

Quorum: 7

## IBC Meeting Comments

January 21, 2026 – Zoom Conference Call

Attendance – IBC Committee			
Present	Name	Expertise	Role
	Paul Gulig	Microbiology	Member
x	Luis Martinez	Microbiology	Member
x	Jason Clements		Member
x	Norman Beatty	Infectious Diseases	Member
x	Steeve Boulant	Virology	Member
x	Sanford L. Boye	Virology	Member
	Amber Duren		Community Member
	Mariola Ferraro	Microbiology	Member
x	Gary Heil		Member
x	Michael McIntosh	Virology	Member Joined 1:27pm
x	John D. McVay	Plants	Community Member
x	Mark Moehle	Microbiology	Member
x	Kamal A. Mohammed	Microbiology	Member Joined at 1:18pm
x	Christopher Overend		Member
x	[REDACTED]	Animals	Member
x	Jeffrey Rollins	Plants	Member
	Elias J. Sayour	Clinical Trials	Member
x	Clay Smith	Virology	Chair
	Daniel R. Swale	Insects	Member
x	Amy Vittor	Infectious Diseases	Member Left at 2:19pm

Attendance – Staff and Guests		
Present	Name	Affiliation/Position
x	Pratibha Srivastava	UF EHS
x	Asha Rani	UF EHS
x	Anna Gioseffi	UF EHS
x	Alek Aranyos	UF EHS
x	Christine Lashley	UF EHS
x	Savannah Hardiman	UF EHS
x	Erica Gonzaga	UF EHS
x	Jennifer Jackson Left at 2:30pm	UF EHS
x	Artiom Chacon	UF EHS
x	Laura Castillo Left at 1:45pm	UF EHS
x	Rui Xiao Left at 1:12pm	PI Guest
x	Laurance Prunetti	UF EHS
x	[REDACTED]	UF IACUc
x	Raies Mir	UF EHS
x	Jeff Jones Left at 1:17pm	PI Guest

Attendance – UFO IBC: Apopka, Orlando, Lake Alfred, Lake Nona		
Present	Name	Affiliation/Position
	Annette R. Khaled	Community member - Covers Apopka, Orlando, Lake Alfred and Lake Nona
x	Norman Beatty	Other: Infectious Disease
	Mariola J. Ferraro	Other: Microbiology and Cell Science
x	Gary L. Heil	Other: Bio-Safety / Alternate Responsible Official
x	Kindra A. Kelly-Quagliana	Joined at 1:13pm BSO, Voting Contact
x	Michael T. McIntosh	Other: infectious disease
x	[REDACTED]	Animal Expert
x	Jeffrey Rollins	Plant Expert
x	Hubert Salvail	Joined at 1:16pm. Left at 1:45pm Community member - Covers Apopka, Orlando, Lake Alfred and Lake Nona
x	Wesley Clay Smith	Chair

Attendance – Gulf Coast Wimauma		
Present	Name	Affiliation/Position
	Allen Williford	Community Member
x	Chris Overend	Member
x	Clay Smith	Chair
	Daniel Swale	Member
	Dustin Grooms	Community Member
x	Gary Heil	BSO
x	Michael McIntosh	Member
x	Jeffrey Rollins	Plant Expert

Attendance – Ft Lauderdale		
Present	Name	Affiliation/Position
x	Chris Overend	Member
x	Gary Heil	BSO
	Daniel Swale	Member
x	Jeffrey Rollins	Plant expert
	Amir Khoddamzadeh	Community member
x	David Serrano	Joined at 1:12pm. Left 1:22pm Community member
x	Clay Smith	Chair
	Michael McIntosh	Member

Agenda:

	Full Committee Projects	PI
1	<a href="#">Investigating molecular pathways of cognitive aging and neurodegenerative disease</a>	Jeffrey Jones
2	<a href="#">Contribution of impaired and maladaptive motor innervation of muscle fibers to progressive pathology of muscular dystrophy.</a>	██████████
3	<a href="#">Mechanisms of stress-induced abortion of Arabidopsis ovules</a>	Bernard Hauser – RD-2220 Transcription
4	<a href="#">Mechanisms of longevity regulation of C. elegans</a>	Rui Xiao – BIO5777 Renewal
5	<a href="#">chemoenzymatic synthesis of glycosphingolipids</a>	Zhongwu Guo – BIO5803 Renewal
6	<a href="#">Ex vivo generation of antigen-specific T cell targeting COVID-19.</a>	Duane Mitchell – BIO5677 Renewal
7	<a href="#">Mechanism and structure of natural product biosynthesis pathways</a>	Steven Bruner – BIO5645 Renewal
8	<a href="#">Production of genetically modified plants belonging to Rutaceae family- Will be voted on UF Orlando IBC</a>	Vladimir Orbovic – RD-3375 Transcription
9	<a href="#">Genetic transformation of horticultural crops and model plants for increased resistance to major diseases – Will be voted on by Gulf Coast Wimauma IBC</a>	Zhanao Deng
10	<a href="#">Cloning and sequencing of 16S rRNA, amoA, nxrA, nor, nos genes from soil, freshwater, and ocean water – Will be voted on by Ft. Lauderdale IBC</a>	Willm Martens-Habbena – RD-4494 Transcription
	Amendments	PI

1	<a href="#">Nanotherapeutics for immune programing</a>	██████████ BIO5838
2	<a href="#">Restoring improved cognition and synaptic function by up regulating receptor proteins during aging</a>	██████████ BIO6643
3	<a href="#">Lentivirus transfection of ovarian cancer cell lines</a>	Meghan Ferrall-Fairbanks BIO6564
4	<a href="#">Recombinantly overexpressing membrane proteins in human cell lines</a>	Chen Zhao BIO6662
5	<a href="#">Transferring primary cells from transgenic donor mice</a>	██████████ BIO7765
6	<a href="#">Role of pancreatic cancer cell-derived CTGF in cachectogenic cytokine secretion and muscle cell atrophy</a>	██████████ BIO6120
7	<a href="#">Modulating Genes in Parkinson's Disease</a>	Matthew LaVoie BIO5823
8	<a href="#">Mechanisms of Cancer-induced Skeletal Muscle Wasting</a>	██████████ BIO6173 – adding RD-3029
9	<a href="#">non-coding RNA study in cancers</a>	██████████ BIO7281
10	<a href="#">Recombinant DNA constructs to study normal and leukemic cell physiology in human and mouse cell cultures and in mouse models</a>	██████████ BIO6083

**Minutes**

Meeting was called to order at: 1:02pm

**Project Review**

**Principal Investigator:** Jeffrey Jones

**Project Title:** Investigating molecular pathways of cognitive aging and neurodegenerative disease

**BIO number not yet assigned**

**Vector/Agent(s) to be used:** Lentivirus, second-generation (Gag/Pol/Rev expressed in a single helper plasmid)

**Name and Function of Transcribed Nucleic Acids:** Neurogenin 2 (NGN2) and achaete-scute family bHLH transcription factor 1 (ASCL1), Transcription factors for the direct conversion of dermal fibroblasts or induced pluripotent stem cells to neurons. Ribonucleotide reductase catalytic subunit M1 (RRM1), encodes the large and catalytic subunit of ribonucleotide reductase, an enzyme essential for the conversion of ribonucleotides into deoxyribonucleotides. Cyclin dependent kinase 1 (CDK1), catalytic subunit of the highly conserved protein kinase complex known as M-phase promoting factor (MPF), which is essential for G2/M phase transitions of eukaryotic cell cycle. Neurogenin 2 (NGN2) and Green Fluorescent Protein (GFP), Transcription factor for the direct conversion of induced pluripotent stem cells to neurons. Expressed with the reporter GFP to indicate activation. Keima, a fluorescent protein.

**Host(s) to be used:** *E.coli*, HEK 293T (human), human dermal fibroblasts, induced pluripotent stem cells, human embryonic stem cells, human induced neurons

**NIH Guidelines:** III-D-3-a for the production and packaging of lentivirus using HEK293 cells; III-E for the CRISPR Cas-9 work; III-F-8 Appendix C-II for molecular cloning into plasmids in K-12 lineage *E. coli*.

**Biosafety Level and Any Additional Requirements:** BSL-2+ for the packaging and production of lentivirus using human HEK293 cells, the + necessitating the use of mucous membrane protection, substitution of glassware with plastic, and initial and annual Bloodborne Pathogens training for all lab staff. BSL-1 for the work of cloning and storage in K-12 lineage *E. coli*.

**Concerns or Discussion:** None

**Training:** All training completed.

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

**Principal Investigator:** [REDACTED]

**Project Title:** Contribution of impaired and maladaptive motor innervation of muscle fibers to progressive pathology of muscular dystrophy.

**BIO number not yet assigned**

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

**Name and Function of Transcribed Nucleic Acids:** uDys (Solid microdystrophin) - truncated dystrophin protein containing the N-terminus region, 5 spectrin-like repeats (#1, #16, #17, #23, #24) and a truncated C-terminal domain. Stabilizes membrane of striated muscle cells.

Micro-dystrophin, truncated dystrophin protein.

**Host(s) to be used:** rodents, K-12 *E. coli*

**NIH Guidelines:** III-D-4-a, for the injection of AAVs into rodents; III-F-8, appendix C-II, for cloning and propagation of plasmids in K-12 *E. coli*.

**Biosafety Level and Any Additional Requirements:** BSL-1 for cloning plasmids in the lab, handling K-12 *E. coli* strains, and handling prepared AAVs; ABSL-1+ for injection of AAVs into rodents, with subsequent ABSL-1i housing (for inactivation of bedding for the first 72 hours post-administration), ABSL-1 housing is appropriate (the '+' designates the use of safe sharps, wiping of the injection site, and mucous membrane protection).

**Concerns or Discussion:** None

**Training:** All training completed.

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

**Principal Investigator:** Bernard Hauser – RD-2220 Transcription

**Project Title:** Mechanisms of stress-induced abortion of Arabidopsis ovules

**BIO number not yet assigned**

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

**Name and Function of Transcribed Nucleic Acids:** Arabidopsis transcription factors (HOX, MYB, AP2, and zinc fingers). Ovule development, signaling or housekeeping gene.

**Host(s) to be used:** *E. coli*, (JM109 and DH5alpha) *A. tumefaciens*, *A. thaliana*

**NIH Guidelines:** III-E-2-a is for delivery of recombinant/synthetic nucleic acids in whole plants (*Arabidopsis thaliana*) and plant-associated microorganism (*Agrobacterium tumefaciens*); III-F-8 Appendix C-II for propagation of plasmids in K-12 derived *E. coli*.

**Biosafety Level and Any Additional Requirements:** BSL-1 for *in vitro* work involving K-12 derived *E. coli*; PBSL-1 for work involving the transfer of recombinant nucleic acid molecules to plants and subsequent propagation of genetically modified plants.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-14, No-0, Abstain-0)

**Principal Investigator:** Rui Xiao – BIO5777 Renewal

**Project Title:** Mechanisms of longevity regulation of *C. elegans*

**BIO5777**

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

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

**Host(s) to be used:** table below

name	function	hosts
Cas9 and sgRNA for daf-10	directs (Cas9) and cuts (sgRNA)	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
Tiar-1; mCherry fluorescent tag	RNA binding protein involved in cold stress response; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
SMA-5; mCherry fluorescent tag	Kinase involved in stress response; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
sgk-1; mCherry fluorescent tag	protein kinase of DAF-16; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
rict-1; mCherry fluorescent tag	adapter protein for mTOR complex 2; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
rack-1; mCherry fluorescent tag	adapter protein for PKC-2; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
pkc-2; mCherry fluorescent tag	protein kinase involved in the low temperature-mediated lifespan extension; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold

Mito roGFP; mCherry fluorescent tag	Reactive oxygen species probe; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
MCT-1; mCherry fluorescent tag	Ketone body transporter; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
isu-1; YFP fluorescent tag	isu-1 is a mitochondrial gene involved in iron-sulfur cluster assembly of <i>C. elegans</i> ; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
HMGS-1; mCherry fluorescent tag	Ketone body metabolism gene; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
Fat-2; mCherry fluorescent tag	Fat metabolism gene; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
daf-10; YFP fluorescent tag	daf-10 is a <i>C. elegans</i> gene involved in cilia assembly; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
CRTC-1; mCherry fluorescent tag	Transcription co-factor; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
Cey-1; mCherry fluorescent tag	RNA binding protein involved in cold stress response; fluorescence	<i>C. elegans</i> , <i>E. coli</i> strains DH5-alpha, TOP10; XLGold
SKN-1	SKN-1 is an adapter protein for mTOR complex 2; used to generate the <i>C. elegans</i> RNAi plasmid	<i>C. elegans</i> , <i>E. coli</i> strain HT115
SGK-1	SGK-1 is a protein kinase of DAF-16; used to generate the <i>C. elegans</i> RNAi plasmid	<i>C. elegans</i> , <i>E. coli</i> strain HT115
isu-1	isu-1; a mitochondrial gene involved in iron-sulfur cluster assembly of <i>C. elegans</i> ; used to generate the <i>C. elegans</i> RNAi plasmid	<i>C. elegans</i> , <i>E. coli</i> strain HT115
GFP (green fluorescent protein)	fluorescence; used to generate the <i>C. elegans</i> RNAi plasmid	<i>C. elegans</i> , <i>E. coli</i> strain HT115
DAF-16	daf-16 is a transcription factor involved in animal aging; used to generate the <i>C. elegans</i> RNAi plasmid	<i>C. elegans</i> , <i>E. coli</i> strain HT115
daf-10	daf-10 is a <i>C. elegans</i> gene involved in cilia assembly; used to generate the <i>C. elegans</i> RNAi plasmid	<i>C. elegans</i> , <i>E. coli</i> strain HT115

**NIH Guidelines:** III-D-4-a, for transgenic *C. elegans*; III-F-8 Appendix C-II, for maintenance of plasmids in *E. coli* K-12 strains; Application of genome editing in eukaryotic hosts (such as CRISPR/Cas9 technologies).

**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-13, No-0, Abstain-0)

**Principal Investigator:** Zhongwu Guo – BIO5803 Renewal

**Project Title:** chemoenzymatic synthesis of glycosphingolipids

**BIO5803**

**Vector/Agent(s) to be used:** ; plasmids

**Name and Function of Transcribed Nucleic Acids:** beta-1,3-N-acetylgalactosaminyltransferase; LgtD. Glycotransferase activity

<b>Name</b>	<b>Function</b>
beta-1,3-N-acetylgalactosaminyltransferase, LgtD	Converting globotriose to globotetrose
alpha 1,2 Fucosyltransferase	Addition of fucose to disaccharides. IPTG induction
GDP-fucose pyrophosphorylase (FKP)	Converts Fucose to GDP-Fucose; IPTG
N-acetylhexosamine 1-kinase	catalyzes the formation of 1 μmol of GlcNAc-1-P from GlcNAc and ATP per minute at 37 °C
GlcNAc 1-P uridyltransferase (CjGlmU)	catalyzes the formation of 1 μmol of UDP-GlcNAc from GlcNAc-1-P and UTP per minute at 37 °C

**Host(s) to be used:** E. coli B- and K-12 strains

**NIH Guidelines:** III-D-2-a for the transfer of DNA from RG2 pathogenic agents to a non-pathogenic prokaryotic host-vector system; III-E for the use of a non-K-12 lineage *E. coli* (BL21DE3) for expression; III-F-8 appendix C-II for the use of a K-12 *E. coli* (Top10) host-vector system for cloning plasmids of interest.

**Biosafety Level and Any Additional Requirements:** BSL-1 for *in vitro* work involving both K-12 lineage *E. coli* and non-K-12 lineage *E. coli*; BSL-2 for *in vitro* work involving the subcloning of DNA from RG2 pathogens into non-pathogenic prokaryotes.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-14, No-0, Abstain-0)

**Principal Investigator:** Duane Mitchell – BIO5677 Renewal

**Project Title:** *Ex vivo* generation of antigen-specific T cell targeting COVID-19.

**BIO5677**

**Vector/Agent(s) to be used:** SARS-CoV-2; plasmids

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

Spike glycoprotein mRNA	Spike gp allows full SARS-CoV2 virus engage with ACE2 receptor and infect cells.	We will use this mRNA to transfect human antigen presenting cells that will process it to translate it into peptide to be expressed on their MHC molecules to later activate human T cells in vitro. All this work will be in vitro.
Membrane mRNA	Membrane protein plays a role in determining the shape of the virus envelope. Binding with M protein helps to stabilize nucleocapsids or N proteins and promotes completion of viral assembly by stabilizing N protein-RNA complex, inside the internal virion.	We will use membrane protein mRNA to transfect human antigen presenting cells that will process it to translate it into peptide to be expressed on their MHC molecules to later activate human T cells in vitro. All this work will be in vitro.

Envelope protein mRNA	Envelope or E protein which is the smallest protein in the SARS-CoV structure that plays a role in the production and maturation of this virus.	We will use envelop protein mRNA to transfect human antigen presenting cells that will process it to translate it into peptide to be expressed on their MHC molecules to later activate human T cells in vitro. All this work will be in vitro.
Nucleocapsid protein mRNA	The nucleocapsid protein known as N protein is the structural component of CoV localizing in the endoplasmic reticulum-Golgi region that structurally is bound to the nucleic acid material of the virus. Because the protein is bound to RNA, the protein is involved in processes related to the viral genome, the viral replication cycle, and the cellular response of host cells to viral infections . N protein is also heavily phosphorylated and suggested to lead to structural changes enhancing the affinity for viral RNA.	We will use nucleocapsid protein mRNA to transfect human antigen presenting cells that will process it to translate it into peptide to be expressed on their MHC molecules to later activate human T cells in vitro. All this work will be in vitro.

Spike	The spike protein (S) is a protein located surface of coronavirus that mediates virus entry into host cells.
membrane	The Membrane protein (M) is a structural protein of coronavirus that is involved in the formation of the viral capsid.
envelope	The Envelope protein (E) is a structural protein of coronavirus that is involved in the formation of the viral capsid.
nucleocapsid	The Nucleocapsid protein (N) is a structural protein of coronavirus that is involved in the formation of the viral capsid.

**Host(s) to be used:** human cells, HB101 E. Coli

**NIH Guidelines:** III-D-2-a for experiments in which DNA from Risk Group 2 or Risk Group 3 agents is transferred into nonpathogenic prokaryotes or lower eukaryotes; III-F-8 Appendix C-II for work with nonpathogenic *E. coli* K-12 strains.

**Biosafety Level and Any Additional Requirements:** BSL-1 for work involving cloning and *in vitro* transcription using *E. coli* K-12; BSL-2 for work involving blood from human donors (initial and annual bloodborne training is required).

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-15, No-0, Abstain-0)

**Principal Investigator:** Steven Bruner – BIO5645 Renewal

**Project Title:** Mechanism and structure of natural product biosynthesis pathways

**BIO5645**

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

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

mdnD	Gene produces an N-acetyltransferase protein that acts on peptide natural products; expression in <i>E. coli</i> using IPTG inducer
clbR	Encodes for protein of unknown function, thought to be a transcriptional regulator for genes involved in natural product biosynthesis; expression in <i>E. coli</i> using IPTG inducer
mdnE	Encodes for an ABC transporter membrane protein, unknown function; expression in <i>E. coli</i> using IPTG inducer
mdnD, mdnE	mdnD encodes for an N-acetyltransferase, and mdnE encodes for a membrane transporter, both thought to be involved in peptide natural product biosynthesis; expression in <i>E. coli</i> using IPTG inducer

nhoA	N-acetyltransferase that acetylates p-aminophenol; expression in <i>E. coli</i> using IPTG inducer
thi4	Encodes for a thiamine thiazole synthase that is involved in thiamine biosynthesis; expression in <i>E. coli</i> using IPTG inducer

**Host(s) to be used:** BL21(DE3) Competent *E. coli*; TOP10 *E. coli* competent cells

**NIH Guidelines:** III-E for protein expression using non-exempt *E. coli* strain BL21 (DE3); III-F-8, Appendix C-II for molecular cloning with exempt K-12 strain *E. coli*.

**Biosafety Level and Any Additional Requirements:** BSL-1 for the work involving *E. coli*.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-15, No-0, Abstain-0)

**Principal Investigator:** Vladimir Orbovic – RD-3375 Transcription

**Project Title:** Production of genetically modified plants belonging to *Rutaceae* family

**BIO number not yet assigned**

**Vector/Agent(s) to be used:** *Agrobacterium tumefaciens*; *Escherichia coli*, (DH5alpha, JH109); Plasmids

**Name and Function of Transcribed Nucleic Acids:** pCAMBIA2300, pCAMBIA2301, pBIN101, pPZP212; Binary vectors (plasmids) containing Left and Right border that determine the stretch of DNA to be moved into plant cell genome. pFMVpoly2, pRTL.vec; small plasmids used for gene splicing.

**Host(s) to be used:** various members of *Rutaceae* family (citrus group), *Agrobacterium tumefaciens*

**NIH Guidelines:** III-E-2-a for work involving experiments with recombinant or synthetic nucleic acids molecule containing plants (Citrus group) or plant associated microorganisms (*Agrobacterium tumefaciens*); Application of genome editing in eukaryotic hosts (such as CRISPR/Cas9 technologies); III-F-8 Appendix C-I for the maintenance of genetically modified cells in culture; III-F-8 Appendix C-II for manipulation and propagation of plasmids in *E. coli* K12 strains (DH5alpha and JM109)

**Biosafety Level and Any Additional Requirements:** BSL-1 for *in vitro* work involving *E. coli* K-12 and *A. tumefaciens*; PBSL-1 for work involving the transfer of recombinant nucleic acid molecules to plants and subsequent propagation of genetically modified plants. Because this project operates as a core facility providing transgenic plants to other investigators, an update is required every six months providing a list of transgenic plants prepared over the past six months along with the corresponding investigators for whom the plants were made.

**Concerns or Discussion:** Will request an annual update due to lab making so many unknown genes throughout the year.

**Training:** All training completed.

**Approval:** Voted on by UF Orlando IBC. All approved as recommended (Yes-8, No-0, Abstain-0)

**Principal Investigator:** Zhanao Deng

**Project Title:** Genetic transformation of horticultural crops and model plants for increased resistance to major diseases

**BIO number not yet assigned**

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

**Name and Function of Transcribed Nucleic Acids:** Ca9 gene; nptII gene; gfp gene, Cas9 protein; RNA scaffold; nptII, GFP. Plant transformation and gene editing. DMR6\_gRNA1 and DMR6\_gRNA2 from citrus, SWEET1\_gRNA1 and SWEET1\_gRNA2 from citrus; Knock-out citrus DMR6 gene for disease resistance.

**Host(s) to be used:** *E. coli*, *Agrobacterium tumefaciens*, Citrus species; Poncirus or trifoliolate orange and its hybrids.

**NIH Guidelines:** III-E-2-a for experiments involving CRISPR genome editing of whole plants; III-F-8 appendix C-II for work with *E. coli* K-12 strain plasmids and molecular cloning, and appendix C-I for the maintenance of modified cell lines *in vitro*.

**Biosafety Level and Any Additional Requirements:** BSL-1/PBSL-1 for all work with the plasmids, agrobacterium, and *in vitro* citrus work. An updated FDACS-08208 form is required before transgenic plants can be moved.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** Voted on by UF Gulf Coast Wimauma IBC. Community members not present. They are not a requirement but considered a best practice. All approved as recommended (Yes-5, No-0, Abstain-0)

**Principal Investigator:** Willm Martens-Habbena – RD-4494 Transcription

**Project Title:** Cloning and sequencing of 16S rRNA, amoA, nxrA, nor, nos genes from soil, freshwater, and ocean water

**BIO number not yet assigned**

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

**Name and Function of Transcribed Nucleic Acids:** 16SrRNA genes, Nitrate reductase genes, nitrite reductase genes, nitric oxide reductase genes, nitrous oxide reductase genes, ammonia monooxygenase genes, hydroxylamine dehydrogenase genes, nap genes. All functional genes are involved in microbial ammonia oxidation or nitrate reduction.

**Host(s) to be used:** *E. coli* TOPO Top10 cells

**NIH Guidelines:** III-F-8 appendix C-II of the NIH Guidelines for cloning and transformations.

**Biosafety Level and Any Additional Requirements:** BSL-1 containment and practices for work involving K-12 strain *E. coli*.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** Voted on by UF Fort Lauderdale IBC. All approved as recommended (Yes-5, No-0, Abstain-0)

### Amendments

**Principal Investigator:** [REDACTED] BIO5838

**Title:** Nanotherapeutics for immune programming

**BIO5838**

**Summary:** CAR-T cells have been added. Lentivirus has been removed. BSL-1 for the *in vitro* use of the transfected cell line; BSL-2 containment and practices are for the use of PBMCs from sepsis patients; BSL-2+ for the work with LVV transduced cell lines, with additional precautions including substitution of glassware with plasticware, the use of mucous membrane protection, and initial and annual Bloodborne Pathogens training for all lab staff; ABSL-1 for handling transgenic animals; ABSL-1i for housing rodents inoculated with cells derived from genetically modified rodents, with inactivation of bedding materials for the first 72 hours post-inoculation; ABSL-2+ for *in vivo* procedures with extra precautions emphasizes the use of mucous membrane protection, the use of safe sharps, substitution of glassware with plasticware, and wiping of the injection site, and ABSL-2 for subsequent housing. The following sections of the NIH Guidelines apply to this project: III-D-4-b for the *in vivo* use of the recombinantly-modified cells; III-E-1 which encompasses the *in vitro* use of the transduced or transfected cells; III-F-1 for the incorporation of mRNA and DNA fragments into the nanoparticle formulations; III-F-8 Appendix C-I for the *in vitro* use of the transfected cell line.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-15, No-0, Abstain-0)

**Principal Investigator:** [REDACTED] BIO6643

**Title:** Restoring improved cognition and synaptic function by up regulating receptor proteins during aging

**BIO6643**

**Summary:** BSL-1 for experiments handling AAV are appropriate with ABSL-1 for administration of AAV (stereotaxic intracerebroventricular administration) and subsequent housing; BSL-2+ for work with lentivirus with ABSL-2 for animal inoculations with lentivirus (stereotaxic intracerebroventricular administration), and ABSL-2 for subsequent housing. The + necessitates the use of mucous membrane protection, safe engineered sharps, and initial and annual Bloodborne Pathogens training for all staff. The following sections of the NIH Guidelines apply to this project: III-D-4-a for the use of recombinant DNA from less than 2/3 of viral genome in animals for lentivirus and AAV experiments. Bloodborne pathogen training required.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-14, No-0, Abstain-0)

**Principal Investigator:** Meghan Ferrall-Fairbanks BIO6564

**Title:** Lentivirus transfection of ovarian cancer cell lines

**BIO6564**

**Summary:** Adding more lentiviruses. BSL-2+ (the + designation necessitates the use of mucous membrane protection, substitution of glassware with plastic whenever possible, and initial and annual Bloodborne Pathogens training for all lab members). The following section of the NIH Guidelines apply to this project: III-E-1 for the transduction of cells with lentiviral vectors.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** Conditional approval pending certification of Biosafety Cabinet (Yes-15, No-0, Abstain-0)

**Principal Investigator:** Chen Zhao BIO6662

**Title:** Recombinantly overexpressing membrane proteins in human cell lines

**BIO6662**

**Summary:** Adding plasmids. BSL-2 for *in vitro* work with human cell lines; BSL-1 for *in vitro* work with baculovirus and molecular cloning. The following sections of the NIH Guidelines apply to this project: III-E for the use of non-K-12 lineage *E. coli* (BL21, Mach1, Rosetta (DE3)) to propagate and express plasmids; III-E-1 for the use of recombinant baculovirus; III-F-8, appendix C-I for the maintenance of genetically modified cells in tissue culture.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-15, No-0, Abstain-0)

**Principal Investigator:** [REDACTED] BIO7765

**Title:** Transferring primary cells from transgenic donor mice

**BIO7756**

**Summary:** Addition of rodent line. BSL-1 for handling and processing rodent tissue and cells. ABSL-1+ for injection of T-cells, alveolar macrophages, or epithelial cells from transgenic donor rodents into recipient rodents. Subsequent ABSL-1i housing: inactivation of bedding materials for the first 72 hours post-inoculation of mice and disinfection of caging. ABSL-1 housing is appropriate after this period. The '+' designates the use of safe sharps and wiping of the injection site. These changes also do not affect NIH guidelines: III-D-4-a, for the transfer of genetically modified materials from donor rodents into recipient rodents.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-15, No-0, Abstain-0)

**Principal Investigator:** [REDACTED] BIO6120

**Title:** Role of pancreatic cancer cell-derived CTGF in cachectogenic cytokine secretion and muscle cell atrophy

**BIO6120**

**Summary:** Adding cancer lines. BSL-2 for work with human tumor cells; BSL-2 and ABSL-2, respectively, for *in vitro* work and animal procedures and housing involving PANC-1 cells or derivatives with additional precautions using safe engineered sharps and wiping of the injections site. Approval for all work involving KPC cells and the new derivatives may remain at BSL-1 and ABSL-1. The following section of the NIH Guidelines apply to this project: III-D-4-a for the use of recombinant nucleic acid modified cell lines in animals.

**Concerns or Discussion:** None

**Training:** All training completed.

**Approval:** All approved as recommended (Yes-14, No-0, Abstain-0)

**Principal Investigator:** Matthew LaVoie BIO5823

**Title:** Modulating Genes in Parkinson's Disease

**BIO5823**

**Summary:** Adding new AAVs. BSL-1 for handling of AAV and plasmid vectors maintained in *E.coli* K-12; BSL-2 for all work involving the use of human sourced cells; BSL-2+ for work with LVV (+ emphasizes mucous membrane protection, use of safe sharps, and substitution of plasticware for glassware, and initial and annual Bloodborne Pathogens training for all lab staff). This work falls under the following sections of the NIH Guidelines: III-E-1 for *in vitro* use of LVV and AAV in cell culture only; III-F-8 Appendix C-I for use of plasmids in mammalian cells and Appendix C-II for use of plasmids in *E. coli* K12 host-vector systems; 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)

**Principal Investigator:** [REDACTED] BIO6173 – adding RD-3029

**Title:** Mechanisms of Cancer-induced Skeletal Muscle Wasting

**BIO6173**

**Summary:** Addition of RD-3029. BSL-1/ABSL-1 for the work with AAVs with ABSL-1i for subsequent housing of rodents, including inactivation of bedding and cages for the first cage change after 72 hours; ABSL-1i or transplanting mice with transduced/genetically modified cells for the first 72 hours, with ABSL-1 housing thereafter, substitution of glassware for plastic whenever possible, the use of safe engineered sharps, mucous membrane protection, and wiping of the injection site.; BSL-2 for the work involved with human-derived cell lines. The following sections of the NIH Guidelines apply to this project: III-D-4-a for the use of AAV in animals; III-F-8 (Appendix C-I), for the use of plasmids containing less than ½ the genome of any eukaryotic virus in cell culture.

**Concerns or Discussion:** None

**Training:** All training completed.

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

**Principal Investigator:** [REDACTED] BIO7281

**Title:** non-coding RNA study in cancers

**BIO7281**

**Summary:** Updated generation of LVV. BSL-1 for plasmid maintenance using K-12 lineage nonpathogenic *E. coli*; BSL-2 for work with human cell lines; BSL-2+ for work with transduced cell lines and *in vitro* experiments with LVV (the “+” practices require mucous membrane protection and substituting plastic labware for glassware, and initial and annual Bloodborne Pathogens training for all lab staff); ABSL-2+ for inoculation of human cells transduced with 2nd gen LVV into rodents (the “+” practices require the use of safe sharps, mucous membrane protection and wiping of the injection site) and ABSL-2 subsequent housing for lentivirus vectors (LVV) experiments. This project falls under the following sections of the NIH Guidelines: III-D-4-a for the use of recombinant DNA from less than 2/3 of viral genome in rodents; III-D-4-b for the use of recombinantly modified cells in rodents; III-D-3-b for the generation of lentiviral vectors; III-F-8 Appendix C-II for the molecular cloning using K-12 lineage *E. coli* (DH5 $\alpha$ ); this project also contains 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)

**Principal Investigator:** [REDACTED] BIO6083

**Title:** Recombinant DNA constructs to study normal and leukemic cell physiology in human and mouse cell cultures and in mouse models

**BIO6083**

**Summary:** Providing virus testing to lower containment for the administration of gammaretrovirus-transduced cells and for 2nd gen lentivirus-transduced murine cells. BSL-2 for *in vitro* work involving viral vectors; ABSL-1 for transfer of cells from transgenic mice into other mice, with subsequent ABSL-1 for subsequent housing; ABSL-1+ for injection of lentivirus transduced murine cells into rodents and ABSL-1 for subsequent housing (the + indicates the requirements for mucous membrane protection, use of safe sharps, wiping of the injection site); ABSL-1+ for injection of gammaretrovirus transduced cells into rodents and ABSL-1 for subsequent housing (the + indicates the requirements for mucous membrane protection, use of safe sharps, wiping of the injection site). These changes do not affect the previously approved NIH Guidelines: III-D-3-a for the production and *in vitro* use of lentiviral and retroviral vectors in the presence of a helper system; III-D-4-a for the inoculation of animals with non-

transduced cells from donor mice; III-D-4-b for the inoculation of animals with cells transduced by lentiviral and gammaretroviral vectors; III-E-1 for the transduction of cell lines by lentiviral vectors.

**Concerns or Discussion:** None

**Training:** All training completed.

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

The meeting adjourned at 2:34pm