV::KRT14::Sema3c) and AAV-targeted cell ablation; (2) rAAV2-retro, an engineered AAV2 capsid selected for retrograde axonal transport, not cutaneous tropism, injected intradermally and transported to sensory neuron cell bodies in the DRG. All rAAV is replicationincompetent and helper-free: rep/cap in trans, genome retains only ITRs, no adenoviral helper. Vector given to animals is purchased finished and purified, or purified in-house by iodixanol gradient. Inactivation: 10% bleach 20 min; solids autoclaved.	T1M2	AC-AABS7613	BSJW0882
18	Wu, June	Notch1, Notch4, CELSR1, PIK3CA, KRAS, GATA2, FOXC2	LV	In vitro	N/A	III-D-1-a	Propagation and mutagenesis of genes: Genes are cloned into lentiviral vectors with and without purimycin and variants identified in patient studies introduced by PCR based site directed mutagenesis. DNA is propagated in non-virulent E.COLI (DH5alpha and HST08). All media exposed to bacteria are treated with Bleach or agarose plates are disposed of in biological waste (red bags). -Introduction into tissue culture cells. Plasmids are introduced into cells via calcium phosphate transfection and lentiviral infect (non-replicative). The lentiviral system used 4 plasmids, 1 is an expression vector and the rest are packaging plasmids. All tissue culture work is performed in a certified biological safety cabinet and staff wear PPE (lab coat and eye protection). Media is treated with either wescodyne or 10% Bleach and exposed plastics is disposed in red bags or sharps containers. Surfaces are treated with 70% EtOH.	Y1M0	LS-ACYY0255	BSJW0974
19	Zhang, Zhiguo	Cas9; sgRNAs targeting BRG1, CHD2, EXO1, or FOSL1 (and non-targeting control sgRNA); puromycin/blasticidin resistance markers, GCAMP6s	LV	Mouse	ABSL-1 (Note 2)	III-D-1-a	This project uses replication-incompetent, VSV-G pseudotyped third-generation lentiviral vectors to deliver Cas9/sgRNA constructs into patient-derived DIPG and GBM cell lines, knocking out BRG1, CHD2, or EXO1 (plus non-targeting controls), and a doxycycline-inducible Cas9 system for temporal control of CHD2/FOSL1 depletion. Packaging/envelope genes are split across separate plasmids, preventing replication-competent virus formation. Vector sequences integrate into the host genome after transduction; no infectious lentivirus remains in the resulting stable lines used for in vivo work. All procedures are performed in a certified biosafety cabinet at BSL-2 with standard PPE.	T1M03	AC-AABI7550	BSJW0873
20	Zorn Emmanuel	Human cell lines will be transfected with plasmid including the cDNA of the following SARS-COV-2 genes: nucleocapsid, envelope, membrane, spike S1 and spike S2.	plasmid	In vitro	N/A	III-D-1-a	We will test cord blood antibody reactivity to SARS-COV-2 antigens. The antibodies will be tested for their reactivity to commercially available SARS-COV- 2 proteins and then human cell lines transfected with plasmid vector including cDNA of SARS-COV-2 genes.	T1M0	IRB-AAAS0466	BSJW0983

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 disp

Note 5: BSL-2 agent handled with risk mitigation measures