

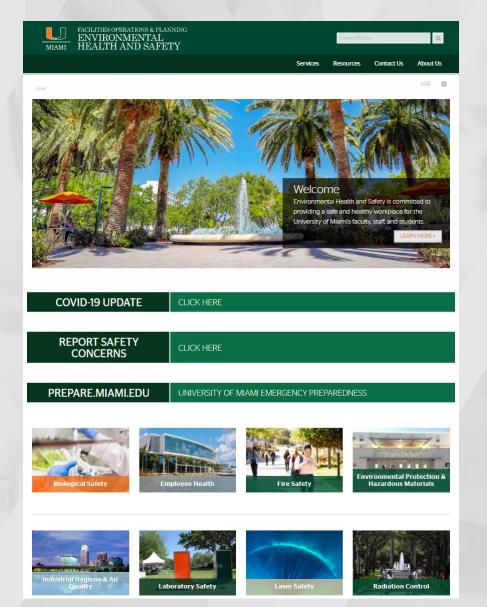
# Outline

Team Introduction
Mission / Goals
Committees
Biosafety Month
Program Development

- BioRaft Updates
- IBC Scope
- Website
- Signage
- Documents
- Training
- Future Development

Questions

### Environmental Health & Safety

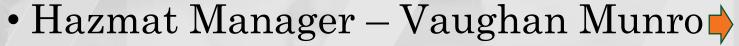


- Biosafety & Lab Safety
- Laser Safety
- Hazardous Materials Management
- Industrial Hygiene & Air Quality
- Fire Safety
- Radiation Safety
- Employee Health

## EHS Leadership



Executive Director – Jennifer Laine





│ Industrial Hygienist – Raul Garcia



• Radiation Safety Officer – Edward Pombier >



Employee Health Manager – Sandra Chen-Walta

• Biosafety Officer – Shane Gillooly

# Biosafety Office



- Shane Gillooly
  - Biosafety Officer



- Melanie Peapell
  - Biosafety Specialist & Laser Safety Officer
    - Dangerous Goods Shipping Coordinator



- Angel Rayo
  - Biosafety Specialist
    - Lab Inspection Coordinator

### Mission

• As depicted on our website:



### Goals

- Words we live by:
  - Service
  - Collaboration
  - Standards
  - Reflection

- Upholding DIRECCT Values
  - Diversity
  - Integrity
  - Responsibility
  - Excellence
  - Compassion
  - Creativity
  - Teamwork
- Safety and Compliance is important to UM leadership
  - Investments have been made to benefit UM

## Biological Safety Committees

- Institutional Biosafety Committee (IBC)
  - Contact: IBCsupport@miami.edu
  - Phone: 305-243-2311
  - https://www.uresearch.miami.edu/uresearch-services/ibc/index.html
- Institional Animal Care and Use Committee (IACUC)
  - Contact: IACUCsupport@miami.edu
  - Phone: 305-243-2311
  - https://www.uresearch.miami.edu/uresearch-services/iacuc/index.html
- Institutional Review Board (IRB)
  - Contact: hsro@miami.edu
  - Phone: 305-243-3195
  - http://hsro.uresearch.miami.edu
- https://www.ehs.miami.edu/services/biological-safety/protocols/index.html

### Institutional Biosafety Committee (IBC)

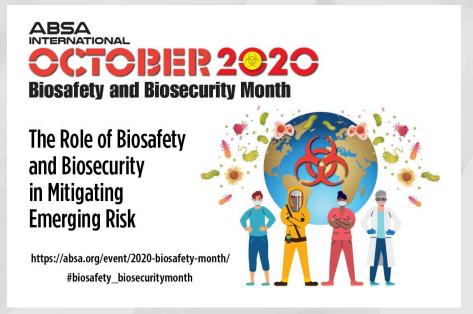
• The mission of the IBC Committee (IBC) is to ensure that all research involving recombinant DNA, synthetic nucleotides, infectious agents (pathogens), biological toxins, nanotechnology, or select agents is classified at the appropriate biosafety level

- Erin Kobetz
  - Responsible Official
- Pantelis Tsoulfas
  - IBC Chair
- Ellen Kapsalis
  - Director of Compliance
- Lizzeth Meza
  - Senior Regulatory Analyst

- Contact: <a href="mailto:IBCsupport@miami.edu">IBCsupport@miami.edu</a>
- https://www.uresearch.miami.edu/uresearch-services/ibc/index.html

# Biosafety & Biosecurity Month

ABSA sponsored event for month of October



- Please consider tagging all related social media posts with #biosafety\_biosecuritymonth
- https://absa.org/event/2020-biosafety-month/

# Biosafety & Biosecurity Month

### Dear Colleagues,

Each fall, the National Institutes of Health (NIH) focuses on some aspect of biosafety for individuals engaged in research in the life sciences. This year's theme is <u>The Role of Biosafety and Biosecurity in Mitigating Risk</u>. Since the beginning of 2020, the COVID-19 pandemic has drastically altered our world. In both our professional and personal lives, we have all been asked to make significant changes to mitigate the risks associated with this pandemic. It has become increasingly clear that tackling the pandemic and mitigating its effects requires teamwork and cooperation. Biosafety and biosecurity professionals have played a critical role in helping mitigate the effects of the pandemic and have been called upon to work on new and challenging problems to protect our communities and the workplace. Remember that a safety culture begins with the Principal Investigator (PI). By embracing and encouraging safe attitudes and behaviors, you show that safety is valued in your laboratory. As a PI, you have the responsibility to ensure that the lab operates safely and that personnel are informed of the potential risks, wear the appropriate PPE and are adequately trained.

- Enforce the current UM social distancing polices and safety practices when working in the lab
  environment. Be mindful of reducing population density, wearing masks at all time in shared
  environments, and washing your hands routinely. Practice proper decontamination and disposal
  procedures.and.donning.(applying) and doffing (removing) personal protective equipment (PPE).
- Report all laboratory incidents <u>promptly</u> to Environmental Health and Safety (EHS). This is a
  requirement of both NIH and UM. It is UM's policy that each incident that results in an injury, exposure, or
  severe illness to faculty, staff, or students be appropriately documented and reported. Exposures <u>must be</u>
  addressed with an appropriate immediate response, the initiation of first aid, and followed by medical
  follow-up if needed. EHS <u>must be notified</u> immediately at 305-243-3267 and the IBC office notified at
  IBC support@miami.edu within 24 hours.
- Review your Biohazard Exposure Response SOPs or Biological Review Assessment forms
  associated with IBC and IRB approvals to ensure that all research personnel know the SOPs for the lab
  and what to do in the event of a biological accident/exposure in the work place. For work-related injuries or
  illnesses, it is essential that appropriate safety procedures be followed. By reviewing these SOPs with
  each laboratory worker, and placing it in a prominent place in your lab, you can ensure that all individuals
  will respond quickly and effectively in the event of an exposure.
- Check the safety signage in, around, and outside of your lab to ensure it is up to date and still
  relevant. New signage can be downloaded from the EHS Biosafety web page or can be obtained from the
  Biosafety Office directly.
- Update your Biosafety, Bloodborne Pathogen, and Laboratory Safety trainings for the entire lab.
   EHS will have several open sessions during the month of October. Contact EHS at 305-243-3400 for more information.
- EHS has added a new Biosafety Officer, Shane Gillooly. Shane joins Biosafety Specialists Melanie
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  For assistance or guidance on anything in your lab, you can start by checking out the new Biosafety
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Let's build a biosafety culture together,

Erin Kobetz, PhD, MPH Institutional Official Office of the Vice Provost for Research and Scholarship



Promoting a Culture of Biosafety & Responsibility

6 Easy Ways to Promote Safety Culture at the University of Miami



Adhere to Pandemic Guidelines in the Lab



Review Biosafety Protocols & SOPs



Post New Biosafety Signage

Report



Get to Know Your Biosafety Team!

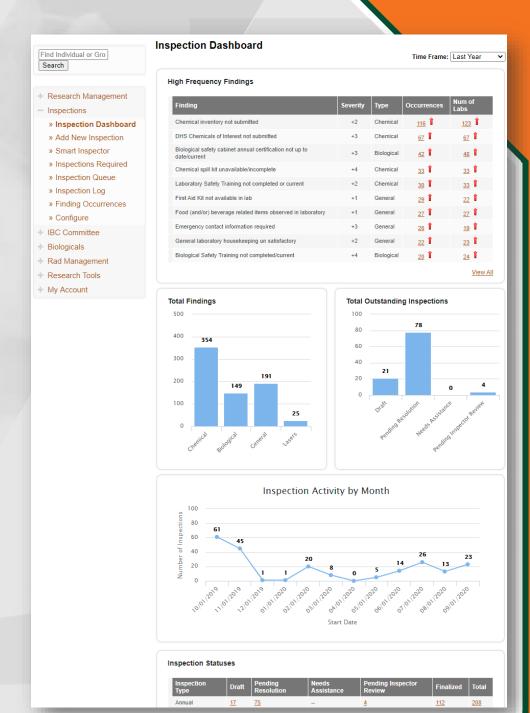
ehs.miami.edu



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### BioRaft Applications

- Lab Inspections
- EHS Notifications
  - Emergent Weather
- Administrative Data Storage
  - Labs, locations, departments, etc.
- Radiation Management
- Soon IBC Applications



### IBC in BioRaft

- BioRaft module for IBC applications
  - Modernize review process
  - Umbrella applications

- IBC purview expanding
  - All biological research captured
  - More holistic capturing of lab work
  - More holistic adherence to regulations

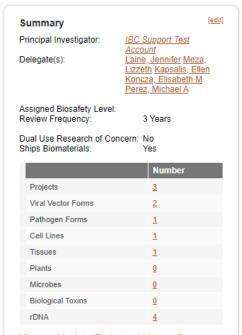
View Edit Dashboard Members Bio

Bio | Biological Summary | Projects | Cell Lines | Tissues | Plants | Microbes | Biological Toxins | rDNA |
NIH Guidelines

### **IBC Support Testing Lab Biologicals**

There are changes to the biological usage summary that have not been certified. Please notify the PI when all changes are ready to be submitted for review. <u>View changes since 09/24/2020</u>

To view all changes to this biological usage summary since last approval, view Amendment Summary.



View or Update Biological Usage Summary

### Biological Materials

Primate Materials

- . Human Body Fluids
- · Human Cell Lines
- Human Organs
- Human Tissues
- . Non-Human Primate Source Materials
- Non-Human Primates

### Non-Primate Materials

- Amphibians
- Arthropods
- Bloodborne Pathogens
- Fish
- Lab Animal Cell Lines (Non-Primate)
- Lab Animal Source Materials (Non-Primate)
- Lab Animal Tissues (Non-Primate)
- · Lab Animals (Non-Primate)
- Non-Pathogenic Microorganisms
- Pathogenic Microorganisms
- Plante

Other Biological Source Materials

- Biological Toxins
- · Infectious Proteins
- Mutagenic Agents
- Recombinant or Synthetic Nucleotides
- Select Agent Biological Toxins
- Viral Vectors

### Registration Summary

Submission: Current ✓

Amended Awaiting Review

(change statu

 Registration Started:
 09/10/2020

 PI Last Certified:
 09/24/2020

 Registration Approved:
 09/22/2020

 Research Last Confirmed:
 09/24/2020

 Next Review Date:
 09/15/2023

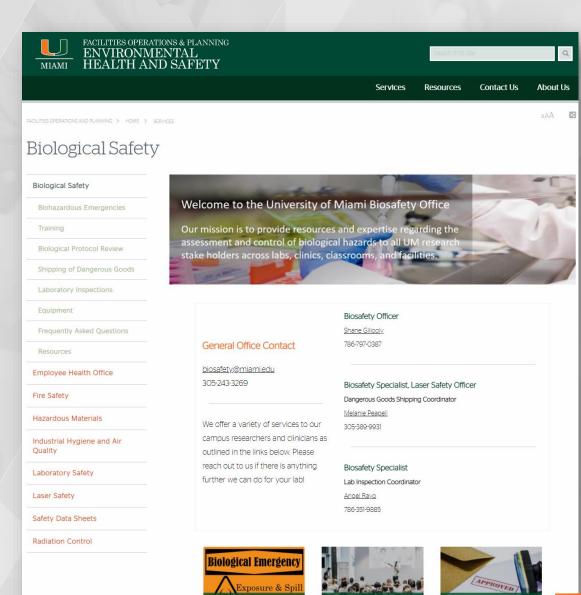
View Registration History and Download PDFs

### Submission Requests

Request Clarification/Modification Submission Request/Reminder Delegate to a Lab Member Request PI Certification

Last Request Sent: 09/22/2020 View All Past Requests

### New Website



**Biological Emergency** 

Protocol Approval

### Better than ever!

















• http://ehs.miami.edu

# New Signage & Postings

Laboratory Gloves: Do's & Don'ts

### Do's

- Wear gloves when working in the lab
- Always remove gloves when leaving the lab
- Select glove material appropriate to the task, consider the hazard:
  - · Biological, Chemical, Radioactive, Sharp, **Extreme Temperatures**
  - · Consult a glove material guide if needed
- Check the glove for holes or damage prior to use
- Change gloves when contaminated or damaged
- Dispose of your used gloves in an appropriate waste container
  - · Glove waste must be segregated on hazard
- Always wash your hands after removing gloves

### Doffing















**Environmental Health &** ehs.miami.edu

### Don'ts

- Do not reuse disposable
  - · Afterall, they're disposable!
- Do not touch doors or door
  - When going between labs, use the "One Glove" technique by holding your sample with your gloved hand while touching the door with your nongloved hand
- Do not touch common equipment or surfaces with gloves, unless signage is present that indicates PPE is



No on



**loves** Door nobs!





- Dispose of sharps in a designated container
- Dispose of the sharps container when it is ¾ full
- Keep a sharps container on hand
- Make no effort to recap when disposing

### Don't

- Bend or manipulate needles
- Leave sharps around unprotected
- Dispose of sharps in regular trash
- Recap needles unless your procedure requires it



\*This technique should only be used when required by protoco.

Step 1: Scoop needle with one hand Step 2: Secure cap\* with other hand \*Secure by the sides, not near the top



### MERGENCY PROCEDURES

portant

biosafety@miami.edu

(1)

←-FULL-

**Biosafety Office** 

EH&S

### **Emergency Numbers**

Dial 911 from Cell Phones or Dial 9-911 from UM Phones

### **Public Safety Phone Numbers**

Coral Gables - 305-284-6666 Medical - 305-243-6000 RSMAS - 305-421-7991

- Medical - 305-243-6375 - RSMAS - 305-421-4066 vee Health - 305-299-4684 (24 hours)

Numbers

es - Coral Gables - 305-284-8282

nmental Health and Safety (EHS) – 305-243-3400 ehs.miami.edu

### Immediate Action

No Gloves on

### Non-Immediate Actio

- 1. Evacuate and avoid area 2. Contact Facilities
- 3. Contact EHS 305-243-3400

### Characterical Exposures

ical exposure that is life threatening:

### Inhalation Exposure

2. Call 911 (9-911 from UM) and report

s/Public Safety

ency, exposure

### ident

or 305-299-4684 (after hours) to report

ident Report Form to biosafety@miami.edu

Door Knobs!

### **EXPOSURES & NEEDLESTICKS**

STOP → WASH→ CALL



...all work in lab



...for **15** Minutes!





Employee Health

305.243.3267

EHS

## New Signage & Postings



### New Documents, SOPs, Templates

### **Biological Ancillary Review Assessment Form**

- . This form is part of a required review from the Biosafety Office for any IRB protocol involving the introduction of biological materials or the collection of human specimens. It may also be required by labs falling outside of the purview of the IBC but still requiring biosafety review.
- This form is both a review tool to assess/develop the safety practices of the lab. as well as a hypersecond. at researchers outlining some of the safety standards and procedures associated with this proto
- All labs must complete the first page, sections 1-4, as well as the digital signature at the end. If ) involves risk group 2 organisms or higher, or upon request, the entire form must be completed.

		Section 1: General F	rotocol li	formation	
PI Name:			PI Email:		
Protocol Title:					
Lab Building:	Room(s):			Biosafe	ety Level
BSC type: N/A	BSC Lab Roon	n Location:			
List the research	ers in the lab who	will be involved with a their correspondi		this portion of the proj g dates.	ject, inclu
List the research	iers in the lab who				ect, incii
Name		Biosafety		Bloodborne Pathogens	Lab Sa
PI name / add researchers		Date Completed		Date Completed	Date (
1 This project	rt involves the intr	Section 3: Pre-Scr aduction of foreign bio			
		infectious, toxic, or of			_
		lood, or other biologic			
2a. The	lab will be manipu	lating or processing th	ese samp	les to any extent.	
2b. Spe	cimens will be coll-	ected, but shipped to a	ind proce:	sed by another lab.	
2c. Spe	cimens are coming Specify:	from patients known	to be or si	spected of carrying a d	isease.
3 Materials	in this lab are gene	tically modified, trans	enic or o	therwise synthetic	
4. Biological		ns will be shipped to a	nother fac		

Section 4: Protocol / Pathogen Overview In lay terms, please provide an overview of the protocol. Be sure to list the purpose of and how each i above is being used, highlighting the aims of the research, and briefly describing how this will be accor

If any of the materials listed above are Risk Group 2 or higher, please proceed with the rest of the applic may scrall to Section 7, sign, and submit this application as complete. If your protocol requires on IBC an may sign the form at Section 7 and submit.

### LIM RESEARCHER INCIDENT REPORT FORM FOR POTENTIALLY HAZARDOUS BIOLOGICAL AGENTS

Incident reports should be filled out and submitted as soon as possible after accident response

Researcher Name:		Phone:		Email:			
Describe the experim (if applicable)	nent	_					
Incident Date:		_	Incide	ent Time:			
Incident Date: Incident Location(s) Building:			Incide	ent Time:			

1. Describe the Incident (who, what, when, where)

2. Nature of the incident

2.1 Specify the biohazard/type of material/animal you were exposed to, including

2.2 Did this incident involve recombinant DNA technology? Recombinant or synthetic nucleic acids including recombinant cells, agent Transgenic animal

Recombinant agents used for human gene transfer Infectious agents created with recombinant gene transfer techniques Attenuated agents created with recombinant gene transfer techniques

2.3 Was the agent infectious?

Yes, please describe:

2.4 Describe the nature of the exposure: Splash to eyes, nose, or mouse



ental Health and Safety (EHS) 1400 NW 10th Ave. Suite 405

Print the form and complete the inspection by walking through the lab and observing lab activities. For all

Laboratory Inspection Checklist

"No", develop and implement a corrective action plan

Equipment and materials are not crowding and obstructing the means of egress (corridors, doors, etc.). Lab is free from slip, trip

The following are posted near the lab entrance

Emergency Contact Card with current contact info

Lab freezers and refrigerators are labeled with "No Food or Drink Allowed", "No Flammables" (if appropriate) and the biohazard

Select Bio Agent with recommended PPE

symbol (if used to store biological/infectious material).

- This form is electronically fillable.
- CTI stands for corrected at time of inspection N/A stands for not applicable.
- Lab is under restricted access (i.e., doors are locked, doors are kept

Please have all laboratory personnel (including the Principal Investigator) answer the following questions. Thank y

Lab sinks are equipped with soap and paper towels for handwashing.					
Lab floor, bench tops and furniture are easily cleanable (i.e., can be wiped down) and uncluttered to allow for safe work practices.					
Food/drinks/cosmetics/lotions are not present in the lab.					
Items stored at least 18" below the sprinkler heads to allow for safe function of building fire sprinkler systems.					
2. Personal Protective Equipment (PPE)	Yes	No	N/A	CTI	C
Lab coats, safety glasses and disposable nitrile gloves are ALWAYS worn while working in the lab					
Face Shield and thermo gloves are available and wom while working extreme temperatures (ex: -80°C freezers/liquid nitrogen)					
Lab members remove gloves before leaving the lab and opening doors. Disposable gloves are NEVER reused					
Closed toed shoes and long pants/skirts are ALWAYS worn in the lab. Examples of inappropriate attire include (sandals, torn jeans, and ballet flats)					
Lab members who use the (N95) respirators, have had the Annual Respirator Fit Test administered by EHS					
3. Signage/ Lab Postings	Yes	No	N/A	CTI	Co
Doors leading into the lab(s) are labeled with appropriate hazard					

### University of Miami Spill Procedure Standard Operating Procedures

Biological spills at the University of Miami are classified as either major or minor. A major spill is a sp event that cannot be handled safely without the assistance of EHS emergency response. A minor spil a spill event that can be handled safely without the assistance of EHS emergency response. During a biological spill, the primary concern for local research staff is potential for inhalation of an aerosol. Thus, spills occurring inside of a biosafety cabinet (BSC) are easier to manage as the BSC will contain a generated aerosols created by the spill. Therefore, spills are addressed by researchers based on whether they are major or minor, and whether they take place inside the biosafety cabinet our outsi of the biosafety cabinet

### Major Spills Inside the Biosafety Cabinet

- 1 Keen the BSC on
- Close the sash of the BSC
- Attend to injured or contaminated persons.

  Alert personnel in the area of the spill and post a sign on the BSC sash that indicates the nature
- Call EHS (305-243-3400).
- 6. EHS to arrange clean-up

### Major Spills *Qutside* the Biosafety Cabinet

- 1. Avoid inhaling airborne materials while quickly leaving the room. Notify others to leave the roo and close the door
- Post a sign on the door indicating the nature and time of the spill.
- Remove contaminated clothing/PPE.

  Wash all exposed skin with soap and warm water.
- Call EHS (305-243-3400).
- 6. EHS to arrange clean-up.

### Minor Spills Inside the Biosafety Cabinet

- Keep the BSC on
- Change PPE.
- Cover spill area with absorbent material.
- Pour liquid disinfectant onto the absorbent material from the outside of the spill area, moving is
- Allow for appropriate contact time
- Collect spill material and dispose of as biohazard waste.
- Spray/wipe walls, work surfaces, and equipment with disinfectant solution and allow for appropriate contact time before wiping up residue.
- Decontaminate grill pans if applicable.
- Dispose of all spill clean-up materials as biohazard waste.
   Allow for the BSC to run for at least 10 minutes after cleanup and before resuming work.
- 11. Notify users that spill cleanup is complete.



Miami, Florida 33136 U.S.A

### Hurricane Season Emergency Preparation for Labs

Environmental Health & Safety Biosafety Office

In preparation of hurricane season and before every hurricane, there are a variety of lab specific considerations that must be addressed to both safely and responsibly preserve the contents within that lab. Review the tasks below and please reach out to the EHS Biosafety

### Securing Samples/Inventory

- Specimens and materials used for research must be properly stored and/or secured. Clear benchtons of specimens
  - Clear biosafety cabinets of specimens
- Check that compressed gas tanks are properly secured.
- Keep chemicals segregated by hazard class
- . Check chemical containers for integrity. Contact EHS for help with disposal of chemicals in damaged or impaired containers.
- O Chemicals, buffers, and liquids should not be stored on shelves above shoulder
- Check the secondary containment around hazardous chemicals and waste. Replace if

### **Electrical Concerns and Equipment**

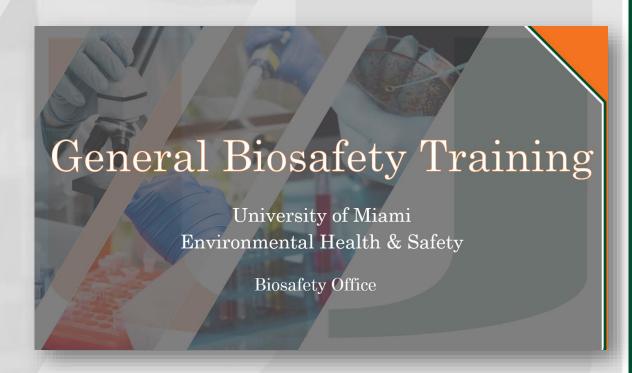
- · Assume anything not on emergency power is likely to lose power during the event and act accordingly Biosafety cabinets, fume hoods, and other types of hoods should be cleared out.
- . During a power outage, conditioning is likely to halt for laboratory spaces. Plan for the additional heat load during the event and shut down non-essential equipment.
- Plan for power outages on computer by backing up data and intellectual property.
   For paper based data, find appropriate/approved methods to digitally secure this

### information in the event of flooding.

- Lab members should update their contact details in Workday.
- Develop a lab/office contact list with phone numbers and email addresses to stav connected before, during, and after the event.
- · Review the lab Business Continuity Plan, the Emergency Management communications and local emergency guidance
- Report emergencies to 911, Public Safety, and/or EHS and/or 911.

## New Trainings

- New trainings in development
  - General Biosafety
  - Dangerous Goods Shipping Training
    - Complementary Hands on Biohazardous Shipping Training
- Trainings by request
- Future Development
  - Tailored versions of Biosafety
  - Recombinant DNA
  - Bloodborne Pathogens refresh



### Future Vision

- Aiming to address current gaps
  - Training Development
  - Biosafety Manual(s)
  - Better Animal Research Support





Very receptive to ideas and critiques

Collaborative spirit with research

• Service minded response

## Biosafety Month Recap

### Dear Colleagues,

Each fall, the National Institutes of Health (NIH) focuses on some aspect of biosafety for individuals engaged in research in the life sciences. This year's theme is <u>The Role of Biosafety and Biosecurity in Mitigating Risk</u>. Since the beginning of 2020, the COVID-19 pandemic has drastically altered our world. In both our professional and personal lives, we have all been asked to make significant changes to mitigate the risks associated with this pandemic. It has become increasingly clear that tackling the pandemic and mitigating its effects requires teamwork and cooperation. Biosafety and biosecurity professionals have played a critical role in helping mitigate the effects of the pandemic and have been called upon to work on new and challenging problems to protect our communities and the workplace. Remember that a safety culture begins with the Principal Investigator (PI). By embracing and encouraging safe attitudes and behaviors, you show that safety is valued in your laboratory. As a PI, you have the responsibility to ensure that the lab operates safely and that personnel are informed of the potential risks, wear the appropriate PPE and are adequately trained.

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Promoting a Culture of Biosafety & Responsibility

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Adhere to Pandemic Guidelines in the Lab



Review Biosafety Protocols & SOPs



Report Exposures, Injuries & Near Misses



Get to Know Your Biosafety

Team!



ehs.miami.edu



ABSA INTERNATIONAL

## Questions

- Contact the Biosafety Office:
  - **305-243-3269**
  - biosafety@miami.edu

- Contact Shane directly:
  - **786-797-0387**
  - sxg1519@med.miami.edu
- Visit our Website!
  - http://ehs.miami.edu

