

Quorum: 7

## IBC Meeting Comments

February 4, 2026 – Zoom Conference Call

Attendance – IBC Committee			
Present	Name	Expertise	Role
	Paul Gulig	Microbiology	Member
x	Luis Martinez	Microbiology	Member
x	Jason Clements		Member
	Norman Beatty	Infectious Diseases	Member
x	Steeve Boulant	Virology	Member
x	Sanford L. Boye	Virology	Member
	Amber Duren		Community Member
x	Mariola Ferraro	Microbiology	Member Joined at 1:17pm
x	Gary Heil		Member
x	Michael McIntosh	Virology	Member
x	John D. McVay	Plants	Community Member
	Mark Moehle	Microbiology	Member
x	Kamal A. Mohammed	Microbiology	Member
x	Christopher Overend		Member
x		Animals	Member
x	Jeffrey Rollins	Plants	Member Joined at 1:15pm
	Elias J. Sayour	Clinical Trials	Member
	Clay Smith	Virology	Chair
x	Daniel R. Swale	Insects	Member
	Amy Vittor	Infectious Diseases	Member

Attendance – Staff and Guests		
Present	Name	Affiliation/Position
x	Asha Rani	UF EHS
x	Artiom Chacon	UF EHS
x	Christine Lashley	UF EHS
x	Pratibha Srivastava	UF EHS
x	Laura Castillo	UF EHS Left at 1:49 pm
x		PI Guest Left at 1:34pm
x	Erica Gonzaga	UF EHS
x	Alek Aranyos	UF EHS
x	Laurence Prunetti	UF EHS Joined at 1:33pm
x	Anna Gioseffi	UF EHS Joined at 1:33pm

Attendance – UFO IBC: Apopka, Orlando, Lake Alfred, Lake Nona		
Present	Name	Affiliation/Position
x	Annette R. Khaled	Community member - Covers Apopka, Orlando, Lake Alfred and Lake Nona Left at 1:23pm
	Norman Beatty	Other: Infectious Disease
x	Mariola J. Ferraro	Other: Microbiology and Cell Science
x	Gary L. Heil	Other: Biosafety
	Kindra A. Kelly-Quagliana	BSO, Voting Contact
x	Michael T. McIntosh	Other: infectious disease
x	[REDACTED]	Animal Expert
x	Jeffrey Rollins	Plant Expert Joined at 1:15pm
	Hubert Salvail	Community member - Covers Apopka, Orlando, Lake Alfred and Lake Nona
	Wesley Clay Smith	Chair

Agenda:

	Full Committee Projects	PI
1	<a href="#">Mechanisms of proteostasis-mediated neurodegeneration</a>	[REDACTED] – BIO5670 Renewal
2	<a href="#">Understanding the underlying mechanisms of Axon regeneration</a>	Sung Min Han – BIO5750 Renewal
3	<a href="#">Ca2+ and redox signalling in neuromuscular conditions.</a>	[REDACTED] – BIO5790 Renewal

4	<a href="#">Continuous Directed Evolution (OrthoRep) in Yeast</a>	Juannan Zhou
5	<a href="#">Movement of phloem-limited pathogens in citrus</a> – Will be voted on by UF Orlando IBC	Amit Levy – BIO5786 Renewal
Amendments		PI
1	<a href="#">Assess effects of soluble checkpoint receptors in intracranial glioma</a>	██████████ BIO5718
2	<a href="#">Noncanonical microRNA biogenesis and function in a gamma herpesvirus and mammals</a>	██████████ BIO5924

**Minutes**

Meeting was called to order at: 1:01pm

**Project Review**

**Principal Investigator:** ██████████

**Project Title:** Mechanisms of proteostasis-mediated neurodegeneration

**BIO5670 Renewal**

**Vector/Agent(s) to be used:** Adeno-associated virus (AAV)

**Name and Function of Transcribed Nucleic Acids:**

Name	Function
GST	microtubule binding protein
GFP	Microtubule binding protein
Perk	Sensor of ER stress

dendra2	Fluorescence
P301S tau	Microtubule binding protein
P301L tau	Microtubule binding protein
htau	Microtubule binding protein
GFP	hSyn-driven GFP expression
activating transcription factor 4	ER-stress sensor - ATF4 translation at ORF3 fluorescent reporter with mScarlet-I
jGCaMP8m, jGCaMP8s, jGCaMP8f	Syn-driven expression of ultrafast calcium sensor
EGFP	hSyn-driven EGFP expression
MCP-GFP; The MS2 coat protein (MCP) is a structural protein which interacts with the MS2V7	fluorescent reporter
X-box binding protein 1	Acts during endoplasmic reticulum stress (ER) by activating unfolded protein response (UPR) target genes via direct binding to the UPR element (UPRE).
B-GECO,	calcium sensor

**Host(s) to be used:** HEK293T, Rodent/primary rodent neuronal cells, Rodents.

**NIH Guidelines:** III-D-4-a for the administration of AAV to rodents; III-E-1 for the transduction of cell lines with AAV.

**Biosafety Level and Any Additional Requirements:** BSL-1 for experiments with AAV vectors; BSL-2 for experiments involving HEK-293 cells; ABSL-1 for intracerebroventricular injections of AAV into animals, with subsequent ABSL-1 housing.

**Concerns or Discussion:** Need to reorganize Section 15 for better understanding. Need more information about MS2V7.

**Training:** All training completed.

**Approval:** Conditionally approved pending comments be addressed. (Yes-10, No-0, Abstain-0)

**Principal Investigator:** Sung Min Han

**Project Title:** Understanding the underlying mechanisms of Axon regeneration

**BIO5750 Renewal**

**Vector/Agent(s) to be used:** Plasmids

**Name and Function of Transcribed Nucleic Acids:**

Name	Function
tomm- 20N::miniSOG(426 Cys)	mitochondria labeling, microinjection into <i>C. elegans</i> .
Pmyo3::tag:sl1(G1 6C)	RNA sequencing/ microinjection into <i>C. elegans</i> .
Punc- 25::atfs1::mCherry	encodes <i>C. elegans</i> ATFS1 gene, microinjection into <i>C. elegans</i> . The mito-miniSOG plasmid will not be used to induce injury or ablation that requires excessive stimulation. The purpose of using this plasmid is to make local mitochondria stress at the subcellular area.
ccdB	cloning selection, transformation to <i>E. Coli</i>
myo-3p::TIR1::F2A::AID*::NLS::tbb-2 3'UTR	SEC plasmid containing LG1 homology arms and myo-3p::TIR1::F2A::BFP::AID*::NLS::tbb-2 3'UTR, for expression of TIR1 and nuclear BFP reporter in <i>C. elegans</i> .

**Host(s) to be used:** *C. elegans*, DH5alpha, Top10 competent cells

**NIH Guidelines:** III-D-4-a for the use of recombinant/synthetic nucleic acids in whole animals (*C. elegans*); III-F-8, Appendix C-II for the molecular cloning using nonpathogenic K-12 lineage *E. Coli*.

**Biosafety Level and Any Additional Requirements:** BSL-1 containment and practices.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-12, No-0, Abstain-0)

**Principal Investigator:** [REDACTED]**Project Title:** Ca<sup>2+</sup> and redox signaling in neuromuscular conditions.**BIO5790 Renewal****Vector/Agent(s) to be used:****Name and Function of Transcribed Nucleic Acids:**

Name	Function
circularly permuted yellow fluorescent protein	reporter gene specific for superoxide. CMV promoter expressed specifically in mitochondria after transfection or electroporation.
ROS specific green fluorescent protein	reporter gene specific for ROS. CMV promoter, expressed specifically in mitochondria after transfection or electroporation.
yellow chameleon 3.6	reporter gene specific for Ca <sup>2+</sup> , CMV promoter, expressed in cytosol after transfection or electroporation.
circularly permuted mRuby with Camodulin Ca <sup>2+</sup> binding motif, RCaMp1h;	red shifted reporter gene specific for Ca <sup>2+</sup> , chicken beta actin promoter, expressed specifically in mitochondria after transfection or electroporation.
ROS specific green fluorescent protein	reporter gene specific for ROS. CMV promoter, expressed in cell cytosol.
Yellow chameleon 3.6 with COX IV mitochondrial targeting gene	reporter gene specific for Ca <sup>2+</sup> , beta-actin promoter, expressed specifically in mitochondria after transfection or electroporation.
ROS specific green fluorescent protein	reporter gene specific for ROS. CMV promoter, expressed in the cytosol of the cells after transfection or electroporation.
monomeric Kate2 cDNA, mitochondria-targeting sequence	Reporter protein to label mitochondria
GCaMP6f cDNA, with mitochondrial targeting sequence	reporter protein sensing Calcium ions in mitochondrial matrix
GCaMP6f cDNA, a Calcium sensing green fluorescent protein.	Genetically encoded calcium indicator used to sense calcium in the cytosol of the cell.
GCaMP6f cDNA, targeted to mitochondrial outer membrane	Report calcium levels exposed to the mitochondrial outer membrane.

jRCaMP1b cDNA targeted to mitochondrial outer membrane	Report calcium levels exposed to mitochondrial outer membrane
RCaMP1h cDNA, containing monomeric Ruby, a red shifted reporter protein	Report calcium levels in the cytosol
cDNA of RCaMP, a red shifted reporter linked with mito4xGCaMP6f, a green fluorescent protein reporter	this reporter will detect calcium levels exposed to mitochondrial outer membrane and in the mitochondrial matrix simultaneously
GCaMP6f cDNA, targeted to mitochondrial outer membrane	green fluorescent reporter protein sensing calcium levels exposed to mitochondrial outer membrane

**Host(s) to be used:** *E. Coli* (DH5a), HEK cells, C2C12 cells, rodents, Cultured skeletal muscle cells

**NIH Guidelines:** III-D-4-a for the introduction of rDNA in animals; III-E-1 for *in vitro* work in human and rodent cells; III-F-8 Appendix C-II for cloning and propagation in *E. coli* K-12 strains (DH5 alpha).

**Biosafety Level and Any Additional Requirements:** BSL-1 for *in vitro* work with C2C12 rodent cells; BSL-2 for *in vitro* work involving human derived HEK cells; ABSL-1 for work involving the delivery of mammalian expression vectors to rodents, with housing at ABSL-1. Safe sharps practices for all animal procedures. Initial and annual bloodborne pathogen training is required.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-12, No-0, Abstain-0)

**Principal Investigator:** Juannan Zhou

**Project Title:** Continuous Directed Evolution (OrthoRep) in Yeast

**BIO number not yet assigned**

**Vector/Agent(s) to be used:** Plasmids

**Name and Function of Transcribed Nucleic Acids:** APH4-1a, APH4-1b, APH7-1a; hygromycin resistance gene

**Host(s) to be used:** *E. Coli*, *Saccharomyces cerevisiae*

**NIH Guidelines:** III-F-8 Appendix C-II for maintenance of plasmids in K-12 *E. Coli* and Appendix C-III for the use of plasmids in *S. cerevisiae* and Application of genome editing in eukaryotic hosts (such as CRISPR/Cas9 technologies).

**Biosafety Level and Any Additional Requirements:** BSL-1 practices and containment.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-12, No-0, Abstain-0)

**Principal Investigator:** Amit Levy

**Project Title:** Movement of phloem-limited pathogens in citrus

**BIO5786 Renewal**

**Vector/Agent(s) to be used:** CTV-Synaototagmin, CTV-Remorin, Plasmids

**Name and Function of Transcribed Nucleic Acids:**

Downregulate the citrus Synaptotagmin gene expression. Downregulate the citrus Remorin gene repression

Name	Function
CTV replicon-GFP	3' of citrus tristeza virus fused to GFP, expressed by agroinfiltration
citrus tristeza virus	CTV infectious clone, expressed by agroinfiltration into plant
CTV replicon	5' part of CTV involved in viral replication
AT1G72160 promoter	promoter of AT1G72160
AT5G20870 promoter	Promoter of AT5G20870
AT1G72160 Promoter	Promoter of AT1G72160
p13 (CTV)	viral gene, no expression
CTV p18	CTV gene, no expression
CTV p20	p20 gene of CTV, no expression

CTV p23	p23 gene from CTV, no expression
CTV p65	p65 gene of CTV, no expression
CTV p6	p6 of CTV, no expression
CTV p61	p61 form CTV, no expression
CTV p6	p6 of CTV, expression in plants under 35S promoter
CTV p13	p13 of CTV, expression in plants under 35S promoter
CTV p20	p20 of CTV, expression in plants under 35S promoter
CTV p23	p23 of CTV, expression in plants under 35S promoter
CTV p61	p61 of CTV, expression in plants under 35S promoter
CTV p65	p65 of CTV, expression in plants under 35S promoter
CTV p18	p18 of CTV, expression in plants under 35S promoter
PDS guide RNA	Guide RNA for citrus CRISPR/Cas9
GFP	Produce Green Fluorescence
GUS	Test Promoter activity
Cas9	Mutations in target genes
35S promoter	Promoter of 35S
Ub6 promoter	Promoter of Ub6
FMV promoter	Promoter of FMV
FMV promoter drives GFP	GFP under FMV promoter
35S promoter for GFP	GFP under 35S promoter
FMV promoter	Promoter of FMV
CsRTM2	Restricted TEV Movement
CTVT68p13(EcoRI/SpeI)	Part of the CTVT68p13
AtSUC2 promoter follows by CsRTM2(BamHI/BsrGI)	AtSUC2 promoter drives CsRTM2(BamHI/BsrGI)
CTVT68p13	P13 gene in CTV-T68
FMV promoter	Promoter of FMV
CTVT68p13	Modified P13 gene in CTV

FMV-CTVT68p13	Promoter FMV
AtRTM2(KpnI/BsrGI)	Restricted TEV Movement
AtSUC2 promoter	Promoter of AtSUC2
AtORX2	Oxidation Resistance
Cs3g05770_1(ApaI/NsiI)	Codes for a P-type H <sup>+</sup> -exporting transporter
Cs3g05770_2(NsiI/SpeI)	Codes for a P-type H <sup>+</sup> -exporting transporter
AtORX2(XmaI/SpeI)	FMV promoter drives AtORX2
Cs3g05770(ApaI/SpeI)	Codes for a P-type H <sup>+</sup> -exporting transporter
tCsPDS(sense orientation) (EcoRI/BamHI)	phytoene desaturase
tCsPDS(antisense orientation) (EcoRI/BamHI)	Phytoene desaturase
AtRTM3(KpnI/BsrGI)	Restricted TEV Movement
SUC2- AtRTM3(KpnI/BsrGI)	AtSUC2 promoter
AtRTM1(BamHI- KpnI/BsrGI)	Restricted TEV Movement
SUC2-AtRTM1(BamHI- KpnI/BsrGI)	AtSUC2 promoter
CTVt36-p13 (ApaI/SpeI)	P13 in CTV
FMV- CTVT36p13(ApaI/SpeI)	FMV promoter drives the CTV- p13

**Host(s) to be used:** *Citrus sinensis*, *Citrus macrophylla*. *E. coli* DH5 alpha, *Agrobacterium tumefaciens*, *C. sinensis* explants.

**NIH Guidelines:** III-E-2-a for delivery of recombinant/synthetic nucleic acids in plants (*Nicotiana benthamiana* and Citrus) and plant-associated microorganism (*A. tumefaciens*); III-E-2-b-(3) for the use of recombinant molecule-modified non-exotic microorganisms that have the potential for serious detrimental impact in plants; III-F-8, appendices C-I for the use of recombinant/synthetic nucleic acids in tissue culture; III-F-8 Appendix C-II for work with *E. coli* K-12 strains (DH5 alpha).

**Biosafety Level and Any Additional Requirements:** BSL-1 for plasmid maintenance in *E. coli* K-12 (DH5 alpha) as well as for *in vitro* molecular cloning and construction of genetically modified CTV; PBSL-2 for the inoculation of recombinant CTV into whole plants. It is important to note that CTV genetic manipulations may enhance pathogenicity or the severity of disease. In accordance with the USDA-BRS Permit under 7CFR 340

stipulations, the permitted material must be used in accordance with **the conditions outlined in the permit**. Please ensure full compliance with all record-keeping, monitoring, and reporting requirements for the transgenic plants involved in this project. In each area where the regulated material is used or stored, you must clearly post signage stating "Authorized Personnel Only" on the door or an adjacent wall. Prior to removing regulated materials/organisms from the authorized containment facility, all items in direct contact with or exposed to those materials/organisms must be decontaminated according to the permit. The USDA APHIS BRS permit (122-J5L89NK) has expired (5/10/2024). Please provide an update if renewal or action is needed.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** Voted on by UF Orlando IBC. All approved as recommended (Yes-6, No-0, Abstain-0)

### Amendments

**Principal Investigator:** [REDACTED] BIO5718

**Title:** Assess effects of soluble checkpoint receptors in intracranial glioma

**BIO5718**

**Summary:** BSL-1 for *in vitro* experiments with AAV vectors; BSL-2 for *in vitro* experiments with human cell lines and 4T1-Luc2 cells; BSL-2 for production of gammaretroviral vectors; BSL-2+ for *in vitro* work with lentiviral and retroviral vectors (the + indicates the requirements for mucous membrane protection and substitution of glassware with plasticware when possible); ABSL-1 for non-systemic administration of AAVs and subsequent housing; ABSL-1+ for injections of rodents with murine cells transduced with 3rd generation lentiviral vectors including 4T1-Luc2 cells and ABSL-1 for subsequent housing (the + indicates the requirements for mucous membrane protection, use of safe sharps, wiping of the injection site); ABSL-2+ (the + indicates the requirements for mucous membrane protection, use of safe sharps, wiping of the injection site).for injections of rodents with murine cells transduced with gammaretroviral vectors and ABSL-2 for subsequent housing (the + indicates the requirements for mucous membrane protection, use of safe sharps, wiping of the injection site); ABSL-2 for injections of unmodified human cells into rodents with subsequent housing at ABSL1+hu The following sections of the NIH Guidelines apply to the work: III-D-3-a for production of gammaretroviral vectors in the presence of a helper system; III-D-4-a for use of recombinant viral vectors and transduced cells in rodents; III-E-1 for *in vitro* transduction of cells with lentiviral vectors, and subsequent experiments using the transformed cell lines.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-12, No-0, Abstain-0)

**Principal Investigator:** [REDACTED] BIO5924

**Title:** Noncanonical microRNA biogenesis and function in a gamma herpesvirus and mammals

**BIO5924**

**Summary:** BSL-1 for work with plasmids; BSL-2 for handling human and non-human primate cells; BSL-2+ for work with 2nd gen lentivirus (the “+” precautions indicating mucous membrane protection, the use of safe sharps, and the substitution of glassware with plasticware.); ABSL-2 for the injection of modified human cells into rodents and ABSL-1+hu for subsequent housing. Additional precautions include the use of safe sharps. This project falls under the following sections of the NIH Guidelines: III-D-2-a for transferring genes or nucleic acids from a Risk Group 2 pathogen to another prokaryotic or lower eukaryotic host vector system; III-D-3-a for the production of lentiviral vectors in the presence of a helper system; III-D-4 for the injection of modified cells into rodents; III-E for the use of rDNA in non-K12 *E. coli* strain BL21 (DE3); III-E-1 for *in vitro* transduction of cells with lentiviral vectors; III-F-8 Appendix C-I for rDNA in tissue culture and Appendix C-II for maintenance of plasmids in K-12 *E. coli*; Application of genome editing in eukaryotic hosts (such as CRISPR/Cas9 technologies).

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-13, No-0, Abstain-0)

The meeting adjourned at 1:55pm